



Carlisle | Wortman

ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

TO: Augusta Township Planning Commission

FROM: Laura K. Kreps, AICP, Township Planner

DATE: September 8, 2021

RE: Planning Commission Agenda Packet for September 15, 2021, Regular Meeting

Please find a summary of the business items on this month's Planning Commission agenda below. ***Hard copies of the revised Railsplitter #2 submittal were sent earlier this month. No hard copies of the additional agenda packet materials will be sent. IF YOU ARE NOT ABLE TO ATTEND THE MEETING,*** please let myself and/or Heather at the Township know as far in advance as possible. We cannot conduct the meeting without a quorum (4 Planning Commission Members).

- a. **SLU 21-01 Railsplitter #2 – Special Land Use - Multiple Properties.** An application has been received for a special land use for large-scale solar project north of Arkona, south of Talladay, east of Sanford and west of Gooding encompassing thirteen (13) parcels and 478 acres of land. A pre-application conference was conducted at the April 2021 Planning Commission meeting. A public hearing has been published/notified and will be conducted at this meeting.
- b. **SP21-03, Railsplitter #2 – Preliminary Site Plan - Multiple Properties.** In addition to special land use approval, the applicant is seeking simultaneous review of the preliminary site plan for the Railsplitter #2 project. Approval of the preliminary site plan is conditioned upon receiving special land use approval and is being conducted at the applicant's risk.
- c. **Master Plan Discussion.** At their August 24, 2021, meeting, the Board of Trustees approved the CWA proposal to update the master plan. More information to be discussed at the meeting.

As always, please feel free to contact me directly with any questions prior to the meeting.



CARLISLE/WORTMAN ASSOC., INC.

Laura K. Kreps, AICP

Senior Associate

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President*

R. Donald Wortman, *Principal* John L. Enos, *Principal* David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal*
Laura K. Kreps, *Senior Associate* Paul Montagno, *Senior Associate* Megan Masson-Minock, *Senior Associate*

AGENDA
Augusta Charter Township
Regular Planning Commission Meeting

Township Hall
September 15, 2021
6:30 PM

1. **Call to Order**
2. **Pledge of Allegiance**
3. **Roll Call and Recognition of Visitors** –Yurk, Buxton, Woolf, Hall, Spence, Hurd
4. **Approval of Agenda**
5. **Approval of Minutes**
 - a. Planning Commission Meeting Minutes from November 18, 2020 Regular Meeting – corrected.
 - b. Planning Commission Meeting Minutes from July 21, 2021 Regular Meeting
6. **Public Hearings**
 - a. **SLU 21-01, Railsplitter #2, Special Land Use**, Large-Scale Solar Facility, north of Arkona, south of Talladay, east of Sanford, west of Gooding. T-20-19-400-001; T-20-19-400-002; 5655 Willow Road (T-20-30-100-002); 5760 Willow Road (T-20-30-100-003); T-20-30-100-004; 12439 McCrone Road (T-20-30-100-005); T-20-30-200-004; T-20-30-200-008; T-20-30-200-012; T-20-30-400-006; T-20-19-300-003; T-20-30-200-009; 12182 McCrone Road (T-20-30-200-010).
7. **Business Items**
 - a. **SLU 21-01, Railsplitter #2, Special Land Use**, Large-Scale Solar Facility, north of Arkona, south of Talladay, east of Sanford, west of Gooding. T-20-19-400-001; T-20-19-400-002; 5655 Willow Road (T-20-30-100-002); 5760 Willow Road (T-20-30-100-003); T-20-30-100-004; 12439 McCrone Road (T-20-30-100-005); T-20-30-200-004; T-20-30-200-008; T-20-30-200-012; T-20-30-400-006; T-20-19-300-003; T-20-30-200-009; 12182 McCrone Road (T-20-30-200-010).
 - b. **SP 21-03, Railsplitter #2, Preliminary Site Plan** – Large-Scale Solar Facility
 - c. **Master Plan Discussion**
8. **Public Comment**
9. **Communications**
10. **Adjournment**

Meeting Minutes – Updated Final
Augusta Charter Township
Regularly Scheduled Planning Commission Meeting

Township Hall Zoom Meeting
Wednesday November 18, 2020
6:30 p.m.

1. Call to Order

Vice Chair Robert Yurk called the meeting to order at 6:34 p.m. Treasurer Susan Burek moderated the Zoom meeting for the Planning Commission.

2. Pledge of Allegiance

All in attendance said the Pledge as it was led by Vice Chair Yurk

3. Roll Call and Recognition of Visitors

Present: Green, Howard, Woolf, Yurk, and Bennett. Planner Kreps was present. There were four Zoom visitors in attendance.

4. Approval of Agenda

Motion by Yurk, support by Green to approve Agenda as presented. Due to Zoom meeting all votes done as roll call. Aye: Green, Howard, Woolf, Yurk and Bennett. Nay: None. Absent. Chie, Green, Newsome. Motion carried unanimously by members present.

5. Election of Officers, Public Hearings and Communications:

None scheduled

6. Agenda Items

#4. Motion by Bennett, supported by Green

Master Plan update, take note of update option, motion by Bennett support by Howard.

General Discussion of setbacks and how to modify them.

New Business

Land Holding LLC site plan review.

Motion by Howard, supported by Bennett at 6:45 p.m. to go into Closed Session to discuss Attorney Client Privilege information exempt from disclosure pursuant to MCL 15.243(1)(g) and may be considered in closed session under MCL 15.268(h). Roll call: Aye: Green, Howard, Woolf, Yurk and Bennett. Nay: None. Absent. Chie, Green, Newsome. Motion carried unanimously by members present.

A motion was not made to end Closed Session. However, the Planning Commission returned to the Regular Planning Commission Meeting around 7:30.

General Discussion about site plan, Krepps said final site plan will be needed.

Motion by Bennett to get final site plan, 2nd by Yurk. Motion Carries 3-2.

Solar Farm discussion and presentation by Ranger Power.

Woolf questions about fence and grass.

Yurk questions about setbacks.

7. Public Comment none.

Motion to Adjourn at 8:04 p.m. by Howard 2nd by Green. Motion carries.

Meeting Minutes
Augusta Charter Township
Regular Planning Commission Meeting

Township Hall

August 18, 2021

6:30 pm

1. **Call to Order:** The meeting was called to order by Chair Yurk at 6:30 PM.
2. **Pledge of Allegiance:** The Pledge of Allegiance was led by Chair Yurk.
3. **Roll Call and Recognition of Visitors:** Present Buxton, Hall, Spence, Woolf, Yurk. Absent Hurd. Quorum present. Also attending were Planner Laura Kreps, Counsel Victor Lillich, and three members of the public.
4. **Approval of Agenda:** Motion by Spence to approve. Supported by Hall. Motion carried unanimously.
5. **Approval of Minutes:**
 - a. **Planning Commission Meeting Minutes from July 21, 2021 Regular Meeting:**
 - i. Discussion that under Item 7A Commissioner Hurd withdrew her motion to “deny” the petition, not “postpone” as noted.
 - ii. Motion by Spence to approve amended minutes of the July 21, 2021 Regular Meeting to reflect under Item 7A that Commissioner Hurd withdrew her motion to “deny” the petition, not “postpone.” Supported by Hall. Motion carried unanimously.
 - b. **Planning Commission Meeting Minutes from November 18, 2020 Regular Meeting Revised:**
 - i. Discussion that the revised copy of the minutes the Planning Commission was being asked to approve was not clear as it included “Track Changes” from what appeared to be a previous version of minutes from a different meeting.
 - ii. Motion by Woolf to return the item to the Township Clerk and request a clear copy reflecting the relevant revision. Supported by Hall. Motion carried unanimously.
6. **Public Hearings:** None
 - a. **Public Comment:** Moved from Item 8. Call to the public for comment. There was none.
7. **Business Items:**

Discussion to move Item 8 Public Comment ahead of Item 7a Closed Session as it is unknown how long the Planning Commission may be in closed session. This will allow members of the public the opportunity to speak without having to wait for the Closed Session to be concluded. Motion by Woolf to move Item 8 Public Comments to Item 6a. Support by Hall. Motion carried unanimously.

- a. **Closed Session:** Receipt of written attorney-client privilege communication from the Township Attorney which is exempt from disclosure under Section 13(1)(g) of the Freedom of Information Act.
 - i. Motion by Yurk that the Planning Commission meet in closed session with the Township Attorney and Planner under Section 8(h) of the Open Meetings Act, to consider the written attorney-client privilege which is exempt from discussion or disclosure under Section 13(1)(g) of the Freedom of Information Act. Supported by Hall. Motion carried unanimously. Planning Commission began closed session at 6:45 PM.
 - ii. Motion by Yurk to end the closed session and reopen the public meeting. Supported by Woolf. Motion carried unanimously. Public meeting reopened at 8:02 PM.

8. **Public Comment:** Moved to Agenda Item 6a.

9. **Communications:** None

10. **Adjournment:** Motion by Spence to adjourn. Supported by Buxton. Motion carried unanimously. Meeting adjourned at 8:05 PM.

From: [Sergio Trevino](#)
To: [Laura Kreps](#); [Robert Yurk](#)
Cc: [Timothy A. Stoepker](#); [Victor Lillich](#)
Subject: Re: Public Hearing Notices
Date: Tuesday, August 31, 2021 12:37:27 AM
Attachments: [image001.png](#)

Hello Laura:

Below you will find a summary of the revisions contained in the documents we submitted to the Township on August 23. The revisions can be sorted into two categories: revisions to address issues raised in your reported dated June 30, 2021; and revisions prepared in response to comments from the Planning Commission at their July 21, 2021 meeting. I hope this will be of assistance to the Planning Commission as they review our revised submission and to you in your preparation of your updated report.

Please let me know if you have any questions or if there is anything you would like to discuss.

Thanks.

Preliminary Site Plan

- Increased 500-ft setback from the project to adjacent, non-participating residences as requested by the Planning Commission. The 75-ft setback required by the Township Solar Ordinance is shown in addition to the 500-ft setback. See sheets E-201 through E-208.
- Added engineer's seal. See all pages of the Preliminary Site Plan.
- Added zoning classification and land use of the petitioner's property (i.e., the project parcels). See sheet ZN-1.
- Added zoning classification and land use of the adjacent properties. See sheet ZN-1.
- Added dimensions to lot lines. See sheet PRP-1.
- Added name, address, and phone number to the Preliminary Site Plan cover page. See Cover Page.
- Added a note providing information on coordination with the Washtenaw County Water Resources Commission, Road Commission, and Health Department. See Cover Page.
- Added note indicating there are no known wells and/or sewage systems within the project area. See Cover Page and sheets E-100 through E-208.
- Added labels identifying directionally bored drain crossings for project electric collection lines. See sheets E-100 through E-208 (where applicable).
- Added color for easier identification of setbacks (both 75-ft and 500-ft), electric collection lines, lot/property lines, easement boundaries, and other features shown on the Preliminary Site Plan. See sheets E-100 through E-208.
- Added detail to the legend to correspond to the features shown in the Preliminary Site Plan. See sheets E-100 through E-208.
- Added a note identifying the former location of Buck Creek, which was rerouted several years ago. See sheet PRP-1.
- Added a "Regional View" to provide context for the project location. See sheet G-101.
- Added a separate detail sheet showing the road cross-section. See sheet D-301.
- Please note that landscape screening is shown in the Cover Page, sheet G-100, and sheets E-100 through E-208 (where applicable). The June 30 report indicated that this information needed to be provided but it was included in the original submission and is included here.

Cover Letter

- Revised to include a discussion of how the project will meet the Michigan Department of Agriculture and Rural Development's (MDARD) PA 116 solar project program criteria and provided related documents from MDARD.
- Removed references to the White Tail project.
- Please note that the project roads are twelve feet wide and will consist of native, compacted soil as noted in section 1.5 of the Cover Letter and in the Preliminary Site Plan (sent D-301). The June 30 report identified project roads as 20-feet wide and consisting of gravel. This is true only for the initial access but the interior roads are twelve feet wide and consist of native, compacted soil. This was identified in the original application submitted and is repeated here.

Economic Impact Analysis

- Removed references to the White Tail project.

Glare Study

- Analyzed the potential glare impact caused by the revised site design incorporating the 500-ft setback; no glare impacts identified.

Sound Study

- Analyzed the potential sound impact caused by the revised site design incorporating the 500-ft setback; sound at the property line is projected to be 55 dBA or less, which is lower than the 65dBA maximum in the Township Solar Ordinance.

Special Land Use Findings

- Removed references to the White Tail project.

Decommissioning Plan

- Revised the Plan and cost estimate to provide for full removal of all project equipment, including electric lines buried deeper than three (3) feet, as requested by the Planning Commission.

Property Value Impact Study

- Removed references to the White Tail project.

On Thu, Aug 26, 2021 at 2:47 PM Laura Kreps <lkreps@cwaplan.com> wrote:

That would be great! Thanks!



Laura K. Kreps, AICP

Senior Associate

PH: 734.662.2200

Fax: 734.662.1935

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

Special Use Permit and Preliminary Site Plan Application

Railsplitter Solar II Project

**Augusta Township
Washtenaw County, Michigan**



Prepared for:
Railsplitter Solar, LLC

Prepared by:
Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon, Wisconsin 53092

Project No: 193708120

Submitted May 19, 2021
Revision submitted August 23, 2021

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

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Submitted May 19, 2021

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Appendix C – Project Parcels with Solar Energy System Agreements

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Appendix G – Railsplitter Solar II Decommissioning Plan

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Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

1.0 PROJECT DESCRIPTION AND OVERVIEW

1.1 Introduction

The Railsplitter Solar II Project (Railsplitter Solar II, or Railsplitter - Phase II, or Project) is located on approximately 355 acres of land northwest of the Norfolk Southern Railroad and east of Sanford Road. On behalf of Railsplitter Solar, LLC, Stantec Consulting Services Inc. (Stantec) is submitting this Special Land Use Application (Appendix A) and Preliminary Site Plan Application (Appendix B) to construct and operate Railsplitter Solar II on ten (10) parcels within Augusta Township, Washtenaw County, Michigan. Railsplitter Solar II is part of a larger utility-scale solar project, consisting of approximately 60 MW in Augusta Township and 60 MW in York Township. The Project is being developed by Ranger Power, LLC (Ranger Power) in the southwest portion of Augusta Township (Figure 1-1).

Solar power, a renewable energy source, has many attractive features, including: utilizing the predictable, unlimited, and free energy from the sun; providing a clean energy source with no emissions; and producing power during the day when demand is high. In addition, a utility-scale solar development creates both temporary construction jobs and permanent maintenance and operations jobs. Railsplitter Solar II will be a long-term addition to the Augusta Township tax base. Solar development preserves land for future generations of farming.

According to the Solar Energy International Association (SEIA) website, 1 megawatt (MW) of energy powers approximately 150 homes in Michigan. Railsplitter Solar II is part of a larger 120 Megawatt (MW) solar project comprised of the Railsplitter I project area (permitted under existing Special Land Use Permit 16-01) in Augusta Township and the project area in York Township (approved by the York Township Planning Commission on June 14, 2021 (Resolution #2021-01PC)). The Railsplitter Solar II portion of the larger 120 MW solar project is planned to have a generating capacity of approximately 44.42 MW of alternating current (AC) of power. At this level of generation, Railsplitter Solar II is capable of powering approximately 6,663 homes.

1.2 Applicant Information

Ranger Power is a solar energy development company headquartered in Chicago, Illinois. Led by an experienced team, the company is committed to working closely with landowners and local stakeholders to bring new investment and clean energy to their communities. Ranger Power develops utility-scale solar energy facilities across the U.S. and is presently developing numerous utility-scale solar projects throughout the Midwest.

Railsplitter Solar, LLC, a Delaware limited liability company, the Applicant and holder of the Project land rights. Contact information for the company is as follows:

Ranger Power, LLC
Railsplitter Solar, LLC
Sergio Trevino

Design with community in mind

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

226 North Morgan St. #200

Chicago, IL 60607

Email: Sergio@rangerpower.com

Phone: (512) 827-1924

Fax: (207) 221-1747

1.3 Project Location

The Project is located northeast of Milan in Augusta Township, Washtenaw County, Michigan (Figure 1-1). The Project encompasses a total area of approximately 355 acres (Table 1-1). Land use within and adjacent to the Project area is predominantly agricultural fields, scrub/shrub areas, forested areas, wetlands, and waterways. The area was selected based on land use and proximity to existing transmission infrastructure.

