



CONSERVATION PLAN

USS Valley Solar LLC

Cass County, Illinois

FEBRUARY 13, 2024

PREPARED FOR:

US/SOLAR

PREPARED BY:

Westwood

Conservation Plan

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Table of Contents

- 1.0 Introduction.....1**
- 2.0 Conservation Plan.....1**
 - 2.1 Purpose and Need 1
 - 2.2 Project Location and Description..... 1
 - 2.3 Protected Species 2
 - 2.3.1 Illinois Chorus Frog and Habitat 3
 - 2.3.2 Ornate Box Turtle and Habitat 3
 - 2.3.3 Plains Hog-nose Snake and Habitat 4
 - 2.4 Incidental Take Authorization (ITA) Request..... 4
 - 2.5 Project Effects 4
 - 2.5.1 Construction Sequence and Schedule 4
 - 2.5.2 Decommissioning 5
 - 2.5.3 Project Elements 6
 - 2.6 Potential Adverse Impacts 7
 - 2.7 Efforts to Minimize and Mitigate Impacts to Listed Species 8
 - 2.8 Adaptive Management 10
 - 2.9 Cascading Effects..... 11
 - 2.10 Conservation Plan Funding..... 11
 - 2.11 Assessment of Take 11
- 3.0 Project Alternatives12**
 - 3.3 No-Action Alternative 12
 - 3.4 Relocate within the Project..... 12
 - 3.5 Current Project Design..... 13
- 4.0 Implementing Agreement.....13**
 - 4.1 Responsibilities and Schedules 13
 - 4.2 Certification..... 13
 - 4.3 Compliance with Federal, State and Local Regulations..... 14
- 5.0 References 14**

Tables

- Table 1: Land Cover types within the Project2
- Table 2: Soil types within the Project.....2
- Table 3: General Construction and Installation Schedule and Sequence.....5
- Table 4: Permanent Impact Elements and Size.....8

Appendices

- Appendix A: Exhibits
- Appendix B: IDNR Correspondence
- Appendix C: Web Soil Survey Results
- Appendix D: Plant List
- Appendix E: Solar Construction Layout
- Appendix F: USGS NAAMP Data Sheet

List of Abbreviations

AIMA	Agricultural Impact Mitigation Agreement
Applicant	United States Solar Corporation
BMPs	Best Management Practices
CEJA	Climate and Equitable Job Act
CP	Conservation Plan
DC	Direct Current
EcoCAT	Ecological Compliance Assessment Tool
EO	Element Occurrence
ESA	Endangered Species Act
ICF	Illinois Chorus Frog
IDNR	Illinois Department of Natural Resources
ITA	Incidental Take Authorization
KM	Kilometers
LVac	Low Voltage AC
MRLC	Multi-Resolution Land Characteristics Consortium
MW	Megawatt
MVac	Medium Voltage AC
NAAMP	North American Monitoring Protocols
NLCD	National Land Cover Database
NPDES	National Pollutant Discharge Elimination System
OBT	Ornate Box Turtle
O&M	Operation and Maintenance
T&E	Threatened and Endangered Species
PHNS	Plains Hog-nosed Snake
Project	USS Valley Solar LLC
PV	Photovoltaic
USGS	U.S. Geological Survey
Westwood	Westwood Professional Services

1.0 Introduction

This Conservation Plan (CP) has been prepared for the USS Valley Solar LLC (Project) in accordance with Title 17, Chapter I(c), Section 1080 of the Illinois Administrative Code (Incidental Taking of Endangered or Threatened Species). In accordance with Section 1080, the Illinois Department of Natural Resources (IDNR) can authorize the incidental take of species listed as endangered or threatened by the State of Illinois with an approved Conservation Plan (CP). On behalf of the United States Solar Corporation (Applicant), Westwood Professional Services (Westwood) has prepared this CP for the Illinois chorus frog (*Pseudacris illinoensis*; ICF), ornate box turtle (*Terrapene ornate*; OBT), plains hog-nosed snake (*Heterodon nasicus*; PHNS) in support of the Applicant's effort to develop a photovoltaic (PV) solar farm at the USS Valley Solar LLC site (Project Area).

2.0 Conservation Plan

2.1 Purpose and Need

Consultation with the IDNR was requested through the Ecological Compliance Assessment Tool (EcoCAT) program on August 7, 2023 (**Appendix B**). Results of the EcoCAT indicated the potential need for an Incidental Take Authorization (ITA) for the state threatened ICF, OBT, and PHNS. A review of the Illinois Natural Heritage Database also indicated Element Occurrences (EO) for the ICF, OBT, and PHNS within the Project or surrounding region (NatureServe 2024a-c). A pre-application meeting for the ITA was held on September 22, 2023, to discuss plan requirements and expectations (**Appendix B**).

Additional surveys (i.e., habitat assessment, call-back surveys) were not conducted as part of this CP development and probable presence of ICF, OBT, and PHNS were assumed on site based on the availability of suitable habitat (i.e., loose loamy soil and seasonally flooded fields in the vicinity). As a result of this documented presence, the Project Area is considered by IDNR to contain suitable habitat for ICF, OBT, and PHNS regardless of whether additional surveys documented suitable habitat or the presence of frogs. Therefore, the Applicant has chosen to assume presence of ICF, OBT, and PHNS within the Project Area and forego additional surveys.

This CP addresses the potential impacts to the ICF, OBT, and PHNS due to the construction of the 19.5-acre 3.3-megawatt (MW) ground mounted solar facility. This Project is part of the effort to develop clean renewable energy sources within the state of Illinois. The Project was submitted to the Illinois Adjustable Block Program to work towards the Climate and Equitable Job Act (CEJA). CEJA obligates the Commission to take various actions to implement new programs, initiatives, and directives to further the state's goals of the following: (1) transitioning to 100 percent clean energy; (2) supporting a responsible transition away from carbon-intensive power generation; (3) increasing public participation in regulatory matters; and (4) encouraging further diversity and inclusion within the renewable energy industry. Implementation of CEJA, which contains changes to numerous statutes related to utility regulation, will likely require revisions to various Commission rules as well as other processes and procedures.

2.2 Project Location and Description

The Project Area is located in Beardstown Township, Cass County, Illinois, immediately southwest of the intersection of S Beardstown Drainage Road and Boulevard Road (**Exhibit 1: Appendix A**). The municipal boundaries of Beardstown, Illinois, are located approximately 0.75

miles north and 0.57 miles east of the Project Area. The elevation of the Project Area is relatively flat and ranges from 438 to 444 feet above mean sea level, gradually increasing to the northeast/east. According to the Multi-Resolution Land Characteristics Consortium (MLRC; 2019) National Land Cover Database (NLCD), the Project Area is predominantly cultivated croplands with lesser areas of woody wetlands (**Exhibit 2: Appendix A**) (**Table 1**). Surrounding land areas are consistent with the land-use and habitat types as those in the Project Area. Soils mapped within the Project were generally sandy (USDA 2023) (**Exhibit 3: Appendix A**). The Project Area consisted of Gilford fine sandy loam, Ambraw clay loam, Sparta loamy sand, Watseka loamy fine sand, and Hoopeston sandy loam (**Table 2, Appendix C**). A desktop wetland analysis identified no wetlands within the Project Area (**Exhibit 4: Appendix A, Appendix C**). Westwood conducted a field wetland delineation October 18, 2023, to confirm the presence/absence of wetlands within the Project. No wetlands were observed within the Project Area during field reconnaissance.

The Project Area consists of 19.5-acres. Of those 19.5 acres, there will be permanent impacts to 0.31 acres of the land, including roadways, equipment pads, fencing, and solar array foundations. The Project is a 3.3-MW AC ground-mounted utility solar energy facility capable of providing clean, renewable energy to approximately 574 Illinois homes. The permanent impacts account for approximately 1.6% of the Project.

The Project is located on a property owned by a private landowner, who lives in Illinois. The Applicant has a lease on the property for the development and operational life of the Project and will be the long-term owner and operator of the Project.

Table 1: Land Cover types within the Project

Land Classification	Acres	Percentage
Cultivated Cropland	19.33	99.1
Woody Wetlands	0.17	0.9
Total	19.5	100

*Values rounded to the nearest tenth

Table 2: Soil types within the Project

Soil Classification	Acres	Percentage
Gilford fine sandy loam	13.6	69.8
Ambraw clay loam	4.0	20.4
Hoopeston sandy loam	1.0	5.1
Sparta loamy sand	0.6	3.3
Watsseka loamy fine sand	0.3	1.3
Total	19.5	100

*Values rounded to the nearest tenth

2.3 Protected Species

Consultation with IDNR was requested through the EcoCAT program on August 7, 2023, (**Appendix B**) for the proposed Project. Potential habitat for one species listed pursuant to the ESA of 1973 (as amended) and the Illinois Endangered Species Act (520 ILCS 10/7) was identified as potentially occurring within the Project Area. The IDNR identified the presence of nearby ICF, OBT, and PHNS records, low-lying areas suitable for ephemeral spring flooding, and sandy soil all in or within the vicinity of the Project.

2.3.1 Illinois Chorus Frog and Habitat

The largest threat to ICF is loss of breeding habitat and habitat fragmentation caused by agricultural use and development, as well as the draining of ephemeral wetlands and flooded fields (NatureServe 2024d, Brown and Rose 1988). Additional causes of population-level declines include highway construction, water contamination, chemical spills, competition from bullfrogs (*Lithobates catesbeianus*), and predation from fish in breeding ponds (NatureServe 2024d).

Remanent populations of ICF are found in floodplains along the Illinois, Ohio, and Mississippi Rivers in Illinois, Missouri, and Arkansas (IDNR 2011, NatureServe 2024d). In Illinois, ICFs are restricted to sandy areas along the lower portion of the Illinois River floodplain, including areas within Cass County (IDNR 2011). They rarely utilize forested habitat but may be found in savanna habitat (Henning and Hinz Jr 2016).

ICF are considered habitat specialists and require areas with sandy soil, such as dry-mesic sand prairies, cultivated fields, and open sandy areas of river lowlands for burrowing (NatureServe 2024d). They spend a majority (approximately 85 percent) of their life underground and prefer areas of loose soil with sparse vegetation (Tucker 2008, NatureServe 2024d). Agricultural lands are typically avoided by ICF; however, agricultural areas may be used as travel corridors between aestivation and breeding locations (Tucker and Phillips 1995).

In early spring, ICF emerge after heavy rains from burrows for breeding (February – April) where they travel to nearby shallow, isolated waters, such as ephemeral ponds, sloughs, flooded fields, and ditches (IDNR 2011, NatureServe 2024d). Larger bodies of water with currents are not suitable breeding habitat (Brown and Rose 1988). Females lay a clutch of over 400 eggs in multiple isolated clutches on twigs or grass that will eventually emerge from the water; tadpoles mature into their terrestrial form about two months following hatching and travel to sandy areas to burrow in late May or June (IDNR 2011, NatureServe 2024d). ICF typically do not travel more than one kilometer (km) between their aestivation and breeding locations (Tucker and Phillips 1995).

2.3.2 Ornate Box Turtle and Habitat

The major threats to OBT populations are caused by habitat fragmentation and degradation of native prairie habitat due to urbanization including agricultural practices and development of roads (NatureServe 2024e, Habeck et al. 2019). Additional causes to population-level declines include over-collecting individuals for illegal pet trade (NatureServe 2024e, Habeck et al. 2019).

In Illinois, OBT populations are small and isolated and span across several counties throughout the northern, central, and southern portions of the state (Mankowski 2010, IDNR 2024a). OBT prefer sandy prairie habitat, in which they burrow, nest and overwinter; they burrow in the ground to escape heat in the summer and in the winter due to the cold and limited food resources (IDNR 2024a). OBT require three types of habitats in a given area including feeding areas consisting primarily of grassland/prairie habitat with access to water, nesting sites, which are often the same burrows females will use for overwintering, and thermoregulatory sites in which partial or total burial in soft soil are used to avoid extreme temperatures and to maintain water balance during the extreme winter and summer months (Redder et al. 2006, IDNR 2024a).

OBT overwinters by burrowing in sandy soils and emerges in the spring for breeding; overwintering typically occurs in September or October and spring emergence occurs in April or May with breeding primarily in June (Redder et al. 2006, IDNR 2024a). They may also use grasses or burrows of other animals. Females may lay more than one clutch per year and deposit four to

six eggs in a nest during June or July, often at the edge of a woodland (IDNR 2024a). Eggs begin to hatch in September or will overwinter in the burrow and hatch the following spring depending on climatic factors (Redder et al. 2006, IDNR 2024a).

OBT movement is strongly associated with climatic factors, including air temperatures (Redder et al. 2006). They forage on a variety of foods including insects, snails, earthworms, tadpoles, carrion, eggs, berries, and other plant materials, depending on availability of resources accessible locally and temporally (Redder et al. 2006, IDNR 2024a). Home ranges, an area which a species regularly travels in search of food and mates, for OBT average 7.54 hectares (ha) (18.63 acres) (Habeck et al. 2010) and some individuals may travel more than two or three km outside of known home ranges (NatureServe 2024e).

2.3.3 Plains Hog-nose Snake and Habitat

Major threats to the PHNS population include habitat loss and degradation of suitable sand prairie habitat caused by conversion to agricultural, pine (*Pinus* spp.) plantations, Christmas tree farms, and developed land (IDNR 2024b, NatureServe 2024f, Wright and Didiuk 1998). Additional threats include over-collecting for illegal pet trade and road mortality (NatureServe 2024f, Wright and Didiuk 1998).

