

APPENDICES

DATCP #4623

Emerald Substation

Towns of Baldwin & Emerald, St. Croix County

**WISCONSIN DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION**

PUBLISHED FEBRUARY 18, 2025

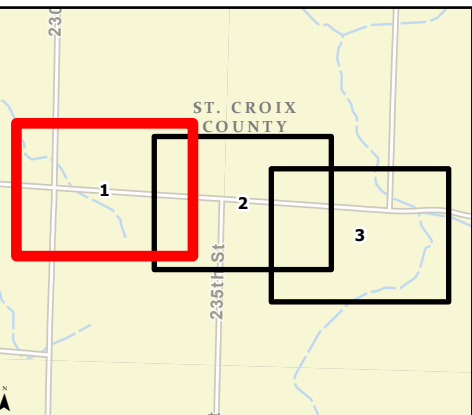
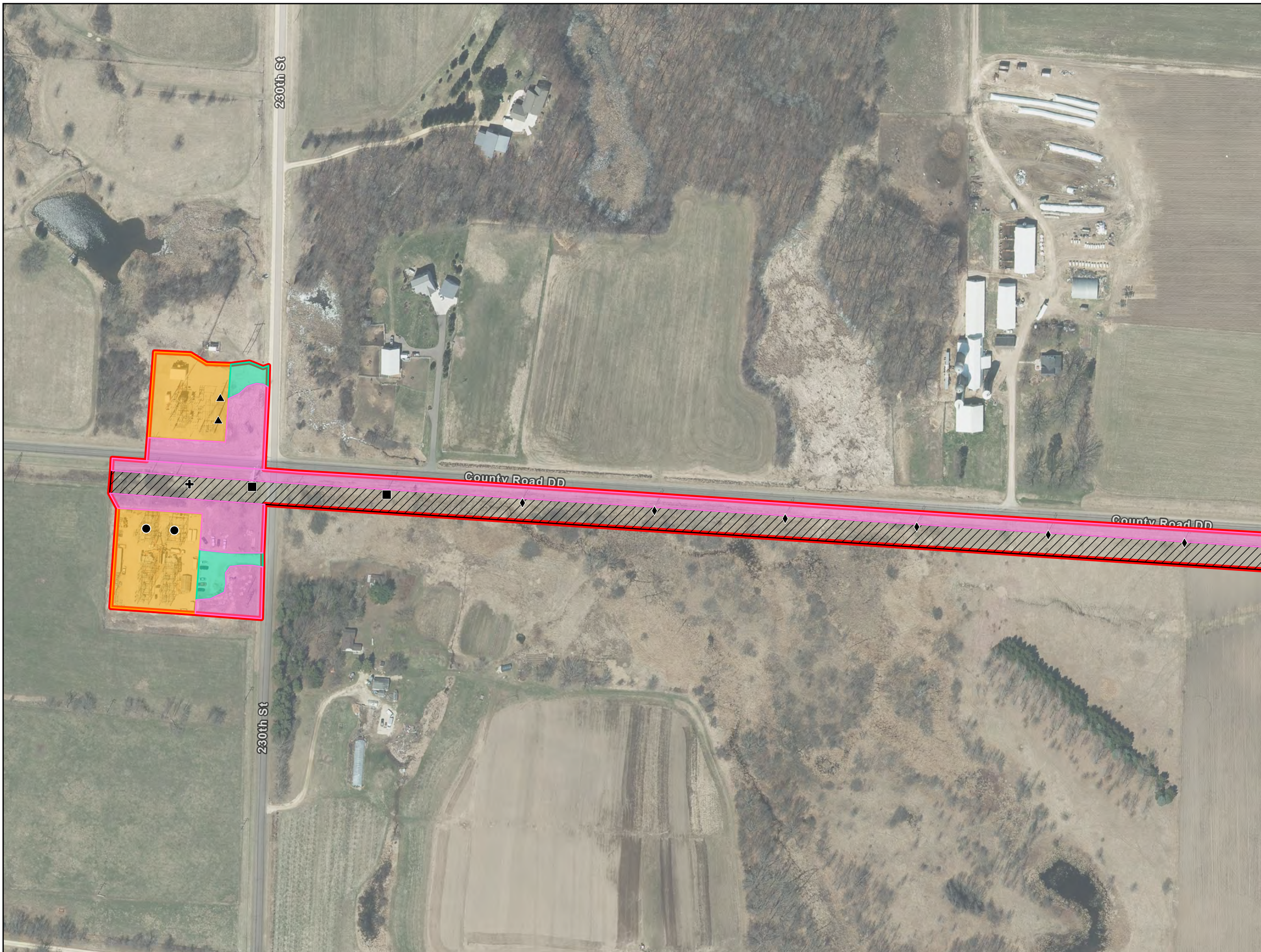
APPENDIX TABLE OF CONTENTS

Appendix A: Additional Figures & Tables.....	iii
Appendix B: Appraisal and Compensation Process	iv
Appendix C: Wisconsin’s Agricultural Impact Statement Statute	v
Appendix D: Additional Information Sources	xiv
Appendix E: Xcel Energy Best Management Practices for the Emerald Substation Project	xvi
Appendix F: Xcel Energy’s Response to Recommendations	xix

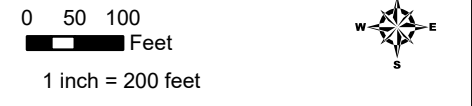
APPENDIX A: ADDITIONAL FIGURES & TABLES

Figure 1 A, B, and C: Xcel Energy, 2024. Project Workspaces Map: New Emerald Substation.