Table 1-1 Railsplitter Solar II Project Location

County	Total Area (approximate acres)	Political Township	PLSS Township	Range	Section(s)
Washtenaw	355	Augusta	4S	7E	19 and 30

1.4 Project Summary

The Applicant has acquired the rights necessary to develop, construct, and operate an approximately 44.42 MW AC large solar energy system on ten parcels of land owned by five private landowners. The Applicant's land rights are by easement agreement or by purchase option agreement. The project parcels under purchase option agreements will be owned by an affiliate of Ranger Power after the purchase option is exercised. Two additional parcels (T-20-30-200-010 and T-20-19-300-003) will host an overhead electric line leading to the Point of Interconnect (POI) at the ITC McCrone Road substation, which will connect the portion of the project in York Township. One parcel (T-20-30-200-009) located to the southwest will host an underground electric line connecting the Railsplitter II portion of the project to the project substation located in the Railsplitter I portion of the project, which is being permitted separately under Special Land Use Permit (SLUP) 16-01, and an overhead electric line from the project substation to the existing ITC-owned substation on Willow Road. These electric lines are permitted by right as an Essential Service under Section 5.18 of the Augusta Township Zoning Ordinance and are identified here and in the Preliminary Site Plan for informational purposes only. Railsplitter Solar II acquired consent to easement rights from ITC for the POI (Appendix B). Figure 1-2 shows the parcels included in this application and their ownership. A list of the parcels is provided in Table 1-2 in Appendix C.

The Project will consist of solar panel systems, organized into several photovoltaic (PV) areas. Associated facilities include compacted native soil access drives to and within each PV area, and electrical cabling to collect and transmit the power to the Project's substation. As noted above, the Project substation is located within the Railsplitter Solar

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

portion of the overall project, which is being permitted separately under Special Land Use Permit (SLUP) 16-01. The proposed locations of the solar arrays, access drives, electrical collection lines, and other ancillary facilities or structures, are shown in Appendix D.

The Applicant has worked extensively with local landowners, government officials, and other stakeholders throughout the Project siting and development process. The site layout was developed to optimize the solar resource while minimizing impacts on natural resources and potentially sensitive areas. The topography of the site and existing natural resources features dictate solar array placement. Wetlands and floodplains located on project parcels have been largely excluded from PV areas / development areas. The exception being a minor wetland impact for the purpose of collection line boring beneath wetlands. A minimum 25-foot buffer will be maintained around all wetlands (Appendix D). The intent of the Project design is to place solar arrays and associated infrastructure primarily on undeveloped, open fields. The Project area also includes several woodlots; however, woodlots have been avoided and tree removal has been minimized to the extent possible, to maintain existing wooded areas.

The Applicant anticipates that construction will begin in 2022, with a planned commercial operation date ("COD") in late 2023. Construction dates and COD are dependent upon the receipt of permits, agency approvals, and other development activities.

1.5 Site Plan and Description Proposed Solar Energy System

The Project will consist of several PV areas generating approximately 44.42 MW AC of power. Each PV Area will be accessible via compacted native soil access drives connecting to public roads. The compacted native soil access drives will be approximately 12 feet wide and low profile to allow cross-travel by maintenance vehicles during the operations phase of the Project. The PV areas will include solar arrays, including self-powered east-west tracking solar panel systems and inverters, access drives, low voltage to medium voltage transformers, underground communication and electric power collection cables, and other ancillary facilities or structures. Collectively, these are referred to as "solar power facilities." Appendix D displays the proposed Project solar power facility layout and profile view of a typical array, along with other related project information. Appendix E provides manufacturer specifications, including additional technical information regarding the solar array equipment.

1.6 Compliance with Township Ordinances

The Applicant has designed the Project to comply with Township Ordinances including the development standards for Large Solar Energy Systems (LSES) (Article 6, Large Scale Energy Systems, Section 6.25) pertaining to LSES facilities, the general standards for special land uses (Article 4, Special Land Uses), and with the Preliminary Site Plan Review (Article 11) applicable to development in Augusta Township. All parcels will comply with

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

the requirements for special land uses as outlined in the Township Ordinances for the LI Limited Industrial and AR Agricultural/Residential zoning districts.

1.7 Solar Development on Property Included in the PA 116 Program

The Michigan Department of Agriculture and Rural Development (MDARD) has determined that "solar energy generation on property enrolled in the Farmland Development Rights Program is consistent with farming operations and is consistent with the purposes of the statute (MCL 324.36101; 324.36104 and 324.36104(a))" if certain conditions are met. (See "Policy for Allowing Commercial Solar Panel Development on PA 116 Lands," available on MDARD's website and provided in Appendix O.)

The conditions under which solar energy generation is allowed on land in the PA 116 program are described briefly below:

- The landowner must amend the Farmland Development Rights Agreement with MDARD to extend the term for a period equal to the amount of time the land is used for solar energy generation plus the remaining term of the Farmland Development Rights Agreement. This results in no net change in the length of the Farmland Development Rights Agreement.
- Tax credits cannot be claimed from the start of construction of the solar facility until the removal of solar panels and related structures. The past 7 years of tax credits are calculated at the time the Amended Farmland Development Rights Agreement is recorded and held by the State until the land is returned to agricultural production. If the landowner leaves the Farmland Development Rights Program at any time while the land is used for a solar facility, the calculated 7 years of tax credits is payable to the state.
- The solar facility site must be planted to achieve and maintain a score of at least 76 on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
- Portions of the site not included in pollinator plantings must maintain U.S. Department of Agriculture – Natural Resource Conservation Service Conservation Cover Standard 327.
- Financial security sufficient to ensure the solar facility is decommissioned and the land returned to agricultural use must be provided and maintained for the period the solar facility is in use.
- The solar facility must be established and maintained in a manner that ensures the land is returned to agricultural use after the solar facility is decommissioned, including maintaining drainage infrastructure.
- The land is returned to agricultural use after decommissioning and remains subject to the Farmland Development Rights Agreement. Decommissioning must be completed in time for normal agricultural operations the following season.

MDARD's policy allowing solar facility development on land in the PA 116 program requires landowners to submit an application to defer the Farmland Development Rights

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Agreement. The application must demonstrate compliance with the requirements described above. (See “Farmland and Open Space Preservation Program – Solar Panel Application,” available on MDARD’s website and provided in Appendix O.) The land agreements for the parcels in the Railsplitter II project in the PA 116 program require compliance with the MDARD requirements.

MDARD’s policy allowing solar development on land in the PA 116 program is “subject to appropriate permitting by the local governing body...” (See Appendix O.) Accordingly, Railsplitter II must demonstrate that it has secured all zoning approvals and permits for the project from Augusta Township. In addition, the Township must approve the application to defer the Farmland Development Rights Agreement for the applicable land. (See Appendix O.)

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2.0 SOLAR ENERGY SYSTEMS SUPPLEMENTARY REGULATIONS

The following sections address the requirements in the Augusta Township LSES Ordinance (Article 6, Large Scale Energy Systems, Section 6.25). The Ordinance section is listed first in *italics*, followed by a response.

2.1 Purpose and Intent

Article 6, Section 6.25.A – Purpose and Intent

The purpose and intent of this Section is to establish standards for the siting, installation, operation, repair, decommissioning and removal of LSES within the Agricultural Residential, Light Industrial and General Industrial Districts as a Special Land Use.

The Applicant has designed the Project to comply with Augusta Township Ordinance requirements and describes Project compliance with standards below.

2.2 Site Plan Drawing and Supporting Materials

Article 6, Section 6.25.B – Site Plan Drawing and Supporting Materials

All applications for a Large Solar Energy Systems use must be accompanied by detailed site plans, drawn to scale and dimensioned and certified by a registered engineer licensed in the State of Michigan, displaying the following information:

1. *All requirements for a site plan contained in Article 11 of the Augusta Charter Township Zoning Ordinance.*

All preliminary site plan requirements contained in Article 11 are included in this application and are included in Section 4.0 of this document. Additional information can be found in Appendices B, C, and D.

2. *All lot lines and dimensions, including a legal description of each lot or parcel comprising the Large Solar Energy System.*

Information regarding lot lines, dimensions, and legal descriptions of each parcel can be found in Appendix D. Additional project parcel information can be found in Appendix C.

3. *Names of owners of each lot or parcel within Augusta Charter Township that is proposed to be within the Large Solar Energy System.*

Landowner names and parcel information can be found in Appendices C and D, and Figure 1-2.

4. *Vicinity map showing the location of all surrounding land uses.*

Design with community in mind

Railsplitter Solar II Project

Submitted May 19, 2021

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A vicinity map showing location of surrounding land uses can be found in Appendix D (Preliminary Site Plan and Design Sheets).

5. *Location and height of all proposed Solar Array(s), buildings, structures, electrical tie lines and transmission lines, security fencing, and all aboveground structures and utilities associated with a LSES.*

Appendix D contains the LSES component locations and heights. Security fencing, PV inverters, collector lines, and solar panel tracker details are located in Appendix D Detail Sheets. Additional information regarding Project components may be found in Appendix E.

6. *Horizontal and vertical (elevation) to scale drawings with dimensions that show the location of the proposed Solar Array(s), buildings, structures, electrical tie lines and transmission lines, security fencing and all above ground structures and utilities on the property.*

Appendix D contains the LSES component horizontal and vertical (elevations) dimensions. Security fencing, PV inverters, collector lines, and solar panel tracker details are also located in Appendix D. Additional information regarding Project components may be found in Appendix E.

7. *Location of all existing and proposed overhead and underground electrical transmission or distribution lines within the LSES and within one hundred (100) feet of all exterior property lines of the LSES.*

All existing and proposed overhead and underground electrical line information can be found in Appendix D. As noted above, several electric lines are permitted as an Essential Service under Section 5.18 of the Augusta Township Zoning Ordinance and are identified here and in the Preliminary Site Plan for informational purposes only.

8. *Proposed setbacks from the Solar Array(s) to all existing and proposed structures within the Large Solar Energy System.*

Proposed setback information within the LSES can be found in Appendix D.

9. *Land elevations for the Solar Array(s) location and the relationship to the land elevations of all existing and proposed structures within the Large Solar Energy System at a minimum of five (5) foot contours.*

Land elevations and contours within the LSES can be found in Appendix D.

10. *Access driveways within and to the Large Solar Energy System, together with a detailed narrative regarding dimensions, composition, and maintenance of each*

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proposed driveway. All access drives shall be subject to Washtenaw County Road Commission approval and shall be planned so as to minimize the use of lands for that purpose.

Access drive information can be found in Appendix D. The Project has been designed so access drives are minimized and will most efficiently serve the Project and surrounding area. The Applicant has been coordinating with Washtenaw County Road Commission to secure appropriate preliminary approvals. Associated County correspondence is presented in Appendix F. The engineering construction contractor will secure permit approvals prior to construction.

11. Planned security measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance or repair of the Large Solar Energy System.

Railsplitter Solar II has designed the Project to conform with applicable industry safety standards to minimize hazards to adjacent properties, roadways, and the general public. Access to the Project arrays and substation will be restricted by perimeter seven-foot fencing and locked gates. Electricity generated by the arrays will be transmitted to the Project substation, which is being permitted separately under Special Land Use Permit (SLUP) 16-01, through buried collector lines. Electricity from the project substation will be transferred to the power grid through an overhead transmission system. As noted above, the overhead electric line connecting the project substation to the power grid is permitted as an Essential Service under Section 5.18 of the Augusta Township Zoning Ordinance and is identified here and in the Preliminary Site Plan for informational purposes only. Also see response in Section 2.10 Screening/Security (Article 6, Section 6.25.J) discussed below, for additional security measure information.

12. A written description of the maintenance program to be used for the Solar Array and other components of the Large Solar Energy System, including decommissioning and removal. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Large Solar Energy System is decommissioned.

Aside from snow plowing, conducted as needed, little to no additional maintenance is anticipated for the compacted native soil access drives within the Project. Project equipment and components have been designed to be very low maintenance. If repairs to the Project are required, Railsplitter Solar II will utilize a Professional Engineer to certify the safe continued operation of the facility. Railsplitter Solar II will consult with Augusta Township to determine the appropriate documentation is provided. Removal and decommissioning procedures are presented in the Decommissioning Plan (Appendix G).

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13. Planned lightening protection measures.

The solar arrays are self-grounded, and the facility will be developed according to all National Electrical Safety Code (NESC) and industry standards.

14. Additional detail(s) and information as required by the Special Land Use requirements of the Augusta Charter Township Zoning Ordinance, or as required by the Planning Commission.

This submittal includes the information required by this section and the site plan requirements in Article 11, as well as Article 4, Special Land Use. Additional details and information are presented within the associated appendices submitted with this document. The Applicant will work with the Planning Commission to provide requested additional information.

2.3 Application Escrow Account

Article 6, Section 6.25.C – Application Escrow Account
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An escrow account shall be deposited with the Township by the Applicant when the Applicant applies for a Special Land Use Permit for a Large Solar Energy System. The monetary amount deposited by the Applicant in escrow with the Township shall be the amount estimated by the Township, to cover all reasonable costs and expenses associated with the Special Land Use Permit review and approval process, which costs shall include, but are not limited to, reasonable fees of the Township Attorney, Township Planner and Township Engineer, as well as costs for any reports or studies that are reasonably related to the zoning review process for the application. The Applicant shall have thirty (30) days to refuse or approve of the amount estimated by the Township. Such escrow amount shall be in addition to any filing or application fees established by resolution. At any point during the Special Land Use Permit review process, the Township may require that the Applicant place additional funds into escrow with the Township if the existing escrow amount deposited by the Applicant is deemed insufficient by the Township. If the escrow account needs replenishing and the Applicant refuses to do so within thirty (30) days, the Special Land Use Permit process shall cease unless and until the Applicant makes the required additional escrow deposit. Any applicable zoning escrow Resolutions or other Ordinances adopted by the Township must also be complied with by the Applicant. The Township shall provide a summary of all account activity to the Applicant within a timely manner upon request. Any funds remaining within the escrow after approval of the Special Land Use Permit shall be returned in a timely manner to the Applicant.

The Applicant has made arrangements with the Township to set up an escrow account, as required; funds remaining in this account will be used for this project review.

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2.4 Compliance with the County Building Code and the National Electricity Safety Code

Article 6, Section 6.25.D – Compliance with the County Building Code and the National Electricity Safety Code

Construction of a Large Solar Energy System shall comply with the National Electric Safety Code and the County Building Code (as shown by approval by the County) as a condition of any Special Land Use Permit under this section. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.

The Project will comply with the NESC and applicable building codes. The Applicant understands and accepts this as a condition to the approved Special Use Permit.

2.5 Certified Solar Array Components

Article 6, Section 6.25.E – Certified Solar Array Components

Components of a Solar Array shall be approved by the Institute of Electrical and Electronics Engineers ("IEEE"), Solar Rating and Certification Corporation ("SRCC"), Electronic Testing Laboratories ("ETL"), or other similar certification organization if the similar certification organization is approved by the Township, which approval shall not be unreasonably withheld.

The Applicant has designed the Project to comply with the Ordinance requirement for certified solar array components. Manufacturer specifications are provided in Appendix E. The solar equipment installed will comply with industry standards. Preliminary design drawings and engineering calculations are certified by a Professional Engineer licensed in the State of Michigan.

2.6 Height

Article 6, Section 6.25.F – Height

Maximum height of a Solar Array, other collection device, components or buildings of the Large Solar Energy System, excluding substation and electrical transmission equipment, shall not exceed fifteen (15) feet (as measured from the natural grade at the base of improvements) at any time or location on the property. Substation and electrical transmission equipment shall not exceed one hundred (100) feet.

The inverters and self-powered tracking equipment proposed for the Project will not exceed 15 feet at maximum tilt. Detailed information regarding typical self-powered tracking equipment model solar arrays and electrical transmission equipment can be found in Appendix D and Appendix E.

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2.7 Lot Size

Article 6, Section 6.25.G – Lot Size

A Large Solar Energy System shall be located on one or more parcels with an aggregate area of ten (10) acres or greater.

The parcels that are the subject of this application include approximately 475 acres as detailed in Table 1-2 and on Figure 1-2 and the site plan included in Appendix D. In addition, three parcels will be utilized for electric lines and the Point of Interconnect (POI) to the ITC McCrone Road substation. As noted above, the electric lines on these parcels are permitted as an Essential Service under Section 5.18 of the Augusta Township Zoning Ordinance and are identified here and in the Preliminary Site Plan for informational purposes only.

2.8 Setbacks

Article 6, Section 6.25.H – Setbacks

A minimum setback distance of fifty (50) feet from all exterior property lines of the Large Solar Energy System and existing public roads and railroad rights-of-way shall be required for all buildings and Solar Arrays, provided that a setback of seventy-five (75) feet shall be required adjacent to any residential structure.

The Applicant has designed the Project to comply with or voluntarily exceed the setback requirements for an LSES. All buildings and solar arrays will be located outside the specified setback. The required 50-foot setback distances are shown on the site plan detail drawings included in Appendix D. There are no residential structures within 150 feet of the facility equipment.

2.9 Lot Coverage

Article 6, Section 6.25.I – Lot Coverage

A Large Solar Energy System is exempt from maximum lot coverage limitations.