In Illinois, the PHNS can be found along the central Illinois River and the upper Mississippi River and requires areas with sandy or loose soil, including sand prairies, savannas, and nearby forested habitat (IDNR 2024b, NatureServe 2024f, Baird and Girard 1852, Averill-Murray 2006). PHNS shelters and overwinters in abandoned small mammal burrows in loose sandy soils (IDNR 2024b, Averill-Murray 2006). Mating occurs in April and May; females deposit between eight and 20 eggs in loose sandy or loamy soil in July with hatching occurring in August or September (NatureServe 2024f, IDNR 2024b).

PHNS are diurnal and are most active at dusk; they burrow during mid-day and at night (Averill-Murray 2006). They prey on lizards, toads, frogs, eggs, birds, and small mammals (NatureServe 2024f, IDNR 2024b, Baird and Girard 1852). PHNS use their specialized head and digging adaptation to loosen soil during burrowing and foraging for prey (Averill-Murray 2006). Home ranges for individual PHNS span between 25-100 ha (61.7-271.1 acres) but is believed to be less than 100 ha (NatureServe 2024f). PHNS may move between 277 feet to 785 feet (0.5 miles to 0.15 miles) outside of their home range and have been reported to travel as far as one mile (MNDNR 2024).

2.4 Incidental Take Authorization (ITA) Request

In consideration of the Project location, proposed design, and anticipated impacts as described in the following section, it was determined that there is the potential for incidental take of the ICF, OBT, and PHNS which is covered by this Conservation Plan. An ITA is requested to cover the duration of construction and the anticipated 30-year life of the Project.

2.5 Project Effects

2.5.1 Construction Sequence and Schedule

Construction activities and infrastructure may have the potential to alter habitat for the ICF, OBT, PHNS and affect individuals. Changes in the habitat can result from construction activities and seasonal timing. Construction activities will largely take place within the array footprint, with the bulk of the work taking place in September 2024 through January 2025. A generalized month-to-

month schedule for construction and installation is as follows:

Table 3: General Construction and Installation Schedule and Sequence

Month (2024)	Construction Activities
September	Site mobilization, silt fence installation
October	Surveying and staking, begin civil work
November	Grading and road work, pad excavation, localized trenching, site fence installation, begin pile installation
December	Pile installation, racking installation, solar panel installation, wire installation, localized trenching, pad construction
January (2025)	Laydown yard restoration, seed mix planting, site inspection, performance testing, site operation

2.5.2 Decommissioning

Commercial scale solar facilities are expected to have an operational life of approximately thirty years. For the purpose of this CP, upon expiration of the operational life of the proposed solar facility, the Project facilities will be removed, and the Project property will be restored pursuant to the Cass County approved Conditional Use Permit. Cass County Zoning Ordinance and Agricultural Impact Mitigation Agreement (AIMA) per the Illinois Department of Agriculture may also require consultation upon the expiration of the Project’s operational life. It has also been assumed that the decommissioning process will initiate upon the termination of the lease with the landowner.

All solar components, including Project facilities constructed above ground and any structures at a minimum of four feet below-grade will be removed offsite, except for (1) access roads or driveways on private property upon property owner request in writing to the Project for the roads to remain, and (2) interconnection facilities or other similar utility facilities not owned by the Project at the time of decommissioning.

Decommissioning will occur over a twelve-month period and will coordinate with Cass County and others pursuant to the AIMA prior to the start of any decommissioning processes. Once decommissioning activities are completed, the restoration process will begin on site. The restoration will occur over a maximum of a six-month period, and all decommissioning and restoration shall be completed within a one-year period. IDNR will be consulted prior to any decommissioning activity.

The anticipated sequence of decommissioning and removal involves the following; however, an overlap of activities is expected:

1. Removal of the perimeter fences,
2. Removal of all PV modules,
3. Removal of all metal structures (mounting racks and trackers),

4. Removal of steel piles,
5. Removal of aboveground and underground cables,
6. Removal of equipment pads and concrete foundations,
7. Removal of access roads (or restoration, if requested by landowner),
8. Restoring the premises to its original condition.

Post-construction activities will include retaining topsoil, restoring, and revegetating disturbed land with a native seed mixture or as otherwise agreed to with the landowner (**Appendix D**).

2.5.3 Project Elements

The elements for the Project include the site access road, solar arrays, inverters, battery pads, step-up transformer, above and below grade cabling, interconnecting facilities, site fencing, and laydown yards for storage of construction materials and equipment (**Appendix E**).

One temporary laydown yard will be established within the Project fence, along the western Project boundary and along the access road to ease offloading of supplies transported to the site, store construction materials, reduce construction traffic by large transport vehicles, and stage project tasks. The laydown yard will be connected to the site access road. The laydown yard will be constructed from a layer of gravel with topsoil being stripped prior to placement of gravel. The laydown yard will encompass approximately 0.5-acres in total to accommodate storage of construction materials and a job trailer. Once construction of the Project is completed, the gravel will be removed to restored to pre-construction soil conditions. The impacts to habitat from the laydown yard are temporary.

The access road for the project will be constructed of aggregate surface, a geotextile fabric, and scarified/compacted subgrade placed approximately 8 inches thick. Paving materials will be placed upon rough graded site soils following establishment of grades. The access road is to be 12 feet wide with approximately 915 linear feet of access roadway. The access road is required to provide access to the site for ongoing monitoring and maintenance and is intended to remain for the life of the Project. As such, the access road is considered a permanent impact to the habitat.

Panels are designed to adjust module angles throughout the day to track the sunlight. As a result, the height of the panels above grade can vary from 2.5 to 11 feet based on tilt angle and pile reveal height. The on center spacing between module rows is anticipated to be 13.9 feet module to module and 21.4 feet pitch. The seed mix selected to be planted beneath the panels will be selected to include native short grass prairie species and forb species requiring minimal disturbance from maintenance. The same seed mix will be planted between the rows to reduce the impact from shading of the panels from vegetation. A seed mix is included in **Appendix D**. Cass County permits do not require vegetation screening for the perimeter inside the fence.

The solar panels, which will be elevated above ground and positioned on piles, are considered to have neither permanent nor temporary impacts on the habitat. In comparison to active row crop agriculture, solar farming will allow for establishment of more favorable plant communities for the ICF, OBT, and PHNS.

The racking systems are supported by galvanized steel “I” beam sections sized W6 and installed 12 to 16 feet below ground level. The piles are installed by a pile-driven method. The racking systems will require 1,940 piles to be installed, which will remain in place for the life of the Project and are considered a permanent impact to the habitat.

Step-up transformers will convert the voltage of produced electrical current to the line voltage of

the utility grid. Two step-up transformers will be located on site. Concrete pads will be constructed to mount the transformers. Pads will be constructed of concrete and will be approximately 8 feet by 25 feet in extent. Inverters will be mounted on driven piles similar to the solar array. The concrete transformer pads are permanent structures for the duration of the Project and are considered permanent impacts to the habitat.

Battery energy storage systems (BESS) will store electrical energy generated from the solar plant. Two BESS will be located on site. Concrete pads will be constructed to mount the batteries. Pads will be constructed of concrete and will be approximately 13 feet by 47 feet in extent. The concrete battery pads are permanent structures for the duration of the Project and are considered permanent impacts to the habitat.

LVac and MVac underground cables will connect the panel modules to the electrical panels on the equipment pad. DC and LVac underground wires are planned to be placed within the conduit and MVac cables will be directly buried approximately 3 to 5 feet below grade. The cables will be placed underground via trenching, with trenches being approximately 3 feet wide per cable. Any topsoil that is removed during trenching activities will be replaced in accordance with National Pollutant Discharge Elimination System (NPDES) permit requirements. Trenching associated with electrical wiring placement is considered a temporary impact.

A security fence will be constructed around the perimeter of the Project. The fence will be 7 feet tall maximum height made of a wood post and agricultural fabric. Fencing will be constructed with a 6-inch gap at the bottom to allow small animal passage; thus, the fence wire will have minimal to no impact on habitat. Approximately 500 support posts are expected to be installed, with posts being spaced every 8 feet. Support posts will remain in place for the life of the Project and are considered a permanent impact to the habitat.

Decommissioning is the approximate mirror image of the construction process. In contrast, all of the impacts during decommissioning are considered to be temporary.

2.6 Potential Adverse Impacts

The potential adverse impacts of the Project on ICF, OBT, and PHNS can be divided into two categories: (1) *temporary* impacts and (2) *permanent* impacts. During construction, temporary and permanent disturbances will occur within the Project. Timing of the construction activities will be considered to minimize impacts to ICFs, OBTs, and PHNSs. During construction, there may be inadvertent impacts from construction vehicles to the ICF, OBT, and PHNS. Outside of the breeding season in early spring, ICF rarely leave their burrows and, as such, are unlikely to encounter construction vehicles or personnel, unless there is soil disturbance. Additionally, PHNS are mainly active at dusk and are unlikely to encounter construction vehicles or personnel throughout the day. Compact soils will be used around equipment pads and trenches so PHNS and their prey cannot burrow, therefore, it is unlikely PHNS will be injured by electrical equipment. Construction during the ICF, OBT, and PHNS breeding season could result in mortality of these species from construction vehicles and disturbance of effective ICF calling due to construction noise.

The Project will undergo temporary activities and impacts to soils that may provide suitable habitat for ICF, OBT, and PHNS. Temporary activities may include vehicle travel, temporary laydown yards, temporary trenches, and vegetation maintenance. These temporary activities could result in negative effects to ICF, OBT, and PHNS. Temporary adverse impacts to sandy soils that ICF, OBT, and PHNS utilize may also occur due to grading. Permanent impacts to the Project include installation of access roadways, equipment pads, security fencing, and solar panel

foundations. These permanent impacts reduce the available suitable habitat within the Project as enumerated in **Section 2.2**.

Once constructed, occasional vehicle entries and vegetation management will be necessary until the Project reaches the end of its operational life and is decommissioned in approximately 30 years. Potential adverse impacts could result from inadvertent impacts to ICF, OBT, and PHNS from vehicles driving on access roads during site visits, which may result in direct mortality caused by crushing ICF, OBT, and PHNS individuals. However, the solar facility should be a less disruptive land use than active intensive agricultural practices. Additionally, the Project infrastructure will prevent wildlife usage within certain areas. Areas that will become inaccessible or converted to unsuitable habitat for the 30-year lifetime of the Project includes areas of cement or stone inverter pads, fence posts, and solar panel support beams; 0.31 acres of loamy and sandy soil will be impacted during the Projects approximate 30-year lifetime (**Table 4**).

Table 4: Permanent Impact Elements and Size

Element	Estimated Area of Impact (Acres)
Access Road	0.25
Fence Posts	0.01
Battery Pads	0.03
Transformer Pads	0.01
Solar Array Foundation Piles	0.01
Total	0.31

2.7 Efforts to Minimize and Mitigate Impacts to Listed Species

Based on the habitat requirements for the ICF, OBT, and PHNS and the proposed scope of the solar project, the following efforts to minimize *temporary* negative impacts to the ICF, OBT, and PNS were developed:

- Implementation of Best Management Practices (BMPs) to avoid erosion and sedimentation to wetland habitats to mitigate negative impacts per the Soil Erosion and Sedimentation Control (SESC) permit requirements. There will be no reduction in acres of wetlands due to Project construction.
- Active work areas within the Project will be assessed daily for sightings of ICF, OBT, and PHNS.
- Daily tailgate meeting will include information on ICF, OBT, and PHNS identification, avoidance, and maintaining BMPs to avoid adverse impacts of these species and their habitat.
- Laydown yards will be sited to avoid areas of sandy soil to the best possible extent.
- Pre-construction conditions of ICF habitat within the Project will be documented with on-site photographs prior to construction activities.
- Construction personnel will receive environmental training prior to Project construction. The training will focus on the identification, lifecycles, vulnerabilities, and reporting procedures regarding the ICF, OBT, and PHNS.
- In September, silt fencing will be installed around the perimeter of the Project at a

minimum depth of 6-inches to prevent OBT searching for brumination sites from settling inside the Project Area.

- Security fences around the Project will be designed to allow for unrestricted passage of the ICF, OBT, and PHNS.
- Daily construction work hours from February – March will conclude prior to sunset to reduce risk to ICF.
- Trenches will be refilled within 12 hours of excavation. Trenches that are left open for more than 12 hours or left open overnight will be inspected for ICF presence before refilling. If found, ICF will be moved by a qualified Biologist prior to trench filling.
- If applicable, areas of grading and excavation in sandy soils, topsoil will be removed from the area and set aside for replacement upon completion of construction activities.
- A qualified biologist will be present daily during the ICF breeding season (February – April) if construction activities are taking place. If ICF are observed, location will be documented with GPS and photographs and immediately reported to IDNR.
- Native seed mixes will be planted to reestablish vegetation in disturbed areas. Areas beneath and around the solar arrays will be seeded with a low-growing, shade-tolerant, perennial seed mix. This mix may be comprised of warm and cool-season grasses that do not typically exceed height of one foot, thus eliminating concerns for panel shading and reducing mowing frequency.
- The conditions of the reseeded areas will be documented every five years following Project construction. The survey will (1) determine if prairie species are present for the ICF, OBT, and PHNS; and (2) evaluate if invasive species are present. The results of the vegetation monitoring will be submitted to the IDNR ITA Coordinator within one month of the field surveys.
- IDNR will be notified immediately if there are issues with the effectiveness of the above avoidance measures. If no issues are encountered, that documentation will be included in the post construction report.