See next page



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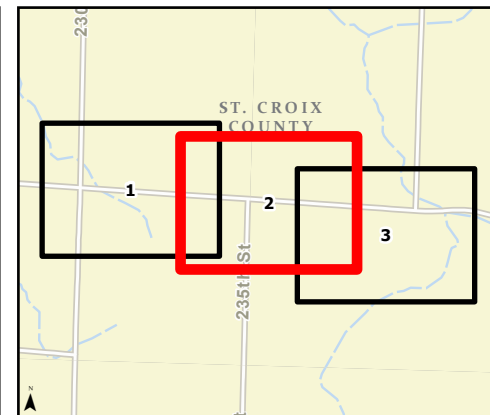
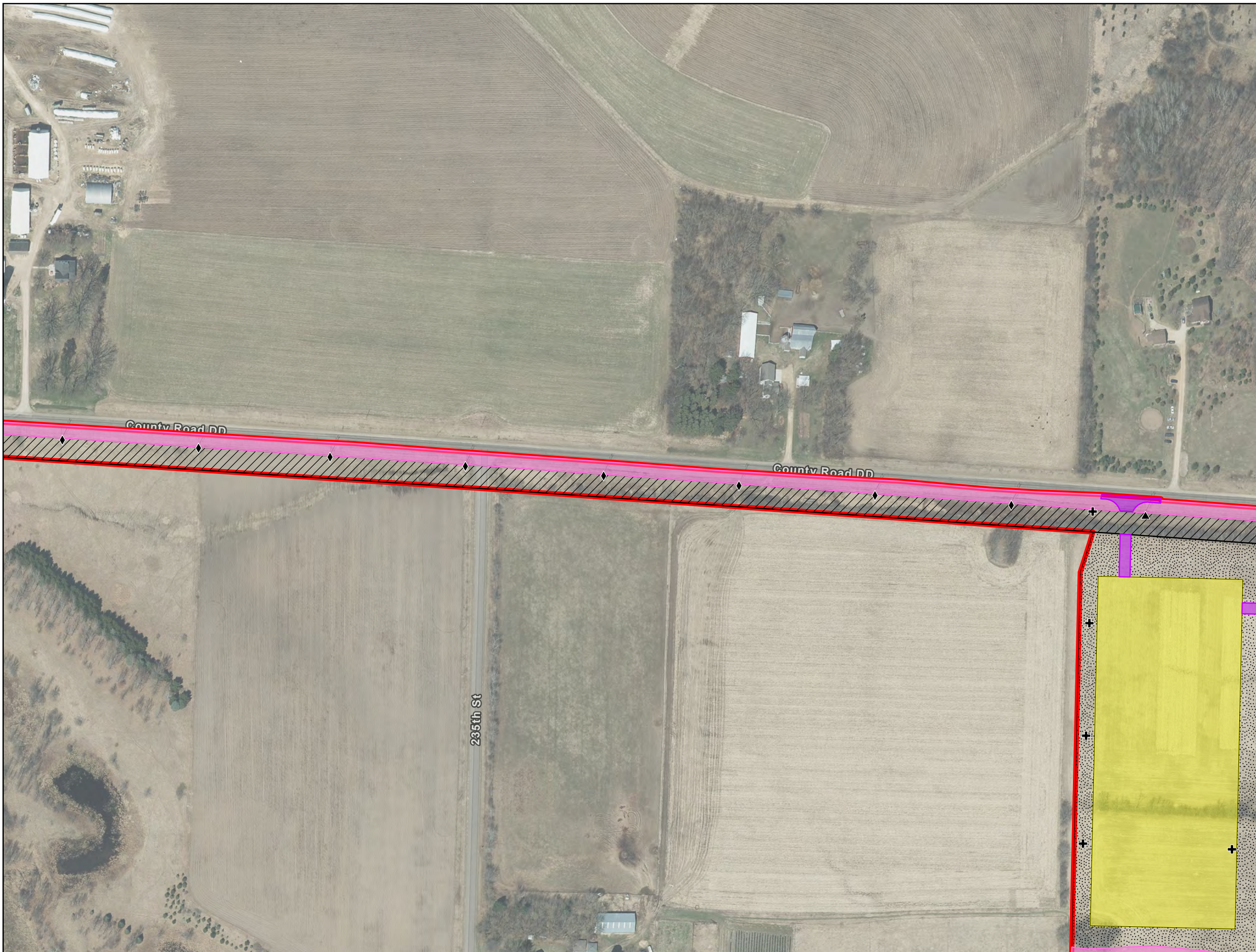


- Project Limits of Disturbance
- Project Structures**
- + New Structure
- ▲ Remove Structure
- Replace Structure
- Substation Equipment
- ◆ Structure to Remain
- Project Impact Areas**
- Existing T-Line Easement
- Proposed Additional Workspace
- Existing Substation Driveway
- Existing Substation Footprint

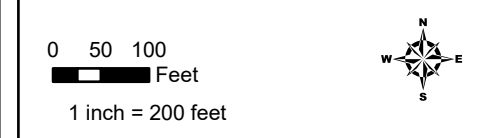
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Figure 1:
Project Workspaces Map
 Xcel Energy
 New Emerald Substation
 St. Croix County, Wisconsin