2.10 Screening/Security

Article 6, Section 6.25.J – Screening/Security

A Large Solar Energy System shall be completely enclosed by perimeter security fencing to restrict unauthorized access. Such fencing shall be at least six (6) feet in height with a one-foot extension arm consisting of a minimum of three strands of barbed-wire placed above the fencing and slanting outward as measured from the natural grade of the fencing perimeter. Electric fencing is not permitted. The perimeter of Large Solar Energy

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Systems shall also be screened and buffered by installed evergreen or native vegetative plantings whenever existing natural vegetation does not otherwise reasonably obscure the Large Solar Energy System from adjacent residential structures, subject to the following requirements:

- 1. The Large Solar Energy Systems shall be exempt from the landscape requirements of Article 5.7.*
- 2. The evergreen or native vegetative buffer shall be composed of native or evergreen trees that at planting shall be a minimum of four (4) feet in height and shrubs two (2) feet in height. The evergreen trees shall be spaced no more than fifteen (15) feet apart on center (from the central trunk of one plant to the central trunk of the next plant), native trees shall be placed no more than thirty (30) feet apart on center and shrubs shall be spaced no more than seven (7) feet apart on center. All unhealthy (sixty (60) percent dead or greater) and dead material shall be replaced by the Applicant within one (1) year, or the next appropriate planting period, whichever occurs first.*
- 3. All plant materials shall be installed between March 15 and November 15. If the Applicant requests a Final Certificate of Occupancy from the Township and the Applicant is unable to plant during the installation period, the Applicant will provide the Township with a letter of credit, surety or corporate guarantee for an amount equal to one and one-half (1.5) times the cost of any planting deficiencies that the Township shall hold until the next planting season. After all plantings have occurred, the Township shall return the financial guarantee.*
- 4. Failure to install or continuously maintain the required vegetative buffer shall constitute a violation of this Ordinance and any Special Use Permit may be subject to revocation.*

The Applicant will install a perimeter fence around the PV areas that is seven feet tall and is compliant with NESC. Railsplitter Solar II, in accordance with Section 6.25 R of the Zoning Ordinance, is requesting the Planning Commission modify the requirement in Section 6.25 J that Railsplitter Solar II install fencing with barbed wire and instead be permitted to install seven-foot agricultural fencing consisting of wood posts and a wire mesh as depicted in the application. The agricultural fencing is more compatible with the rural setting and provides appropriate security. The fence locations and an agricultural fence detail are included on the site plans in Appendix D.

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The Applicant will coordinate with the Township and adjacent landowners to incorporate buffers into the Project design where existing natural vegetation does not otherwise reasonably obscure the LSES from adjacent residential structures. An Elevation drawing depicting the proposed Vegetative Buffering is included in Appendix H.

2.11 Signage

Article 6, Section 6.25.K – Signage

No advertising or non-project related graphics shall be on any part of the Solar Arrays or other components of the Large Solar Energy System. This exclusion does not apply to entrance gate signage or notifications containing points of contact or any and all other information that may be required by authorities having jurisdiction for electrical operations and the safety and welfare of the public.

The Applicant will install signage identifying appropriate contact information and facility ownership at access points and on perimeter fencing. Signs will be installed on the perimeter fencing or gates and will not be illuminated or obtrusive for neighboring properties. Signs will be similar to those on other utility or agricultural facilities in the area.

2.12 Noise

Article 6, Section 6.25.L – Noise

No component of any Large Solar Energy System shall emit noise exceeding sixty-five (65) dBA as measured at the exterior property boundary or the existing ROW line.

The ordinance requires a 50-foot setback of all solar equipment to the property line. The sound producing equipment includes transformers and inverters. The solar panels do not emit sound. A sound analysis (Appendix I) of the transformer and inverter manufacturer's data (Appendix E) indicates that the sound produced by this equipment at 50 feet is less than 65 dBA, thereby meeting this requirement.

2.13 Lighting

Article 6, Section 6.25.M – Lighting

All lighting for parking lots, driveways, external illumination of buildings, or the illumination of signs shall be directed away from and be shielded from adjacent properties and shall be so arranged as to not adversely affect driver visibility on adjacent public roads in accordance with Section 9.13.

The Project does not include artificial lighting within the solar arrays and therefore there will be no adverse impact from lighting on adjacent parcels.

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2.14 Distribution, Transmission and Interconnection

Article 6, Section 6.25.N – Distribution, Transmission and Interconnection

All collection lines and interconnections from the Solar Array(s) to any electrical substations shall be located and maintained underground inside the Large Solar Energy System, except in areas where technical or physical constraints make it preferable to install equipment above ground. This requirement excludes transmission equipment meant to connect the project substation to the local transmission system.

The Applicant has designed the Project to comply with this section of the Ordinance and all collection lines and interconnections inside the LSES are planned to be underground where possible. The high voltage transmission interconnection will utilize overhead lines associated with the Project substation.

2.15 Abandonment and Decommissioning

Article 6, Section 6.25.O – Abandonment and Decommissioning

Following the operational life of the project, the Applicant shall perform decommissioning and removal of the Large Solar Energy System and all its components. The Applicant shall prepare a Decommissioning Plan and submit it to the Planning Commission for review and approval prior to issuance of the Special Land User Permit. Under this plan, all structures, concrete, piping, facilities, and other project related materials above grade and any structures up to three (3) feet below-grade shall be removed offsite for disposal. Any Solar Array or combination of Photovoltaic Devices that is not operated for a continuous period of twelve (12) months shall be considered abandoned and shall be removed under the Decommissioning Plan. The ground must be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning.

A Decommissioning Plan exceeding the above requirements is included in Appendix G. If any solar array is deemed inoperable due to an occurrence event of force majeure; a written notice of the force majeure will be provided to the Township.

2.16 General Standards

Article 6, Section 6.25.P – General Standards

The Planning Commission shall not approve any Large Solar Energy System Special Land Use Permit unless it finds that all of the general standards for Special Land Uses contained in Article 4 of this Ordinance are met.

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The Applicant has designed the Project to comply with the Augusta Township general standards requirements for Special Land Uses. Compliance with the general standards is more specifically discussed in Section 3.0 (Zoning Ordinance Article 4 - Special Land Uses) below.

2.17 Approval Time Limit and Extension

Article 6, Section 6.25.Q – Approval Time Limit and Extension

Special Use and Site Plan approvals or permits under this Section shall be valid for one year but, if requested by the Applicant prior to that expiration date, shall automatically be extended for an additional one-year period.

In the event that construction activities have not commenced within one year of approval, the Applicant will request a one-year extension from Augusta Township.

2.18 Conditions and Modifications

Article 6, Section 6.25.R – Conditions and Modifications

Any conditions and modifications approved by the Planning Commission shall be recorded in the Planning Commissions' meeting minutes. The Planning Commission may, in addition to other reasonable conditions, require landscaping, walls, fences and other improvements that are reasonable in relation to and consistent with the nature of the applicable or adjacent zoning districts.

After approval, at least two (2) copies of the final approved Site Plan shall be signed and dated by the Chairman of the Planning Commission and authorized representative of the Applicant. One copy shall be kept on file by the Township Clerk, and one copy shall be returned to the Applicant's authorized representative.

This submittal request contains Special Land Use and Preliminary Site Plan Permit Applications. The Applicant will work with the Township regarding reasonable conditions and modifications to the preliminary site plan in developing the Final Site Plan for approval.

2.19 Inspection

Article 6, Section 6.25.S – Inspection

The Township shall have the right at any reasonable time, to provide same-day notice to the Applicant to inspect the premises on which any Large Solar Energy System is located. The Township may hire one or more consultants, with approval from the Applicant (which shall not be unreasonably withheld), to assist with inspections at the Applicant's or project owner's expense. Inspections must be coordinated with, and escorted by, the Applicant's

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operations staff at the Large Solar Energy Facility to ensure compliance with the Occupational Safety and Health Administration (OSHA), NESC and all other applicable safety guidelines.

The Applicant will comply with and coordinate Township and/or other agency inspections, as needed or required.

2.20 Maintenance and Repair

Article 6, Section 6.25.T – Maintenance and Repair
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Each Large Solar Energy System must be kept and maintained in good repair and condition at all times. If the Township Zoning Administrator determines that a Large Solar Energy System fails to meet the requirements of this Ordinance and the Special Land Use Permit, or that it poses a safety hazard, the Zoning Administrator, or his or her designee, shall provide notice to the Applicant of the safety hazard. If, after a reasonable cure period (not to exceed 7 days), the safety hazards are not corrected, the Applicant is entitled to a hearing before the Township Board. If the Township Board determines that the safety hazard requires that the Large Solar Energy System must be shut down, Applicant shall immediately shut down the Large Solar Energy System and not operate, start or restart the Large Solar Energy System until the issues have been resolved. Applicant shall keep a maintenance log on the Solar Array(s), which shall be available for the Township's review within 48 hours of such request. Applicant shall keep all sites within the Large Solar Energy System neat, clean and free of refuse, waste or unsightly, hazardous or unsanitary conditions.

The Applicant will comply with the above requirements. Maintenance and repair activities will include periodic inspections and performance assessments of the electrical and mechanical systems onsite. Activities include coatings touchup of metal enclosures and infrastructure, replacement of damaged PV modules, and vegetation management on an as-needed basis. If repairs to the Project LSES are required, the Applicant will utilize a Professional Engineer to certify the safe continued operation of the facility.

2.21 Roads

Article 6, Section 6.25.U – Roads

Any material damages to a public road located within the Township resulting from the construction, maintenance or operation of a Large Solar Energy System shall be repaired at the Applicant's expense. In addition, the Applicant shall submit to the appropriate County agency a description of the routes to be used by construction and delivery vehicles; any road improvements that will be necessary to accommodate construction vehicles, equipment or other deliveries. The Applicant shall abide by all County requirements regarding the use and/or repair of County roads.

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The Applicant will comply with the above requirements. Figure 2-1 provides the Project Transportation Plan showing the routes that construction and maintenance vehicles will utilize to access the Project. Off-project site improvements include site entry points (install/replace culverts, etc.). These improvements will be coordinated with the Township, County, and/or other agencies as needed. In the event that there is material damage to a public road, the Applicant will restore damaged roads to a stable condition as near as practicable to Project pre-construction condition.

2.22 Continuing Security

Article 6, Section 6.25.V – Continuing Security

If any Large Solar Energy System is approved for construction under this Section, Applicant shall post decommissioning security prior to the start of construction (in a mutually agreed upon form) for an amount necessary to accomplish the work specified in the decommissioning plan as agreed upon by the Township and Applicant. The amount shall be reasonably sufficient to restore the property to its previous condition prior to construction and operation of the Large Solar Energy System. Such financial security shall be kept in full force and effect during the entire time that the Large Solar Energy System exists or is in place, and such financial security shall be irrevocable and non-cancelable.

- 1. Continuing Obligations: Failure to keep any required financial security in full force and effect at all times while a Large Solar Energy System exists or is in place shall constitute a material and significant violation of the Special Land Use Permit and this Ordinance, and will subject the Large Solar Energy System Applicant, owner and operator to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use Permit.*

A Decommissioning Plan including the above requirements is included in Appendix G. The Applicant will work with the Township and Engineer to establish a mutually agreed upon financial assurance mechanism approved by the township, as required, and will include a review / update schedule. The surety bond or other financial assurance mechanism as approved by the Township will be in place prior to construction.

2.23 Other Requirements

Article 6, Section 6.25.W – Other Requirements

Each Large Solar Energy System shall also comply with all applicable federal, state and county requirements, in addition to other applicable Township Ordinances.

The Applicant has designed the Project to comply with the Augusta Township and

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Washtenaw County requirements. At the County level, the applicant is currently coordinating with Road Commission, Water Resources Commissioner, and the Health Department. The project will require a Commercial Right of Way (ROW) permit for the access drives connection to the county roads; a Utility ROW Permit will also be obtained for each utility boring beneath a county roadway.

Coordination with the Washtenaw County Water Resources Commissioner will include both the approval of a Stormwater Plan (discussed below), and issuance of Drain Use Permits for the drain crossings required (email correspondence provided in Appendix F). Per the Washtenaw County Drain Map, it is anticipated that the following County Drains will be horizontally directionally drilled to facilitate electrical connection: McIntyre Drain, Sugar Creek, and Sugar Creek Extension. A Drain Use Permit will be obtained for each drain boring beneath county drains.

At the State and Federal level, the applicant is currently coordinating with Michigan Department of Environment, Great Lakes, and Energy (EGLE). The project will obtain necessary State and Federal permit approvals, as required.

Through ongoing coordination with the Washtenaw County Health Department, Water Resource Commissioner, Road Commission, and EGLE, Railsplitter Solar II will be obtaining permits from these agencies as required.

3.0 SPECIAL LAND USES

The following sections address the requirements in the Augusta Township Final Site Plan Review (Zoning Ordinance Article 4 - Special Land Uses). The Ordinance section is listed first in italics, followed by a response, if applicable.

3.1 Intent

Article 4, Section 4.1 Intent

The procedures and standards in this Section are intended to provide a consistent and uniform method for review of proposed plans for special land uses. Special land uses are uses which possess unique characteristics and therefore cannot be properly classified as a permitted use in a particular zoning district. This Article contains standards for review of each special land use proposal individually on its own merits to determine if it is an appropriate use for the district and specific location where it is proposed.

The Applicant has designed the Project to comply with the Augusta Township general standards requirements for Special Land Uses.

3.2 Application Requirements

Article 4, Section 4.2 Application Requirements

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An application for special land use permit approval shall be accompanied by a site plan meeting the standards of Article 11, along with any other information deemed necessary by the Zoning Administrator to determine compliance with this Ordinance and to provide for its enforcement.

Responses to standards of Article 11 are located in Section 4.0 Final Site Plan Review within this document below.

3.3 Procedures

Article 4, Section 4.3 Procedures

Special land uses permit requests shall be reviewed in accordance with the procedures in Article 11 for site plan review, except as follows:

A. The Zoning Administrator shall review the proposed application to determine if all required information has been supplied, and then forward completed applications and supporting data to the Planning Commission.

B. Public Hearing Required. Upon receipt of the application for a special land use permit, the Planning Commission shall conduct a public hearing. Notice of said public hearing shall be in accordance with Section 14.12.

C. Upon conclusion of the public hearing procedures, the Planning Commission may deliberate on the special land use permit request. A copy of the Planning Commission's decision, with any conditions or reasons for rejection, shall be sent promptly to the Zoning Administrator and to the applicant.

D. The decision of the Planning Commission shall be incorporated in a statement of conclusions, or "findings of fact", relative to the special land use under consideration. The statement of conclusions, or "findings of fact", shall be incorporated in the Planning Commission's motion, and recorded in the official meeting minutes. Any decision which denies a request or imposes conditions upon its approval shall specify the basis for the denial or the conditions imposed.

E. Upon approval of a special land use pursuant to Section 4.3(C), a Special Land Use Permit Agreement, which incorporates the terms and conditions of the approval, shall be prepared by the Township in recordable form. The special land use approval shall not become effective until the Special Land Use Permit Agreement has been executed by the Chair and Secretary of the Planning Commission and the applicant and has been recorded by the applicant with the Washtenaw County Register of Deeds. Evidence of such recording shall be provided to the Township.

F. Reapplication. No application for a special land use permit which has been denied wholly or in part shall be resubmitted until the expiration of one (1) year or

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more from the date of such denial, except on grounds of newly discovered evidence or change of conditions found to be sufficient to justify reconsideration by the Planning Commission.

Responses to standards of Article 11 are located in section 4.0 Final Site Plan Review within this document below. Railsplitter Solar II will coordinate with the Township for the required public hearing in accordance with Section 14.12.

3.4 Basis of Determinations

Article 4, Section 4.4 Basis of Determinations
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The Planning Commission shall review each case individually and make findings of fact relative to the following criteria and, where applicable, additional standards stated within this Ordinance.

A. Will be harmonious and in accordance with the general objectives or any specific objectives of the Augusta Charter Township Master Plan.

Railsplitter Solar II is harmonious and compatible with both the general and the specific objectives of the Augusta Township Master Plan. Appendix J provides additional information regarding the Project's compatibility with the general and the specific objectives of the Master Plan.

B. Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area.

Railsplitter Solar II is designed and will be constructed, operated, and maintained to be harmonious with and appropriate in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area. Appendix J and K provide additional information regarding design, construction, operation, and maintenance of the Project being harmonious with and in accordance with the existing or intended character of the general vicinity and demonstrating that it will not change the essential rural character and low-density development of the area.

C. Will not be hazardous or disturbing to existing or future nearby uses.

The Project will not be hazardous or disturbing to existing or future nearby uses. The Project maintains the area's low density and will not increase area road traffic. The Project will comply with all aspects of the Augusta Township Zoning Ordinance. Appendix J and K provide additional information demonstrating that the Project will not be hazardous or disturbing to existing or future nearby uses.