During construction, there will be an impact on the entire Project, laydown yards, and access road. Other than grading for the access road, equipment pads, and minor array grading, site grading is not anticipated. Site preparation for the preferred vegetation is anticipated to include mowing the site with a flail mower followed by no-till drill seeding. Trenching of electrical cables are considered to be temporary impacts, and the trenched areas will be backfilled. Post construction, the laydown yards will be removed, and the site will be seeded with a native seed mixture (**Appendix D**). The site access roads, equipment pads, and solar array foundations will remain for the duration of the Project's operational life. In the event of maintenance, vehicles will only travel on site access roads, and foot traffic will be the only travel throughout the Project.

Permanent impacts pertain mainly to habitat loss resulting from the Project design and, to a lesser degree, the limited potential for direct mortality during Project operations and maintenance. The following practices will be implemented to avoid, minimize, and mitigate *permanent* impacts to ICF, OBT, and PHNS:

- Fencing will be constructed with a 6-inch gap at the bottom to allow small animal passage.
- Areas adjacent to access roads will have a 5-foot-wide vegetative buffer planted with a native seed mix compatible with ICFs, OBTs, and PHNSs.
- Approximately 19.19 acres of loamy soil within the Project fencing will be planted with a native seed mix. Once vegetation is established, mowing will occur after sunrise and before

sunset. In the first full growing season following construction, the Project will be mowed with a flail type mower to reduce the production of invasive and weed seeds and to reduce growth of woody vegetation.

- There will be no broadcast of herbicide spray; however, herbicides may be utilized in a targeted manner in order to reduce invasive species or kill vegetation that threatens the Projects infrastructure (i.e., woody vegetation encroachment within solar panel arrays).
- State and federal T&E species observations made during site visits to the Project will be reported to the IDNR within 48 hours.
- Annual monitoring will be conducted for the first three years after construction is complete to document vegetation and habitat condition as well as wildlife usage. Three monitoring visits will be conducted between July 1 and September 1 of each year.
- The post-construction conditions of ICF, OBT, and PHNS habitat within the Project will be documented at the same locations as the pre-construction photographs to allow for comparison of habitat conditions.
- ICF night call surveys will be conducted during early spring of the third and sixth year after construction concludes. Night call monitoring will follow the U.S. Geological Survey (USGS) North American Amphibian Monitoring Protocols (NAAMP) (**Appendix F**). The results of the ICF surveys will be submitted to the IDNR ITA Coordinator within one month of field surveys.

The permanent impact footprint to ICF, OBT, and PHNS habitat resulting from the Project is 0.31 acres. Mitigation of permanent impacts is calculated at a ratio of 5.5 acres of mitigation to every 1.0 acre of permanent impacts. The resulting mitigation total is 1.7 acres. Based on an equivalent land value of \$6,000 per acre, USS Valley Solar LLC is contributing \$10,250 to the Illinois Wildlife Preservation Fund to benefit the recovery of the ICF, OBT, and PHNS.

2.8 Adaptive Management

Adaptive management is a practice that observes Project results and modifies activities to improve outcomes as needed. The following practices will be implemented to ensure that the Project utilizes adaptive management:

- The construction team and onsite biologist will routinely monitor the implementation and effectiveness of the avoidance, minimization, and mitigation measures within this document to protect ICF, OBT, and PHNS. Should these measures become ineffective or unanticipated events occur, this plan may be adapted in coordination with IDNR.
- If a flooding event occurs, monitoring will occur, and construction may be delayed depending on the extent of the flooding. If flooding occurs during ICF breeding season, construction will be delayed due to potential ICF emergence from burrows to breed in the flooding waters; however, no construction activities are currently anticipated to occur during the ICF breeding season.
- If a drought event occurs during breeding season, ICF will unlikely emerge from their burrows and construction may continue as normal, however, no construction activities are currently anticipated to occur during the ICF breeding season.
- A spill prevention, control, and countermeasure plan (SPCC) will be used if materials or tanks present on site contain more than, or have the ability to contain more than, 1,320 gallons of petroleum products. When not in use, petroleum products will be stored in sealed containers and out of contact with the elements to prevent direct contact with stormwater. Inadvertent spills will be cleaned up immediately upon discovery and the

materials will be disposed of in accordance with local, state, and federal requirements. Contractors will have spill kits available on site for rapid deployment to contain and cleanup spills.

2.9 Cascading Effects

Currently, nearly the entire Project is comprised of cultivated cropland. These agricultural lands are typically subject to frequent tilling and plowing which may require high inputs of fertilizer, herbicides, and pesticides that negatively impact water quality and create poor quality habitat for wildlife.

An unforeseen benefit of the location of the Project is its close proximity to known ICF, OBT, and PHNS populations. These populations are likely negatively impacted due to active intensive agriculture practices. Returning this area to a low disturbance management regime and restoring natural habitats, such as sand prairie, will provide a net benefit to these species.

Reseeding of onsite vegetation is designed to provide ground cover, structural diversity, pollinator resources, and perennial soil and root structure for the ICF, OBT, PHNS and other wildlife (**Appendix D**). The restoration of the Projects 19.5-acres to natural habitat should benefit a variety of non-target species, such as birds, reptiles, amphibians, small mammal species, and insects. Although short-term adverse effects of the Project construction may occur, conversion of the 19.5-acres from agricultural practices to a natural high-quality habitat should result in benefits to the overall area's biodiversity.

2.10 Conservation Plan Funding

The Applicant has adequate financial backing to support and implement all mitigation activities described in this CP. The costs of mitigation activities will be incorporated into the overall Project budget. Therefore, no specific financial instruments, such as bonds, certificates of insurance, or escrow accounts, will be required to implement all aspects of the CP.

2.11 Assessment of Take

Illinois Chorus Frog, Orante Box Turtle, and Plains Hog-nosed Snake

This Project includes approximately 13.6 acres of Gilford fine sandy loam (69.8 percent of the Project's total area), 4 acres Ambraw clay loam (20.4 percent of the Project's total area), 1 acre Hoopeston sandy loam (5.1 percent of the Project's total area), 0.6 acres Sparta loamy sand (3.3 percent of the Project's total area), and 0.3 acres Watseka loamy fine sand (1.3 percent of the Project's total area) (**Appendix C**). In addition to the conservation measures in **Section 2.7**, the Project also proposes to restore approximately 19.19 acres of sand prairie within the Project. As a result, the Project's potential impacts resulting from take of the 0.31 acres of suitable ICF, OBT, and PHNS habitat are unlikely to reduce the survival and recovery rate of these species. Restoration activities over the 30-year operational lifespan of the Project are likely to assist in the conservation efforts of this species.

The Project is almost entirely comprised of active agricultural cropland. Spring soil plowing and row crop planting activities have the potential to significantly disrupt ICF and PHNS burrows and OBT nests especially those four inches deep. Agricultural soil tilling typically extends to approximately 8-10 inches deep below the soil surface—therefore, assuming any ICF or PHNS that burrowed and OBT that nested within the upper 8-10 inches during soil tilling activities would have been impacted. Typically, herbicide involves the use of glyphosate-based herbicides, which

occurs annually, thus impacting these species. The annual or semi-annual soil tilling, annual or semi-annual herbiciding, and persistent agricultural vehicle traffic would have had a significant, adverse impact on ICF, OBT, and PHNS populations, individuals, and their habitat.

The laydown yards and soil disturbance from cable installation are considered temporary impacts to ICF, OBT, and PHNS habitat as the materials will be removed. The solar panel modules are considered to have neither permanent nor temporary impacts on the habitat. The access roads, foundation piles, fence posts, concrete transformer, and equipment pads are permanent structures for the duration of the Projects operational lifespan and are considered permanent impacts to the habitat.

In comparison, the site activities during pre- and post-construction during normal operation of the solar facility will be significantly less disruptive. Additionally, the proposed planting of a native short grass prairie mix will improve habitat structure and biodiversity. There will be no annual soil tilling, no broadcast herbicide application, and during post-construction, sparse vehicle use. Mowing of vegetation within the Project, if appropriately timed, should have minimal-to-no impact on the ICF, OBT, and PHNS. With the elimination of tilling, plowing, and herbiciding, adverse impacts to these species should decrease. When applicable, occasional site inspections and maintenance activities will be conducted on foot and should have no adverse impacts on ICF, OBT, and PHNS. When vehicle use is necessary, vehicles will be parked on the gravel access roads.

The laydown yards and soil disturbance from cable installation are considered temporary impacts to ICF, OBT, and PHNS habitat as the materials will be removed. The solar panel modules are considered to have neither permanent nor temporary impacts on the habitat. The access roads, foundation piles, fence posts, concrete transformer, and equipment pads are permanent structures for the duration of the Projects operational lifespan and are considered permanent impacts to the habitat.

3.0 Project Alternatives

3.3 No-Action Alternative

The purpose and need for the Project are to develop clean renewable energy sources within the state of Illinois and get the state closer to its statutory requirements, established recently through CEJA, to reach 100 percent clean energy. The no-action alternative for the project would be to not construct the PV solar energy at the Project location, and as such, have no impacts on listed species. Not building the Project reduces the availability of clean, renewable power in the state to reach the statewide renewable portfolio standard. In addition, a no-action alternative would result in no change in habitat conditions for ICF, OBT, or PHNS, and existing agricultural conditions at the Project site may provide poor quality habitat for these species.

3.4 Relocate within the Project

The Project and surrounding land conditions are predominantly monoculture crop fields. An alternative to the proposed configuration of the solar arrays would be to relocate the arrays. However, shifting the Project in any direction would replace the Project's impacts on similar monocultural crop fields and would not result in significantly different outcomes based on the design being proposed. The potential impact to the ICF, OBT, and PHNS would approximately remain the same as the habitat for these three species extends across the entire Project.

3.5 Current Project Design

The current Project design provides a source of renewable energy to comply with the state's Clean Energy Job Act (CEJA), while improving local prospects for ICF, OBT, and PHNS. Although the Project design is subject to change within the selected Project site, the proposed configuration has been sited to avoid wetlands and waterways and known breeding ICF, OBT, and PHNS areas.

4.0 Implementing Agreement

The Applicant agrees to implement this CP upon approval by IDNR and issuance of the requested ITA. The Applicant would be solely responsible for meeting the terms and conditions of the ITA and would allocate sufficient personnel and resources for effective implementation of the CP. The Applicant would be responsible for planning, contract execution, and construction supervision for the entire Project.

4.1 Responsibilities and Schedules

The Applicant is the developer of the Project and will be the long-term owner/operator of the Project. The Applicant has the responsibility to acquire all necessary permits for construction and operation of the Project, including the ITA. The Applicant will have the responsibility of complying with the terms of the ITA during both construction and operation of the solar facility.

Luke Rehbein of United States Solar Corporation will serve as the CP Coordinator and will be responsible for the implementation of the best management practices, mitigation measures, and restoration activities as described in this CP. Luke Rehbein will be the IDNR liaison and inform IDNR of adaptive management measures necessary to comply with the CP. Contact information for the CP Coordinator is as follows:

Luke Rehbein
USS Valley Solar LLC
100 N. 6th Street, Suite 410B
Minneapolis, MN 55403
luke.rehbein@us-solar.com
612-791-0303

A post-construction monitoring report will be provided to the IDNR upon completion of construction activities. The report would include a description of when the Project activities were completed, BMPs that were implemented, pre- and post-construction photographs of habitat areas, an inventory of any of the protected species observed during construction activities, and inventory of ICF observed during construction activities, and any additional measures taken to further reduce potential impacts to these species.

In field project construction activities are anticipated to begin at this site in September 2024 and be completed by January 2025.

4.2 Certification

I hereby certify that all the participants listed in **Section 4.1** have the legal authority to carry out their respective obligations and responsibilities under the Conservation Plan.

By: Luke RehbeinName: Luke RehbeinTitle: Project ManagerDate: 1/10/2024

4.3 Compliance with Federal, State and Local Regulations

The Applicant will comply with all pertinent Federal, State, and local regulations that govern the proposed Project and will provide copies of authorizations that could affect the terms and conditions of any ITA authorized by the IDNR for this Project.

