# VILLAGE OF SUGAR GROVE
# BOARD REPORT

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| **TO:** | VILLAGE PRESIDENT & BOARD OF TRUSTEES |
| **FROM:** | DANIELLE MARION, COMMUNITY DEVELOPMENT DIRECTOR |
| **SUBJECT:** | DISCUSSION: SOLAR FIELD SPECIAL USE PETITIONS IN KANE COUNTY |
| **AGENDA:** | OCTOBER 7, 2025 |
| **DATE:** | OCTOBER 1, 2025 |

**ISSUE**
Shall the Village Board discuss two petitions for a special use for solar fields located outside of Village limits in unincorporated Kane County.

**DISCUSSION**
Kane County provides the Village with any petitions for special use permits that they receive that fall within 1.5 miles of the Village limits. This allows the Village to be informed of the petitions happening within this proximity and gives the Village the opportunity to provide comments/objections if they wish to do so. Ultimately, these petitions fall under Kane County jurisdiction and Kane County has final say on whether or not to approve or deny these petitions.

Two special uses petitions for solar fields were sent to the Village for review. The location of the two sites are shown attached as Exhibit A. Both sites fall outside of the Villages limits, but within 1.5 miles. The comprehensive plan designates both sites as Agriculture/Undeveloped. When the comprehensive plan was updated this designation was given to this area due to the hurdles of getting any kind of utilities to serve this area of the Village. However, since then, with the development happening south of Jericho Road, this may not be as much of a challenge as originally thought and there may be potential for future development in this area in the future, but not anytime soon.

The first petition, No. 4673 “CFP IL Orchard Solar” is for a special use permit for a solar facility in the F-District. The proposal is for a 15-megawatt alternating current commercial solar energy facility project situated on five parcels of land located in unincorporated Kane County, Illinois. The entire site is 277 acres, the footprint of the solar panels will be located on approximately 85 acres of the site. The access to this site will be off of Jericho Road. The fence surrounding the site will be an 8’ high, woven-wire fabric livestock fence that is screened by vegetative screening, alternating deciduous and evergreen trees. Year round ground cover will be planted to help to improve stormwater control. This ground cover will include low maintenance turf

seed mix and native grasses or specific pollinator plantings. The petition does include a glare study, noise analysis, and decommissioning plan.

The second petition, No. 4674 “CFP IL Bluestem Solar” is for a special use permit for a solar facility in the F-District. The proposal is for a 15-megawatt alternating current commercial solar energy facility project situated on three parcels of land located in unincorporated Kane County, Illinois. The entire site is 138 acres, the footprint of the solar panels will be located on approximately 88 acres of the site. The access to this site will be off of Prairie Street. The fence surrounding the site will be an 8’ high, woven-wire fabric livestock fence that is screened by vegetative screening, alternating deciduous and evergreen trees. Year round ground cover will be planted to help to improve stormwater control. This ground cover will include low maintenance turf seed mix and native grasses or specific pollinator plantings. The petition does include a glare study, noise analysis, and decommissioning plan.

Overall, neither site is situated directly adjacent to any existing residential developments within the Village and neither site is proposed on any land that Village has future proposed projects on. Both sites are proposing landscape screening and are surrounded by a fence. If located within the Village limits, the type of fence would most likely be required to be something different. There is roughly 1, 520.00 acres of unincorporated land shown on the Villages comprehensive plan in the southeast quadrant of the plan, designated as agriculture/undeveloped. This is the area the both of these projects are proposed to be located.

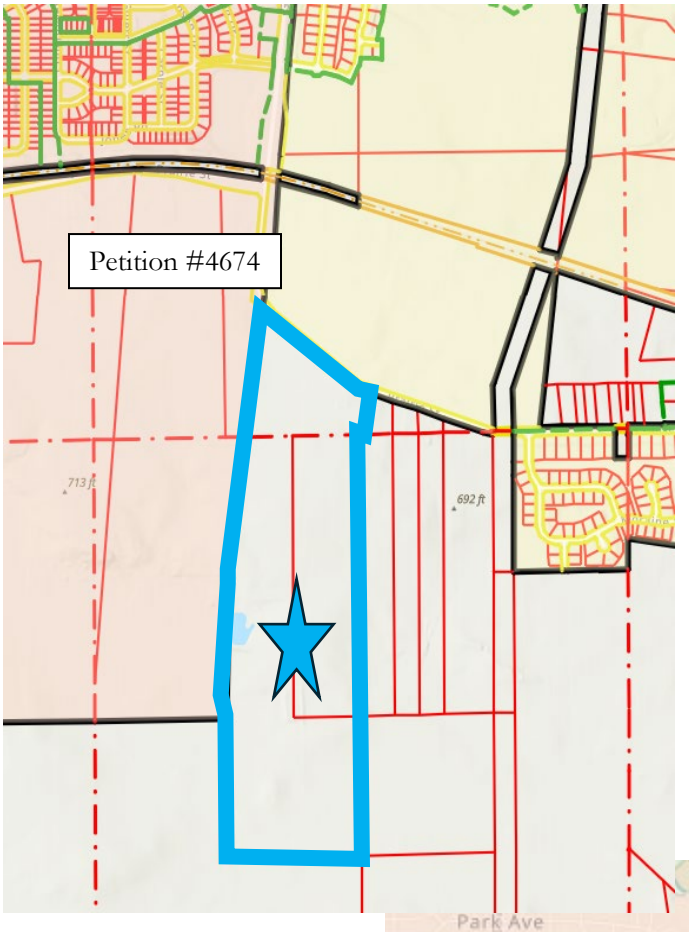
The entire application and all submittal documents can be viewed here: Pages - Pending Zoning Petitions

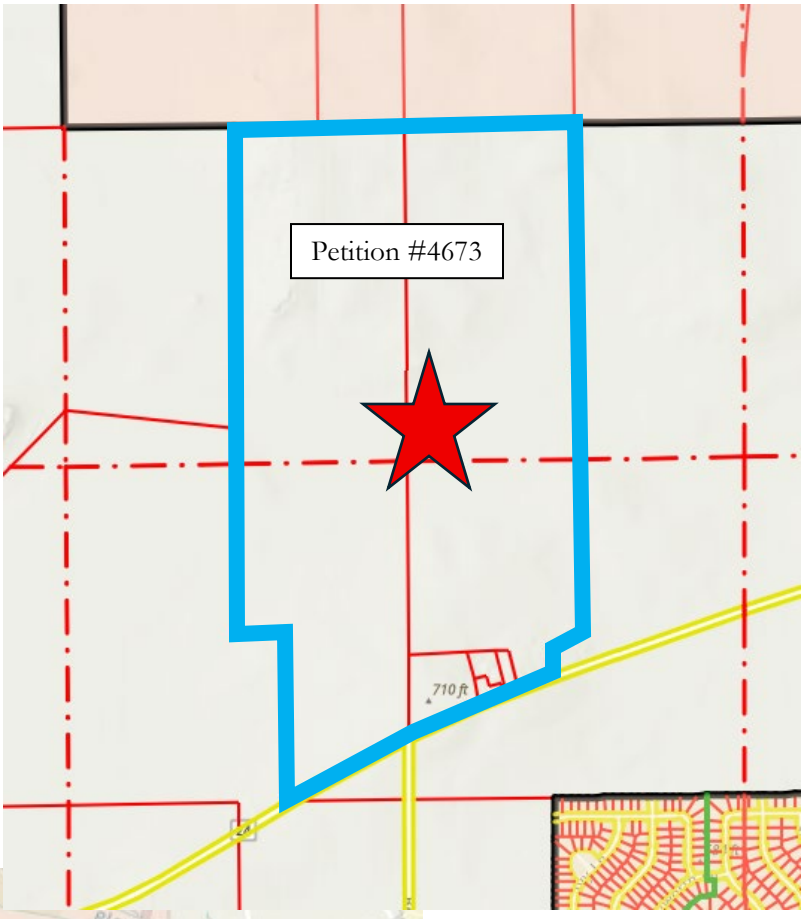
**COST**
There is no cost to discuss this topic.

**ATTACHMENTS**
Exhibit A – Locations
Project Narrative - No. 4673 “CFP IL Orchard Solar”
Site Plan - No. 4673 “CFP IL Orchard Solar”
Project Narrative - No. 4674 “CFP IL Bluestem Solar”
Site Plan - No. 4674 “CFP IL Bluestem Solar”

**RECOMMENDATION**
That the Village Board discuss the two Kane County petitions and provide staff with any additional comments or objections they would like to send to Kane County.

Exhibit A


Petition #4674
713 ft
692 ft


Petition #4673
710 ft


Park Ave
Blackberry Creek
Sugar Grove
Galena
Main St
Gordon Rd
Barnes Rd
Prairie St
721 ft
713 ft
30
Simpson Pkwy

# ORCHARD SOLAR

Commercial Solar Energy Facility
Project Narrative for Kane County Special Use Permit (SUP)

**Petitioner:** CFP IL Orchard Solar LLC

**Prepared by:**

September 15, 2025

## Introduction

CFP IL Orchard Solar, LLC (the "Applicant") is a limited liability company created by Clean Field Power, LLC, ("Clean Field") for the purpose of developing a community solar project. The Applicant has prepared this application for a 15-megawatt alternating current (MW AC or MWac) Commercial Solar Energy Facility project situated on five parcels of land located in unincorporated Kane County, Illinois (PINs: 14-27-300-002; 14-28-400-003; 14-34-100-003; 14-34-200-002; & 14-34-300-004) (the "Property"). The proposed community solar facilities may be referred to herein as the "Project" or "Orchard Solar".

The Applicant has entered into a solar lease and easement agreement with the property owner, J G Farms Properties LLC, and is applying for a Special Use Permit (SUP) with the Kane County Development & Community Services in September 2025 for consideration at the Zoning Board of Appeals Meeting scheduled for November 4, 2025. All Orchard Solar SUP Appendix D: Required Submittal Documents and supplemental information may be referred to as the "SUP Package".