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D. Will be an improvement in relation to property in the immediate vicinity and to the Township as a whole.

Railsplitter Solar II will be an improvement in relation to property in the immediate vicinity and to the Township as a whole. Appendix J provides additional information showing improvement in relation to property in the immediate vicinity and to the Township as a whole.

E. Will be served adequately by essential public services and facilities or that the persons responsible for the establishment of the proposed use will provide adequately for any such service or facility.

Railsplitter Solar II will be served adequately by existing essential public service and facilities and will not require any additional public services and facilities. Appendix J provides additional information regarding public services and facilities.

F. Will not create excessive additional public costs and will not be detrimental to the economic welfare of the Township.

Railsplitter Solar II will not create additional public costs and will not be detrimental to the economic welfare of the Townships. Appendix J provides additional information regarding the Project not creating additional public costs.

G. Will be consistent with the intent, purposes and specifications of this Ordinance.

Railsplitter Solar II will be consistent with the intent, purposes and specifications of this Ordinance. As presented in this document, including the Appendices, the Project is consistent with the intent, purposes, and specifications of this Ordinance.

3.5 Conditions and Safeguards

Article 4, Section 4.5 Conditions and Safeguards
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The Planning Commission may impose such additional conditions and safeguards deemed necessary for the general welfare, for the protection of individual property rights, and for ensuring that the purposes of this Ordinance and the general spirit and purpose of the district in which the special approval use is proposed will be observed. Special land use permits for temporary or transient uses may be issued for specific time periods as determined by the Planning Commission.

The Applicant will comply with reasonable and agreed-upon conditions and safeguards.

3.6 Voiding or Revocation of Special Land Use Permit

Article 4, Section 4.6 Voiding or Revocation of Special Land Use Permit

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Unless otherwise specified by the Planning Commission, any special land use permit granted under this section shall be null and void unless the development proposed shall have its first inspection within six (6) months of the date of granting the permit. Should the Zoning Administrator determine that construction associated with an approved Special Land Use Permit is not in conformance with the approved plans, or that compliance with the conditions set forth in an approved Special Land Use Permit has not been consistently demonstrated, the Administrator shall notify the permit holder and attempt to secure compliance with the Special Land Use Permit administratively. If the Zoning Administrator's attempts to secure compliance are unsuccessful, the following process shall be followed:

A. The issue shall be placed on the agenda of the next available Planning Commission meeting for a show cause hearing to be held. Written notification of the hearing shall be delivered to the permit holder (at the address indicated on the permit in question) via certified mail no less than ten (10) days prior to the hearing.

B. The Planning Commission shall conduct the show cause hearing, allowing the applicant the opportunity to present information and answer questions.

C. Either at the hearing or at their next regular meeting, the Planning Commission may revoke the Special Land Use Permit if it finds, by a preponderance of evidence and facts presented, all of the following:

- 1. That a violation of the site plan approval or Special Land Use Permit exists, or that a violation of this or any other ordinance of the Township exists;*
- 2. That the violation has not been remedied prior to the meeting; and,*
- 3. That the violation creates a risk or danger to the public health, safety and/or welfare.*

Railsplitter Solar II is requesting inspection to be conducted 12-18 months after approval, since construction activities are not anticipated to begin within 6 months of approval.

4.0 PRELIMINARY SITE PLAN REVIEW

The following sections address the requirements in the Augusta Township Preliminary Site Plan Review (Zoning Ordinance Article 11, Section B). The Ordinance section is listed first in *italics*, followed by a response.

- 1. Submittal. The Preliminary Site Plan and application form shall be submitted to the*

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Administrative Assistant and forwarded to the Township Planner. The Preliminary Site Plan shall be put on the next available Planning Commission agenda for consideration, provided the Township received it by noon at least twenty-eight (28) calendar days prior to the meeting. Upon receipt of the Preliminary Site Plan submittal, the applicant must request a preliminary review of the proposal from the Washtenaw County Road Commission, Drain Commissioner, and Health Department, as applicable

This application is submitted for Preliminary Site Plan approval to construct and operate the Railsplitter Solar II Project as defined in Augusta Township Ordinance Article 11.3.B.

2. *Information Required. Every Preliminary Site Plan submitted for Planning Commission review shall include the following information, unless specifically waived by the Planning Commission:*

A. General Information.

- i. Proprietors', applicants', and owners' names, addresses and telephone numbers.*

Applicant name, address, and telephone numbers are in Section 1.3.

See Appendix C for project landowner names, addresses, and telephone numbers.

- ii. Date (month, day, year), including revisions.*

Preliminary Site Plan dates are located in Appendix D (Preliminary Site Plan and Detail Sheets).

- iii. Title block.*

Title Block is included in Appendix D (Preliminary Site Plan and Detail Sheets).

- iv. Scale.*

Scale is displayed on Appendix D (Preliminary Site Plan and Detail Sheets).

- v. Northpoint.*

Northpoint is provided on Appendix D (Preliminary Site Plan and Detail Sheets).

- vi. Legal description and certified survey.*

Project legal description and certified survey are provided in Appendix D

Design with community in mind

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

(Preliminary Site Plan and Detail Sheets).

- vii. *Location map drawn at a scale of 1" = 2,000' with north point and indicating the proximity of the site to major roads and intersections.*

Location map drawn to a scale of 1" = 2,000' is located in Appendix D (Preliminary Site Plan and Detail Sheets).

- viii. *Architect, Engineer, Surveyor, Landscape Architect, or Planner's Seal.*

Seal of a registered State of Michigan Engineer is located on Appendix D (Preliminary Site Plan and Detail Sheets).

- B. The shape, size, and location of existing and proposed lot lines, buildings, parking areas and service drives, loading zones, location of existing and proposed public streets serving the property, and natural features such as topography, soils, woodlands, wetlands, floodplain, and drainage courses which affect the property.*

Existing lot lines, buildings, structures, parking areas, as well as natural features, are located on Appendix D (Preliminary Site Plan and Detail Sheets).

- C. The location of all existing and proposed water and sewage treatment systems that are or will be serving the property.*

No existing or proposed water and sewage treatment systems are proposed as part of this application submittal.

- D. Zoning classification and land use of the petitioner's property as well as all adjacent properties.*

Zoning classification and land use of petitioner's parcel and all adjacent properties are located on Appendix D (Preliminary Site Plan and Detail Sheets).

- E. Preliminary review comments from the Washtenaw County Road Commission, Drain Commissioner and Health Department, as applicable.*

Preliminary storm water plan coordination is currently ongoing with Theresa Marsik, P.E. (Stormwater Engineer – Washtenaw County). Recent correspondence with Ms. Marsik approved the proposed stormwater concept designs, and a final storm water plan will be submitted for review and approval prior to construction (Appendix K).

- F. Any other information deemed necessary to properly illustrate the development concept to the Planning Commission.*

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The Applicant has designed the Project to comply with the Augusta Township and Washtenaw County requirements. At the County level, the Applicant is currently coordinating with Road Commission, Water Resources Commissioner, and the Health Department. The project will require a Commercial Right of Way (ROW) permit for the access drives connecting to the County Roads; a Utility ROW Permit will also be obtained for each utility boring beneath a county roadway.

Coordination with the Washtenaw County Water Resources Commissioner will include both the approval of a Stormwater Plan (discussed above), and issuance of Drain Use Permits for the drain crossings required (email correspondence provided in Appendix F). Per the Washtenaw County Drain Map, it is anticipated that the following County Drains will be horizontally directionally drilled for electrical connection: McIntyre Drain, Sugar Creek, and Sugar Creek Extension. A Drain Use Permit will be obtained for each drain boring beneath county drains.

Railsplitter Solar II will continue coordinating with the Washtenaw County Health Department, Water Resource Commission, and Road Commission, to obtain required permits from these agencies.

11.4 Criteria for Site Plan Review. *Site Plans shall be reviewed and approved upon a finding that the following criteria are met:*

A. *The proposed use will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood.*

The Project will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood. The Project is a passive use that will not expose the soil, groundwater, the general public or the environment to any hazardous substances. The Project area will be surrounded by fencing and will include security monitoring 24/7. The solar arrays are self-grounded, and the Project will comply with National Electrical Safety Code (NESC) and applicable building codes. Additionally, the Project will not generate an increase in traffic, and will not generate discernable sounds, odors or other impacts to adjacent lands or lands in the Project area. Appendix J provides additional information to demonstrate that the Project will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood.

B. *The location of buildings, outside storage receptacles, parking areas, screen walls and utility areas is such that the adverse effects of such uses will be minimized for the occupants of that use and surrounding areas.*

The Project does not propose buildings, outside storage receptacles, parking areas or utility areas and will not have adverse impacts on the surrounding

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area. The Project proposes using an agricultural fencing consisting of wood posts and a wire mesh fence, which is more suited to the area's rural character, compared to a chain link fences. The Project is proposing a vegetative buffer featuring denser screening for residential areas consisting of evergreens spaced at eight (8) feet and two, staggered rows of eight-foot spaced shrubs (rather than the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance). Appendix J provides additional information to demonstrate that the Project will not have an adverse impact on the surrounding area.

- C. The design of storm sewers, stormwater facilities, roads, parking lots, driveways, water mains, sanitary sewers and other site improvements meets the design and construction standards of the Township and other appropriate agencies.*

The Project proposal does not include storm sewers, public roads, water mains, or sanitary sewers and all other site improvements will meet all Township and other appropriate agency design and construction standards. Infiltration testing associated with stormwater management planning has been conducted and the Applicant is coordinating with Washtenaw County Water Resource Commissioner to develop appropriate storm water management plans and to obtain a Soil Erosion and Sedimentation Control (SESC) permit. The areas between and beneath the solar panels will be vegetated, helping to reduce soil exposure and sheet flow runoff. To reduce impermeable area, access drives within the site have been minimized to the extent practicable and will consist of compacted onsite soil. Railsplitter Solar II is actively coordinating with the Washtenaw County Road Commission to obtain road approach permits, commercial driveway permits and utility/installation repair permits. Appendix J provides additional information to demonstrate that the Project meets the design and construction standards of the Township and other agencies.

- D. Proper access to all portions of the site and all sides of any structure is provided. All structures or groups of structures shall be so arranged as to permit emergency vehicle access by some practical means to all sides. Site features such as, but not limited to, trees and other plant materials, fences, retaining walls, berms, outdoor furniture, outdoor structures, and natural and artificial water bodies shall be arranged to permit adequate emergency vehicle access.*

Railsplitter Solar II is being designed in a manner to allow for proper access to all portions of the site. In addition to twelve (12)-foot wide access drives and turnarounds located periodically throughout the Project Site, Project facilities, including solar panels and inverters, are spaced apart at a distance to allow

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for vehicular access to areas of the site during routine Project maintenance or if emergency access is required. Site detail is presented in Appendix D.

- E. Site planning and design of specific improvements will accomplish, the preservation and protection of existing natural resources and features such as lakes, ponds, streams, wetlands, floodplains, steep slopes, groundwater, trees, and wooded areas, including understory trees.*

The Project has been sited and designed to minimize environmental impacts. As part of its development process, Railsplitter Solar II has conducted surveys for wetlands, threatened and endangered species, and cultural resources to ensure that impacts to sensitive environmental resources are avoided, where feasible. The Project has been developed to optimize the solar resource while avoiding impacts on natural resources and potentially sensitive areas. Specifically, see Appendix D (Preliminary Site Plan), Figure 1.3 (Wetlands and Waterways), and Figure 1.5 (FEMA Mapping), which demonstrate that the Project will predominately be located outside or setback from all wetlands, waterways, floodways and flood zones by a minimum setback distance of twenty-five (25) feet.

- F. The proposed development respects the natural topography to the maximum extent possible by minimizing the amount of cutting, filling and grading required.*

The Project respects the natural topography to the maximum extent possible by minimizing the amount of cutting, filling and grading required. The intended racking and panel system is highly adaptable to the existing terrain and natural undulations, thereby minimizing cut and fill. Further, Railsplitter Solar II has specifically selected the project land based on its generally flat topography. Railsplitter Solar II will provide a grading plan in connection with the Final Site Plan submittal, as required under the Ordinance.

- G. The proposed development will not cause soil erosion or sedimentation. The drainage plan is adequate to handle anticipated stormwater runoff.*

The Project has completed infiltration testing and is currently coordinating with the Washtenaw County Water Resources Commissioner to develop a stormwater management plan and secure a drainage permit under the County's requirements. Additionally, as noted above, the area under the solar panels will be vegetated, which will reduce soil exposure and sheet flow runoff. Prior to construction, a SESC plan will be developed and SESC permit

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obtained per the Washtenaw County SESC Ordinance. Thus, the Project plans will adequately manage anticipated stormwater runoff.

- H. A stormwater management system and facility will preserve the natural drainage characteristics and enhance the aesthetics of the site to the maximum extent possible and will not substantially reduce or increase the natural retention or storage capacity of any wetland, water body or water course, or cause alterations which could increase flooding or water pollution on or off site. The Washtenaw County Drain Commission Standards shall be used for the review and approval of all stormwater management systems.*

The Washtenaw County Drain Commissioners office shall provide review comments on the stormwater management system of all site plans for the consideration of the Planning Commission. Comments shall be provided for all Preliminary and Final Site Plans. Final Site Plan approval shall not be granted until approval is granted by the Drain Commissioners Office with regard to the stormwater management plan.

Railsplitter Solar II will require minimal grading, allowing for minimal alteration of existing drainage throughout the Project site. The Project has completed infiltration testing and is currently coordinating with the Washtenaw County Water Resources Commissioner to develop a stormwater management plan and secure a drainage permit under the County's requirements. Additionally, as noted above, groundcover will be planted below and between panel arrays and, except for roadways and structure footprints, will be entirely vegetated, which will improve natural drainage throughout the Project site.

The Project will incorporate appropriate stormwater best management practices (BMPs) to address the minor grading and minimal amount of impervious surface that will be created by the Project. One such BMP includes groundcover that will be planted below and between panel arrays, which will improve natural drainage throughout the Project site. The Applicant has been coordinating with the Washtenaw County Water Resources Commissioner to confirm acceptable storm water strategies. Railsplitter Solar II will provide comments from the Washtenaw County Water Resources Commissioners office to the Planning Commission

- I. Wastewater treatment systems, including on-site septic systems will be located to minimize any potential degradation of surface water or ground water quality.*

No wastewater treatment systems are proposed for Railsplitter Solar II.

Railsplitter Solar II Project

Submitted May 19, 2021

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- J. Sites which include storage of hazardous materials waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the air or to the ground, groundwater or nearby water bodies, with a specific plan to achieve such objectives being incorporated as part of the site plan.*

As a passive land use, the Project does not present any likelihood of any toxic materials contaminating the soil or groundwater as there will be no exposure of such materials from the solar panels. The primary material in the panel itself is silicon, a very common earth element used in cement, ceramics, glass and many other products. The panels are encapsulated in an aluminum casing and tempered glass. Like any other construction project, limited materials (e.g., fuels, lubricants, adhesives) will be used onsite during construction; all materials will be properly stored and managed onsite and have very low risk for spills or contamination. The Project skid-mounted transformers will use a mineral oil, and a spill prevention, contingency, and countermeasure plan will be prepared in accordance with applicable regulations.

- K. The location of buildings, parking, drives, landscaping and other improvements on the site is appropriate and consistent with good design standards for the lot size, shape and general location.*

No buildings or parking are proposed. The location of access drives, landscaping and other improvements on the site will be appropriate and consistent with quality design standards for the lot size, shape and general location. The Project will have a vegetative buffer. Specifically, the Project's panels will not exceed fifteen (15) feet at maximum tilt, as required under Section 6.25 of the Ordinance. As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will not be out of character with the landscape and adjacent residences will be screened with a vegetative buffer. The site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing for evergreens and two, staggered rows of 8-foot spacing for shrubs (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance).

- L. Landscaping, including grass, trees, shrubs and other vegetation is provided to maintain and improve the aesthetic quality of the site and area.*

The site plan includes setbacks and landscaping that exceeds the requirements under the Ordinance. The Ordinance requires a minimum setback of 75 feet from habitable structures to solar arrays. Not only will Railsplitter Solar II comply with this setback requirement, its site plan maintains a minimum distance of 150 feet between all habitable structures and the

Railsplitter Solar II Project

Submitted May 19, 2021

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Project's solar arrays. This represents a 100% increase from the required setback under the Ordinance. Further, the Project's solar arrays are set back a minimum of 50 feet from all public road rights-of-way as required under the Ordinance. As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will maintain and improve the aesthetic quality of the site and area. Additionally, the site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing for evergreens and 8-foot spacing for two, staggered rows of shrubs (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance). Additionally, the Project site will have a vegetative groundcover, which will be maintained throughout Project operations.