5.0 References

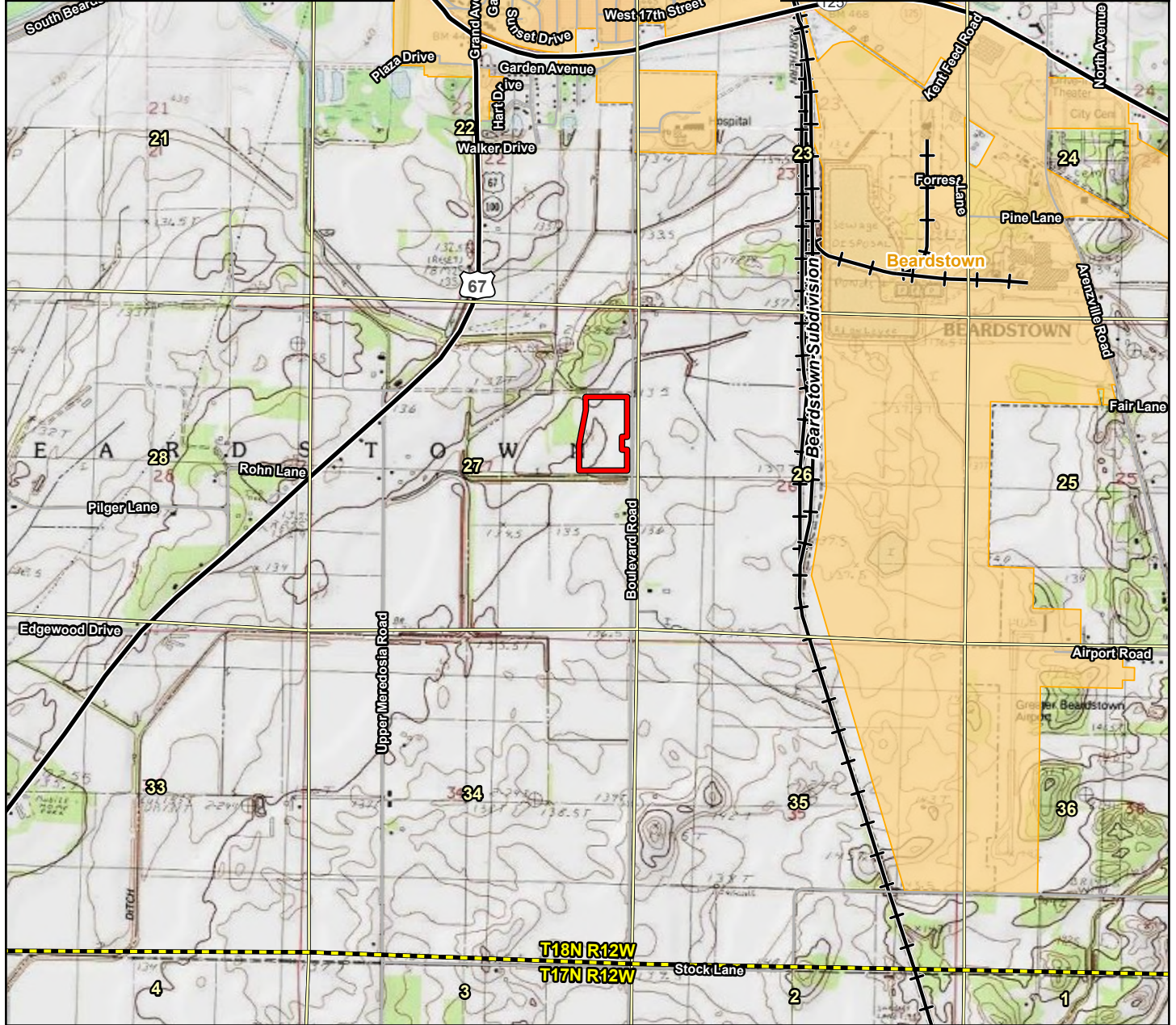
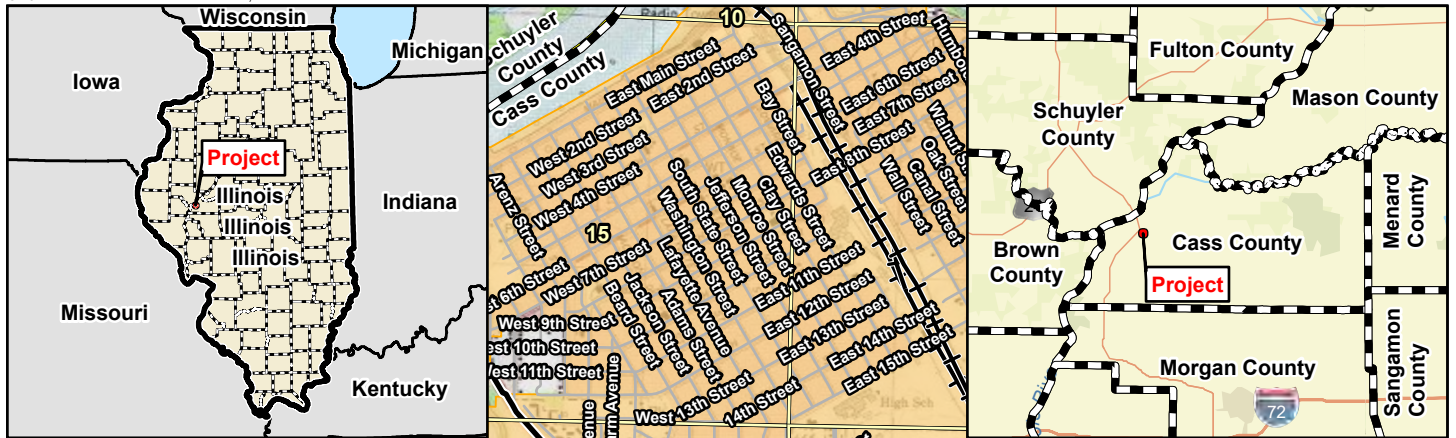
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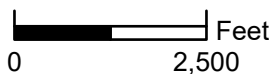
Appendix A: Exhibits

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois



Data Source(s): Westwood (2024); ESRI WMS USA Topo & World Streets Basemaps (Accessed 2023); PLSS (2022); U.S. Census Bureau (2021 & 2022); OpenStreetMap (2023).

- Legend**
- Project Area
 - PLSS Township
 - Municipal Boundary
 - PLSS Section
 - State Boundary
 - Major Road
 - Local Road
 - County Boundary
 - Railroad



Westwood

Toll Free (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

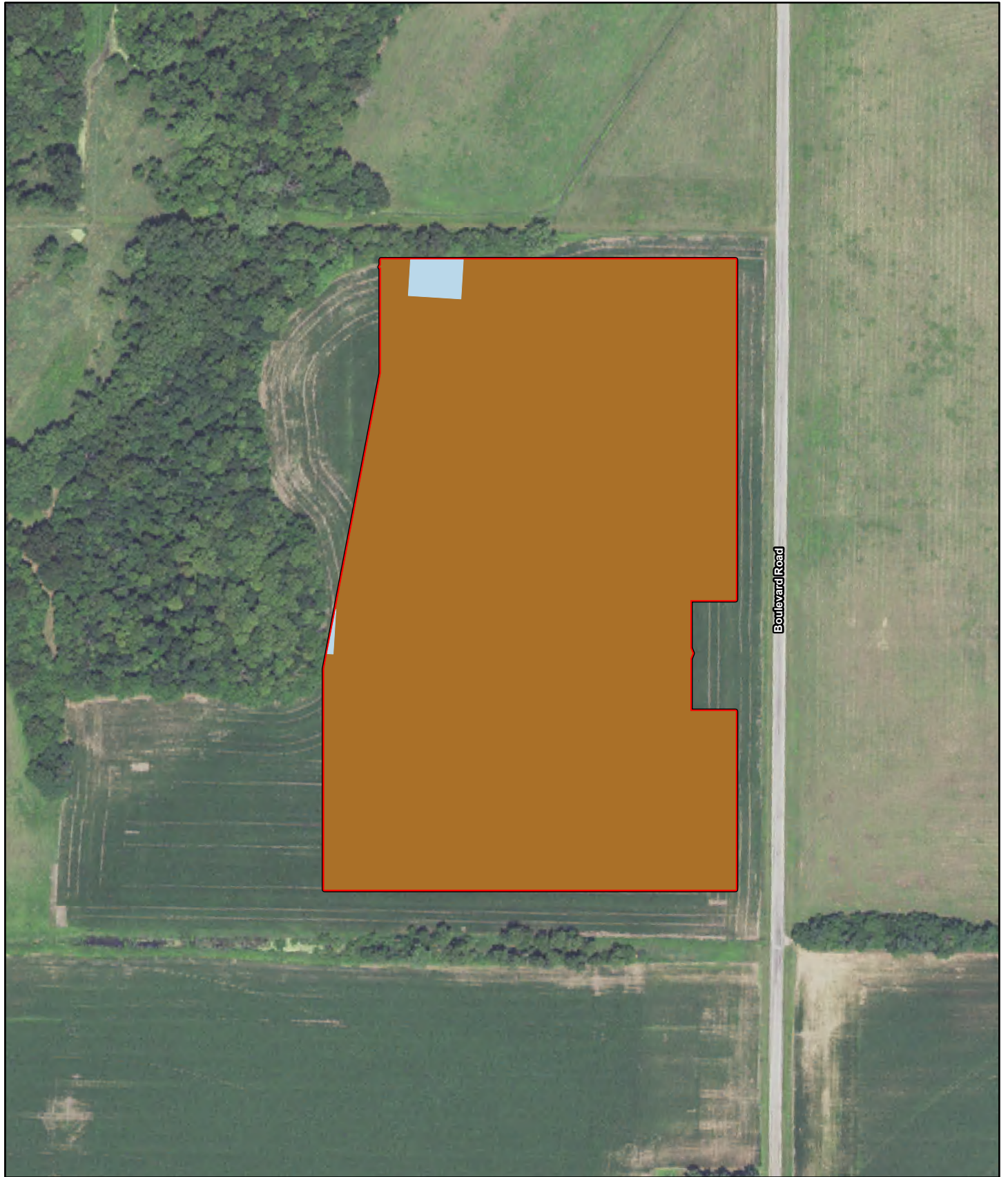
USS Valley Solar LLC Project

Cass County, Illinois

Project Location &
USGS Topography



Map Document: N:\0045947_001_GIS_AccPro\R0045947_040_ITAE\Exhibits_231121\F0045947_040_ITAE\Exhibits_231121.aprx, 2/13/2024 11:05 AM Thomell



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Data Source(s): Westwood (2024); NAIP Imagery (2021); OpenStreetMap (2023); NED 3DEP (2023).



Westwood

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Westwood Professional Services, Inc.

Legend

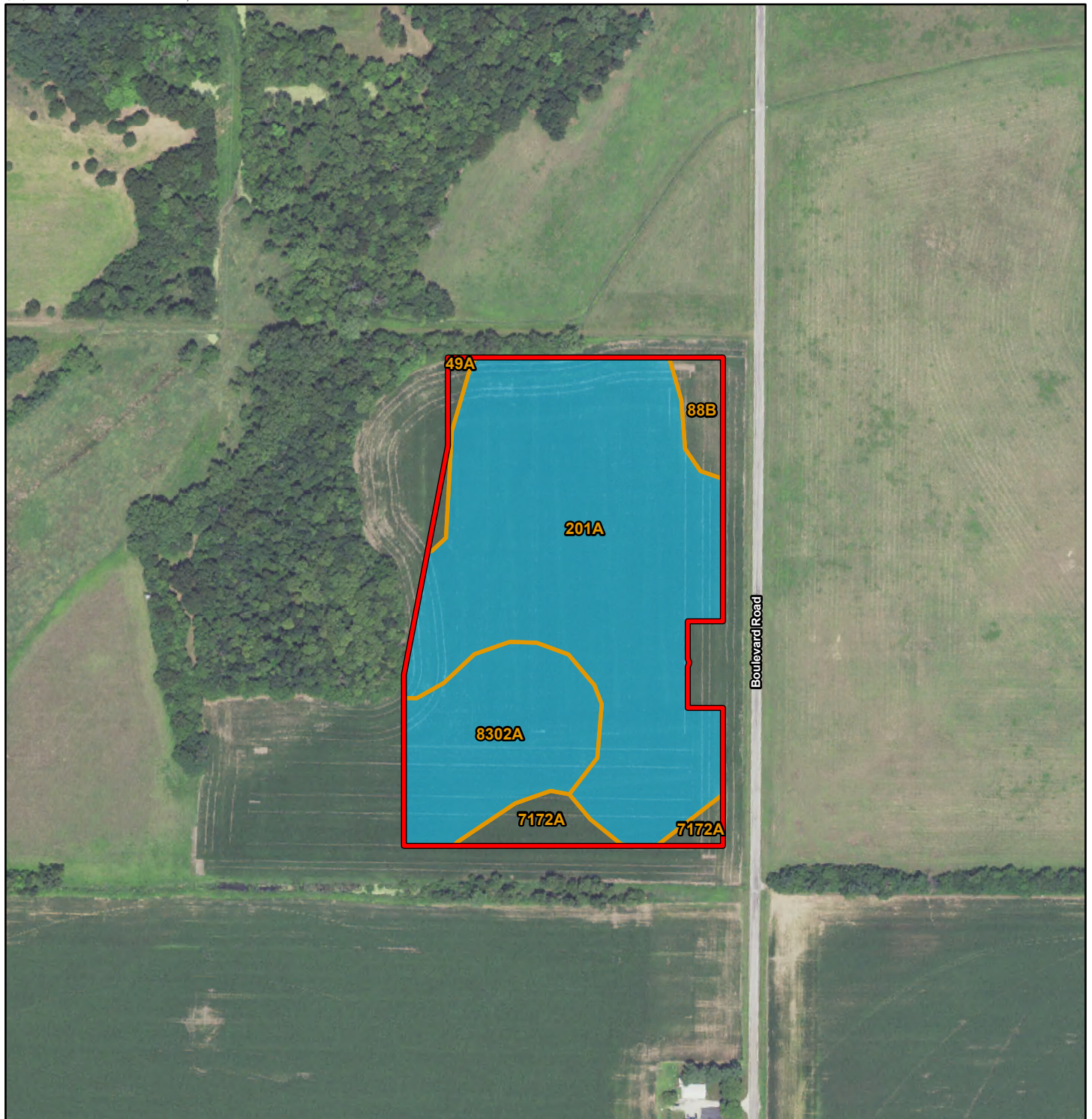
-  Project Area
- NLCD Designation**
-  Cultivated Crops
-  Woody Wetlands

USS Valley Solar LLC Project

Cass County, Illinois



National Land
Cover Database



Map Unit Symbol	Map Unit Name	Hydric Classification Percentage	Hydric Classification
88B	Sparta loamy sand, Illinois till plain, 2 to 6 percent slopes	2	Predominantly Non-Hydric
49A	Watseka loamy fine sand, 0 to 2 percent slopes	4	Predominantly Non-Hydric
7172A	Hoopeston sandy loam, 0 to 2 percent slopes, rarely flooded	4	Predominantly Non-Hydric
201A	Gilford fine sandy loam, 0 to 2 percent slopes	90	Predominantly Hydric
8302A	Ambraw clay loam, 0 to 2 percent slopes, occasionally flooded	95	Predominantly Hydric

Data Source(s): Westwood (2024); NAIP Imagery (2021); OpenStreetMap (2023); NRCS Web Soil Survey (2023).