The Project is being developed through a partnership between Novel Energy Solutions (the "Operator") and Clean Field. The Operator's founder stems from a family of cattle farmers with over 130 years of history in southern Minnesota. The Operator has a proven track record, recently permitted seven solar projects in Illinois, and owns over 200 MW of community solar in their portfolio. The Operator holds projects as opposed to buying and flipping so they will be the county and community's partner for the entire life of the project.

Table 1

| | |
|---|---|
| **Developers** | Novel Energy Solutions LLC<br>Clean Field Power LLC |
| **Project Entity** | CFP IL Orchard Solar LLC |
| **Township** | Sugar Grove |
| **Project Address** | 41W330 JERICHO RD<br>AURORA, IL, 60554 |
| **Parcel IDs** | 14-27-300-002; 14-28-400-003;<br>14-34-100-003; 14-34-200-002;<br>14-34-300-004 |
| **Nearest Cross Streets** | Jericho Rd. & Bertram Rd. |
| **Size** | 15 MWac / 21 MWdc |
| **Total Area of all Parcels** | 276 acres |
| **Proposed Project Area** | 87 acres |

Orchard Solar includes three 5 MWac community solar facilities which will require a footprint of approximately 82 acres and utilize approximately 5 acres under an easement on the Property for two purposes: use of an access road to the Project off Jericho Rd. and a bank of utility poles adjacent to the access road ingress/egress.

Historically, the Property has been used for agricultural purposes and will be leased by the Project for a period of up to 40 years. The impact to the area is low from a construction, operation, and end of life perspective. Construction and setup of the Project is minimally invasive, and solar arrays are a long-term passive land use. The Project will not alter the underlying nature of the land which can be returned to any other appropriate use upon decommissioning.

The Project will also reduce the carbon footprint and greenhouse gas emissions of the State of Illinois as carbon-free-energy will be distributed to the electrical grid by the Project for community solar subscribers to access.

## Zoning and Community Impact

As referenced herein, the Property is located within Kane County's Farming District. The Kane County Code of Ordinances includes "solar utility" uses as a permitted special use in the Farming District. The special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted because the Subject Property is surrounded by farmland. The Applicant and Operator have significant experience developing solar facilities on farmland and take care to remove the system and restore the property to its original condition once the projects are completed. The proposed use of developing a Commercial Solar Energy Facility is compatible with the surrounding farmland as the Applicant plans to develop a community solar farm.

Based on Kane County's 2040 Plan, the Property has a 2040 future designated land use of Resource Management. This designation supports mixed use growth opportunities and emphasizes wise management of land and water resources, and provide opportunities for the implementation of livable, sustainable and healthy development. The Applicant is dedicated to maintaining the character of the Property and the surrounding area and working collaboratively with landowners. The Applicant has also developed an extensive decommissioning plan, as explained herein, to ensure preservation of the farmland and adherence to the 40% open space requirement following transition. The Commercial Solar Energy Facility will not be unreasonably detrimental to the public health, safety, morals, comfort of general welfare of the surrounding community. The Applicant strives to develop projects that deliver benefits to both the stakeholders and surrounding communities.

## Solar Technology & Illinois Shines Background

Solar panels and systems have been in use in the United States for almost 70 years since they were developed by Bell Laboratories in 1954. They have gained in popularity as the cost of solar energy becomes competitive with traditional fossil fuels, in addition to the positive environmental benefits. Modern distributed solar generation facilities (DG), energy produced at multiple locations across the grid, helps prevent electric line loss, increases resiliency of the grid, and reduces dependence on

carbon-based fuel sources and foreign imports.

Community solar facilities are supported by the State of Illinois. Illinois is expected to increase solar capacity state-wide by over 1,700% in the next five years with legislation in place requiring 25% of all energy production to come from renewable sources such as solar. The purpose of a community solar facility is to generate off-site solar energy for the on-going benefit of subscribers to the Project. Nationally, as many as 80% of homes and businesses are unable to install solar power on their property due to site conditions, regulations and cost, making off-site solar energy production their only option.

Illinois officially started recognizing solar energy in 2016 with the passage of the Future Energy Jobs Act (FEJA). This legislation created two key programs that incentive and support solar installations across the state: Illinois Shines and Illinois Solar for All. While 2016 marked the beginning of a significant push, Illinois's commitment to renewables' dates back further, with a renewable portfolio standard (RPS) being established in 2007. However, it was the 2016 and 2021 acts that truly accelerated and shaped the modern solar landscape in Illinois.

As a result, landowners have a new option that brings value to their property without impacting the underlying nature of the land. Subscribers to the Project also can save on their electric bills over the life of the agreement with their utility company.

Furthermore, solar systems have been found to be good neighboring land uses due to their passive nature, lack of negative impact on neighboring property values, and benefits to the environment and local economy.

## Equipment & Interconnection

Orchard Solar will deliver electricity to the grid through three points of interconnection (POIs) off Jericho Rd. with the local electric utility, Commonwealth Edison (ComEd). A substantial investment in interconnection infrastructure upgrades is required to connect the Project to the grid. The interconnection deposit totals approximately $6.3 million dollars to be paid on September 25$^{th}$, 2025, the week after this SUP Package submission.

The Project will consist of bifacial, American-made solar panels on a single axis tracker system. The tracking system significantly increases the efficiency of the system by allowing the panels to follow the sun and absorb more solar energy. The panels will be less than 9 feet in height at full tilt. Equipment specs are located within the SUP Package. For full disclosure, there is a possibility the type of panels being used may change prior to Construction due to supply chain issues & continuous equipment upgrades.

Panels will feed inverters which connect to the electric grid at the POI off Jericho Rd. closest to the ComEd's infrastructure. Transformers and related equipment will be placed on a pre-cast concrete slab adjacent to the array. A total of 21 utility- and customer-owned poles will be required for the Project. The ComEd poles will be standard electric utility poles with underground wires unless

otherwise authorized or required, and ComEd will acquire the necessary permits for their poles. All equipment will meet utility and national standards for safety and interconnection.

## Energy Facility Installation & Construction

All solar energy facilities shall be installed in compliance with the photovoltaic systems standards of the latest edition of the National Fire Protection Association (NFPA) 1, Fire Prevention Code. All wiring will be installed in compliance with the photovoltaic systems standards identified in the latest edition of the National Electrical Code (NFPA 70).

All installed utility connections and cabling will be installed underground, except at the point of interconnection (POI) with ComEd and in areas where it is necessary be overhead such as to cross a stream or other natural occurrences on the land that prevent underground wires. Prior to operation, electrical connections will be inspected and approved by the City Code Enforcement Officer and Electrical Inspector if required. The connection to the public utility grid will be inspected and approved by ComEd.

Grading and minor excavation may be needed for equipment pads to ensure level ground for the slab on grade. Any excavation shall be performed in a manner to preserve topsoil. A Stormwater Pollution Prevention Plan (SWPPP) will be submitted with the Applicant's building permit detailing how soil erosion will be mitigated during construction.

All necessary equipment and supplies will be delivered within a 6 to 8-week period at the start of construction but could be extended depending on supply chain deliveries. During construction, there will be an average of two semi-trailers per day so the Project will not significantly contribute to local traffic congestion. When operational, there will only be an average of one personal vehicle per month. Both the construction and operational periods for the solar facility will require less vehicle traffic than typical agricultural operations.

Construction is expected to take approximately 3 to 4 months upon building permit approval. A temporary delivery direction sign may be installed at the start of construction upon approval from the road authority. Temporary parking and staging will be off-road adjacent to the Project fenceline approximately 0.5 miles from Jericho Rd. Disposal of waste materials will comply with all local, State and Federal regulations and best practices.

## Hydrological Conditions and Environmental Features

Clean Field has conducted significant environmental due diligence over the past six months. The below reports have informed project designs and are included in the SUP Package:

Table 2

| Report | Consultant | Conclusions/Recommendations |
|---|---|---|
| **Phase I Environmental Site Assessment (ESA)** | Terracon | We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 2247-23 south of Prairie Street, Sugar Grove Township, Kane County, Illinois, the site. RECs, Controlled RECs (CRECs), and/or SDGs were not identified in connection with the site. |
| **Protected Species Habitat Assessment** | Terracon | Vegetation removal/disturbance should occur outside the peak bird nesting period of April through late September to avoid destruction of individuals, nests, or eggs. If project activities are conducted during this time, we recommend surveying for migratory bird nests prior to conducting work. |
| **Aquatic Resources Delineation Report (Level 3 Wetland Delineation)** | Terracon | Two artificial ponds and a small wetland totaling $\geq$ 0.5 acres near the southern pond were identified within the study area.<br><br>Based on current guidance, it is Terracon's opinion that the onsite aquatic features would not likely be regulated by USACE under Section 404 of the CWA or by Kane County under the Kane County Stormwater Management Ordinance as these features appear to have been excavated within uplands.<br><br>It is Terracon's understanding that the client intends to avoid impacts to the wetlands identified within the study area. Upon availability of project plans documenting avoidance of the wetlands, Terracon recommends coordinating with the USACE Chicago District to obtain a "No Permit Required" letter. |

The Project footprint will avoid all wetlands on-site, and will incorporate stormwater management practices in compliance with the Kane County Stormwater Management Ordinance.

An existing access road off Jericho Rd. runs south to north within the middle of the Property. This access road will be removed and rebuilt with CA7 gravel stone (3/4" without fines) which will allow water to pass through it and into the soil below, acting as a porous medium that filters and absorbs stormwater runoff rather than channeling it away as surface water. All new access roads will be constructed with CA7 gravel stone as well. This will significantly help to avoid introducing new impervious area and stormwater runoff on the Property associated with the Project. The addition of year-round ground cover will also provide improved stormwater control over traditional row cropping with greater soil retention and water infiltration.

The Preliminary Stormwater Management Report included with this SUP Package provides initial findings associated with the Project along with a Scope of Work to be completed by qualified third parties in pursuit of a Kane County Stormwater Permit for the Project.