M. The means of ingress and egress to and from the site shall be planned with the objective of achieving recognized planning, engineering and safety standards, and shall not result in an unreasonable risk of danger to persons and/or property on the site and/or off the site. In general, this standard shall be met based upon the design of ingress and egress in terms of the number, location and design of access(es), and utilization of acceleration, deceleration and passing lanes and approaches. The Planning Commission shall review the ingress and egress proposed for the purpose of promoting and protecting traffic safety, and shall require improvements accordingly.

The design of ingress and egress from the Project will not result in an unreasonable risk of danger to persons and/or property on the site and/or off the site. Railsplitter Solar II is working in coordination with the Washtenaw County Road Commission to obtain road approach permits and commercial driveway approach permits from the County as required under the Ordinance for all points of ingress and egress to the Project area. The Project has been designed so that internal access drives are minimal and will most efficiently serve the Project. Access drive information can be found in Appendix D. The locations of ingress and egress to the Project from applicable County roads are also depicted in Appendix D. A Preliminary Transportation Routes figure showing the travel paths that construction and maintenance vehicles will utilize to access the project is provided in Figure 2-1 of the Railsplitter Solar II Special Use Permit and Preliminary Site Plan Application.

N. The site plan complies with all township ordinances and design standards, and any other applicable laws.

The site plan complies with all Township Ordinances and design standards, and any other applicable laws.

Railsplitter Solar II Project

Submitted May 19, 2021

Revision submitted August 23, 2021

5.0 SUPPLEMENTAL INFORMATION

The Applicant has designed the Project to comply with applicable federal, state, and county requirements throughout the Project development. A list of supplemental information provided to applicable federal, state and county agencies are summarized below:

- **Appendix J** - discusses the special land use standards in Section 4.4 (Basis for Determinations) of the Zoning Ordinance and the site plan standards for review in Section 11.4 (Criteria for Site Plan Review)
- **Appendix K** - addresses the Environmental Provisions Requirements pursuant to Article 9 of the Augusta Township Zoning Ordinance
- **Appendix L** - Glare Hazard Analysis – pursuant to Article 9, Section 9.5
- **Appendix M** – Economic Impact Study
- **Appendix N** – Property Value Impact Study
- **Appendix O** – PA 116 Forms

Notes

- SOLAR FACILITY DESIGN SHOWN IS PROVIDED BY MCCARTHY CONSTRUCTION. SITE ARRAY AND ELECTRICAL DESIGN IS IN PROGRESS AND MAY CHANGE FOR FINAL SITE PLAN.
- PROPERTY BOUNDARIES PROVIDED BY ATWELL. REFER TO ALTA SURVEY DRAWINGS FOR MORE DETAILS.
- AERIAL IMAGERY SHOWN FROM 2020 AND WAS OBTAINED FROM WASHTENAW COUNTY'S MAPPING SYSTEM.
- WASHTENAW COUNTY AGENCY CONTACT HAS BEEN ONGOING. MOST RECENT CONTACTS AT THIS TIME:
DENISE BERNBECK, WASHTENAW COUNTY HEALTH DEPARTMENT, MAY 18, 2021
THERESA MARSICK, WASHTENAW COUNTY WATER RESOURCES COMMISSIONER'S OFFICE, APRIL 30 2021
MARK MCCULLOCH, WASHTENAW COUNTY ROAD COMMISSION, JUNE 11, 2021
ADDITIONAL INFORMATION CAN BE FOUND IN THE APPENDIX F OF THE SPECIAL USE PLAN/PRELIMINARY SITE PLAN SUBMITTAL MATERIALS
- THERE ARE NO KNOWN EXISTING OR PROPOSED WELLS OR SEWAGE SYSTEMS.

Legend

- PROJECT PARCEL BOUNDARY
- PROJECT AREA BOUNDARY
- SITE PERIMETER FENCE
- COLLECTOR LINE
- EXISTING DRAIN
- DRAIN RIGHT OF WAY
- EXISTING EASEMENT
- PUBLIC ROAD RIGHT OF WAY
- SECTION LINE
- OVERHEAD TRANSMISSION LINE
- FIELD DELINEATED WETLAND
- INVERTER STATION
- PADMOUNTED TRANSFORMER
- MV COLLECTOR JUNCTION BOX
- VEGETATION SCREENING

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18
Revision		By	Appd.	YY.MM.DD

File Name: 193707233_Railsplitter_II_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
	Dwn.	Chkd.	Dsgn.	YY.MM.DD



ISSUED FOR PERMIT
NOT FOR CONSTRUCTION

Client/Project

RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title

PRELIMINARY SITE PLAN
TITLE SHEET

Project No. 193707626	Scale 1" = 500'	Revision
Drawing No.	Sheet	

G-100

1 of 1

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PRELIMINARY SITE PLAN

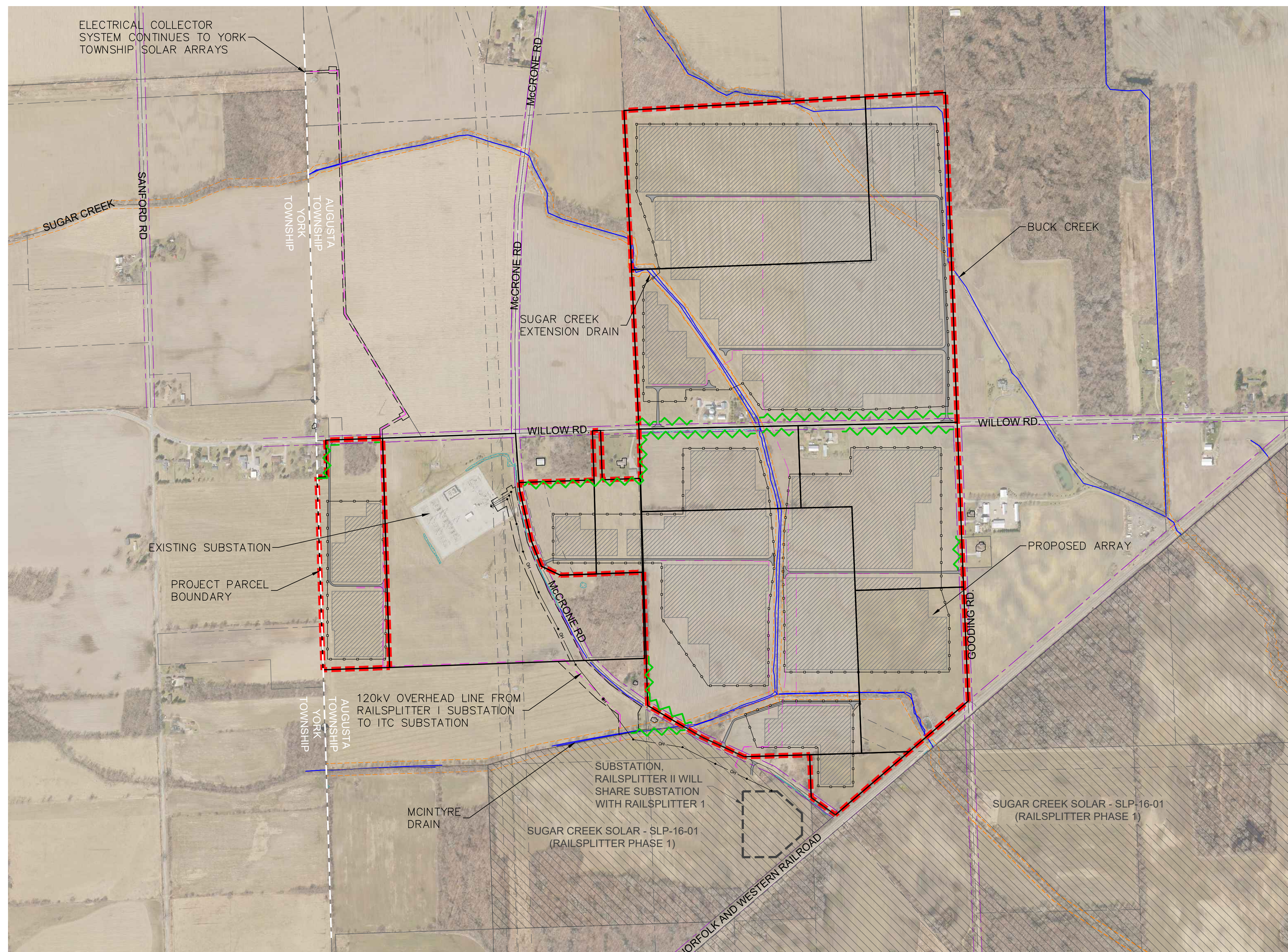
RAILSPLITTER SOLAR II

AUGUSTA TOWNSHIP, SECTIONS 19 AND 30

WASHTENAW COUNTY, MICHIGAN

APPLICANT CONTACT INFORMATION

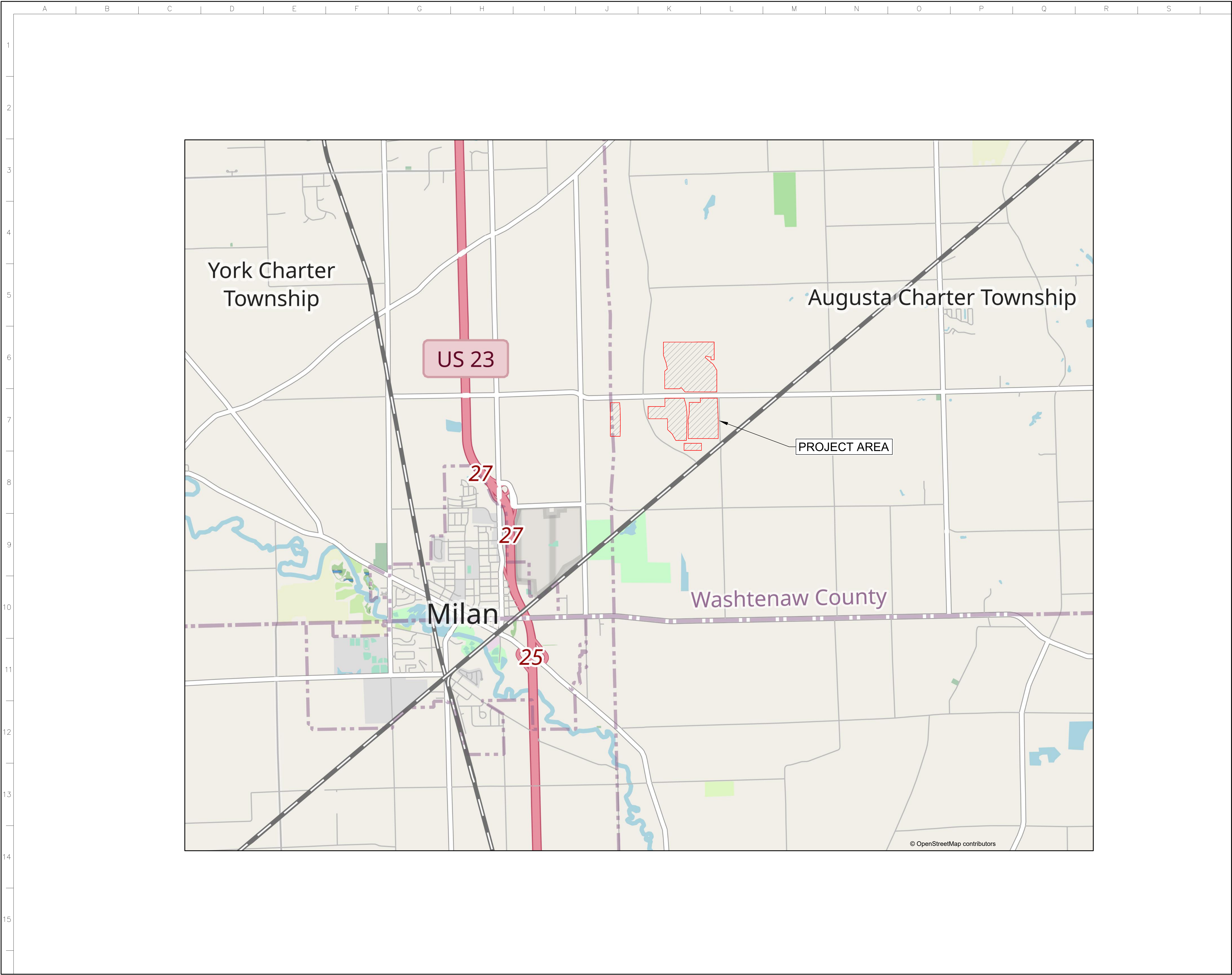
Ranger Power, LLC
Railsplitter Solar, LLC
Sergio Trevino
226 North Morgan St. #200
Chicago, IL 60607
Email: Sergio@rangerpower.com
Phone: (512) 827-1924



OVERALL DEVELOPMENT MAP

Scale 1" = 500'

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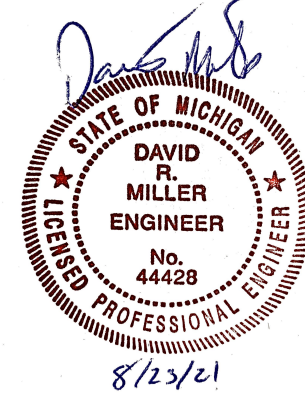
Notes

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H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18

Revision By Appd. YY.MM.DD

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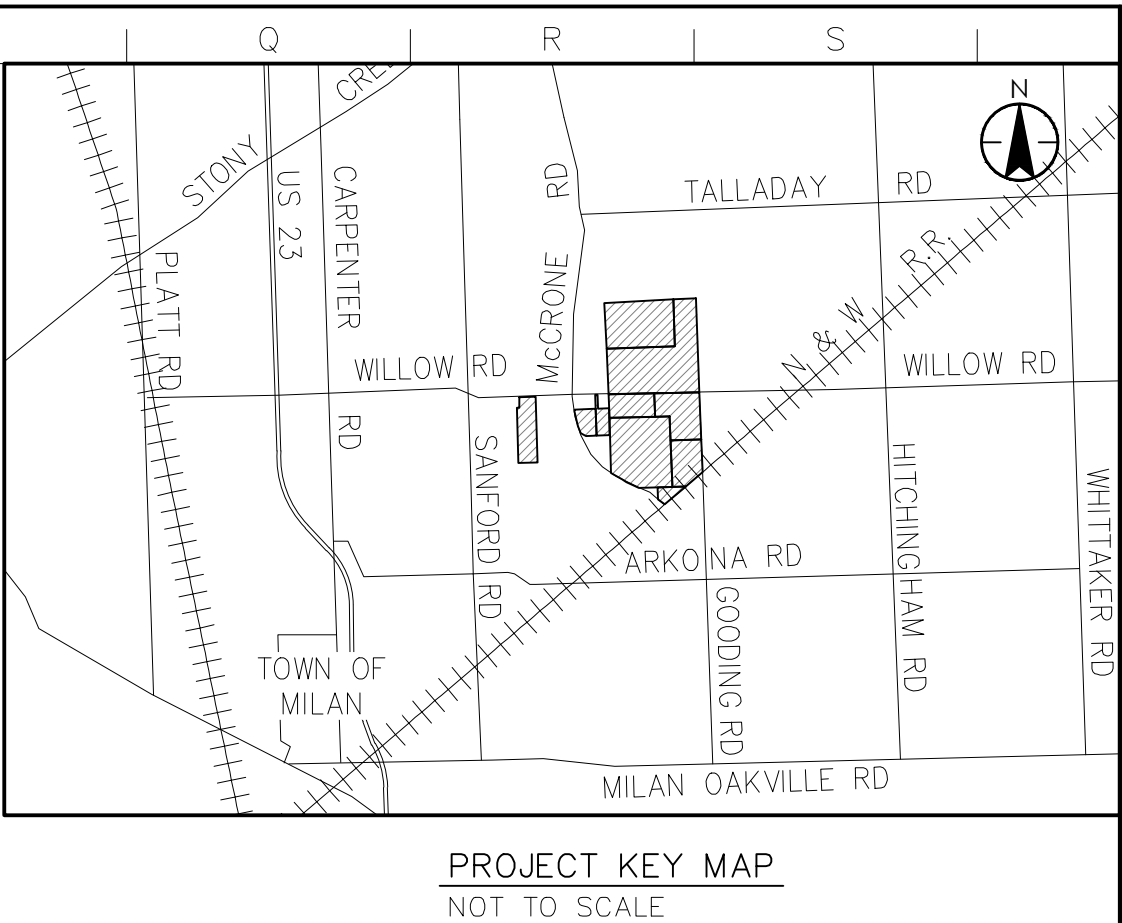
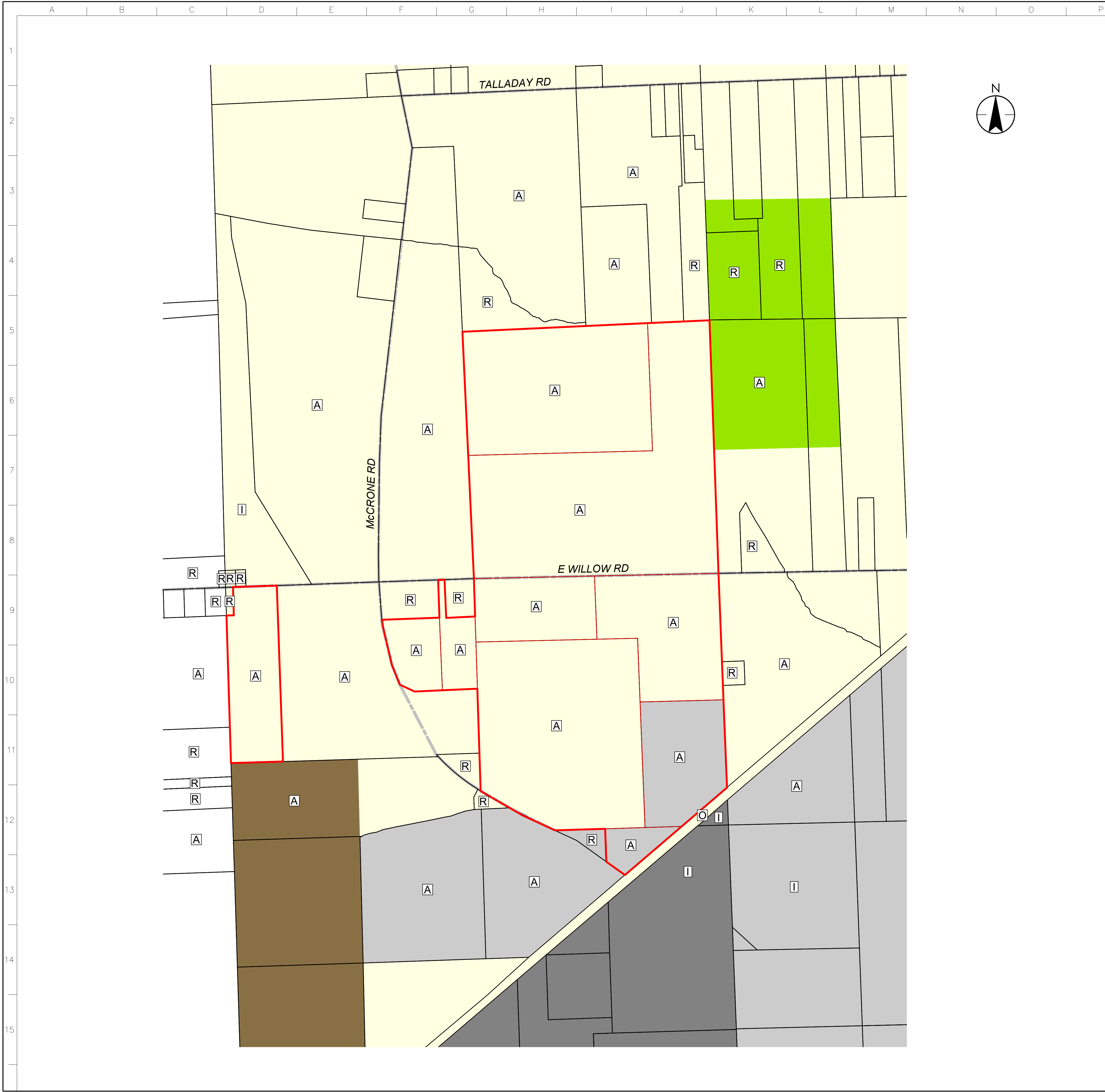
RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
PROJECT AREA MAP