Legend

- Project Area
- Soil Unit Boundary

Hydric Classification

- Predominantly Hydric



Westwood

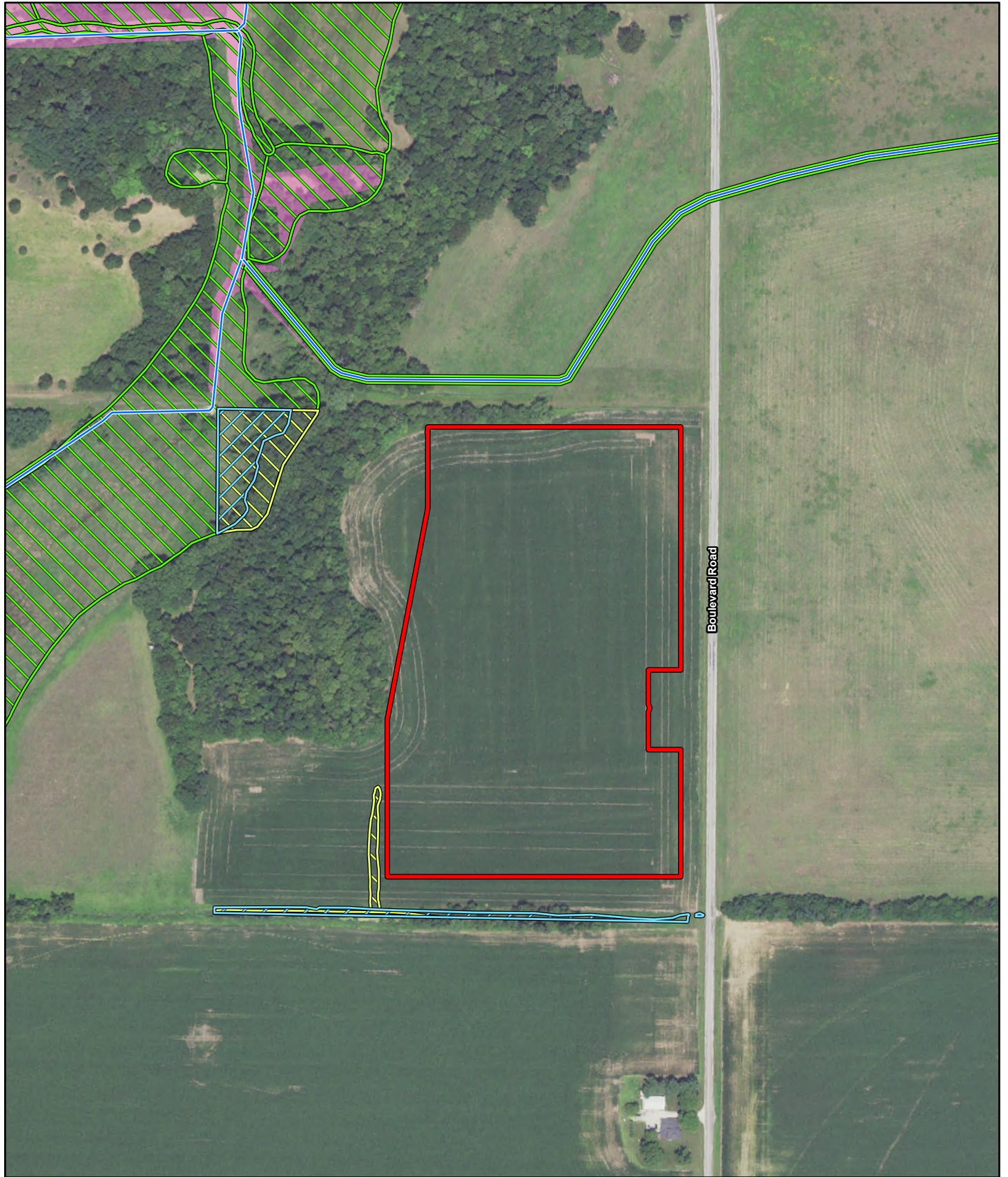
Toll Free (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

USS Valley Solar LLC Project

Cass County, Illinois



Soils



Data Source(s): Westwood (2024); NAIP Imagery (2021); OpenStreetMap (2023); NHD (2023); NWI (2022); FEMA (2023).

Legend

- Project Area
- NWI Wetland
- Field Delineated Wetlands
- 100-year Flood Zone
- Desktop Delineated Wetlands
- NHD Flowline



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USS Valley Solar LLC Project

Cass County, Illinois

Water Resources



Appendix B: IDNR Correspondence

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois

Applicant: Westwood Professional Services
Contact: Laura Nussbaum
Address: 10170 Church Ranch Way
Suite 201
Westminster, CO 80021

IDNR Project Number: 2402461
Date: 08/07/2023

Project: USS Valley Solar
Address: Boulevard Rd, Beardstown

Description: Proposed solar facility

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

- Beardstown Marsh INAI Site
- Beardstown Railroad Prairie INAI Site
- Beardstown Railroad Prairie Natural Heritage Landmark
- The Slough Natural Heritage Landmark
- Common Moorhen (*Gallinula chloropus*)
- Illinois Chorus Frog (*Pseudacris illinoensis*)

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Cass

Township, Range, Section:
18N, 12W, 27



**IL Department of Natural Resources
Contact**
Kyle Burkwald
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
County Zoning Department
Denzil R. Lorton
100 E. Springfield St
Virginia, Illinois 62691

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.
2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.
3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



EcoCAT Receipt	Project Code 2402461
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APPLICANT	DATE
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Westwood Professional Services Laura Nussbaum 10170 Church Ranch Way Suite 201 Westminster, CO 80021	8/7/2023
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DESCRIPTION	FEE	CONVENIENCE FEE	TOTAL PAID
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EcoCAT Consultation	\$ 125.00	\$ 2.81	\$ 127.81
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TOTAL PAID	\$ 127.81
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Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
217-785-5500
dnr.ecocat@illinois.gov



Illinois
Department of
**Natural
Resources**

JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271

www.dnr.illinois.gov

August 10, 2023

Laura Nussbaum
Wildlife Biologist
10170 Church Ranch Way
Suite 201
Westminster, CO 80021

**RE: USS Valley Solar
Consultation Program
EcoCAT Review #2402461
Cass County**

Dear Ms. Nussbaum:

The Department has received your submission for this project for the purposes of consultation pursuant to the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action consists of the construction and operation of a photovoltaic solar facility in Cass County, IL (39.987°, -90.430°).

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Illinois Natural Areas Inventory (INAI)

Beardstown Marsh Beardstown Railroad Prairie

Illinois Nature Preserves Commission Lands

**Beardstown Railroad Prairie Natural Heritage Landmark
The Slough Natural Heritage Landmark**

State Threatened or Endangered Species

**Illinois Chorus Frog (*Pseudacris illinoensis*)
Common Moorhen (*Gallinula galeata*)**

Ornate Box Turtle (*Terrapene ornata*)¹
Plains Hog-nosed Snake (*Heterodon nasicus*)²

Due to the project scope and proximity to protected resources the Department offers the following comments and recommends the following actions be taken to avoid adversely impacting listed species in the vicinity of the project:

Illinois Chorus Frog, Ornate Box Turtle, & Plains Hog-nosed Snake

EcoCAT has indicated records for the State-listed Illinois Chorus Frog Ornate Box Turtle, and Plains Hog-nosed Snake in the project area. Based on the location and scope of work, the Department recommends the applicant seek an Incidental Take Authorization (ITA) pursuant to Part 1080 and Section 5.5 of the *Illinois Endangered Species Protection Act* to avoid an unlawful take if these species. All questions pertaining to ITA should be directed to the ITA coordinator, Heather Osborn (Heather.Osborn@Illinois.gov). Visit the link below for information on the ITA process:

<https://www2.illinois.gov/sites/naturalheritage/speciesconservation/Pages/Incidental-Take-Authorizations.aspx>

Common Moorhen

The Department has determined that adverse impact to the Common Moorhen are unlikely.

Beardstown Marsh, Beardstown Railroad Prairie, Beardstown Railroad Prairie Natural Heritage Landmark, & The Slough Natural Heritage Landmark

The Department has determined adverse impacts are unlikely, however, the Department recommends any required night lighting follow International Dark-Sky Association (IDA) guidance to minimize the effect of light pollution on wildlife; including shielding fixtures so no light travels upward, using “warm-white” or filtered LEDs (CCT < 3,000 K) to minimize blue emission, and avoiding over-lighting.

In accordance with 17 Ill. Adm. Code 1075.40(h), please notify the Department of your decision regarding these recommendations.

Consultation on the part of the Department is closed, unless the applicant desires additional information or advice related to this proposal. Consultation for Part 1075 is valid for two years unless new information becomes available which was not previously considered; the proposed

¹ This species was not indicated to be in the vicinity of the project by the Illinois Natural Heritage Database, however, due to the potential suitable habitat in the project area and occurrence of records in the vicinity, it was added to the list of species being reviewed for this project.

² This species was not indicated to be in the vicinity of the project by the Illinois Natural Heritage Database, however, due to the potential suitable habitat in the project area and occurrence of records in the vicinity, it was added to the list of species being reviewed for this project.

action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the action has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal and should not be regarded as a final statement on the project being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are unexpectedly encountered during the project's implementation, the applicant must comply with the applicable statutes and regulations.

This letter does not serve as permission to take any listed or endangered species. As a reminder, no take of an endangered species is permitted without an Incidental Take Authorization or the required permits. Anyone who takes a listed or endangered species without an Incidental Take Authorization or required permit may be subject to criminal and/or civil penalties pursuant to the *Illinois Endangered Species Act*, the *Fish and Aquatic Life Act*, the *Wildlife Code* and other applicable authority.

The Department also offers the following conservation measures be considered to help protect native wildlife and enhance natural areas in the project area:

- The Department also strongly recommends that the project proponent establish pollinator-friendly habitat as groundcover wherever feasible. Solar Site Pollinator Establishment Guidelines can be found here:
<https://dnr.illinois.gov/conservation/pollinatorscorecard.html>
 - The project proponent should ensure that the site is de-compacted before planting. Long term management of the site should be planned for prior to development to ensure successful native pollinator habitat establishment for the lifetime of this project. An experienced ecological management consultant should be considered to assist with long-term management.
- Required fencing, excluding areas near or adjacent to public access areas (e.g., roads, parking areas, trails, etc.), should not exceed 6 feet in height and should have a 6-inch gap along the bottom to prevent the restriction of wildlife movement.
- Good housekeeping practices should be implemented and maintained during and after construction to prevent trash and other debris from inadvertently blowing or washing into nearby natural areas.
- Soil erosion and sediment control BMPs should be implemented and properly maintained. If erosion control blanket is to be used, wildlife-friendly plastic-free blanket should be used to prevent the entanglement of native wildlife.
- A long-term invasive species management program should be implemented to avoid the spread of invasive species.
- If tree clearing is necessary, the Department recommends removing trees between November 1st and March 31st to avoid impacts to the state-listed bats and birds.

Please contact me with any questions about this review.

Sincerely,

A handwritten signature in black ink that reads "Bradley Hayes". The signature is written in a cursive style with a long, sweeping underline.

Bradley Hayes
Manager, Impact Assessment Section
Division of Real Estate Services and Consultation
Office of Realty & Capital Planning
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
Bradley.Hayes@Illinois.gov
Phone: (217) 782-0031

Cc. Heather Osborn – Incidental Take Authorization Coordinator

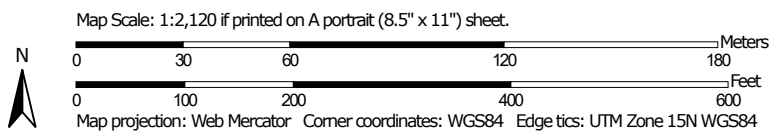
Appendix C: Web Soil Survey Results

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois

Soil Map—Cass County, Illinois
(20240212_Valley_Fence)




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

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 1:12,000.