## Natural Resources Inventory Farmland Determination

A Natural Resources Inventory (NRI) Report from the Kane-DuPage Soil & Water Conservation District (SWCD) made the following determination regarding the property:

Based upon the Kane County Land Evaluation and Site Assessment (LESA) score, this tract warrants Low Protection effort from development. Sites with a LESA score of 85 or greater are considered to warrant protection. This site has an LE score of 29, and a SA score of 43, with a total score of 72, placing it in the "Low Protection" category for farmland.

## Drain Tile Mitigation

The Applicant has entered into an Agricultural Mitigation Agreement (AIMA) with the Illinois Department of Agriculture which requires the Applicant to mitigate any agricultural damage that may be caused by construction activities. This includes maintaining surrounding area subsurface drainage, re-establishing subsurface drainage within the facility footprint, and permanent repairs as needed.

The Applicant has worked with the property owner and third-party consultants to identify drainage tiles across the Property. There is one main drain tile existing which divides the Property in half running east to west. The Applicant understands its importance to the Rob Roy Creek drain tile system and as such has designed the Project to have a significant setback (approximately 345 ft at the closest southeastern point, and 470 ft at the farthest southwestern point). Prior to applying for a building permit, the Applicant will conduct a comprehensive physical drain tile survey to map all existing drain tile lines traversing the Property.

The Preliminary Farmland Drain Tile Investigation report included with this SUP Package provides maps showing approximate locations of known tiles and a Scope of Work to be completed by qualified third parties in pursuit of a Kane County Stormwater Permit for the Project.

## State Cultural Resources

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act to review all state undertakings for their effect on cultural resources. The SHPO review found no historic architectural properties will be affected within the area of potential visual effects. However, they informed the Applicant that a known site (11K796) is recorded within the project area so a Phase I archaeological survey was required. An archaeological survey was then conducted by Terracon on Friday, Sept 5th and found no artifacts or presence of cultural resources. Terracon has provided a report recommending a finding of "no historic properties affected" and no additional archaeological investigations are warranted for the Project. This Archaeological Survey Short Report (ASSR) is included in our SUP Package and Terracon is preparing to submit their findings to SHPO. The final SHPO determination is expected to take 30 days and will be provided to zoning officers upon receipt.

## Tax Benefits to the Community

Orchard Solar will provide new tax revenues for local schools, libraries, and municipal services. Applicant has forecasted that the Project will generate approximately $4,011,884 of tax revenue over 40 years. The Year 1 calculation and distribution of taxes from the Project is provided in the below table which reflects the current tax rate of 8.04%, subject to further confirmation by the taxing authority:

Table 3

| District | Tax Rate | Extension |
|---|---|---|
| KANELAND C.U.S.D. 302 | 5.9066% | $82,408.69 |
| SUGAR GROVE FIRE DISTRICT | 0.6284% | $8,767.05 |
| WAUBONSEE COLLEGE 516 | 0.4201% | $5,861.10 |
| KANE COUNTY | 0.2878% | $4,015.97 |
| SUGAR GROVE LIBRARY DIST | 0.2516% | $3,509.89 |
| SUGAR GROVE PARK DISTRICT | 0.1749% | $2,439.67 |
| KANE FOREST PRESERVE | 0.1468% | $2,048.27 |
| SUGAR GROVE TWP ROAD DIST | 0.1334% | $1,861.45 |
| SUGAR GROVE TOWNSHIP | 0.0674% | $940.62 |
| SUGAR GROVE COMM BUILDING | 0.0171% | $239.14 |
| SUGAR GROVE WATER AUTH | 0.0019% | $27.19 |
| TOTAL | 8.0361% | $112,119.03 |

## Vegetation Management

Following construction of the Project, vegetation will be established to ensure soil stabilization, improve storm water quality, and site beautification. Low Maintenance Turf seed mix or similar seed mix is utilized for soil stabilization and erosion control. Native grasses or specific pollinator plantings will also be utilized. Once established, this site will filter surface waters and minimize erosion better than traditional croplands. Additional site visits and proactive weed identification and control will occur in the earlier seasons of vegetative growth to ensure proper site development. Regular site maintenance will occur throughout the life of the system.

## Fencing

The array and equipment pad will be surrounded by an 8’ high, woven-wire fabric livestock fence. The fence will have an 8” to 12” space on the bottom for small animals to pass through. The proposed layout is subject to change according to engineering, utility standards and the final equipment used. The final layout will continue to meet all municipal requirements and performance standards. Gated access will be provided with a key code or double lock for ComEd and emergency response personnel.

## Landscape Screening and Setbacks

The visual impact of the solar farm will be minimal. Plantings will be placed on the side facing non-participating homes and the roadway. The screening will primarily consist of native tree species alternating between conifer and deciduous. The Landscape & Screening Plan included with this SUP Package provides additional details.

The Project also meets all municipal setback requirements and significantly exceeds them in several cases. Kane County does not have any additional setback requirements outside of Illinois P.A. 102-1123. Those setback requirements are 150 feet from the nearest non-participating dwellings or structures, and 50 feet to the nearest non-participating property or a Public Right of Way (ROW). The closest dwelling is approximately 0.45 miles from the closest point of the Project and is the only dwelling within 0.5 miles of the Project.

Along the southern property boundary, the Project will have a setback from the main public roadway, Jericho Rd., of approximately 2,800 feet (or 0.5 miles) at its closest point. The eastern boundary that borders active farmland with a non-participating, unaffiliated neighbor applies a minimum setback of 80 feet and approximately 200 feet at its farthest point. On the western property boundary, Sugar Grove requested a special accommodation related to a possible annexation of the adjacent western property in pursuit of a future residential development. A minimum setback of 200’ was requested for any equipment or facilities from the coterminous (western) property line. As such, the Project was designed to have a setback of 500' at the northernmost aspect of the project, and approx. 850' at the southernmost point. Additionally, Sugar Grove requested "The installation of a berm ... high enough to prevent someone from seeing the solar farm from the second story window of a home." We believe the tree stand in the northwest corner of the Property and our new plantings will result in sufficient visual screening.

Finally, the northern property boundary is shared with a separate but affiliated entity of the property owner’s family, Alexander Family of Illinois LP. Here, a setback of 60 to 75 feet was applied to maximize land use for the property owner.

## Glare & Noise Analysis

Solar panels are designed to absorb sunlight and are encased in black, non-reflective material. To put it in perspective, solar panels have an equivalent glare factor as a body of water. The Project is also setback significantly from any roadway or dwelling and will be surrounded by natural screening so glare will not be an issue.

To validate this, a glare study has been conducted to analyze the impact on surrounding roadways, existing residentials, and airport facilities. The analysis determined that the Project has the potential to temporarily impact vision less than 0.2% of the year, primarily affecting motorists along Jericho Road and limited isolated receptors. This is similar to everyday glare exposure a driver might experience momentarily off the windshield of another car on a sunny day. No significant glare was predicted for FAA flight paths or the Aurora Air Traffic Control Tower.

The study explains that motorists would only experience glare if traveling in the right direction and looking directly at the panels at the exact modeled time. Because drivers are focused on the roadway and remain in motion, actual exposure would be brief and unlikely to cause a hazard. The analysis was conservative and did not account for mitigating effects of existing tree cover, backtracking controls, and the vegetative screening planned around the site. Therefore, the overall likelihood of the project causing a hazard to motorists or being a nuisance to the community is low.

Prior to the start of construction, the Applicant will also clear the Federal Aviation Administration (FAA) Notice Criteria Tool (FNTC) to confirm that flight paths associated with the Aurora Municipal Airport remain safe and unobstructed. The FNTC applies to drone flight approvals or construction projects near airports.

A noise analysis has also been conducted by a Qualified Professional in compliance with applicable Illinois Pollution Control Board (IPCB) regulations. Inverters are the only primary component of a solar project that produces sound. At the closest property line (400 feet from the nearest inverter), sound levels are expected to be approximately 35 decibels (dB), well below the regulatory limit. To put it in perspective, it is quieter than a refrigerator hum. Furthermore, noise generally dissipates at a rate of about 6 dB with every doubling of distance so the noise will be almost non-existent at for the nearest dwelling (2,500 ft. away) and public road (3,000 ft.).

## Emergency Management, Safety and Services

The Operator will develop a detailed Emergency Response Plan for the building permit submission to ensure the safety of the public, employees, and all emergency responders.

The Emergency Response Plan will include proper signage during construction and operations including a sign on the gate to the Project that identifies the name of the Owner, the name of the Operator, and a 24-hour emergency contact phone number for the Operator. One light at the point of interconnection (POI) will be illuminated continually in the evening hours for safety of responding personnel.

In consideration of feedback from Chief Brendan Moran of the Sugar Grove Fire Prevention District, additional access roads, hammerhead turnarounds, and emergency access gates at road terminations were incorporated into the Project designs. These new roads allow for fire apparatuses to reach within approximately 500’ of all aspects of the Project. As requested by Chief Moran, a stamped letter from a Professional Engineer also documents that the access roads can support vehicles up to 80,000 lbs.

## Operations and Maintenance Plan

The Operator will develop an Operations and Maintenance Plan detailing how the solar farm will be kept in good condition once energized. Generally, the facilities will be operated and maintained in a manner consistent with utility best practices, including a minimum of biannual (spring and fall) on-site inspections and maintenance of stormwater management system components, as needed. Solar farms typically utilize remote electronic monitoring to gain real-time information regarding electrical

output and associated required maintenance.

## Decommissioning, Restoration Plan and Insurance

Within one hundred eighty (180) days of the end of the project useful life, decommissioning will include the removal of all the solar arrays, cables, electrical components, accessory structures, fencing, roads and other ancillary facilities owned by the solar farm. Since this project includes the establishment of vegetation on site, the soil will be excellent for agricultural utilization upon decommissioning. Established vegetation can be maintained or tilled and re-planted to other vegetation upon the landowner's request. At year 26, there is almost equal salvage value in the panels and equipment than the costs associated with removing the system. Detailed decommissioning includes:

- All cables and conduits will be removed
- PV modules will be removed from racking sold or transported to a recycling facility
- Racking equipment will be dismantled and removed, and either re-used or sold for scrap
- Inverters, transformers, switchgear, etc. will be re-sold or scrapped per industry best practices and regulations
- Concrete foundations, if utilized, will be broken down and recycled or otherwise disposed
- The security fence will be removed
- The site will be left in a natural vegetative state

The Operator will be supplying a decommissioning bond meeting the approved decommissioning plan prior to applying for the building permit. The performance bond will be utilized by the Operator to restore the site back to its original state. The soil is expected to be restored and re-nourished from the native and pollinator grasses that inhabit the site during operation of the solar array. All equipment, concrete (small slab from equipment pad), and materials will be removed from the site unless useful for future land use (i.e. underground wiring).