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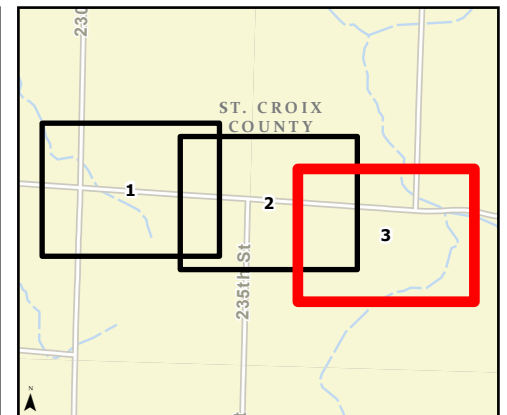
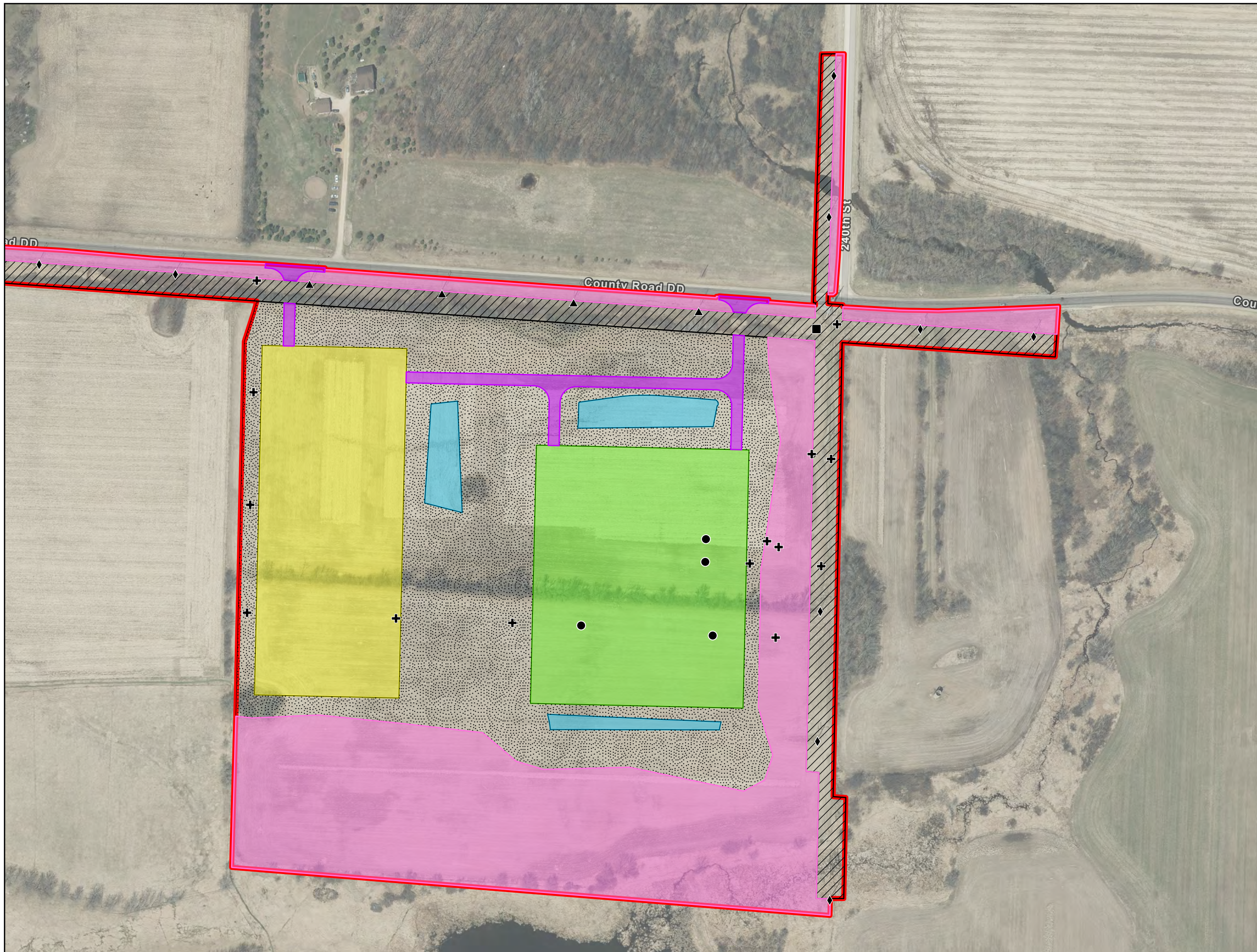


- Project Limits of Disturbance
- Project Structures**
- + New Structure
- ▲ Remove Structure
- ◆ Structure to Remain
- Project Impact Areas**
- Proposed Grading Extent
- Proposed Stormwater Pond
- Proposed Substation Driveway
- Existing T-Line Easement
- Proposed Substation Storage Area
- Proposed Additional Workspace

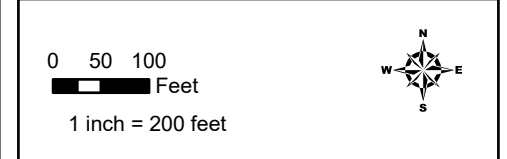
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Figure 1:
Project Workspaces Map
 Xcel Energy
 New Emerald Substation
 St. Croix County, Wisconsin

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Center of Current View: 92.3208165°W 45.03269803°N



- Project Limits of Disturbance
- Project Structures**
- + New Structure
- ▲ Remove Structure
- Replace Structure
- Substation Equipment
- ◆ Structure to Remain
- Project Impact Areas**
- Proposed Grading Extent
- Proposed Stormwater Pond
- Proposed Substation Driveway
- Existing T-Line Easement
- Proposed Substation Pad
- Proposed Substation Storage Area
- Proposed Additional Workspace

*No features within map extent

**Figure 1:
Project Workspaces Map
Xcel Energy
New Emerald Substation
St. Croix County, Wisconsin**

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APPENDIX B: APPRAISAL AND COMPENSATION PROCESS

The acquisition of land by entities including but not limited to departments, municipalities, boards, commissions, public officers, and business with eminent domain authority in Wisconsin, is stipulated under [Wis. Stat. §32.06](#). If the entity (referred to as the condemner) actualizes their powers of eminent domain by exercising condemnation, the condemner shall first provide an appraisal of the affected property to each landowner prior to the start of land acquisition negotiations. An appraisal is an estimate of fair market value, additional information about the appraisal process and landowners rights can be found in the Wisconsin Department of Administration publication, "[The Rights of Landowners under Wisconsin Eminent Domain Law](#)," also listed in Appendix C.