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: Cass County, Illinois

Survey Area Data: Version 19, Aug 28, 2023

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

Date(s) aerial images were photographed: Jul 12, 2022—Aug 30, 2022

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
49A	Watsika loamy fine sand, 0 to 2 percent slopes	0.3	1.3%
88B	Sparta loamy sand, Illinois till plain, 2 to 6 percent slopes	0.6	3.3%
201A	Gilford fine sandy loam, 0 to 2 percent slopes	13.6	69.8%
7172A	Hoopeston sandy loam, 0 to 2 percent slopes, rarely flooded	1.0	5.1%
8302A	Ambraw clay loam, 0 to 2 percent slopes, occasionally flooded	4.0	20.4%
Totals for Area of Interest		19.5	100.0%

Appendix D: Plant List

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois

Valley Solar

Common Name	Scientific Name	% of Mix	Seeds/ft ²
Grasses			
Sideoats Grama	Bouteloua curtipendula	35.56%	10.58
June Grass	Koeleria macrantha	0.37%	3.67
Plains Oval Sedge	Carex brevior	2.22%	3.20
Bicknell's Sedge	Carex bicknellii	1.48%	1.25
Silky Wild Rye	Elymus villosus	2.00%	0.55
Little Bluestem	Schizachyrium scoparium	32.07%	23.86
Prairie Dropseed	Sporobolus heterolepis	0.37%	0.29
Forbs			
Common Yarrow	Achillea millefolium	0.33%	2.95
Lead Plant	Amorpha canescens	1.28%	1.01
Canada Anemone	Anemone canadensis	0.06%	0.02
Wild Columbine	Aquilegia canadensis	0.13%	0.24
Common Milkweed	Asclepias syriaca	0.09%	0.02
Butterfly Milkweed	Asclepias tuberosa	0.22%	0.05
Canada Milkvetch	Astragalus canadensis	1.00%	0.84
Partridge Pea	Chamaecrista fasciculata	1.93%	0.26
Lanceleaf Coreopsis	Coreopsis lanceolata	2.96%	2.94
White Prairie Clover	Dalea candida	4.00%	3.77
Purple Prairie Clover	Dalea purpurea	5.40%	4.82
Pale Purple Coneflower	Echinacea pallida	0.74%	0.19
Spotted Bee Balm	Monarda punctata	0.07%	0.33
Hairy Mountain Mint	Pycnanthemum pilosum	0.22%	2.04
Virginia Mountain Mint	Pycnanthemum virginianum	0.04%	0.48
Black-eyed Susan	Rudbeckia hirta	1.78%	8.11
Wild Petunia	Ruellia humilis	0.36%	0.09
Gray Goldenrod	Solidago nemoralis	0.12%	1.76
Calico Aster	Symphotrichum lateriflorum	0.12%	1.47
Sky Blue Aster	Symphotrichum oolentangiense	0.28%	1.10
Ohio Spiderwort	Tradescantia ohiensis	0.37%	0.15
Hoary Vervain	Verbena stricta	1.83%	2.55
Golden Alexanders	Zizia aurea	2.59%	1.41
		100.00%	80.00

Seeding Rate: 13.5 lb/acre (80 seeds/square foot)

Appendix E: Solar Construction Layout

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois

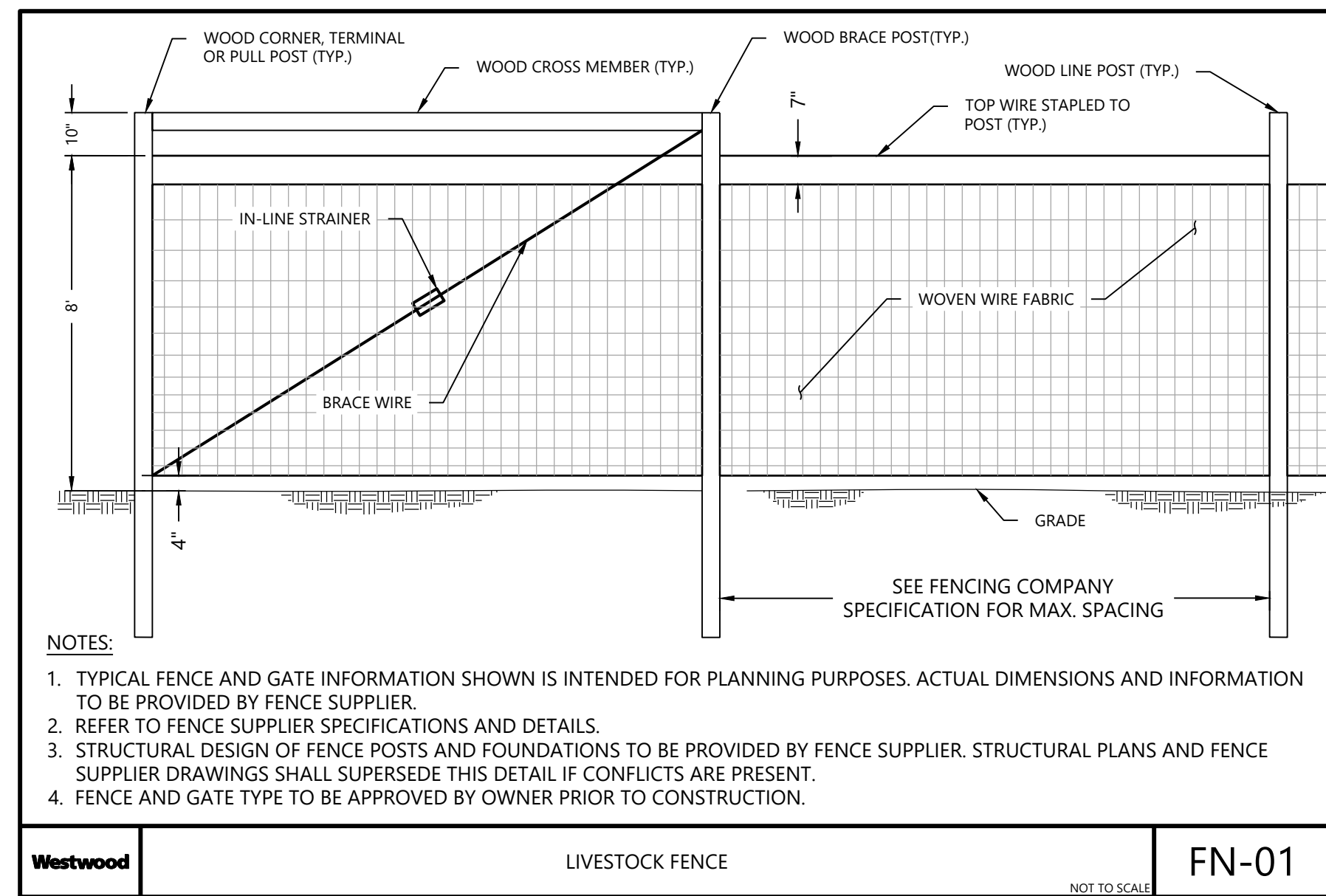
PREPARED FOR:



100 N 6th St., #410B
Minneapolis, MN 55403

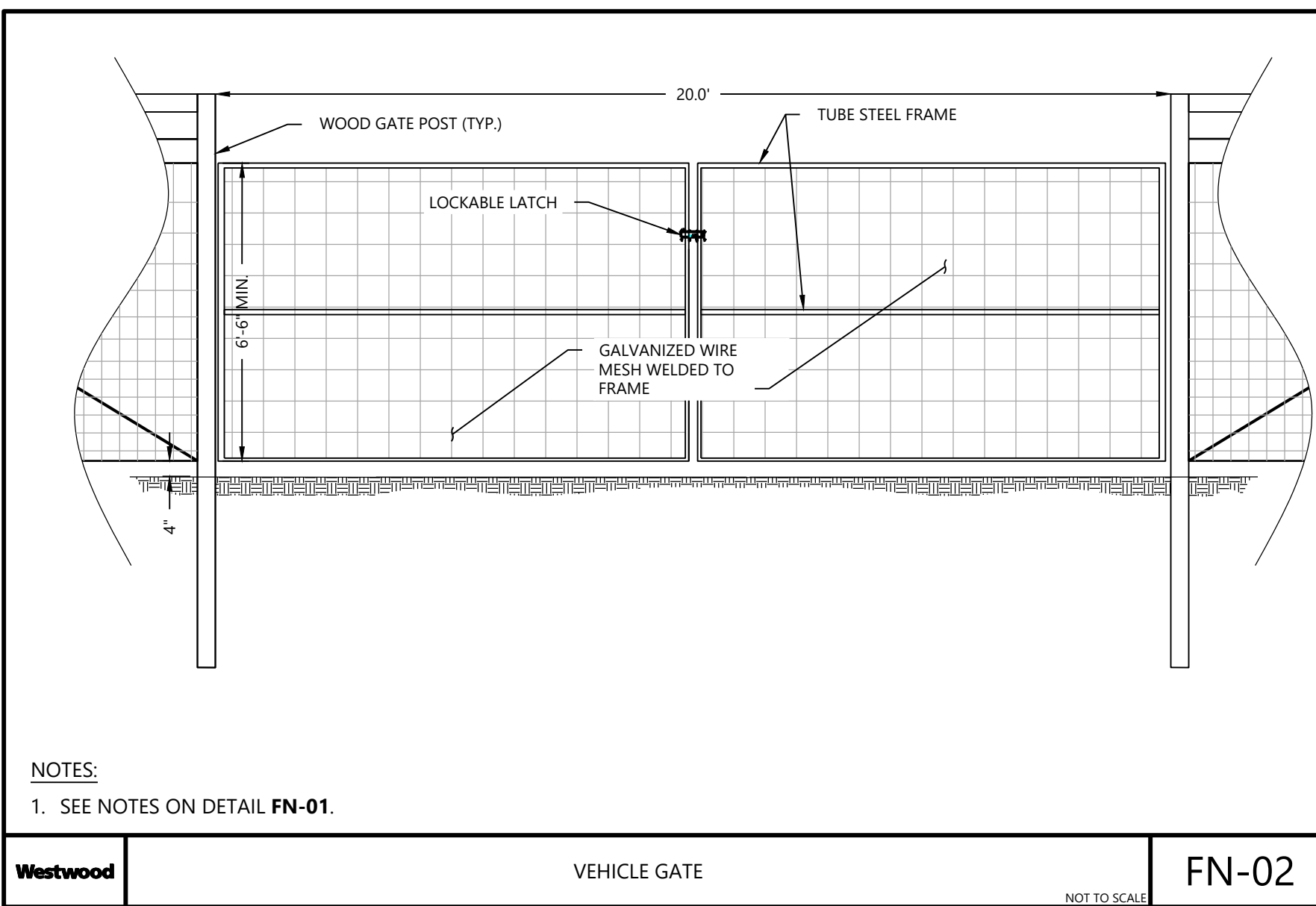
REVISIONS:

#	DATE	COMMENT
A	01/05/24	Typical Details



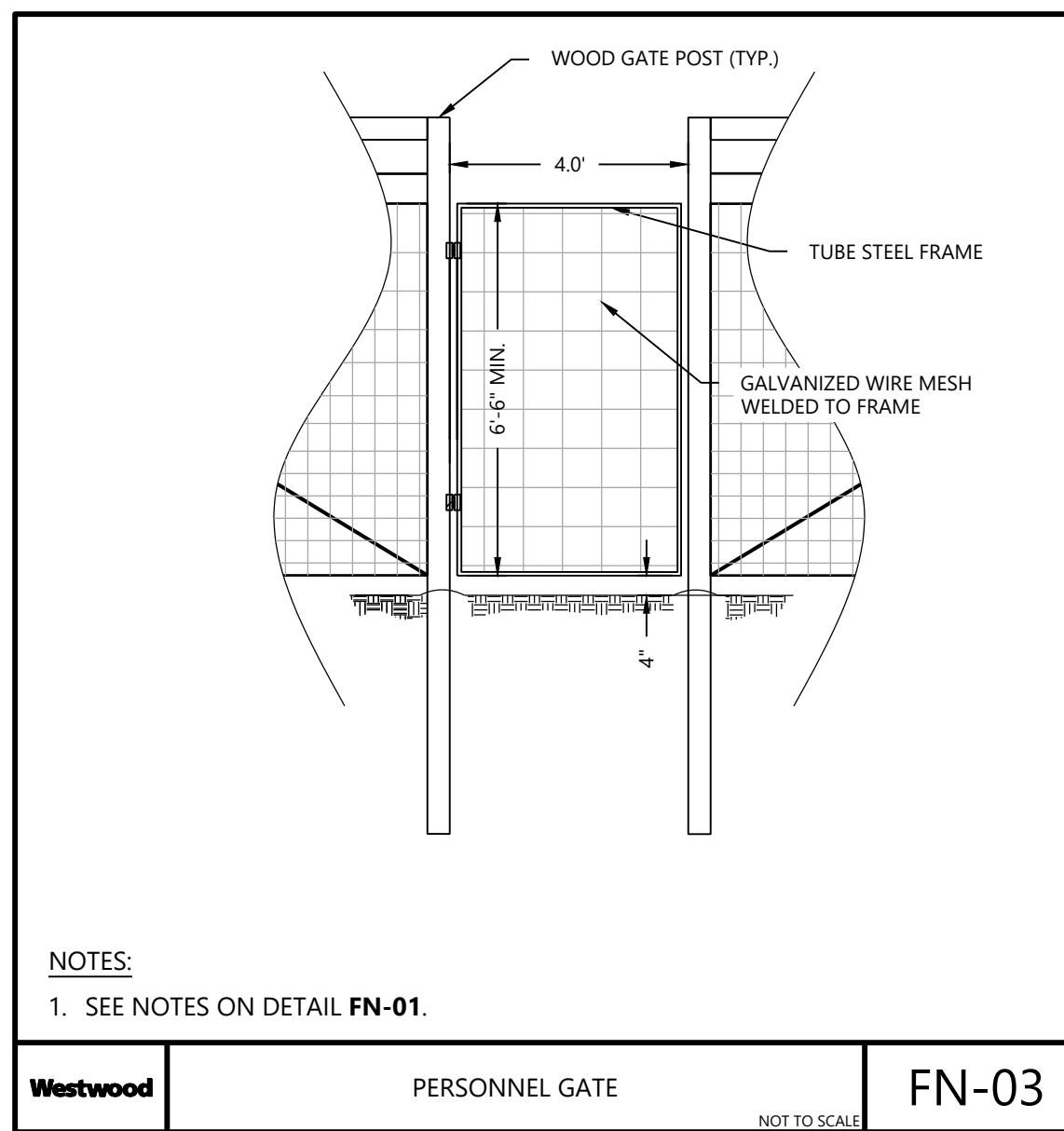
- NOTES:
1. TYPICAL FENCE AND GATE INFORMATION SHOWN IS INTENDED FOR PLANNING PURPOSES. ACTUAL DIMENSIONS AND INFORMATION TO BE PROVIDED BY FENCE SUPPLIER.
 2. REFER TO FENCE SUPPLIER SPECIFICATIONS AND DETAILS.
 3. STRUCTURAL DESIGN OF FENCE POSTS AND FOUNDATIONS TO BE PROVIDED BY FENCE SUPPLIER. STRUCTURAL PLANS AND FENCE SUPPLIER DRAWINGS SHALL SUPERSEDE THIS DETAIL IF CONFLICTS ARE PRESENT.
 4. FENCE AND GATE TYPE TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.