## Conclusion

Orchard Solar will bring clean energy to the citizens of Illinois unable to site a solar facility on their property. It will reduce the utilities and the state's carbon emissions, provide significant local tax revenue during operations, and is a passive use of the land. A solar farm is designed, just like crops, to absorb the sun's rays, not reflect them. Over seventy years of history deploying solar technology has not identified public health or environmental issues.

We are excited to complete this project in a strong partnership with Kane County and the property owner. We are committed to following best practices and all State, Federal and local rules, and regulations to develop a community solar farm providing many benefits to the local community.

## Kane County Commercial Solar Energy Facility Requirements Chapter 25-5-4-9 Commercial Solar Energy Facility

The below table displays the name(s), address(es), and phone number(s) of the Applicant(s), Owner and Operator, and all property owner(s) for ease of reference:

Table 4

| Applicant | Owner & Operator | Property Owner |
|---|---|---|
| CFP IL Orchard Solar LLC<br>2303 Wycliff, Suite 300<br>St. Paul, MN 55114<br>(215) 932-2559<br>glanoce@cleanfieldpower.com | Novel Energy Solutions<br>2303 Wycliff, Suite 300<br>St. Paul, MN 55114<br>(612) 345-7188<br>info@novelenergy.biz | J G Farm Properties LLC<br>c/o Scott Jesseman & Jean Goehlen<br>2260 Tanglewood Dr.<br>Aurora, IL 60506<br>(630) 675-7586 |

## Appendix D: Required Submittal Documents Table

The below table displays all documents included within our Special Use Permit (SUP) package for ease of reference:

Table 5

| Item # | Required Document |
|---|---|
| 1 | Application for a Special Use Permit |
| 2 | Special Use Permit Findings of Fact Worksheet |
| 3 | Project Narrative/Commercial Solar Energy Facility Summary |
| 4 | Site Control Documentation |
| 5 | Plat of Survey/ALTA Land Title Survey |
| 6 | Solar Equipment Manufacturer Specs |
| 7 | Noise Analysis |
| 8 | Decommissioning Plan |
| 9 | Decommissioning Surety Draft |

| | |
|---|---|
| 10 | Waiver of Setback Requirements |
| 12 | Glare Study* |
| 13 | Legal Description of the Subject Property |
| 14 | List of all Property Owners & Mailing Addresses within 250’ of the subject property |
| 15 | Certification of Notice to Adjacent Property Owners |
| 16 | Copy of Letter from Petitioner sent to Adjacent Properties |
| 17.1 | Geometric Site Plan |
| 17.2 | Electrical Plans |
| 18 | Landscape & Screening Plan |
| 20 | Results and recommendations from the Illinois Department of Natural Resources (IDNR) obtained through the Ecological Compliance Assessment Tool (EcoCAT) |
| 21.1 | Resource Preservation Review from the Illinois State Historic Preservation Office (SHPO) |
| 21.2 | Archaeological Survey Short Report (ASSR) |
| 22 | Natural Resources Inventory (NRI) Report from the Kane-DuPage Soil & Water Conservation District (SWCD) |
| 23 | Results of any USFWS Information for Planning and Consulting environmental review |
| 24 | Letter of No Objection from the U.S. Army Corps of Engineers (USACE) |
| 25 | Executed Agricultural Impact Mitigation Agreement (AIMA) with the Illinois Department of Agriculture |
| 26 | Documentation demonstrating avoidance of protected lands as identified by IDNR and the Illinois Nature Preserve Commission (INPC) |
| 27 | Written Approval of Roadway Use from the Road District Commissioner and the County Engineer |
| 28 | Structural Engineer’s Certificate |
| 29 | FEMA 100-Year Floodplain Map |

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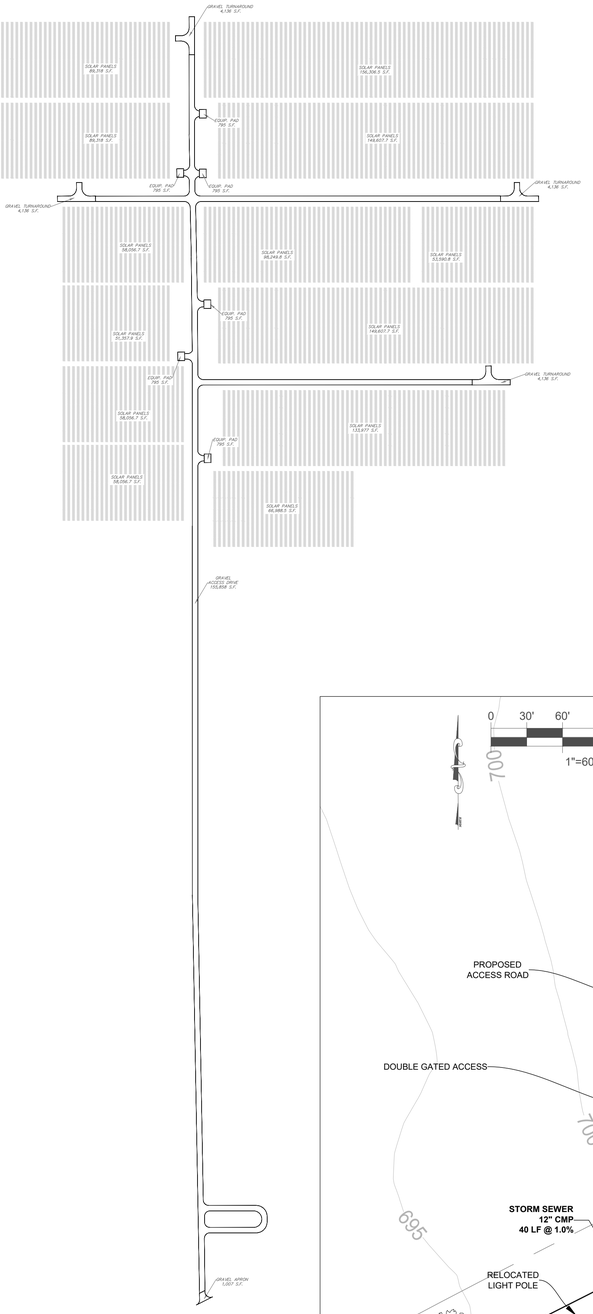
|---|---|
| 30 | Level 1 Wetland Investigation |
| 31 | Topographical Map of the Subject Property |
| 32 | Preliminary Farmland Drain Tile Investigation |
| 33 | Preliminary Stormwater Management Report |
| 34 | Phase I Environmental Site Assessment (ESA) |
| 99 | Gravel Solar Farm Access Roads Engineer's Letter |

## PROPOSED IMPERVIOUS AREAS
## NTS




| ORCHARD SOLAR | | |
|---|---|---|
| LOT SIZE: | 12,134,363 SF | |
| | EXISTING IMPERVIOUS AREA ENTIRE LOT (s.f.) | PROPOSED IMPERVIOUS AREA ENTIRE LOT (s.f.) |
| DRIVE APRON (PERVIOUS) | | 1,007 |
| ACCESS DRIVE (PERVIOUS) | | 155,858 |
| TURN AROUNDS (PERVIOUS) | | 16,544 |
| EQUIPMENT PADS | | 4,770 |
| SOLAR PANELS (NOT INCLUDED) | | 1,145,503 |
| TOTALS | 0 | 4,770 |
| % OF LOT | 0.00% | 0.04% |
| INCREASE IN IMPERVIOUS | 4,770 SF | |