The condemner may conduct a market study to determine current area property values of affected property. If the landowner signs an appraisal waiver form, the market study will be the basis for the condemner's offer of compensation and no individual property appraisal will be conducted. The condemner may also offer additional compensation to landowners who choose to sign the appraisal waiver form.

Landowners have the right to obtain their own appraisal of their property under Wisconsin's eminent domain law ([Wis. Stat. §32.06](#)) and will be compensated for the cost of this appraisal if the following conditions are met:

- The appraisal must be submitted to the condemner or its designated real estate contractor within 60 days after the landowner receives the initial appraisal
- The appraisal fee must be reasonable
- The appraisal must be a full, narrative appraisal
- The appraisal must be completed by a qualified appraiser

Through the process of condemnation, a jurisdictional offer made to the landowner in accordance with [Wis. Stat. §32.06\(3\)](#) will include an appraisal of the fair market value for the land acquisition or easement and any anticipated damages to the property. The fair market value means the price that a willing buyer would pay to a willing seller in the market. This will be based on at least one full narrative appraisal for each property the condemner intends to acquire. The appraisal must be presented to the landowner. The amount of compensation is based on the appraisal(s) and is established during the negotiation process between condemner and the individual landowners.

The condemner is required to provide landowners with information about their rights in this process before negotiations begin. [Wis. Stat. § 32.035\(4\)\(d\)](#) additionally stipulates that if the condemner actualizes their condemnation authority, the condemner cannot negotiate with a landowner or make a jurisdictional offer until 30 days after the AIS is published.

APPENDIX C: WISCONSIN'S AGRICULTURAL IMPACT STATEMENT STATUTE

The Department of Agricultural, Trade and Consumer Protection (referred to as the Department) is required to prepare an AIS whenever more than five acres of land from at least one farm operation will be acquired for a public project if the agency/company acquiring the land has the authority to use eminent domain for property acquisitions. The Department has the option to prepare an AIS for projects affecting five or fewer acres from each farm if the proposed project would have significant effects on a farm operation. The entity proposing a construction project is required to provide the Department with the necessary details of the project so that the potential impacts and effects of the project on farm operations can be analyzed. DATCP has 60 days to make recommendations and prepare the AIS. DATCP shall publish the AIS upon receipt of the fee required to prepare the AIS. The Department provides the AIS to affected farmland owners, various state and local officials, local media and libraries, and any other individual or group who requests a copy. Thirty days after the date of publication, the project initiator may begin negotiating with the landowner(s) for the property.

[Wisconsin Statute § 32.035](#) is provided below and describes the Wisconsin Agricultural Impact Statement procedure and content.

(1) DEFINITIONS. In this section:

- (a) "Department" means department of agriculture, trade, and consumer protection.
- (b) "Farm operation" means any activity conducted solely or primarily for the production of one or more agricultural commodities resulting from an agricultural use, as defined in s. 91.01 (2), for sale and home use, and customarily producing the commodities in sufficient quantity to be capable of contributing materially to the operator's support.

(2) EXCEPTION. This section shall not apply if an environmental impact statement under s. 1.11 is prepared for the proposed project and if the department submits the information required under this section as part of such statement or if the condemnation is for an easement for the purpose of constructing or operating an electric transmission line, except a high voltage transmission line as defined in s. 196.491(1) (f).

(3) PROCEDURE. The condemnor shall notify the department of any project involving the actual or potential exercise of the powers of eminent domain affecting a farm operation. If the condemnor is the department of natural

resources, the notice required by this subsection shall be given at the time that permission of the senate and assembly committees on natural resources is sought under s. 23.09(2)(d) or 27.01(2)(a). To prepare an agricultural impact statement under this section, the department may require the condemnor to compile and submit information about an affected farm operation. The department shall charge the condemnor a fee approximating the actual costs of preparing the statement. The department may not publish the statement if the fee is not paid.

(4) IMPACT STATEMENT.

(a) *When an impact statement is required; permitted.* The department shall prepare an agricultural impact statement for each project, except a project under Ch. 82 or a project located entirely within the boundaries of a city or village, if the project involves the actual or potential exercise of the powers of eminent domain and if any interest in more than 5 acres from any farm operation may be taken. The department may prepare an agricultural impact statement on a project located entirely within the boundaries of a city or village or involving any interest in 5 or fewer acres of any farm operation if the condemnation would have a significant effect on any farm operation as a whole.

(b) *Contents.* The agricultural impact statement shall include:

1. A list of the acreage and description of all land lost to agricultural production and all other land with reduced productive capacity, whether or not the land is taken.
2. The department's analyses, conclusions, and recommendations concerning the agricultural impact of the project.

(c) *Preparation time; publication.* The department shall prepare the impact statement within 60 days of receiving the information requested from the condemnor under sub. (3). The department shall publish the statement upon receipt of the fee required under sub. (3).

(d) *Waiting period.* The condemnor may not negotiate with an owner or make a jurisdictional offer under this subchapter until 30 days after the impact statement is published.

(5) PUBLICATION. Upon completing the impact statement, the department shall distribute the impact statement to the following:

(a) The governor's office.

- (b) The senate and assembly committees on agriculture and transportation.
- (c) All local and regional units of government that have jurisdiction over the area affected by the project. The department shall request that each unit post the statement at the place normally used for public notice.
- (d) Local and regional news media in the area affected.
- (e) Public libraries in the area affected.
- (f) Any individual, group, club, or committee that has demonstrated an interest and has requested receipt of such information.
- (g) The condemnor.