Project No.	Scale	
193707626	1" = 2000'	
Drawing No.	Sheet	Revision

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 - REFER TO INDIVIDUAL LAYOUT SHEETS FOR DETAIL OF PV ARRAY AND PROPOSED EQUIPMENT LAYOUT.
 - THERE ARE NO KNOWN EXISTING OR PROPOSED WELLS OR SEWAGE SYSTEMS.

Legend

PROJECT BOUNDARY

PROJECT PARCEL

PUBLIC ROADWAY

AUGUSTA TOWNSHIP ZONING

AGRICULTURAL / RESIDENTIAL

LIMITED INDUSTRIAL

GENERAL INDUSTRIAL

MOBILE HOUSING COMMUNITY

CONSERVATION

LAND USE

AGRICULTURAL

RESIDENTIAL

INDUSTRIAL

OTHER (RAIL ROAD)

G	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
F	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
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D	UPDATED SITE LAYOUT	AR	TG	21.08.06
C	DTE COMMENTS ADDRESSED	AR	TG	21.07.20
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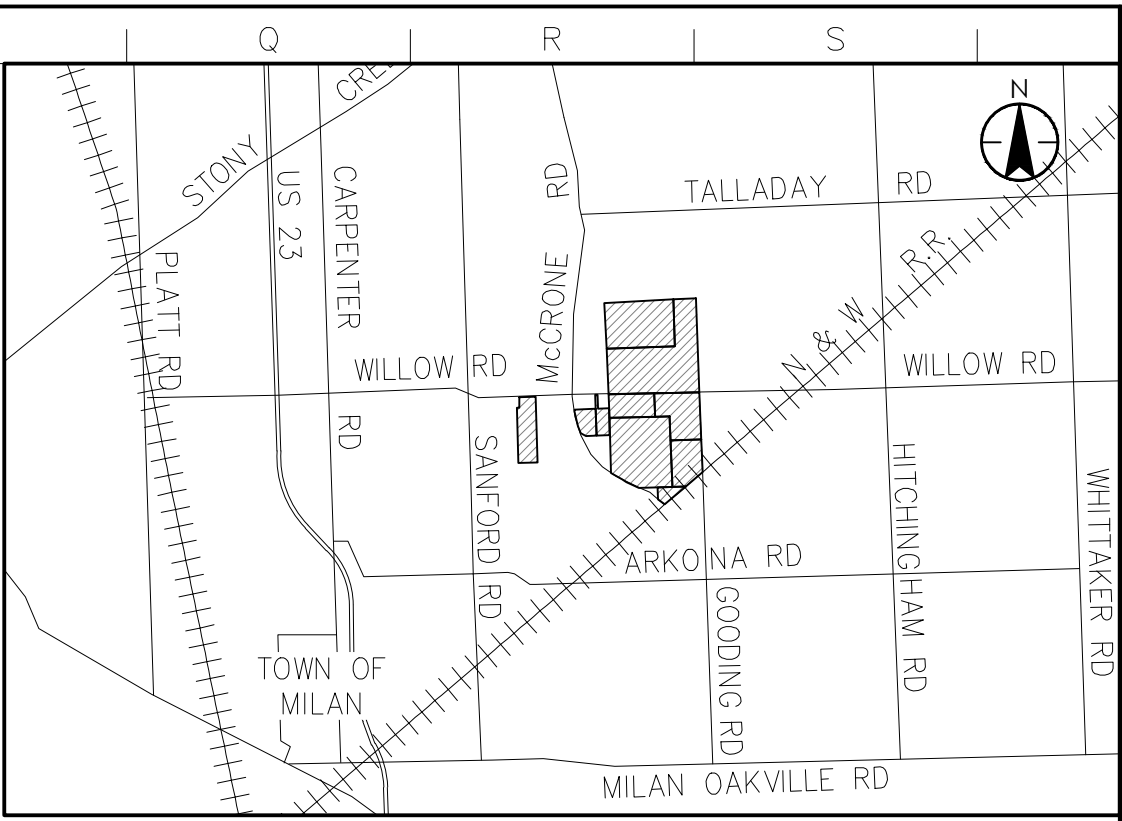
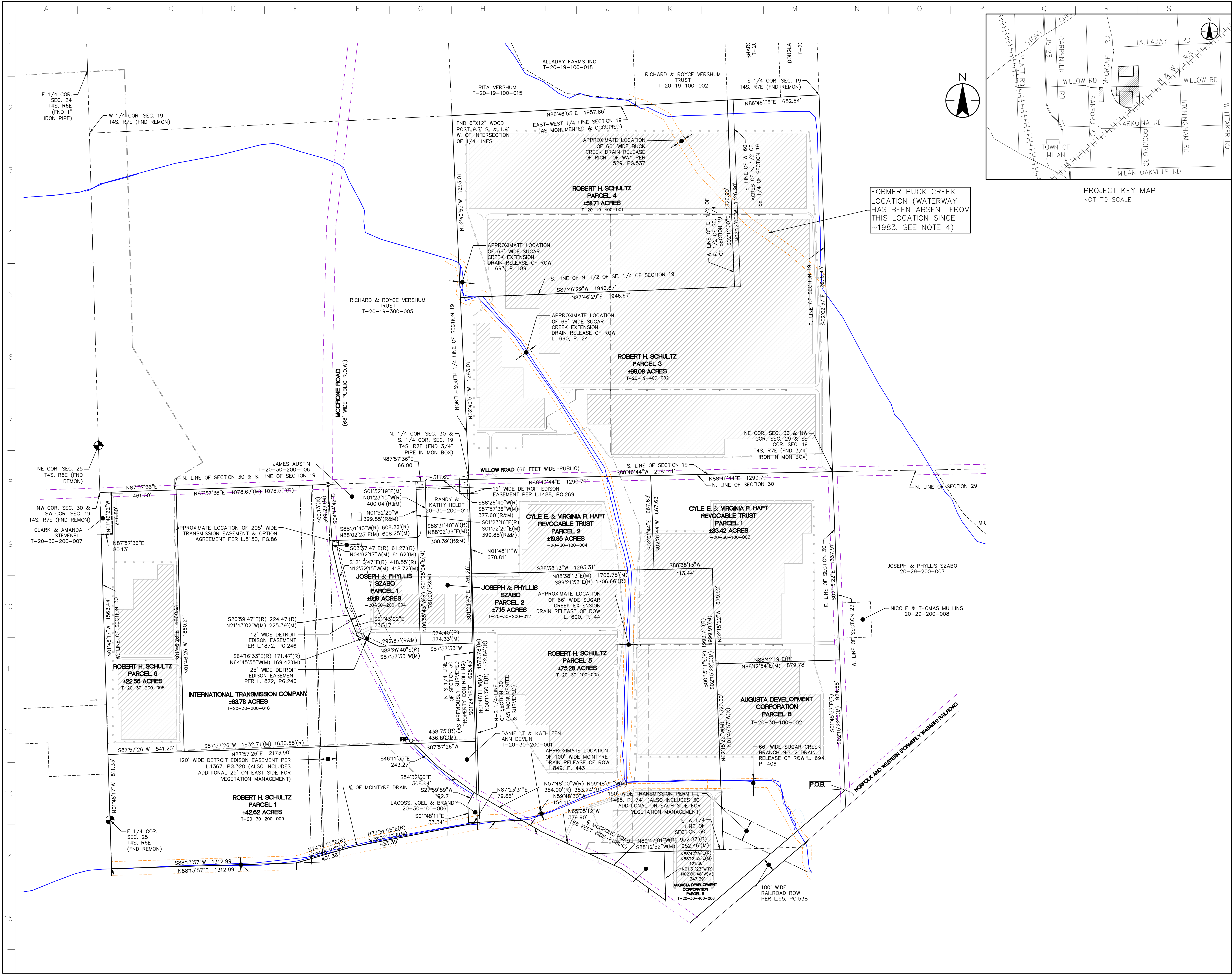
Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
ZONING AND LAND USE INFORMATION

Project No. 193707626	Scale 1" = 500'
Drawing No.	Sheet 1 of 1
	Revision G

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 - REFER TO INDIVIDUAL LAYOUT SHEETS FOR DETAIL OF PV ARRAY AND PROPOSED EQUIPMENT LAYOUT.
 - FORMER BUCK CREEK LOCATION HAS BEEN ACTIVELY FARMED SINCE AT LEAST 1993. ALTHOUGH SHOWN ON WASHTENAW COUNTY DRAIN MAPS, WATERWAY IS NO LONGER PRESENT AT THIS LOCATION AS CONFIRMED BY WETLAND DELINEATION.
 - THERE ARE NO KNOWN EXISTING OR PROPOSED WELLS OR SEWAGE SYSTEMS.

Legend

- SOLAR TRACKER FOOTPRINT
- SITE INTERNAL ACCESS DRIVE
- SITE PERIMETER FENCE
- COLLECTOR LINE
- PROJECT PARCEL BOUNDARY LINE
- SECTION LINE
- PUBLIC ROAD RIGHT OF WAY
- EXISTING DRAIN / WATERCOURSE
- DRAIN RIGHT OF WAY
- EXISTING EASEMENT BOUNDARY
- SECTION CORNER

G	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
F	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
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C	DTE COMMENTS ADDRESSED	AR	TG	21.07.20

Revision	By	Appd.	YYMMDD
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Client/Project

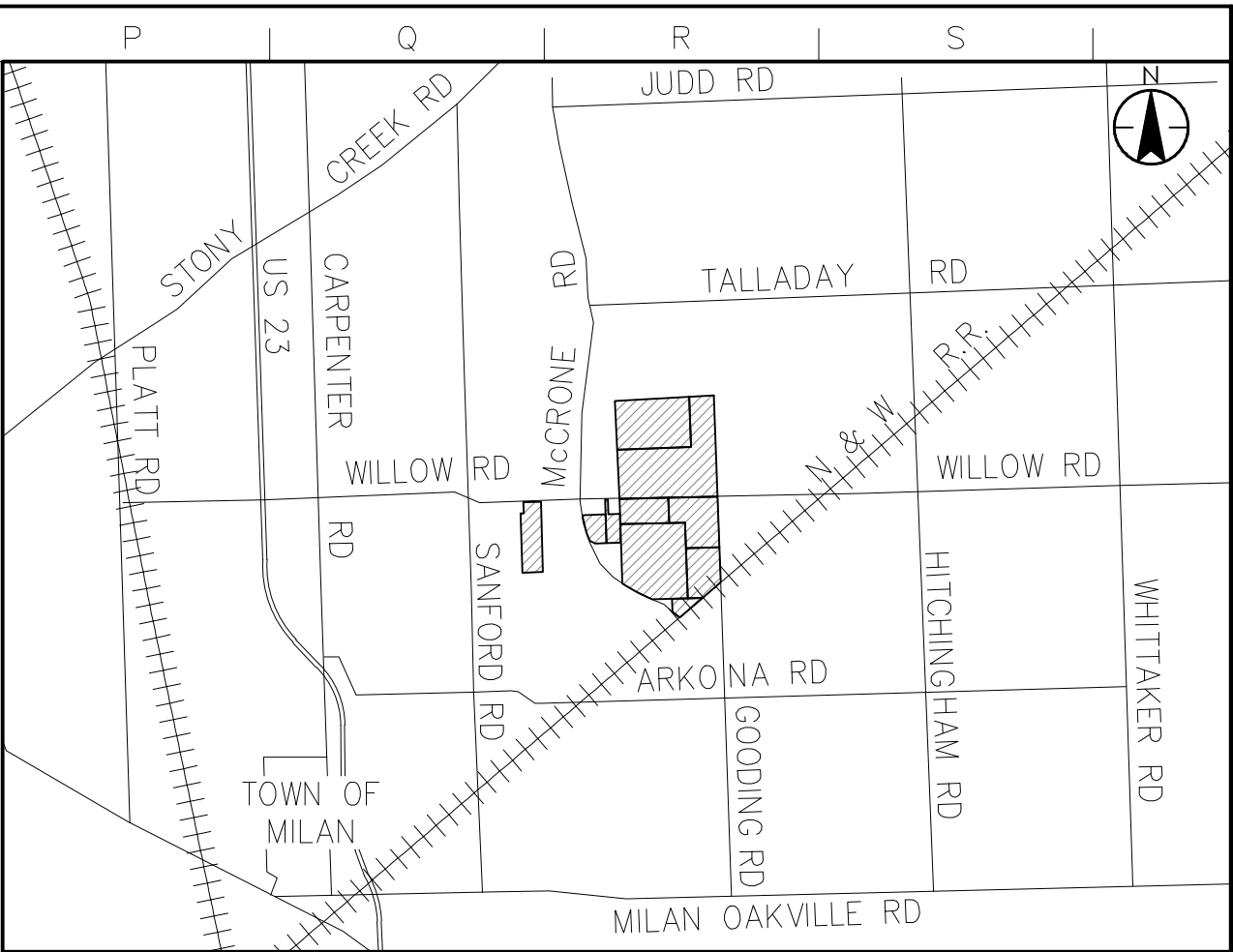
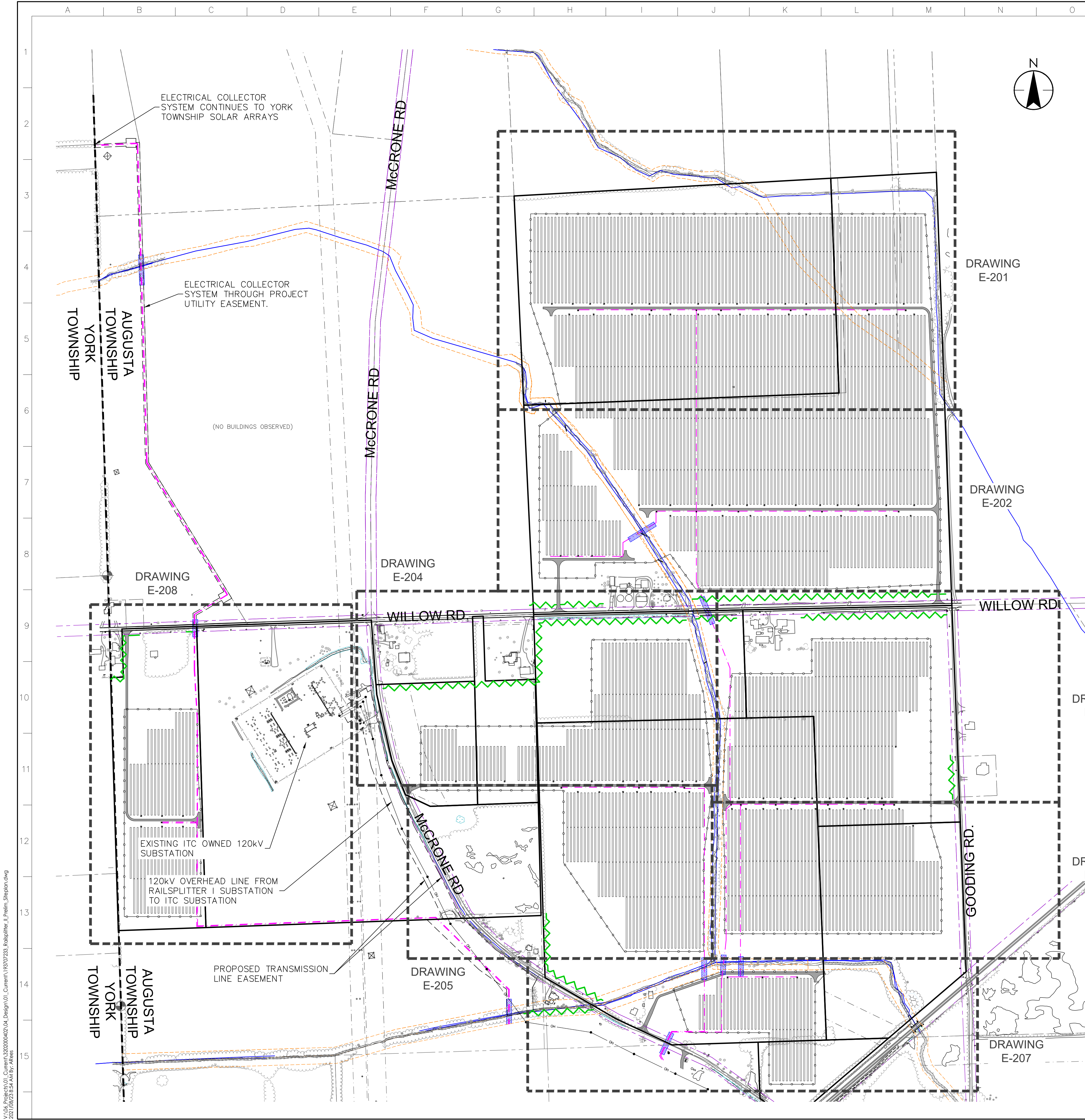
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