**TYPICAL ROAD CROSS-SECTION**

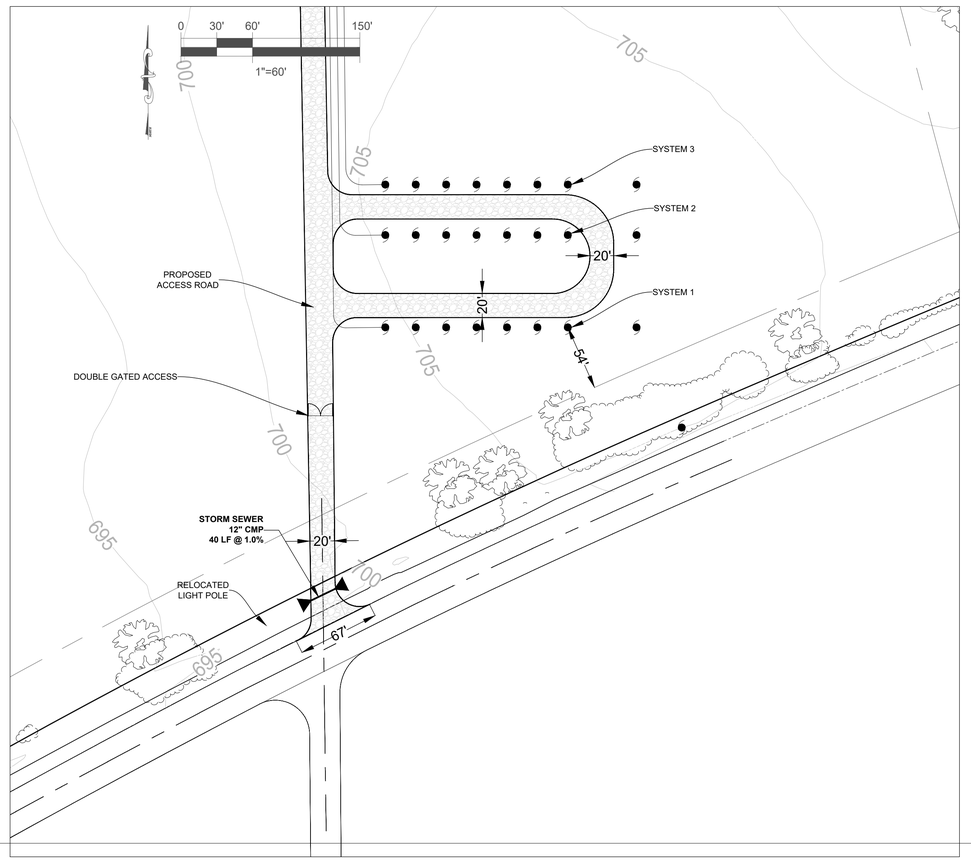
**CUT OUT EXISTING GRAVEL & DIRT**

**PLACE 12" CA-7 CLEAN CRUSHED AGGREGATE & DRESS SHOULDERS**

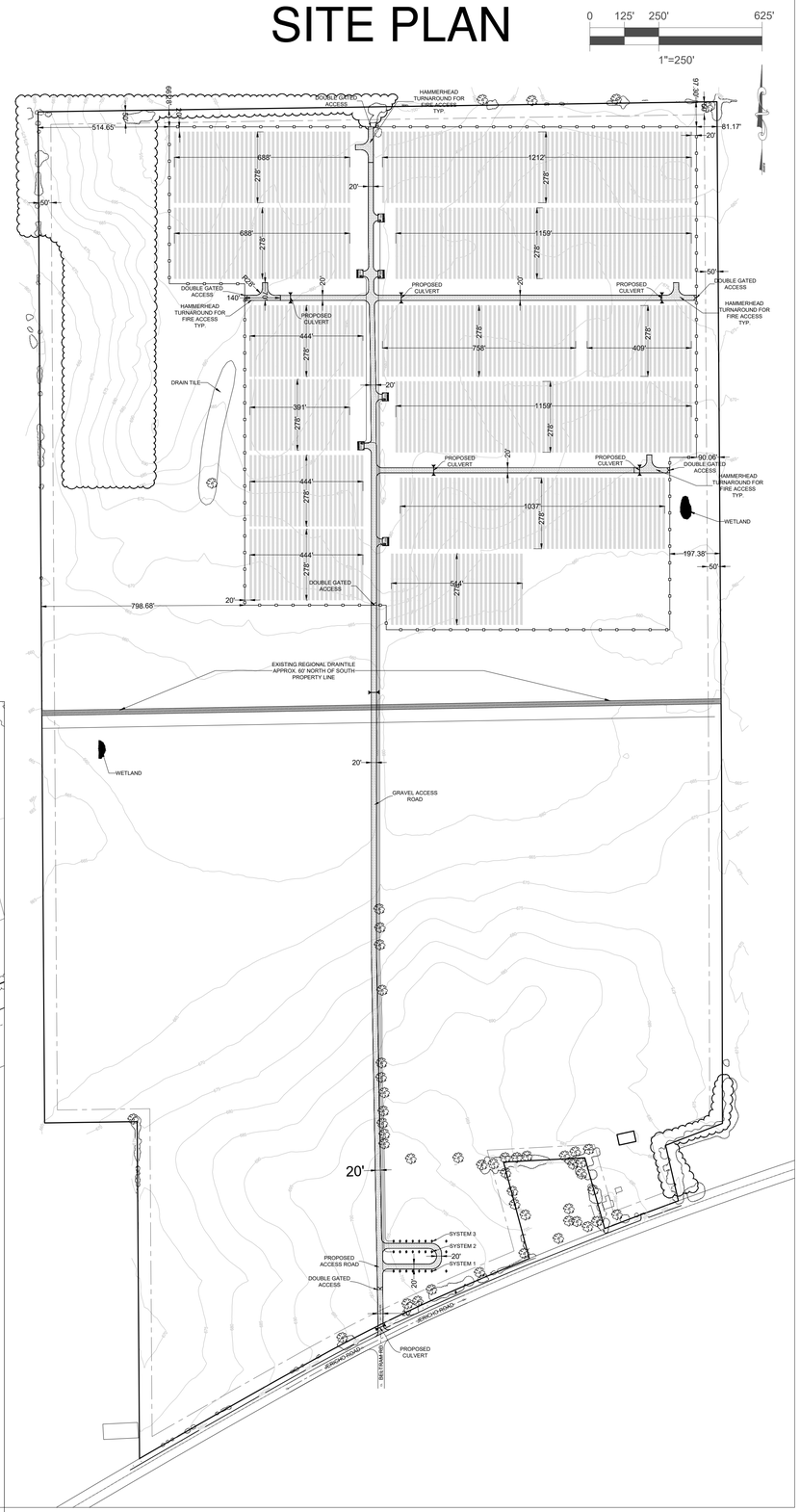



**PERMEABILITY OF STONE ROAD WILL MATCH THE PERMEABILITY OF THE SOIL BELOW**

# SITE ACCESS




# SITE PLAN




MUNICIPALITY APPROVAL STAMP

CLIENT:
CLEAN FIELD POWER
211 ISLAND RD,
MAHWAH, NJ 07430

CONTRACTOR:
IN AVE RENEWABLES
NAPERVILLE, IL 60565
contact@inwavere.com

ELECTRICAL ENGINEER:
IE DESIGN
**IE DESIGN PLLC**
ELK GROVE VILLAGE, IL 60007
contact@iedesignco.com
PROFESSIONAL DESIGN FIRM # 184.008367-0002

CIVIL ENGINEER:
BCI BONO CONSULTING CIVIL ENGINEERS
A Sevee & Maher Engineers company
1018 BUSSE HIGHWAY
PARK RIDGE, IL 60068
847-823-3300
bbono@bonoconsulting.com
4234 MERIDIAN PKWY, STE 116
AURORA, IL 60504
331-229-3512
rwalker@bonoconsulting.com
DESIGN FIRM NO. 184.008857-0002

SME SEVEE & MAHER ENGINEERS
ENVIRONMENTAL • CIVIL • GEOTECHNICAL • WATER • COMPLIANCE
4 Blanchard Road, PO Box 85A, Cumberland, Maine 04021
Phone 207.829.5016 • Fax 207.829.5692 • sme-engineers.com

PROJECT NAME:
ORCHARD SOLAR

LOCATION:
41°44'24.3"N 88°25'26.9"W
SUGAR GROVE, IL

| ISSUE # | ISSUED FOR: | DATE |
|---|---|---|
| 1 | SITE CHECK SET | 08-25-2025 |
| 2 | SITE CHECK SET | 09-05-2025 |
| 3 | PROGRESS SET | 09-10-2025 |
| 4 | PROGRESS SET | 09-17-2025 |
| 5 | PROGRESS SET | 09-18-2025 |

SEAL:
NOT FOR CONSTRUCTION

DATE: 09/17/2025

TITLE:
SITE PLAN

PROJECT #:
IW-101

SHEET:
C-2.0

# BLUESTEM SOLAR

Commercial Solar Energy Facility
Project Narrative for Kane County Special Use Permit (SUP)

**Petitioner:** CFP IL Bluestem Solar LLC

**Prepared by:**

September 18, 2025

## Introduction

CFP IL Bluestem Solar, LLC (the "Applicant") is a limited liability company created by Clean Field Power, LLC, ("Clean Field") for the purpose of developing a community solar project. The Applicant has prepared this application for a 15-megawatt alternating current (MW AC or MWac) Commercial Solar Energy Facility project situated on three parcels of land located in unincorporated Kane County, Illinois (PINs: 14-23-300-018, 14-26-100-004 & 14-26-300-003) (the "Property"). The proposed community solar facilities may be referred to herein as the "Project" or "Bluestem Solar".

The Applicant has entered into a purchase option agreement with the property owner, Thomas E. Maytas, trustee of the Thomas E. Matyas Revocable Trust, and is applying for a Special Use Permit (SUP) with the Kane County Development & Community Services in September 2025 for consideration at the Zoning Board of Appeals Meeting scheduled for November 4, 2025. All Bluestem Solar SUP Appendix D: Required Submittal Documents and supplemental information may be referred to herein as the "SUP Package".

The Project is being developed through a partnership between Novel Energy Solutions (the "Operator") and Clean Field. The Operator's founder stems from a family of cattle farmers with over 130 years of history in southern Minnesota. The Operator has a proven track record, recently permitted seven solar projects in Illinois, and owns over 200 MW of community solar in their portfolio. The Operator holds projects as opposed to buying and flipping so they will be the county and community's partner for the entire life of the project.

Table 1

| | |
|---|---|
| **Developers** | Novel Energy Solutions LLC<br>Clean Field Power LLC |
| **Project Entity** | CFP IL Bluestem Solar LLC |
| **Township** | Sugar Grove |
| **Project Address** | 40W489 PRAIRIE ST<br>SUGAR GROVE, IL, 60554 |
| **Parcel IDs** | 14-23-300-018<br>14-26-100-004<br>14-26-300-003 |
| **Nearest Cross Streets** | Prairie St. & Gordon Rd. |
| **Size** | 15 MWac / 21 MWdc |
| **Total Area of all Parcels** | 139 acres |
| **Proposed Project Area** | 80 acres |

Bluestem Solar includes three 5 MWac community solar facilities which will require a footprint of approximately 78 acres and utilize approximately 2 acres under an easement on the Property for two purposes: access to the Project off Prairie St. and a bank of utility poles outside of the Project fence line.

Historically, the Property has been used for agricultural purposes and will be leased by the Project for a period of up to 40 years. The impact to the area is low from a construction, operation, and end of life perspective. Construction and setup of the Project is minimally invasive, and solar arrays are a long-term passive land use. The Project will not alter the underlying nature of the land which can be returned to any other appropriate use upon decommissioning.

The Project will also reduce the carbon footprint and greenhouse gas emissions of the State of Illinois as carbon-free-energy will be distributed to the electrical grid by the Project for community solar subscribers to access.