I. STATUTES GOVERNING EMINENT DOMAIN

The details governing eminent domain as it relates to WisDOT projects are included in Wis. Stat. Ch. 32 (<http://docs.legis.wisconsin.gov/statutes/statutes/32.pdf>).

The Department recommends that farmland owners concerned about eminent domain powers and the acquisition of land should review this statute in its entirety. Landowners may also wish to consult with an attorney who should have expertise in eminent domain proceedings. In addition, any Wisconsin licensed appraiser that landowners employ regarding a project where eminent domain could be used should be knowledgeable in partial takings.

Section 32.09 of the Wisconsin Statutes describes the compensation provided for property acquisition and certain damages:

(6) In the case of a partial taking of property other than an easement, the compensation to be paid by the condemnor shall be the greater of either the fair market value of the property taken as of the date of evaluation or the sum determined by deducting from the fair market value of the whole property immediately before the date of evaluation, the fair market value of the remainder immediately after the date of evaluation, assuming the completion of the public improvement and giving effect, without allowance of offset for general benefits, and without restriction because of enumeration but without duplication, to the following items of loss or damage to the property where shown to exist:

- (a)** Loss of land including improvements and fixtures actually taken.
- (b)** Deprivation or restriction of existing right of access to highway from abutting land, provided that nothing herein shall operate to restrict the power of the state or any of its

subdivisions or any municipality to deprive or restrict such access without compensation under any duly authorized exercise of the police power.

(c) Loss of air rights.

(d) Loss of a legal nonconforming use.

(e) Damages resulting from actual severance of land including damages resulting from severance of improvements or fixtures and proximity damage to improvements remaining on condemnee's land. In determining severance damages under this paragraph, the condemnor may consider damages which may arise during construction of the public improvement, including damages from noise, dirt, temporary interference with vehicular or pedestrian access to the property and limitations on use of the property. The condemnor may also consider costs of extra travel made necessary by the public improvement based on the increased distance after construction of the public improvement necessary to reach any point on the property from any other point on the property.

(f) Damages to property abutting on a highway right of way due to change of grade where accompanied by a taking of land.

(g) Cost of fencing reasonably necessary to separate land taken from remainder of condemnee's land, less the amount allowed for fencing taken under par. (a), but no such damage shall be allowed where the public improvement includes fencing of right of way without cost to abutting lands.

Section 32.19 of the Wisconsin Statutes outlines payments to be made to displaced tenant occupied businesses and farm operations.

(4m) BUSINESS OR FARM REPLACEMENT PAYMENT. (a) Owner-occupied business or farm operation. In addition to amounts otherwise authorized by this subchapter, the condemnor shall make a payment, not to exceed \$50,000, to any owner displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to the initiation of negotiations for the acquisition of the real property on which the business or farm operation lies, and who actually purchases a comparable replacement business or farm operation for the acquired property within two years after the date the person vacates the acquired property or receives payment from the condemnor, whichever is later. An owner displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to the initiation of negotiations for the acquisition of the real property on which the business or farm operation lies may elect to receive the payment under par. (b) 1. in lieu of the payment under this paragraph, but the amount of payment under par. (b) 1. to such an owner displaced person may not exceed the amount the owner displaced person is eligible to

receive under this paragraph. The additional payment under this paragraph shall include the following amounts:

1. The amount, if any, which when added to the acquisition cost of the property, other than any dwelling on the property, equals the reasonable cost of a comparable replacement business or farm operation for the acquired property, as determined by the condemnor.
2. The amount, if any, which will compensate such owner displaced person for any increased interest and other debt service costs which such person is required to pay for financing the acquisitions of any replacement property, if the property acquired was encumbered by a bona fide mortgage or land contract which was a valid lien on the property for at least one year prior to the initiation of negotiations for its acquisition. The amount under this subdivision shall be determined according to rules promulgated by the department of administration.
3. Reasonable expenses incurred by the displaced person for evidence of title, recording fees and other closing costs incident to the purchase of the replacement property, but not including prepaid expenses.

(b) Tenant-occupied business or farm operation. In addition to amounts otherwise authorized by this subchapter, the condemnor shall make a payment to any tenant displaced person who has owned and occupied the business operation, or owned the farm operation, for not less than one year prior to initiation of negotiations for the acquisition of the real property on which the business or operation lies or, if displacement is not a direct result of acquisition, such other event as determined by the department of commerce, and who actually rents or purchases a comparable replacement business or farm operation within 2 years after the date the person vacates the property. At the option of the tenant displaced person, such payment shall be either:

1. The amount, not to exceed \$30,000, which is necessary to lease or rent a comparable replacement business or farm operation for a period of 4 years. The payment shall be computed by determining the average monthly rent paid for the property from which the person was displaced for the 12 months prior to the initiation of negotiations or, if displacement is not a direct result of acquisition, such other event as determined by the department of administration and the monthly rent of a comparable replacement business or farm operation and multiply the difference by 48; or
2. If the tenant displaced person elects to purchase a comparable replacement business or farm operation, the amount determined under subd. 1 plus expenses under par. (a) 3.

(5) EMINENT DOMAIN. Nothing in this section or ss. 32.25 to 32.27 shall be construed as creating in any condemnation proceedings brought under the power of eminent domain, any element of damages.

Section 32.25 of the Wisconsin Statutes delineates steps to be followed when displacing persons, businesses, and farm operations.

(1) Except as provided under sub.(3) and s. 85.09 (4m), no condemnor may proceed with any activity that may involve the displacement of persons, business concerns or farm operations until the condemnor has filed in writing a relocation payment plan and relocation assistance service plan and has had both plans approved in writing by the department of administration.

(2) The relocation assistance service plan shall contain evidence that the condemnor has taken reasonable and appropriate steps to:

(a) Determine the cost of any relocation payments and services or the methods that are going to be used to determine such costs.