Westwood LIVESTOCK FENCE NOT TO SCALE FN-01



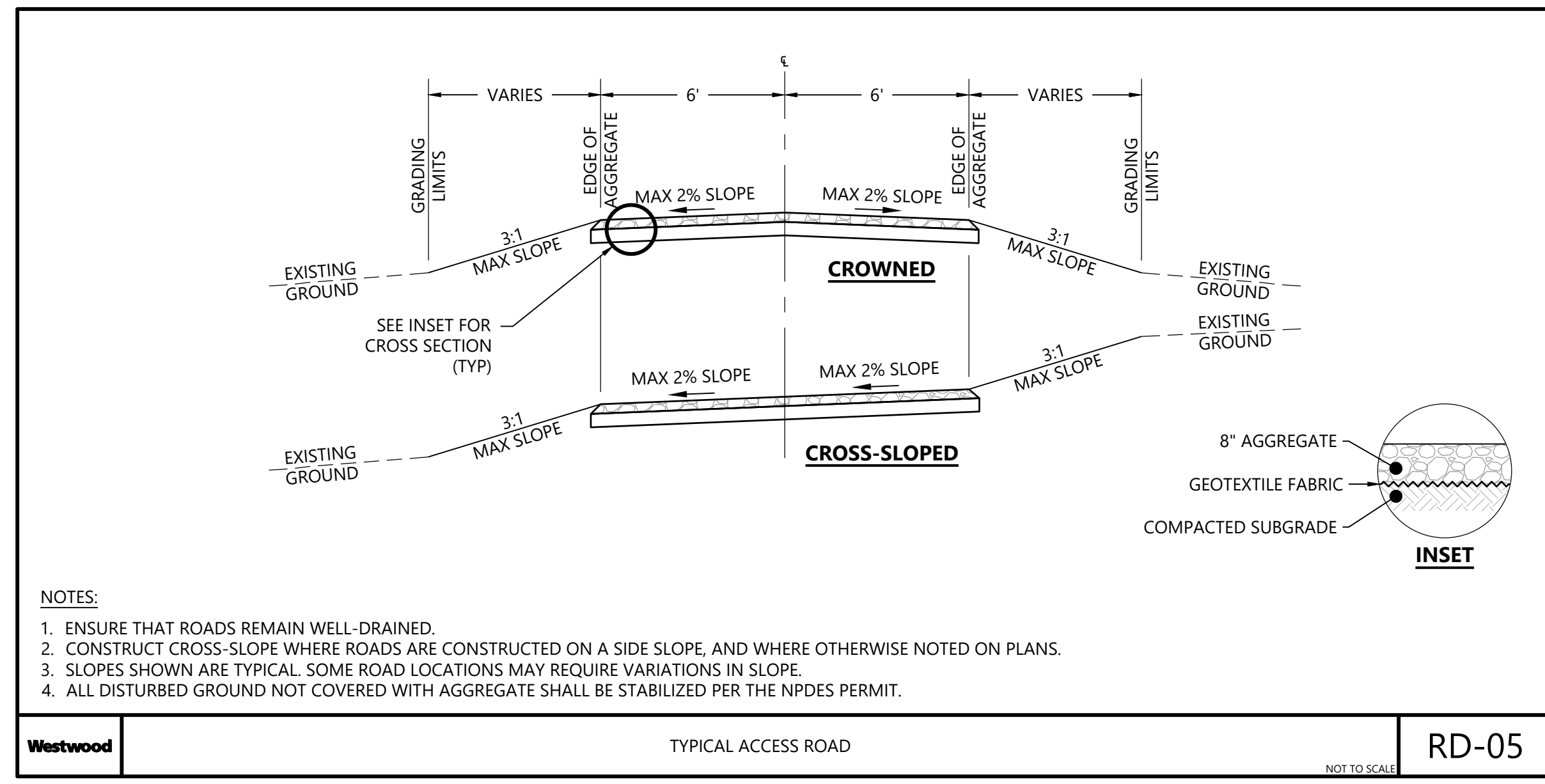
- NOTES:
1. SEE NOTES ON DETAIL FN-01.

Westwood VEHICLE GATE NOT TO SCALE FN-02



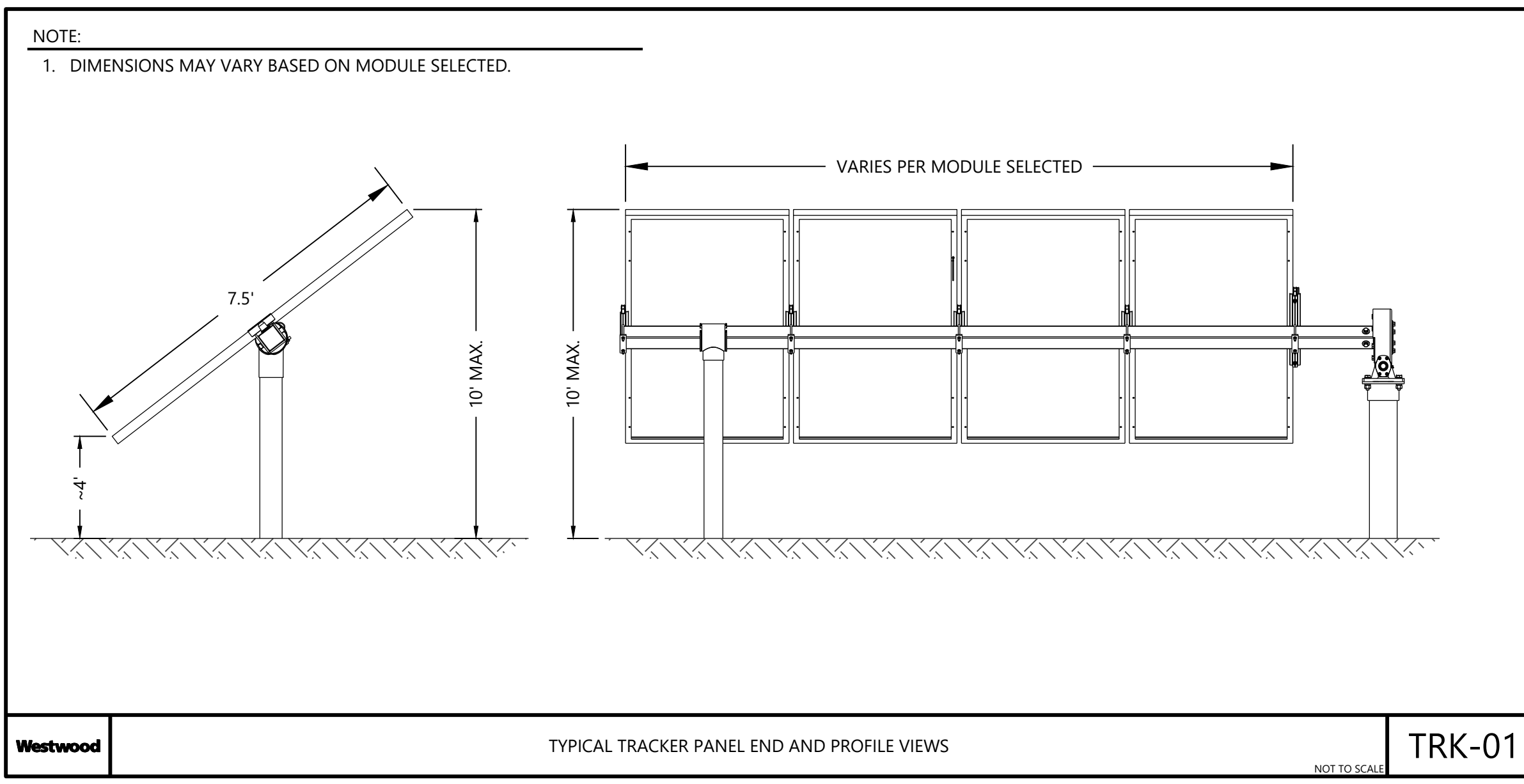
- NOTES:
1. SEE NOTES ON DETAIL FN-01.

Westwood PERSONNEL GATE NOT TO SCALE FN-03

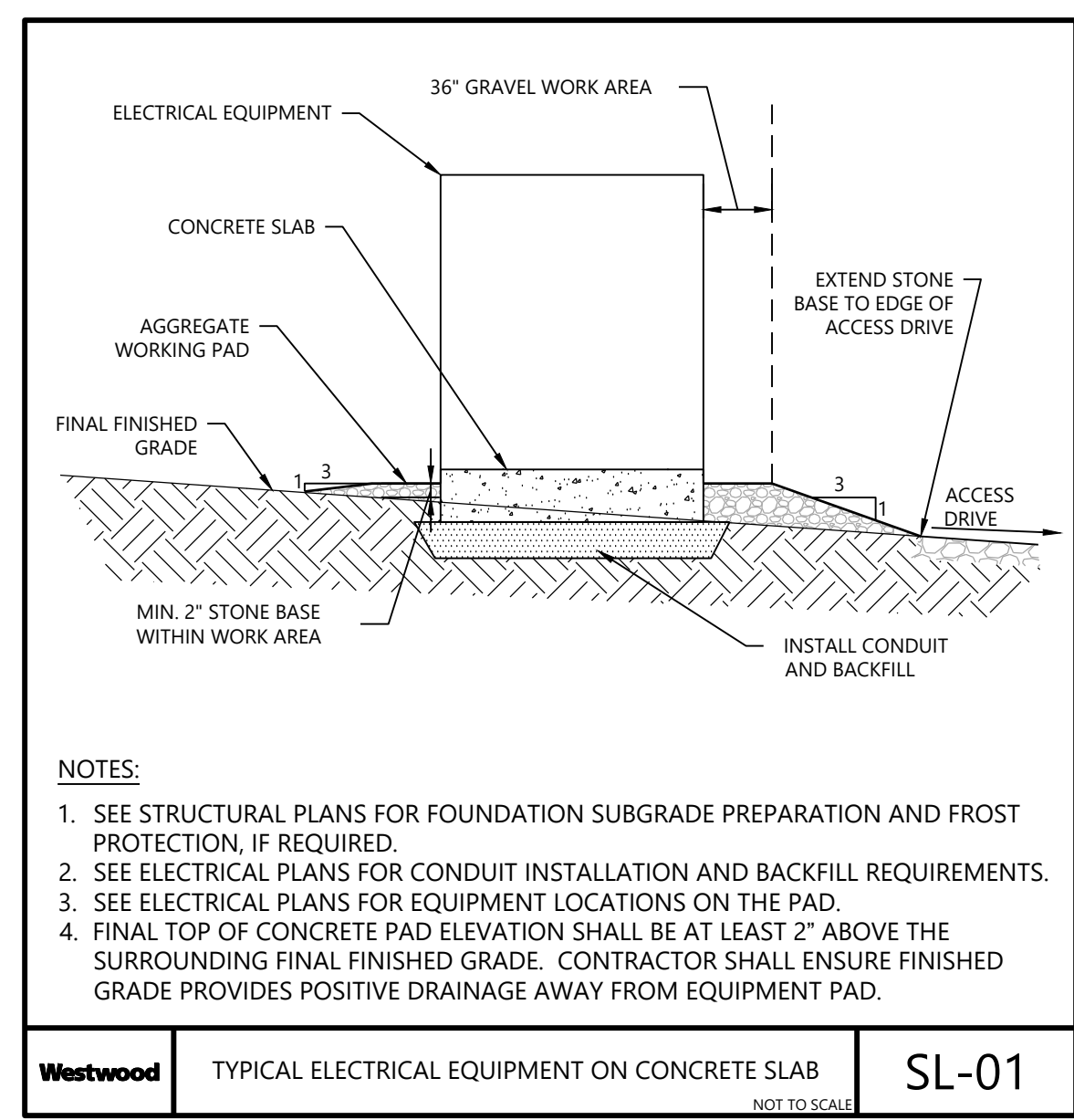


- NOTES:
1. ENSURE THAT ROADS REMAIN WELL-DRAINED.
 2. CONSTRUCT CROSS-SLOPE WHERE ROADS ARE CONSTRUCTED ON A SIDE SLOPE, AND WHERE OTHERWISE NOTED ON PLANS.
 3. SLOPES SHOWN ARE TYPICAL. SOME ROAD LOCATIONS MAY REQUIRE VARIATIONS IN SLOPE.
 4. ALL DISTURBED GROUND NOT COVERED WITH AGGREGATE SHALL BE STABILIZED PER THE NPDES PERMIT.