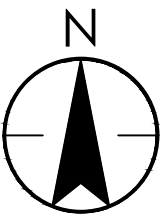
Title

PRELIMINARY SITE PLAN
PARCEL DETAILS AND DIMENSIONS

Project No.	Scale
193707626	1" = 300'
Drawing No.	Sheet
	Revision



PROJECT KEY MAP
NOT TO SCALE



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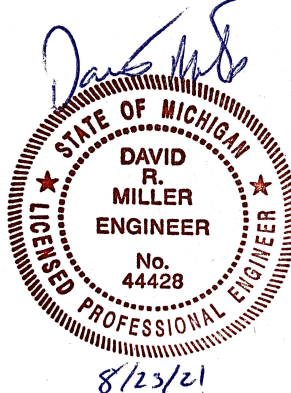
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 2. PROPERTY BOUNDARIES PROVIDED BY ATWELL. REFER TO ALTA SURVEY DRAWINGS FOR MORE DETAILS.
 3. REFER TO INDIVIDUAL LAYOUT SHEETS FOR DETAIL OF PV ARRAY AND PROPOSED EQUIPMENT LAYOUT.
 4. THERE ARE NO KNOWN EXISTING OR PROPOSED WELLS OR SEWAGE SYSTEMS.

- Legend
- PROJECT PARCEL BOUNDARY
 - PUBLIC ROAD RIGHT OF WAY
 - SITE PERIMETER FENCE
 - COLLECTOR LINE
 - DIRECTIONAL BORED COLLECTOR CROSSING, DRAIN OR ROADWAY
 - EXISTING DRAIN
 - DRAIN RIGHT OF WAY
 - SECTION LINE
 - INVERTER STATION
 - PADMOUNTED TRANSFORMER
 - MV COLLECTOR JUNCTION BOX
 - VEGETATION SCREENING
 - 12ft WIDE SITE ACCESS DRIVE
 - EXISTING TREES
 - EXISTING TREE LINE / VEGETATION

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18

Revision By Appd. YY.MM.DD

File Name:	193707233_Railsplitter_II_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
		Dwn.	Chkd.	Dsgn.	YY.MM.DD



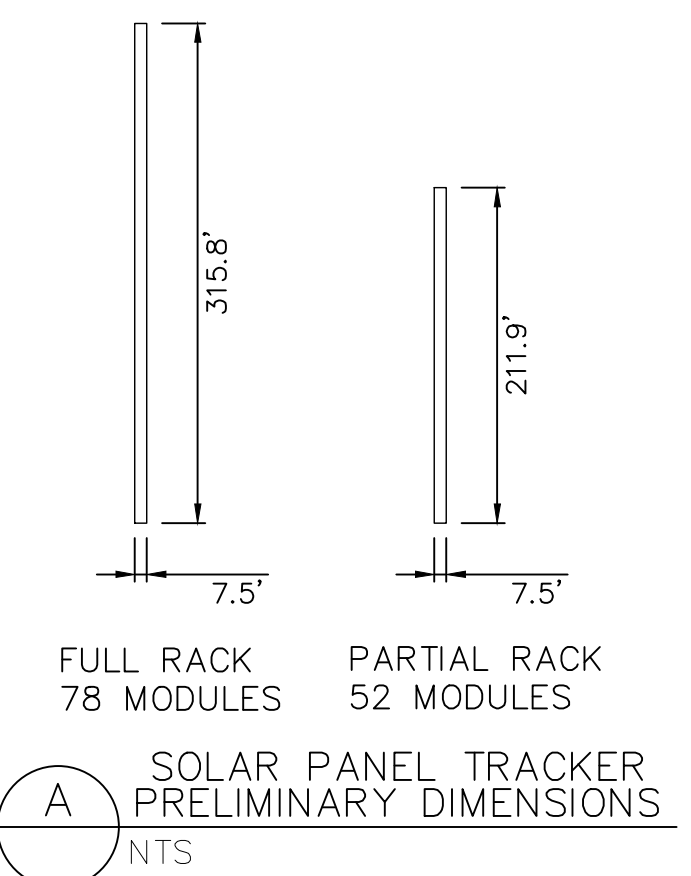
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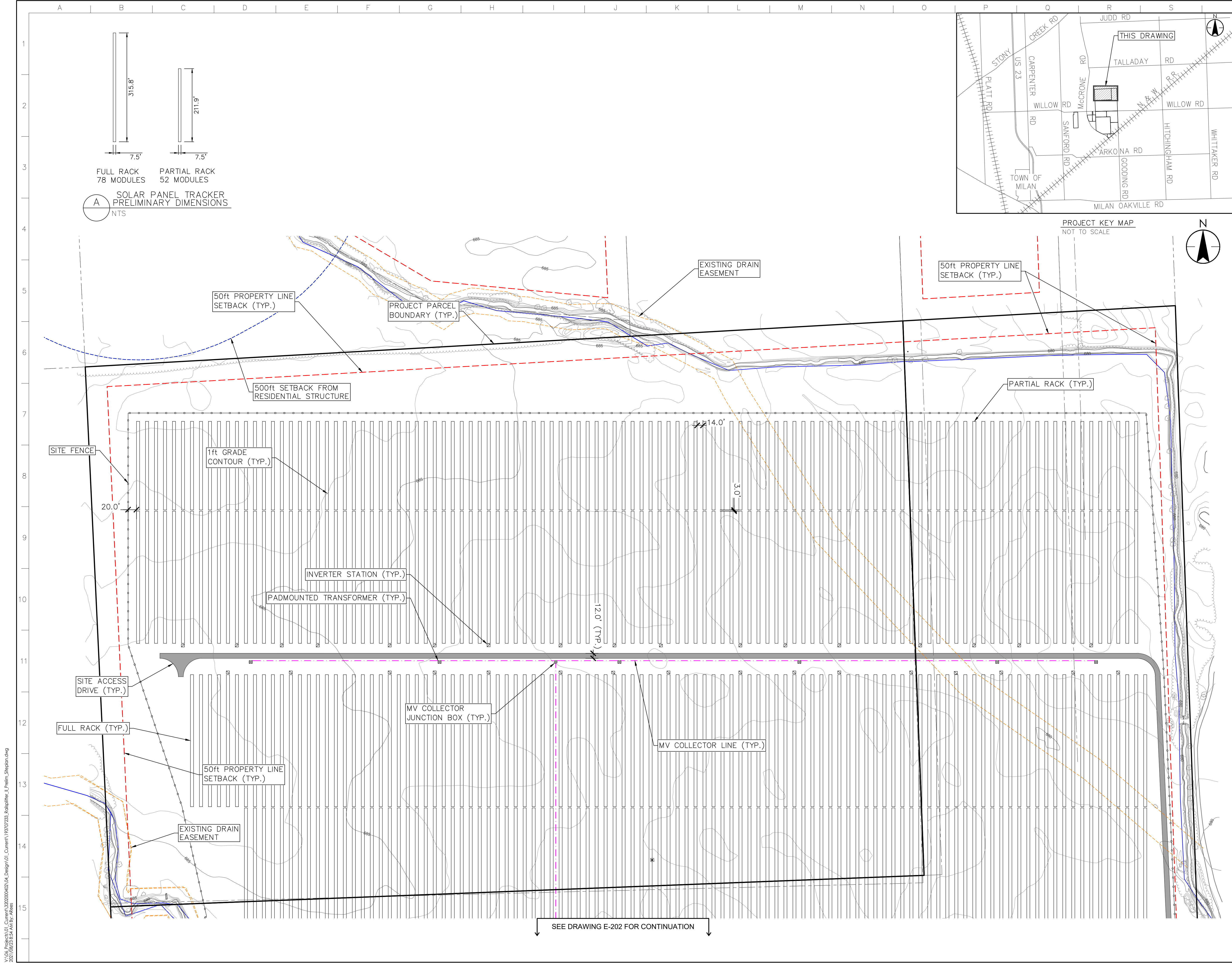
Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
OVERALL SITE PLAN

Project No.	Scale
193707626	1" = 300'
Drawing No.	Sheet
	Revision





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- Legend
- PROJECT PARCEL BOUNDARY
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 - SITE PERIMETER FENCE
 - COLLECTOR LINE
 - DIRECTIONAL BORED COLLECTOR CROSSING, DRAIN OR ROADWAY
 - EXISTING DRAIN
 - DRAIN RIGHT OF WAY
 - SECTION LINE
 - FIELD DELINEATED WETLAND
 - INVERTER STATION
 - PADMOUNTED TRANSFORMER
 - MV COLLECTOR JUNCTION BOX
 - VEGETATION SCREENING
 - 12ft WIDE SITE ACCESS DRIVE
 - PROPERTY LINE / ROW SETBACK
 - EXISTING TREES
 - EXISTING TREE LINE / VEGETATION
 - EXISTING POWER POLE
 - 1ft GRADING CONTOUR LINE
 - RESIDENTIAL STRUCTURE SETBACK
 - 75ft
 - 500ft

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18

Revision	By	Appd.	YY.MM.DD
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File Name: 193707233_Railsplitter_IL_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
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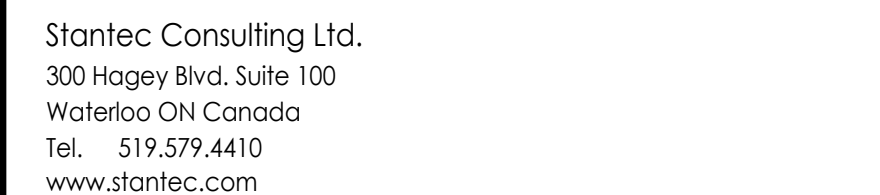


Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No.	Scale
193707626	1" = 100'
Drawing No.	Sheet
	Revision



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	SITE PERIMETER FENCE
	COLLECTOR LINE
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	EXISTING DRAIN
	DRAIN RIGHT OF WAY
	SECTION LINE
	FIELD DELINEATED WETLAND
	INVERTER STATION
	PADMOUNTED TRANSFORMER
	MV COLLECTOR JUNCTION BOX
	VEGETATION SCREENING
	12ft WIDE SITE ACCESS DRIVE
	PROPERTY LINE / ROW SETBACK
	EXISTING TREES
	EXISTING TREE LINE / VEGETATION
	EXISTING POWER POLE
	1ft. GRADING CONTOUR LINE

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
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Revision	By	Appd.	YY.MM.DD
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File Name: 193707233_Railsplitter_II_Prelim_Siteplan	MS	AR	MS	21.04.23
	Dwn.	Chkd.	Dsn.	YY.MM.DD



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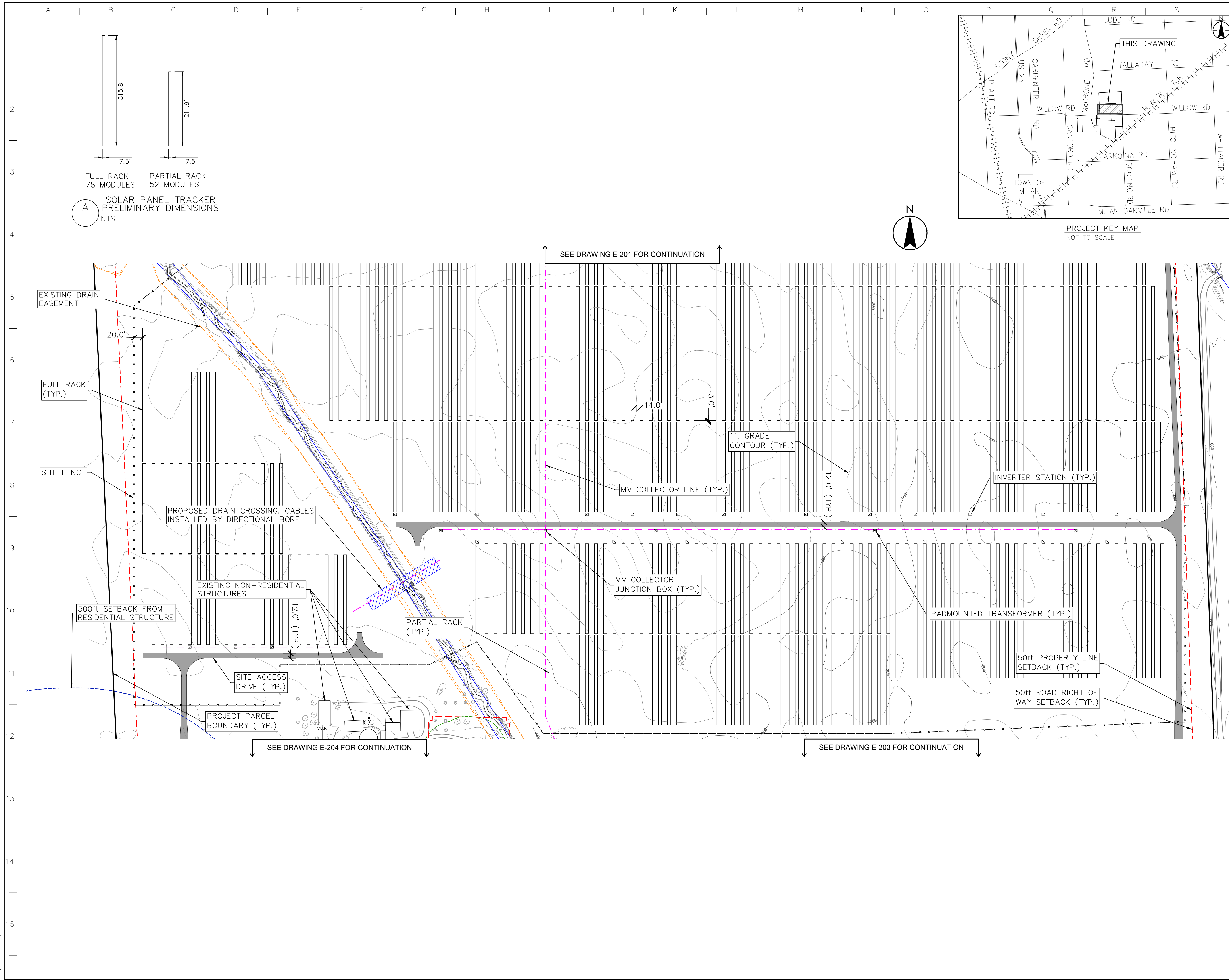
Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No. 193707626	Scale 1" = 100'	
Drawing No.	Sheet	Revision