(b) Assist owners of displaced business concerns and farm operations in obtaining and becoming established in suitable business locations or replacement farms.

(c) Assist displaced owners or renters in the location of comparable dwellings.

(d) Supply information concerning programs of federal, state and local governments which offer assistance to displaced persons and business concerns.

(e) Assist in minimizing hardships to displaced persons in adjusting to relocation.

(f) Secure, to the greatest extent practicable, the coordination of relocation activities with other project activities and other planned or proposed governmental actions in the community or nearby areas which may affect the implementation of the relocation program.

(g) Determine the approximate number of persons, farms or businesses that will be displaced and the availability of decent, safe and sanitary replacement housing.

(h) Assure that, within a reasonable time prior to displacement, there will be available, to the extent that may reasonably be accomplished, housing meeting the standards established by the department of administration for decent, safe and sanitary dwellings. The housing, so far as practicable, shall be in areas not generally less desirable in regard to public utilities, public and commercial facilities and at rents or prices within the financial means of the families and individuals displaced and equal in number to the number of such displaced families or individuals and reasonably accessible to their places of employment.

(i) Assure that a person shall not be required to move from a dwelling unless the person has had a reasonable opportunity to relocate to a comparable dwelling.

(3) (a) Subsection (1) does not apply to any of the following activities engaged in by a condemnor:

1. Obtaining an appraisal of property.
2. Obtaining an option to purchase property, regardless of whether the option specifies the purchase price, if the property is not part of a program or project receiving federal financial assistance.

II. STATUTES GOVERNING ACCESS

Section 86.05 of the Wisconsin Statutes states that access shall be provided to land which abuts a highway:

Entrances to highway restored. Whenever it is necessary, in making any highway improvement to cut or fill or otherwise grade the highway in front of any entrance to abutting premises, a suitable entrance to the premises shall be constructed as a part of the improvements, and if the premises are divided by the highway, then one such entrance shall be constructed on each side of the highway. Thereafter, each entrance shall be maintained by the owner of the premises. During the time the highway is under construction, the state, county, city, village or town shall not be responsible for any damage that may be sustained through the absence of an entrance to any such premises.

Section 84.25 of the Wisconsin Statutes describes access restrictions concerning a controlled-access highway.

(3) CONSTRUCTION; OTHER POWERS OF DEPARTMENT. In order to provide for the public safety, convenience and the general welfare, the department may use an existing highway or provide new and additional facilities for a controlled-access highway and so design the same and its appurtenances, and so regulate, restrict or prohibit access to or departure from it as the department deems necessary or desirable. The department may eliminate intersections at grade of controlled-access highways with existing highways or streets, by grade separation or service road, or by closing off such roads and streets at the right-of-way boundary line of such controlled-access highway and may divide and separate any controlled-access highway into separate roadways or lanes by raised curbing, dividing sections or other physical separations or by signs, markers, stripes or other suitable devices, and may execute any construction necessary in the development of a controlled-access highway including service roads or separation of grade structures.

(4) CONNECTIONS BY OTHER HIGHWAYS. After the establishment of any controlled-access highway, no street or highway or private driveway, shall be opened into or connected with any

controlled-access highway without the previous consent and approval of the department in writing, which shall be given only if the public interest shall be served thereby and shall specify the terms and conditions on which such consent and approval is given.

(5) USE OF HIGHWAY. No person shall have any right of entrance upon or departure from or travel across any controlled-access highway, or to or from abutting lands except at places designated and provided for such purposes, and on such terms and conditions as may be specified from time to time by the department.

(6) ABUTTING OWNERS. After the designation of a controlled-access highway, the owners or occupants of abutting lands shall have no right or easement of access, by reason of the fact that their property abuts on the controlled-access highway or for other reason, except only the controlled right of access and of light, air or view.

(7) SPECIAL CROSSING PERMITS. Whenever property held under one ownership is severed by a controlled-access highway, the department may permit a crossing at a designated location, to be used solely for travel between the severed parcels, and such use shall cease if such parcels pass into separate ownership.

III. STATUTES GOVERNING DRAINAGE

[Section 88.87\(2\) of the Wisconsin Statutes](#) describes regulations concerning rights of drainage:

(a) Whenever any county, town, city, village, railroad company or the department of transportation has heretofore constructed and now maintains or hereafter constructs and maintains any highway or railroad grade in or across any marsh, lowland, natural depression, natural watercourse, natural or man-made channel or drainage course, it shall not impede the general flow of surface water or stream water in any unreasonable manner so as to cause either an unnecessary accumulation of waters flooding or water-soaking uplands or an unreasonable accumulation and discharge of surface water flooding or water-soaking lowlands. All such highways and railroad grades shall be constructed with adequate ditches, culverts, and other facilities as may be feasible, consonant with sound engineering practices, to the end of maintaining as far as practicable the original flow lines of drainage. This paragraph does not apply to highways or railroad grades used to hold and retain water for cranberry or conservation management purposes.

(b) Drainage rights and easements may be purchased or condemned by the public authority or railroad company having control of the highway or railroad grade to aid in the prevention of damage to property owners which might otherwise occur as a result of failure to comply with par. (a).

(c) If a city, village, town, county, or railroad company or the department of transportation constructs and maintains a highway or railroad grade not in accordance with par. (a), any property owner damaged by the highway or railroad grade may, within 3 years after the alleged damage occurred, file a claim with the appropriate governmental agency or railroad company. The claim shall consist of a sworn statement of the alleged faulty construction and a description, sufficient to determine the location of the lands, of the lands alleged to have been damaged by flooding or water-soaking. Within 90 days after the filing of that claim, the governmental agency or railroad company shall either correct the cause of the water damage, acquire rights to use the land for drainage or overflow purposes, or deny the claim. If the agency or company denies the claim or fails to take any action within 90 days after the filing of the claim, the property owner may bring an action in inverse condemnation under ch. 32 or sue for such other relief, other than damages, as may be just and equitable.