Westwood TYPICAL ACCESS ROAD NOT TO SCALE RD-05

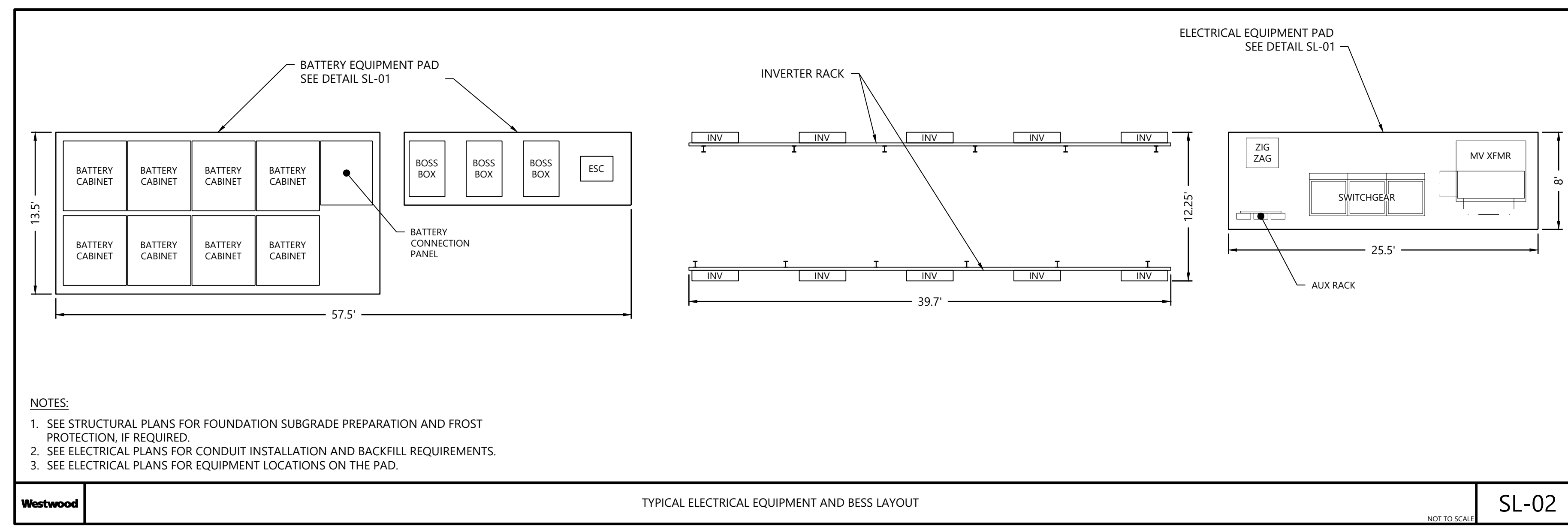


Westwood TYPICAL TRACKER PANEL END AND PROFILE VIEWS NOT TO SCALE TRK-01



- NOTES:
1. SEE STRUCTURAL PLANS FOR FOUNDATION SUBGRADE PREPARATION AND FROST PROTECTION, IF REQUIRED.
 2. SEE ELECTRICAL PLANS FOR CONDUIT INSTALLATION AND BACKFILL REQUIREMENTS.
 3. SEE ELECTRICAL PLANS FOR EQUIPMENT LOCATIONS ON THE PAD.
 4. FINAL TOP OF CONCRETE PAD ELEVATION SHALL BE AT LEAST 2\"/>

Westwood TYPICAL ELECTRICAL EQUIPMENT ON CONCRETE SLAB NOT TO SCALE SL-01



- NOTES:
1. SEE STRUCTURAL PLANS FOR FOUNDATION SUBGRADE PREPARATION AND FROST PROTECTION, IF REQUIRED.
 2. SEE ELECTRICAL PLANS FOR CONDUIT INSTALLATION AND BACKFILL REQUIREMENTS.
 3. SEE ELECTRICAL PLANS FOR EQUIPMENT LOCATIONS ON THE PAD.

Westwood TYPICAL ELECTRICAL EQUIPMENT AND BESS LAYOUT NOT TO SCALE SL-02

USS Valley Solar LLC
Cass County, Illinois

Typical Details

NOT FOR CONSTRUCTION

DATE: 01/05/2024 REV:
SHEET: C400 A

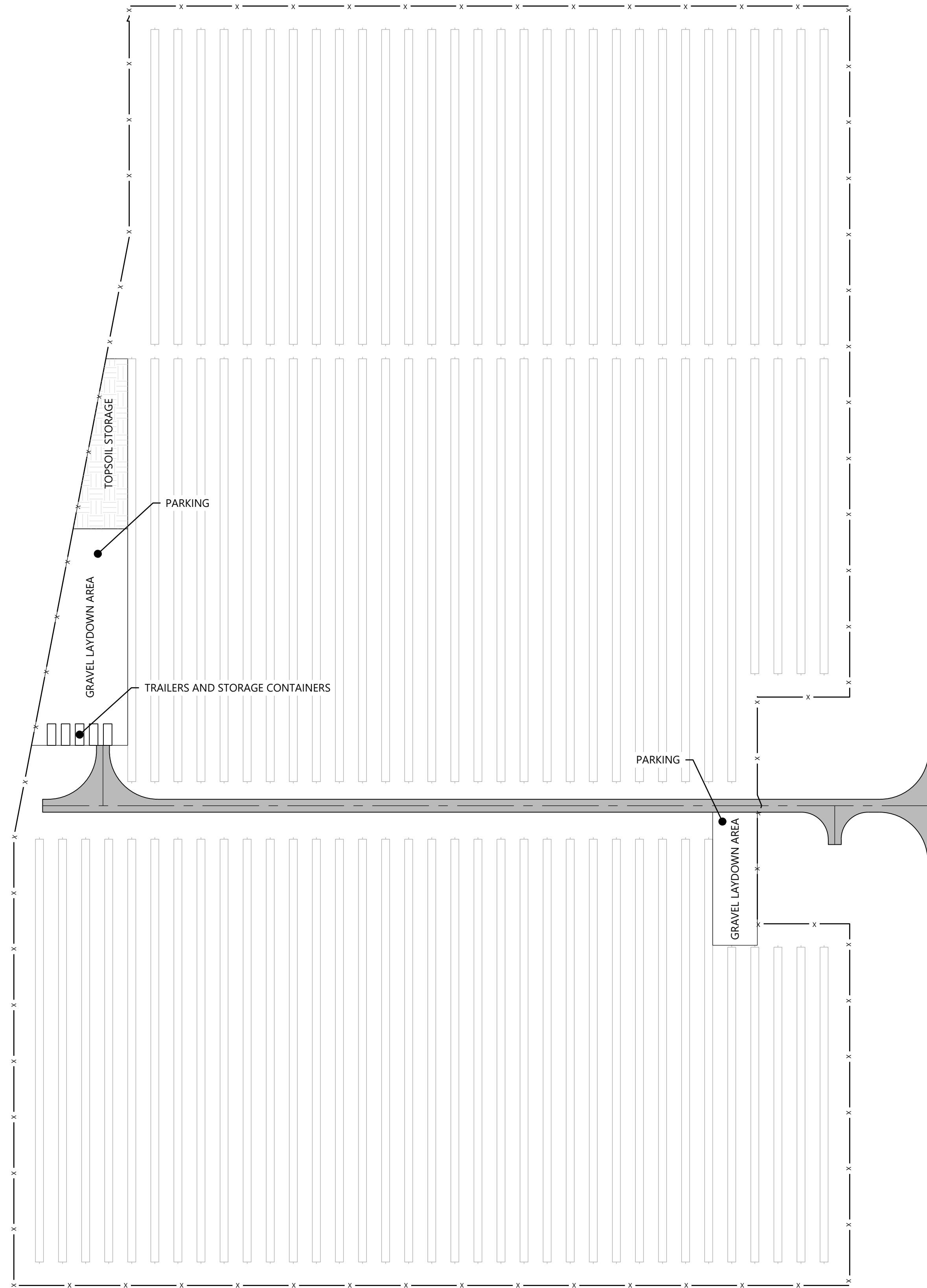
PREPARED FOR:



100 N 6th St., #410B
Minneapolis, MN 55403

REVISIONS:

#	DATE	COMMENT
A	01/05/24	Typical Details



1 TEMPORARY LAYDOWN AREAS
1" = 70'

**USS Valley
Solar LLC**
Cass County, Illinois

Typical Details

NOT FOR CONSTRUCTION

DATE: 01/05/2024

SHEET: C401 REV: A

Appendix F: USGS NAAMP Data Sheet

Conservation Plan for Illinois Chorus Frog, Ornate Box Turtle,
and Plains Hog-nosed Snake
Cass County, Illinois

Name and Contact Information

Please complete contact information below to notify us of any changes.

Name :			
Street Address:			
City, State, Zip Code:			
Phone:		Email:	

Instructions:

Please be sure to complete the entire datasheet.

Each datasheet represents one person's frog call observations. If you have an assistant, he/she can assist with the environmental data (e.g. air temp, count cars, etc.) but not with what frogs are heard.

Visit stops in 1-10 order. If unforeseen circumstances require you to skip a stop, write that on the datasheet.

At the start and finish of each survey record the time, wind, and sky conditions (see codes to the right).

At each stop listen for 5 minutes, then record the amphibian calling index for each species heard. Report only the species you are confident that you heard. If a species varies in calling intensity over the listening period, report the highest calling index level you heard.

At each stop, also report the environmental data requested: start time, air temperature, noise conditions, moonlight, and number of cars that passed while listening.

There are two kinds of noise disturbance questions:

- Was noise a factor? This is asking if background noise impacted your ability to hear. If yes, check the box.
- "Did you take a time out?" If an unexpected noise disturbance happens (such as a train) that lasts a minute or more, you may interrupt the 5 minute listening period to ignore the sudden disturbance. Finish up the listening time after the disturbance has passed. Do not include this type of noise in the "was noise a factor" question.



Index and Code Definitions

Amphibian Calling Index

1	Individuals can be counted; there is space between calls
2	Calls of individuals can be distinguished but there is some overlapping of calls
3	Full chorus, calls are constant, continuous and overlapping

Sky codes

0	Few clouds
1	Partly cloudy (scattered) or variable sky
2	Cloudy or overcast
4	Fog or smoke
5	Drizzle or light rain (not affecting hearing ability)
7	Snow
8	Showers (is affecting hearing ability) do not conduct survey

Wind Codes

0	Calm (<1mph) smoke rises vertically
1	Light Air (1-3 mph) smoke drifts, weather vane inactive
2	Light Breeze (4-7 mph) leaves rustle, can feel wind on face
3	Gentle Breeze (8-12 mph) leaves and twigs move around, small flag extends
4*	Moderate Breeze (13-18 mph) moves thin branches, raises loose papers * Do not conduct survey, unless in Great Plains states
5**	Fresh Breeze (19 mph or greater) small trees begin to sway **Do not conduct survey -ALL REGIONS

Paperwork Reduction Act Statement: A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Public burden for the collection of this information is estimated to average 7 hours per response. Comments regarding this collection of information should be directed to the Bureau Clearance Officer, U.S. Geological Survey, 807 National Center, Reston, Virginia 20192. OMB NO. 1028-0078 Expiration Date: 7/31/2011

Insert sampling windows or mailing address here

Comments:



Please complete information below				Data collected at start and finish of survey														
Observer Name:				For wind & sky codes see page 1	Start					Finish								
Route Number:				Time (military)														
Route Name:				Wind	0	1	2	3	4	5	0	1	2	3	4	5		
Survey Date (mm/dd/yyyy):				Sky	0	1	2	4	5	7	8	0	1	2	4	5	7	8
Window Number:				Days since last rainfall:														
Data collected at each stop				Stop Number														
				1	2	3	4	5	6	7	8	9	10					
Start Time (military):																		
Air Temperature:																		
Select Scale: °C °F																		
Was noise a factor? (check if yes)																		
Did you take a timeout? (check if yes)																		
Species List				1	2	3	4	5	6	7	8	9	10					
Moon or moonlight visible? Y, N																		
Check if snow cover (optional)																		
Number of cars that passed:																		

If you have any additional notes, please write them in the box provided on the front of this sheet. Thank you for your participation!