## Zoning and Community Impact

As referenced herein, the Property is located within Kane County's Farming District. The Kane County Code of Ordinances includes "solar utility" uses as a permitted special use in the Farming District. The special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted because the Subject Property is surrounded by farmland. The Applicant and Operator have significant experience developing solar facilities on farmland and take care to remove the system and restore the property to its original condition once the projects are completed. The proposed use of developing a Commercial Solar Energy Facility is compatible with the surrounding farmland as the Applicant plans to develop a community solar farm.

Based on Kane County's 2040 Plan, the Property has a 2040 future designated land use of Resource Management. This designation supports mixed use growth opportunities and emphasizes wise management of land and water resources, and provide opportunities for the implementation of livable, sustainable and healthy development. The Applicant is dedicated to maintaining the character of the Property and the surrounding area and working collaboratively with landowners. The Applicant has also developed an extensive decommissioning plan, as explained herein, to ensure preservation of the farmland and adherence to the 40% open space requirement following transition. The Commercial Solar Energy Facility will not be unreasonably detrimental to the public health, safety, morals, comfort of general welfare of the surrounding community. The Applicant strives to develop projects that deliver benefits to both the stakeholders and surrounding communities.

## Solar Technology & Illinois Shines Background

Solar panels and systems have been in use in the United States for almost 70 years since they were developed by Bell Laboratories in 1954. They have gained in popularity as the cost of solar energy becomes competitive with traditional fossil fuels, in addition to the positive environmental benefits. Modern distributed solar generation facilities (DG), energy produced at multiple locations across the grid, helps prevent electric line loss, increases resiliency of the grid, and reduces dependence on

carbon-based fuel sources and foreign imports.

Community solar facilities are supported by the State of Illinois. Illinois is expected to increase solar capacity state-wide by over 1,700% in the next five years with legislation in place requiring 25% of all energy production to come from renewable sources such as solar. The purpose of a community solar facility is to generate off-site solar energy for the on-going benefit of subscribers to the Project. Nationally, as many as 80% of homes and businesses are unable to install solar power on their property due to site conditions, regulations and cost, making off-site solar energy production their only option.

Illinois officially started recognizing solar energy in 2016 with the passage of the Future Energy Jobs Act (FEJA). This legislation created two key programs that incentive and support solar installations across the state: Illinois Shines and Illinois Solar for All. While 2016 marked the beginning of a significant push, Illinois's commitment to renewables' dates back further, with a renewable portfolio standard (RPS) being established in 2007. However, it was the 2016 and 2021 acts that truly accelerated and shaped the modern solar landscape in Illinois.

As a result, landowners have a new option that brings value to their property without impacting the underlying nature of the land. Subscribers to the Project also can save on their electric bills over the life of the agreement with their utility company.

Furthermore, solar systems have been found to be good neighboring land uses due to their passive nature, lack of negative impact on neighboring property values, and benefits to the environment and local economy.

## Equipment & Interconnection

Bluestem Solar will deliver electricity to the grid through three points of interconnection (POIs) off Prairie St. with the local electric utility, Commonwealth Edison (ComEd). A substantial investment in interconnection infrastructure upgrades is required to connect the Project to the grid. The interconnection deposit totals approximately $8 million dollars to be paid on October 8th, 2025, shortly after this SUP Package submission.

The Project will consist of bifacial, American-made solar panels on a single axis tracker system. The tracking system significantly increases the efficiency of the system by allowing the panels to follow the sun and absorb more solar energy. The panels will be less than 9 feet in height at full tilt. Equipment specs are located within the SUP Package. For full disclosure, there is a possibility the type of panels being used may change prior to Construction due to supply chain issues & continuous equipment upgrades.

Panels will feed inverters which connect to the electric grid at the POI off Prairie St closest to ComEd's infrastructure. Transformers and related equipment will be placed on a pre-cast concrete slab adjacent to the array. A total of 21 utility- and customer-owned poles will be required for the Project. The ComEd poles will be standard electric utility poles with underground wires unless

otherwise authorized or required, and ComEd will acquire the necessary permits for their poles. All equipment will meet utility and national standards for safety and interconnection.

## Energy Facility Installation & Construction

All solar energy facilities shall be installed in compliance with the photovoltaic systems standards of the latest edition of the National Fire Protection Association (NFPA) 1, Fire Prevention Code. All wiring will be installed in compliance with the photovoltaic systems standards identified in the latest edition of the National Electrical Code (NFPA 70).

All installed utility connections and cabling will be installed underground, except at the point of interconnection (POI) with ComEd and in areas where it is necessary be overhead such as to cross a stream or other natural occurrences on the land that prevent underground wires. Prior to operation, electrical connections will be inspected and approved by the City Code Enforcement Officer and Electrical Inspector if required. The connection to the public utility grid will be inspected and approved by ComEd.

Grading and minor excavation may be needed for equipment pads to ensure level ground for the slab on grade. Any excavation shall be performed in a manner to preserve topsoil. A Stormwater Pollution Prevention Plan (SWPPP) will be submitted with the Applicant's building permit detailing how soil erosion will be mitigated during construction.

All necessary equipment and supplies will be delivered within a 6 to 8-week period at the start of construction but could be extended depending on supply chain deliveries. During construction, there will be an average of two semi-trailers per day so the Project will not significantly contribute to local traffic congestion. When operational, there will only be an average of one personal vehicle per month. Both the construction and operational periods for the solar facility will require less vehicle traffic than typical agricultural operations.

Construction is expected to take approximately 3 to 4 months upon building permit approval. A temporary delivery direction sign may be installed at the start of construction upon approval from the road authority. Temporary parking and staging will be on the Property off-road at the site entrance. Disposal of waste materials will comply with all local, State and Federal regulations and best practices.

## Hydrological Conditions and Environmental Features

Clean Field has conducted significant environmental due diligence over the past six months. The below reports have informed project designs and are included in the SUP Package:

Table 2

| Report | Consultant | Conclusions/Recommendations |
|---|---|---|
| **Phase I Environmental Site Assessment (ESA)** | Terracon | We have performed a Phase I ESA consistent with the procedures included in ASTM Practice E 2247-23 south of Prairie Street, Sugar Grove Township, Kane County, Illinois, the site. RECs, Controlled RECs (CRECs), and/or SDGs were not identified in connection with the site. |
| **Protected Species Habitat Assessment** | Terracon | Vegetation removal/disturbance should occur outside the peak bird nesting period of April through late September to avoid destruction of individuals, nests, or eggs. If project activities are conducted during this time, we recommend surveying for migratory bird nests prior to conducting work. |
| **Aquatic Resources Delineation Report (Level 3 Wetland Delineation)** | Terracon | Two artificial ponds and a small wetland totaling $\geq$ 0.5 acres near the southern pond were identified within the study area.<br><br>Based on current guidance, it is Terracon's opinion that the onsite aquatic features would not likely be regulated by USACE under Section 404 of the CWA or by Kane County under the Kane County Stormwater Management Ordinance as these features appear to have been excavated within uplands.<br><br>It is Terracon's understanding that the client intends to avoid impacts to the wetlands identified within the study area. Upon availability of project plans documenting avoidance of the wetlands, Terracon recommends coordinating with the USACE Chicago District to obtain a "No Permit Required" letter. |

The Project footprint will avoid all wetlands on-site, and will incorporate stormwater management practices in compliance with the Kane County Stormwater Management Ordinance.

An existing access road off Prairie St runs north to south within the middle of the Property. All new access roads on the Property will be constructed with CA7 gravel stone (3/4" without fines) which will allow water to pass through it and into the soil below, acting as a porous medium that filters and absorbs stormwater runoff rather than channeling it away as surface water. This will significantly help to avoid introducing new impervious area and stormwater runoff on the Property associated with the Project. The addition of year-round ground cover will also provide improved stormwater control over traditional row cropping with greater soil retention and water infiltration.

The Preliminary Stormwater Management Report included with this SUP Package provides initial findings associated with the Project along with a Scope of Work to be completed by qualified third parties in pursuit of a Kane County Stormwater Permit for the Project.

## Natural Resources Inventory Farmland Determination

A Natural Resources Inventory (NRI) Report from the Kane-DuPage Soil & Water Conservation District (SWCD) made the following determination regarding the property:

Based upon the Kane County Land Evaluation and Site Assessment (LESA) score, this tract warrants Low Protection effort from development. Sites with a LESA score of 85 or greater are considered to warrant protection. This site has an LE score of 28, and a SA score of 39, with a total score of 67, placing it in the "Low Protection" category for farmland.

## Drain Tile Mitigation

The Applicant has entered into an Agricultural Mitigation Agreement (AIMA) with the Illinois Department of Agriculture which requires the Applicant to mitigate any agricultural damage that may be caused by construction activities. This includes maintaining surrounding area subsurface drainage, re-establishing subsurface drainage within the facility footprint, and permanent repairs as needed.

The Applicant has worked with the property owner and third-party consultants to identify drainage tiles across the property. There appear to be existing drain tiles on the property along the existing access road at an unknown depth. Prior to applying for a building permit, the Applicant will conduct a comprehensive physical drain tile survey to map all existing drain tile lines traversing the Property.

The Preliminary Farmland Drain Tile Investigation report included with this SUP Package provides maps showing approximate locations of known tiles and a Scope of Work to be completed by qualified third parties in pursuit of a Kane County Stormwater Permit for the Project.

## State Cultural Resources

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act to review all state undertakings for their effect on cultural resources. No historic properties were identified within the Property of potential visual effects. Additionally, their files do not identify any known archaeological sites within the Property of potential direct effects, nor is it within a high probability area for archaeological resources.