WisDOT [specification 205.3.3](#) further describes its policies concerning drainage:

- (1)** During construction, maintain roadway, ditches, and channels in a well-drained condition at all times by keeping the excavation areas and embankments sloped to the approximate section of the ultimate earth grade. Perform blading or leveling operations when placing embankments and during the process of excavation except if the excavation is in ledge rock or areas where leveling is not practical or necessary. If it is necessary in the prosecution of the work to interrupt existing surface drainage, sewers, or under drainage, provide temporary drainage until completing permanent drainage work.
- (2)** If storing salvaged topsoil on the right-of-way during construction operations, stockpile it to preclude interference with or obstruction of surface drainage.
- (3)** Seal subgrade surfaces as specified for subgrade intermediate consolidation and trimming in 207.3.9.
- (4)** Preserve, protect, and maintain all existing tile drains, sewers, and other subsurface drains, or parts thereof that the engineer judges should continue in service without change. Repair, at no expense to the department, all damage to these facilities resulting from negligence or carelessness of the contractor's operations.

APPENDIX D: ADDITIONAL INFORMATION SOURCES

Wisconsin State Statutes

- Wisconsin Statute Chapter 91: [Farmland Preservation](#)
 - Subchapter 91.46(4): [Conditional Uses](#)
- Wisconsin Statute Chapter 32: [Eminent Domain](#)
 - Subchapter 32.035: [Agricultural Impact Statement](#)

Department of Agricultural, Trade and Consumer Protection Website Links

- [DATCP \(datcp.wi.gov\)](#)
- [Farmland Preservation](#)
- [Agricultural Impact Statements](#)
- [Wisconsin Farm Center](#) (Information on services provided to Wisconsin farmers including financial mediation, stray voltage, legal, vocational, and farm transfers)
 - [Drainage Districts](#)

Department of Administration (DOOA) Website Links

- [DOA \(doa.wi.gov\)](#)
- [Relocation Assistance](#) (Publications on landowner rights under Wisconsin's eminent domain law)
- [Wisconsin Relocation Rights Residential](#)
- [Wisconsin Relocation Rights for Businesses, Farm and Nonprofit Organizations](#)
- [The Rights of Landowners under Wisconsin Eminent Domain Law](#), Procedures under sec. 32.06 Wis. Stats. (Condemnation procedures in matters other than highways, streets, storm & sanitary sewers, watercourses, alleys, airports and mass transit facilities)

Department of Natural Resources (facility plan) Website Links

- [DNR \(dnr.wi.gov\)](#)
- [Managed Forest Law](#)

U.S. Department of Agriculture (USDA)

- [USDA \(usda.gov\)](#)
- [National Agricultural Statistics Service](#)
- [Web Soil Survey](#)
- [Soil Quality – Urban Technical Note No. 1, Erosion and Sedimentation on Construction Sites](#)

Wisconsin Department of Safety and Professional Services (DPS)

- [DPS \(dps.wi.gov\)](https://dps.wi.gov)
- [Real Estate Appraisers](#) (Look-up for state certification status of different types of real estate appraisers)

State Bar of Wisconsin

- [State Bar of Wisconsin \(www.wisbar.org\)](http://www.wisbar.org)
- For general legal information and assistance in finding a lawyer

APPENDIX E: XCEL ENERGY BEST MANAGEMENT PRACTICES FOR THE EMERALD SUBSTATION PROJECT

General Construction Practices for Vegetation Clearing and ROW Preparation

Construction crews will begin preparing the right-of-way by clearing vegetation to ensure that construction crews will have safe access to the construction site that is free of debris. Clearing may be accomplished with mechanical equipment such as mechanized mowers, sky trips, process harvesters, feller bunchers, or brush cutters. In areas where clearing with large equipment is not viable, clearing will be done with hand tools such as chain saws or other hand tools. Merchantable timber (typically cut to 10 feet in length) will be managed in accordance with landowner agreements and applicable permits and licenses. All materials a landowner has requested to keep are stacked outside the ROW. All materials a landowner does not wish to keep are stacked inside the ROW for further processing and disposition. Any materials a landowner does not wish to keep will be removed from their property. These materials will likely be disposed of at a landfill or another appropriate location, to be determined by the clearing contractor.

Vegetation within temporary workspace areas will be cut at or slightly above the ground surface. Any stumps outside of managed residential grass areas will typically be cut or ground such that no more than two inches remain above grade. Xcel Energy does not typically grub stumps or roots to minimize soil impacts and erosion potential; however, stump removal may be necessary in some locations to facilitate the movement of construction vehicles, or when requested by the landowner.

Xcel Energy will create an approximately 30 feet wide travel lane within the ROW typically using composite, laminated or timber construction mats to allow for the safe passage of construction vehicles and equipment. In wetland areas, construction mats will be installed along the travel lane within the construction workspace to minimize ground disturbance. Construction mats may also be used in other conditions, such as unstable soils, as needed. Mat travel lanes are typically a single layer; however, there may be cases in saturated areas where more than one layer of mats must be placed to provide a stable working surface.

Prior to the start of any land disturbing activity, temporary sediment and erosion control best management practices (BMPs) will be installed along the boundaries of the construction workspace and sensitive resources.

Mitigation or Minimization of Construction Impacts in and around Agricultural Lands

Potential construction-related impacts on agriculture will generally be short term in nature, and would primarily consist of crop losses, soil mixing, and/or soil compaction along equipment access routes and around structure installation sites. Xcel Energy would mitigate these short-term impacts by providing compensation to producers, and by restoring agricultural lands to an

extent practicable. Where appropriate, mitigation techniques such as topsoil replacement and deep tilling will be utilized.

NEV and Induced Voltage Issues

Induced voltage or “stray voltage” is a condition that can potentially occur on a property or on the electric service entrances to structures from distribution lines connected to these structures - not transmission lines as proposed here. The term generally describes a voltage between two objects where no voltage difference should exist. More precisely, stray voltage is a voltage that exists between the neutral wire of either the service entrance or of premise wiring and grounded objects in buildings such as barns and milking parlors. The source of stray voltage is a voltage that is developed on the grounded neutral wiring network of a building and/or the electric power distribution system.

Transmission lines do not, by themselves, create stray voltage because they do not connect directly to businesses or residences. Transmission lines, however, can induce voltage on a distribution circuit that is parallel and immediately under the transmission line. If the proposed transmission lines are parallel or cross distribution lines, appropriate mitigation measures can be taken to address any induced voltages. For additional information regarding stray voltage, please see the PSC page on Stray Voltage Guide that is available online at <https://psc.wi.gov/Pages/Programs/StrayVoltageHomePage.aspx>, or contact your electrical utility provider.

Farming Operations, Vehicle use, and Metal Buildings near Power Lines

The power lines will be designed to meet or exceed minimum clearance requirements with respect to electric fencing as specified by the NESC. Nonetheless, insulated electric fences used in livestock operations can be instantly charged with an induced voltage from transmission lines. The induced charge may continuously drain to ground when the charger unit is connected to the fence. When the charger is disconnected either for maintenance or when the fence is being built, shocks may result. The local electrical utility can provide site specific information about how to prevent possible shocks when the charger is disconnected.

Farm equipment, passenger vehicles, and trucks may be safely used under and near power lines. The power lines will be designed to meet or exceed minimum clearance requirements with respect to roads, driveways, cultivated fields and grazing lands as specified by the NESC. Recommended clearances within the NESC are designed to accommodate a relative vehicle height of 14 feet.

Vehicles, or any conductive body, under high voltage transmission lines will be immediately charged with an electric charge. Without a continuous grounding path, this charge can provide a nuisance shock. Such nuisance shocks are a rare event because generally vehicles are effectively grounded through tires. Modern tires provide an electrical path to ground because carbon black, a good conductor of electricity, is added when they are produced. Metal parts of farming equipment are frequently in contact with the ground when plowing or engaging in various other activities. Therefore, the induced charge on vehicles will normally be continually flowing to ground unless they have unusually old tires or are parked on dry rock, plastic, or other surfaces that insulate them from the ground.

Buildings are permitted near transmission lines but are generally discouraged within the ROW itself because a structure under a line may interfere with safe operation of the transmission facilities. For example, a fire in a building on the right-of-way could damage a transmission line. As a result, NESC guidelines establish horizontal and vertical clearances for transmission facilities. Metal buildings may have unique issues. For example, conductive buildings near power lines of 200 kV or greater must be properly grounded. Any person with questions about a new or existing metal structure can contact Xcel Energy for further information about proper grounding requirements.

Xcel Energy will design and construct the proposed facilities to minimize the potential for induction issues. Additionally, Xcel Energy will work with the owners of the potentially impacted facilities to address their concerns.

**APPENDIX F: XCEL ENERGY’S RESPONSE TO
RECOMMENDATIONS**

See next page

Agricultural Impact Statement (AIS) Program: Project Initiator Response to AIS Recommendations

Respondent's Name	<u>Cameron Bump</u>	Project Name	<u>Emerald Substation and 115 kV Transmission Line Project</u>
Date of Respondent's Response	<u>02/12/2025</u>	Project Initiator	<u>Xcel Energy/Northern States Power - WI</u>
Date of DATCP Response	<u>02/17/2025</u>	AIS #	<u>4623</u>

AIS Recommendation to Project Initiator	Project Initiator Response / Comments / Objections	AIS Program Response / Action
1. The Department recommends Xcel Energy follow all the additional recommended mitigation efforts described in Section 5.5.1 through Section 5.5.7 to mitigate Project impacts to or regarding: topsoil mixing, soil compaction, drainage, de-watering, erosion, fencing, and weed control.	Xcel Energy will apply recommended measures as applicable and possible.	Click or tap here to enter text.
2. As part of any potential future agricultural rental agreements, Xcel Energy should consider requiring conservation practices such as but not limited to conservation tillage, cover cropping, or no-till and require the tenant operator to meet agricultural performance standards under ATCP 50.04 to maintain the health of the soils and preserve the investment.	Xcel Energy will continue to work with future agricultural renters so long as the property is not needed for utility infrastructure development.	Click or tap here to enter text.
3. If the remnant fields are no longer economically viable to farm and are not required for expansion of the substation facility, Xcel Energy should consult the Land and Water Conservation Division within the St. Croix County Community Development Department for opportunities to enroll undeveloped lands in conservation programming to positively affect drainage or pollinators in the area.	Noted	Click or tap here to enter text.
4. Xcel Energy is advised to consult the St. Croix County Land & Water Conservation Department on the existence of installed SWRM conservation practices within the Project area.	Noted	Click or tap here to enter text.
5. As Tax Parcel ID 002100650000 is currently operated by a renter, Xcel Energy should disclose the availability of any remnant fields for future agricultural use.	Xcel Energy will continue to work with future agricultural renters so long as the property is not needed for utility infrastructure development.	Click or tap here to enter text.

Agricultural Impact Statement (AIS) Program: Project Initiator Response to AIS Recommendations

6. The Department recommends that Xcel Energy reach out to landowners proposed to be impacted individually to explain Project details as early as practical.	Public outreach is planned.	Click or tap here to enter text.
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**WISCONSIN DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION**

**DIVISION OF
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