## Tax Benefits to the Community

Bluestem Solar will provide new tax revenues for local schools, libraries, and municipal services. Applicant has forecasted that the Project will generate approximately $4,625,649 of tax revenue over 40 years. The Year 1 calculation and distribution of taxes from the Project is provided in the below table which reflects a blended tax rate of 7.95%, subject to further confirmation by the taxing authority:

Table 3

| District | Tax Rate | Extension |
|---|---|---|
| KANELAND C.U.S.D. 302 / WEST AURORA SCH DIST 129 | 5.8205% | $81,208.06 |
| SUGAR GROVE FIRE DISTRICT | 0.6284% | $8,767.05 |
| WAUBONSEE COLLEGE 516 | 0.4201% | $5,861.10 |
| KANE COUNTY | 0.2878% | $4,015.97 |
| SUGAR GROVE LIBRARY DIST | 0.2516% | $3,509.89 |
| SUGAR GROVE PARK DISTRICT | 0.1749% | $2,439.67 |
| KANE FOREST PRESERVE | 0.1468% | $2,048.27 |
| SUGAR GROVE TWP ROAD DIST | 0.1334% | $1,861.45 |
| SUGAR GROVE TOWNSHIP | 0.0674% | $940.62 |
| SUGAR GROVE COMM BUILDING | 0.0171% | $239.14 |
| SUGAR GROVE WATER AUTH | 0.0019% | $27.19 |
| TOTAL | 7.9500% | $110,918.40 |

## Vegetation Management

Following construction of the Project, vegetation will be established to ensure soil stabilization, improve storm water quality, and site beautification. Low Maintenance Turf seed mix or similar seed mix is utilized for soil stabilization and erosion control. Native grasses or specific pollinator plantings will also be utilized. Once established, this site will filter surface waters and minimize erosion better than traditional croplands. Additional site visits and proactive weed identification and control will occur in the earlier seasons of vegetative growth to ensure proper site development. Regular site maintenance will occur throughout the life of the system.

## Fencing

The array and equipment pad will be surrounded by an 8’ high, woven-wire fabric livestock fence. The fence will have an 8” to 12” space on the bottom for small animals to pass through. The proposed layout is subject to change according to engineering, utility standards and the final equipment used. The final layout will continue to meet all municipal requirements and performance standards. Gated access will be provided with a key code or double lock for ComEd and emergency response personnel.

## Landscape Screening and Setbacks

The visual impact of the solar farm will be minimal. Plantings will be placed on the side facing non-participating homes and the roadway. The screening will primarily consist of native tree species alternating between conifer and deciduous. The Landscape & Screening Plan included with this SUP Package provides additional details.

The Project also meets all municipal setback requirements and significantly exceeds them in several cases. Kane County does not have any additional setback requirements outside of Illinois

P.A. 102-1123. Those setback requirements are 150 feet from the nearest non-participating dwellings or structures, and 50 feet to the nearest non-participating property or a Public Right of Way (ROW). The closest dwelling is 0.2 miles from the closest point of the Project and is the only dwelling within 0.3 miles of the Project.

Along the northern property boundary, the Project will have a setback from the main public roadway, Prairie St., of approximately 230 feet at its closest point. The eastern, western, and southern property boundaries that border active farmland applies a minimum setback of 70 feet and approximately 450 feet at its farthest point.

The City of Aurora Public Works Engineering Division requested two special accommodations: 1) 20' ROW dedication along Prairie Street to the City of Aurora, and 2) an enhanced setback of at least 70 feet for a possible future extension of Gordon Rd. along the western property line.

## Glare & Noise Analysis

Solar panels are designed to absorb sunlight and are encased in black, non-reflective material. To put it in perspective, solar panels have an equivalent glare factor as a body of water. The Project is also setback significantly from any roadway or dwelling and will be surrounded by natural screening so glare will not be an issue.

To validate this, a glare study has been conducted to analyze the impact on surrounding roadways, existing residentials, and airport facilities. The analysis determined that the Project has the potential to temporarily impact vision less than 0.3% of the year, limited to certain roadway segments and a few nearby residences. This is similar to everyday glare exposure a driver might experience momentarily off the windshield of another car on a sunny day. No glare was predicted for any of the six FAA flight paths or at the Aurora Air Traffic Control Tower.

The study explains that motorists would only experience glare if traveling in the right direction and looking directly at the panels at the exact modeled time. Because drivers are focused on the roadway and remain in motion, actual exposure would be brief and unlikely to cause a hazard. The analysis was conservative and did not account for mitigating effects of existing tree cover, backtracking controls, and the vegetative screening planned around the site. Therefore, the overall likelihood of the project causing a hazard to motorists or being a nuisance to the community is low.

Prior to the start of construction, the Applicant will also clear the Federal Aviation Administration (FAA) Notice Criteria Tool (FNTC) to confirm that flight paths associated with the Aurora Municipal Airport remain safe and unobstructed. The FNTC applies to drone flight approvals or construction projects near airports.

A noise analysis has been conducted by a Qualified Professional in compliance with applicable Illinois Pollution Control Board (IPCB) regulations. Inverters are the only primary component of a solar project that produces sound. At the closest property line (451 feet from the nearest inverter), sound levels are expected to be approximately 34 decibels (dB), well below the regulatory limit. To put it in

perspective, it is quieter than a refrigerator hum. Furthermore, noise generally dissipates at a rate of about 6 dB with every doubling of distance so the noise will be almost non-existent at for the nearest dwelling (1,500 ft. away) and public road (700 ft.)

## Emergency Management, Safety and Services

The Operator will develop a detailed Emergency Response Plan for the building permit submission to ensure the safety of the public, employees, and all emergency responders.

The Emergency Response Plan will include proper signage during construction and operations including a sign on the gate to the Project that identifies the name of the Owner, the name of the Operator, and a 24-hour emergency contact phone number for the Operator. One light at the point of interconnection (POI) will be illuminated continually in the evening hours for safety of responding personnel.

In consideration of feedback from Chief Brendan Moran of the Sugar Grove Fire Prevention District, additional access roads, hammerhead turnarounds, and emergency access gates at road terminations were incorporated into the Project designs. These new roads allow for fire apparatuses to reach within approximately 500' of all aspects of the Project. As requested by Chief Moran, a stamped letter from a Professional Engineer also documents that the access roads can support vehicles up to 80,000 lbs.

## Operations and Maintenance Plan

The Operator will develop an Operations and Maintenance Plan detailing how the solar farm will be kept in good condition once energized. Generally, the facilities will be operated and maintained in a manner consistent with utility best practices, including a minimum of biannual (spring and fall) on-site inspections and maintenance of stormwater management system components, as needed. Solar farms typically utilize remote electronic monitoring to gain real-time information regarding electrical output and associated required maintenance.

## Decommissioning, Restoration Plan and Insurance

Within one hundred eighty (180) days of the end of the project useful life, decommissioning will include the removal of all the solar arrays, cables, electrical components, accessory structures, fencing, roads and other ancillary facilities owned by the solar farm. Since this project includes the establishment of vegetation on site, the soil will be excellent for agricultural utilization upon decommissioning. Established vegetation can be maintained or tilled and re-planted to other vegetation upon the landowner's request. At year 26, there is almost equal salvage value in the panels and equipment than the costs associated with removing the system. Detailed decommissioning includes:

- All cables and conduits will be removed
- PV modules will be removed from racking sold or transported to a recycling facility
- Racking equipment will be dismantled and removed, and either re-used or sold for scrap

- Inverters, transformers, switchgear, etc. will be re-sold or scrapped per industry best practices and regulations
- Concrete foundations, if utilized, will be broken down and recycled or otherwise disposed.
- The security fence will be removed
- The site will be left in a natural vegetative state

The Operator will be supplying a decommissioning bond meeting the approved decommissioning plan prior to applying for the building permit. The performance bond will be utilized by the Operator to restore the site back to its original state. The soil is expected to be restored and re-nourished from the native and pollinator grasses that inhabit the site during operation of the solar array. All equipment, concrete (small slab from equipment pad), and materials will be removed from the site unless useful for future land use (i.e. underground wiring).

## Conclusion

Bluestem Solar will bring clean energy to the citizens of Illinois unable to site a solar facility on their property. It will reduce the utilities and the state's carbon emissions, provide significant local tax revenue during operations, and is a passive use of the land. A solar farm is designed, just like crops, to absorb the sun's rays, not reflect them. Over seventy years of history deploying solar technology has not identified public health or environmental issues.

We are excited to complete this project in a strong partnership with Kane County and the property owner. We are committed to following best practices and all State, Federal and local rules, and regulations to develop a community solar farm providing many benefits to the local community.

## Kane County Commercial Solar Energy Facility Requirements Chapter 25-5-4-9 Commercial Solar Energy Facility

The below table displays the name(s), address(es), and phone number(s) of the Applicant(s), Owner and Operator, and all property owner(s) for ease of reference:

Table 4

| Applicant | Owner & Operator | Property Owner |
|---|---|---|
| CFP IL Bluestem Solar LLC<br>2303 Wycliff, Suite 300<br>St. Paul, MN 55114<br>(215) 932-2559<br>glanoce@cleanfieldpower.com | Novel Energy Solutions<br>2303 Wycliff, Suite 300<br>St. Paul, MN 55114<br>(612) 345-7188<br>info@novelenergy.biz | Thomas E. Matyas Revocable Trust<br>c/o Tom Matyas<br>625 Baker's Bridge Rd.<br>Suite 105, Box 109<br>Franklin, TN 37064<br>(972) 639-8544 |

## Appendix D: Required Submittal Documents Table

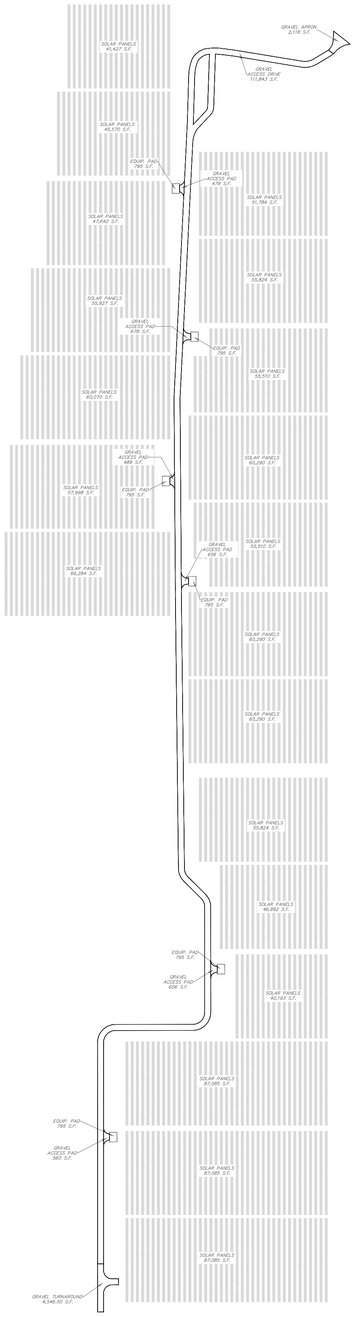
The below table displays all documents included within our Special Use Permit (SUP) package for ease of reference:

Table 5

| Item # | Required Document |
|---|---|
| 1 | Application for a Special Use Permit |
| 2 | Special Use Permit Findings of Fact Worksheet |
| 3 | Project Narrative/Commercial Solar Energy Facility Summary |
| 4 | Site Control Documentation |
| 5 | Plat of Survey/ALTA Land Title Survey |
| 6 | Solar Equipment Manufacturer Specs |
| 7 | Noise Analysis |
| 8 | Decommissioning Plan |
| 9 | Decommissioning Surety Draft |
| 10 | Waiver of Setback Requirements |
| 12 | Glare Study |
| 13 | Legal Description of the Subject Property |
| 14 | List of all Property Owners & Mailing Addresses within 250’ of the subject property |
| 15 | Certification of Notice to Adjacent Property Owners |
| 16 | Copy of Letter from Petitioner sent to Adjacent Properties |
| 17.1 | Geometric Site Plan |
| 17.2 | Electrical Plans |

| | |
|---|---|
| 18 | Landscape & Screening Plan |
| 20 | Results and recommendations from the Illinois Department of Natural Resources (IDNR) obtained through the Ecological Compliance Assessment Tool (EcoCAT) |
| 21 | Resource Preservation Review from the Illinois State Historic Preservation Office (SHPO) |
| 22 | Natural Resources Inventory (NRI) Report from the Kane-DuPage Soil & Water Conservation District (SWCD) |
| 23 | Results of any USFWS Information for Planning and Consulting environmental review |
| 24 | Letter of No Objection from the U.S. Army Corps of Engineers (USACE) |
| 25 | Executed Agricultural Impact Mitigation Agreement (AIMA) with the Illinois Department of Agriculture |
| 26 | Documentation demonstrating avoidance of protected lands as identified by IDNR and the Illinois Nature Preserve Commission (INPC) |
| 27 | Written Approval of Roadway Use from the Road District Commissioner and the County Engineer |
| 28 | Structural Engineer's Certificate |
| 29 | FEMA 100-Year Floodplain Map |
| 30 | Level 1 Wetland Investigation |
| 31 | Topographical Map of the Subject Property |
| 32 | Preliminary Farmland Drain Tile Investigation |
| 33 | Preliminary Stormwater Management Report |
| 34 | Phase I Environmental Site Assessment (ESA) |
| 99 | Gravel Solar Farm Access Roads Engineer's Letter |

## PROPOSED IMPERVIOUS AREAS
NTS




**BLUESTEM SOLAR**

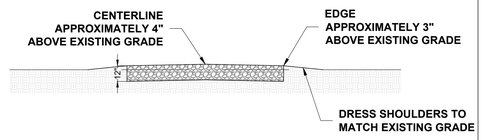
**LOT SIZE:** 6,052,497 SF

| | EXISTING IMPERVIOUS AREA ENTIRE LOT (s.f.) | PROPOSED IMPERVIOUS AREA ENTIRE LOT (s.f.) |
|---|---|---|
| DRIVE APRON (PERVIOUS) | | 2,118 |
| ACCESS DRIVE (PERVIOUS) | | 111,843 |
| TURN AROUNDS (PERVIOUS) | | 4,547 |
| EQUIP. ACCESS PADS | | 5,570 |
| EQUIPMENT PADS | | 4,770 |
| SOLAR PANELS (NOT INCLUDED) | | 1,178,579 |
| TOTALS | 0 | 4,770 |
| % OF LOT | 0.00% | 0.08% |
| INCREASE IN IMPERVIOUS | 4,770 SF | |

**TYPICAL ROAD CROSS-SECTION**

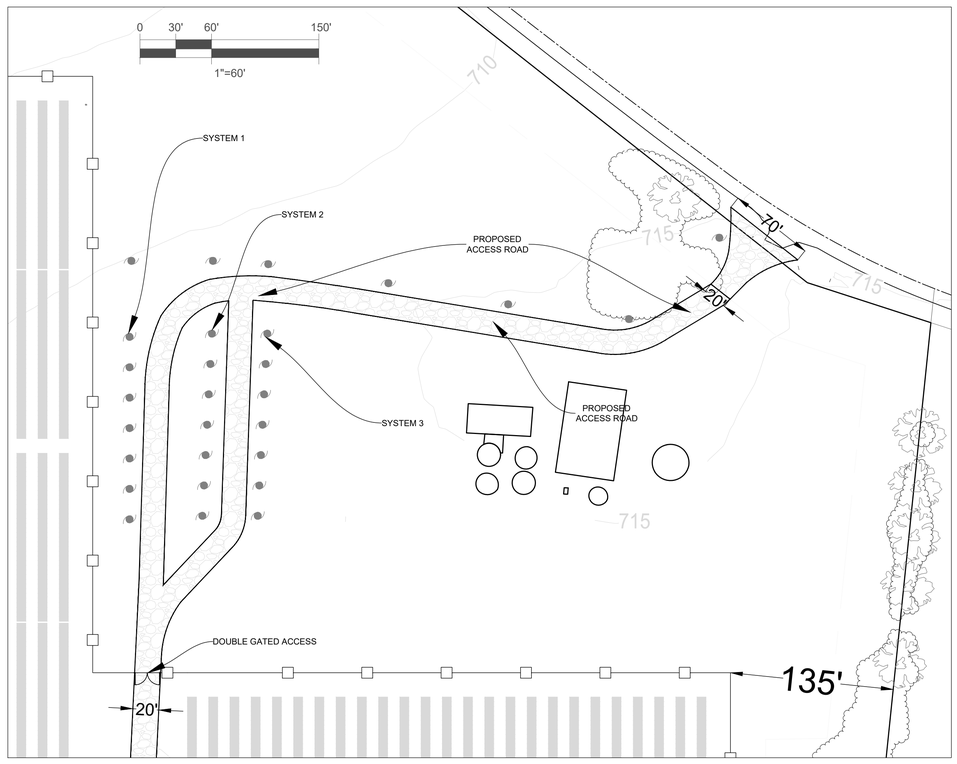
**CUT OUT EXISTING GRAVEL & DIRT**

**PLACE 12" CA-7 CLEAN CRUSHED AGGREGATE & DRESS SHOULDERS**

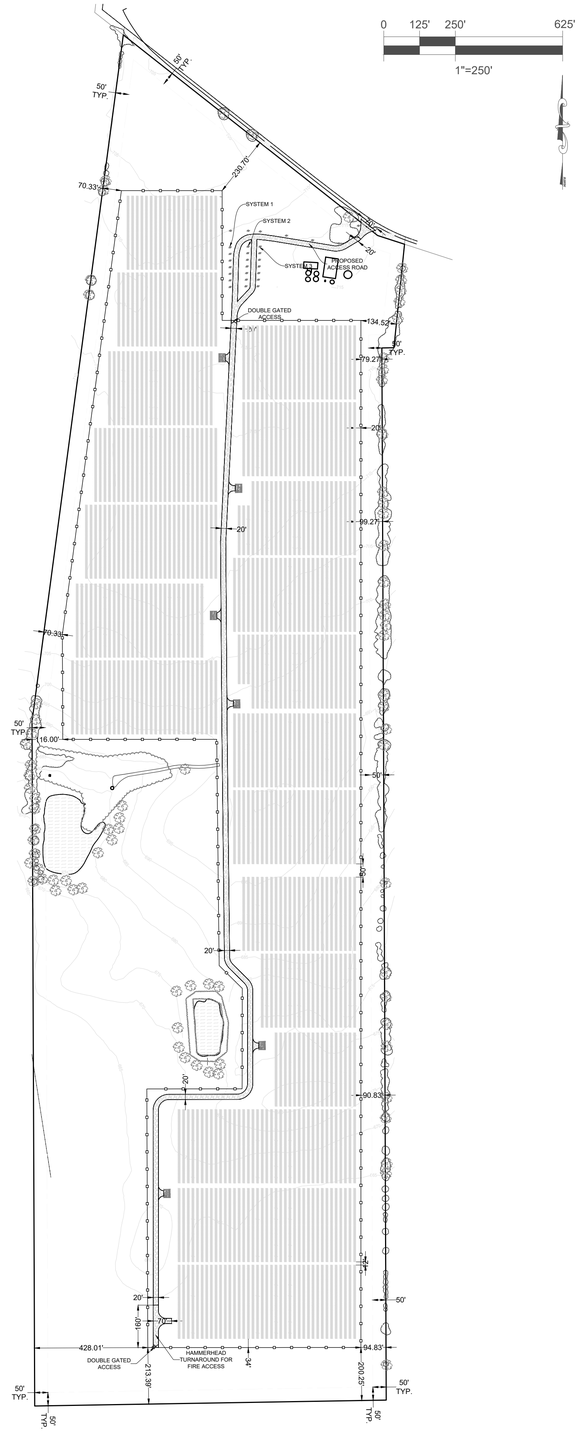



**PERMEABILITY OF STONE ROAD WILL MATCH THE PERMEABILITY OF THE SOIL BELOW**

# SITE ACCESS




# SITE PLAN




MUNICIPALITY APPROVAL STAMP

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PROJECT NAME:
BLUESTEM SOLAR

LOCATION:
41°45'08.6"N, 88°24'16.0"W
AURORA, IL

| ISSUE # | ISSUED FOR: | DATE |
|---|---|---|
| 1 | SITE LAYOUT | 08-27-2025 |
| 2 | PROGRESS SET | 09-11-2025 |
| 3 | PROGRESS SET | 09-17-2025 |

SEAL:
NOT FOR CONSTRUCTION

DATE: 09-17-2025

TITLE:
SITE PLAN

PROJECT #:
IW-101

SHEET:
C-2.0