E-202 2 of 8 |



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	SITE PERIMETER FENCE
	COLLECTOR LINE
	DIRECTIONAL BORED COLLECTOR CROSSING, DRAIN OR ROADWAY
	EXISTING DRAIN
	DRAIN RIGHT OF WAY
	SECTION LINE
	FIELD DELINEATED WETLAND
	INVERTER STATION
	PADMOUNTED TRANSFORMER
	MV COLLECTOR JUNCTION BOX
	VEGETATION SCREENING
	12ft WIDE SITE ACCESS DRIVE
	PROPERTY LINE / ROW SETBACK
	EXISTING TREES
	EXISTING TREE LINE / VEGETATION
	EXISTING POWER POLE
	1ft GRADING CONTOUR LINE

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File Name: 193707233_Railsplitter_IL_Prelim_Siteplan	MS	AR	MS	21.04.23
	Dwn	Chkd	Dsn	YY MM DD



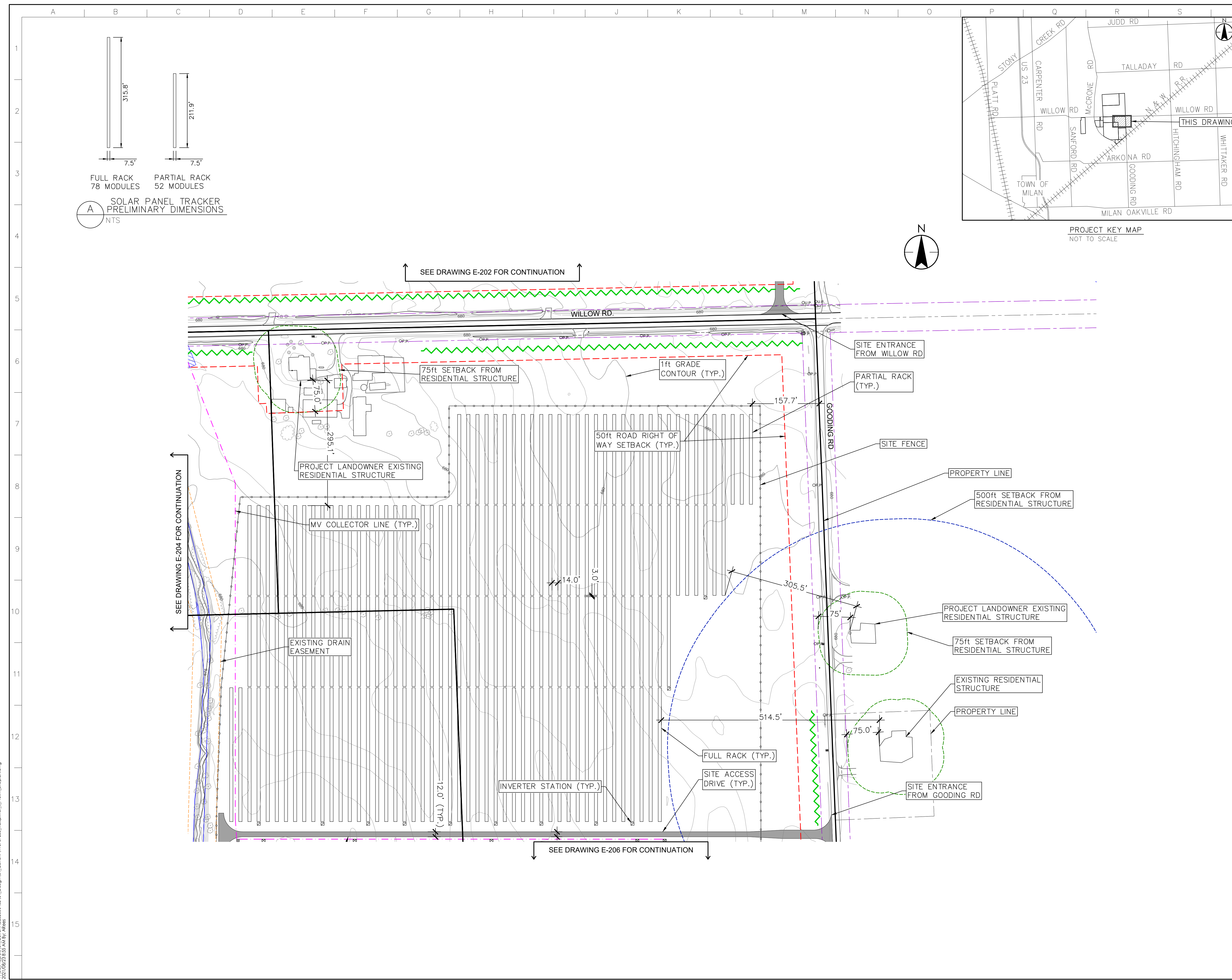
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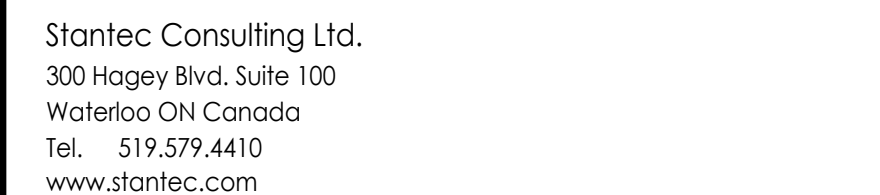
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No. 193707626	Scale 1" = 100'	
Drawing No.	Sheet	Revision





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Legend

- | | |
|--|--|
| | PUBLIC ROAD RIGHT OF WAY |
| | SITE PERIMETER FENCE |
| | COLLECTOR LINE |
| | DIRECTIONAL BORED COLLECTOR CROSSING, DRAIN OR ROADWAY |
| | EXISTING DRAIN |
| | DRAIN RIGHT OF WAY |
| | SECTION LINE |
| | FIELD DELINEATED WETLAND |
| | INVERTER STATION |
| | PADMOUNTED TRANSFORMER |
| | MV COLLECTOR JUNCTION BOX |
| | VEGETATION SCREENING |
| | 12ft WIDE SITE ACCESS DRIVE |
| | PROPERTY LINE / ROW SETBACK |
| | EXISTING TREES |
| | EXISTING TREE LINE / VEGETATION |
| | EXISTING POWER POLE |
| | 1ft GRADING CONTOUR LINE |

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
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E	DTE COMMENTS	AR	TG	21.05.18

Revision	By	Appd.	YY.MM.DD
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File Name: 193707233_Railsplitter_IL_Prelim_Siteplan	MS	AR	MS	21.04.23
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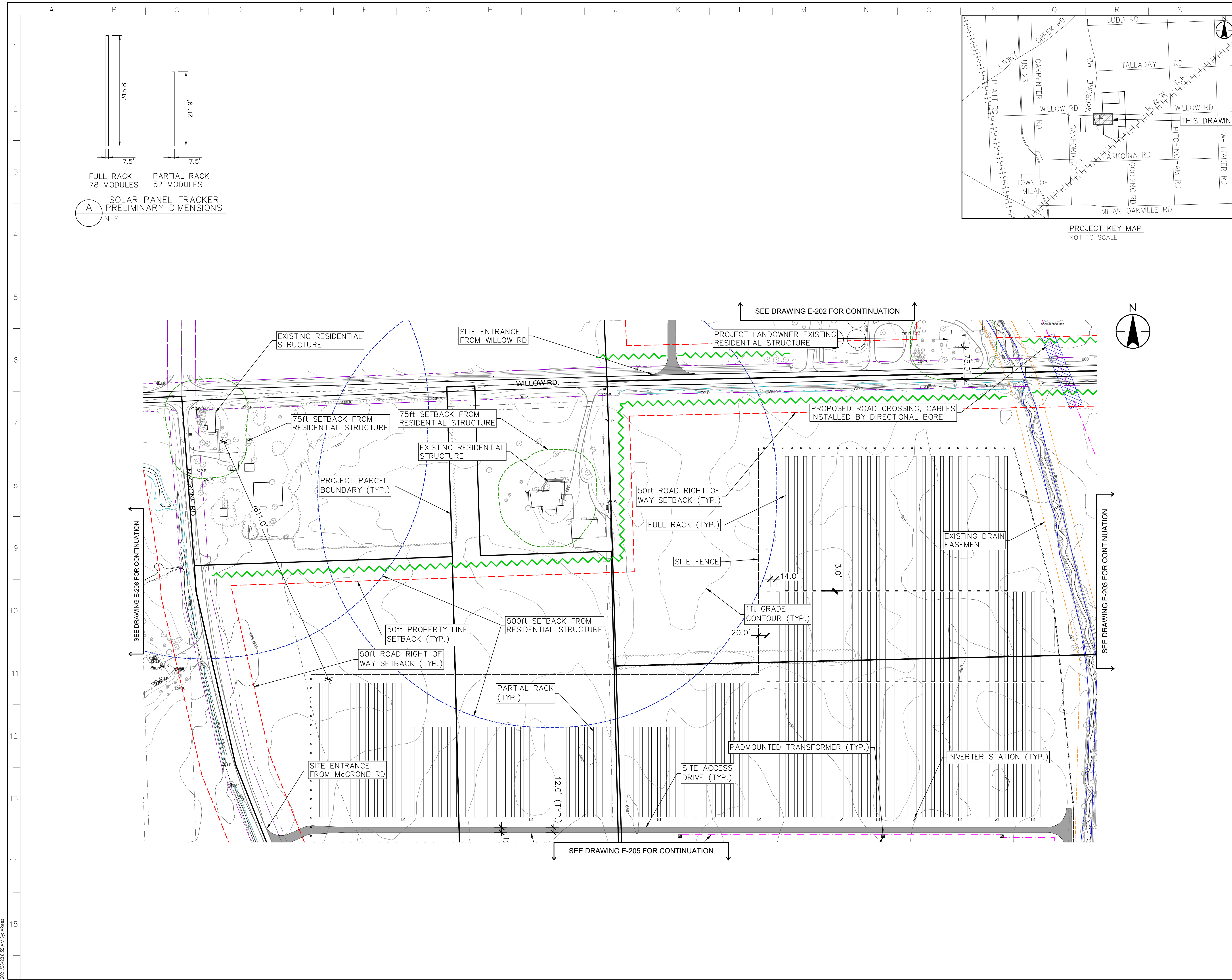
Client/Project
RAILSPITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

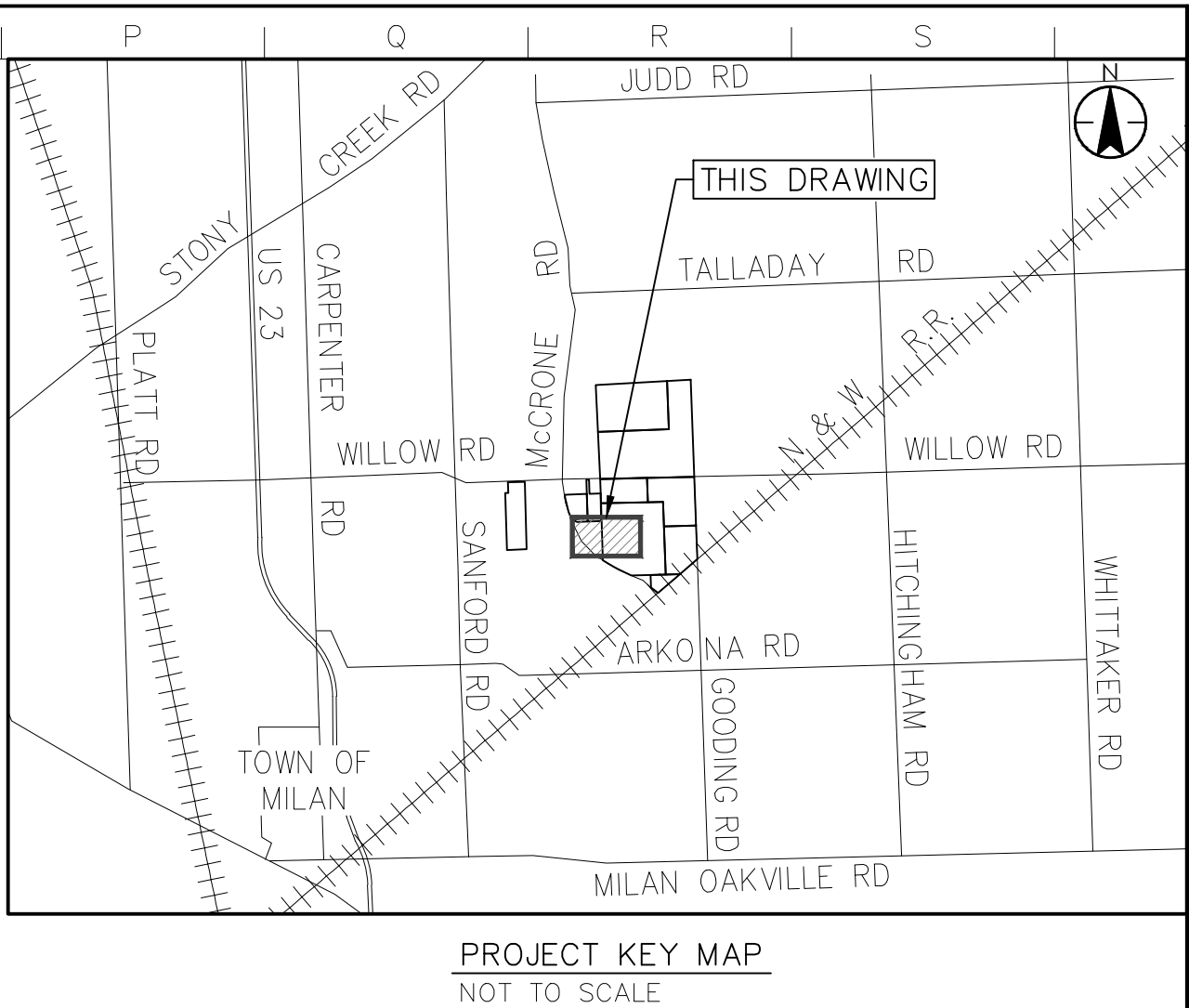
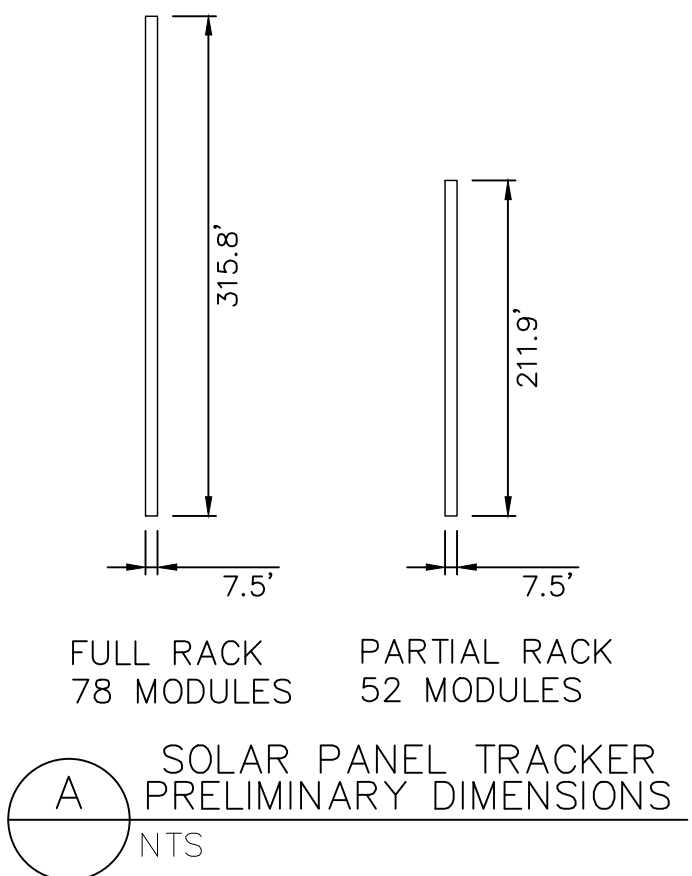
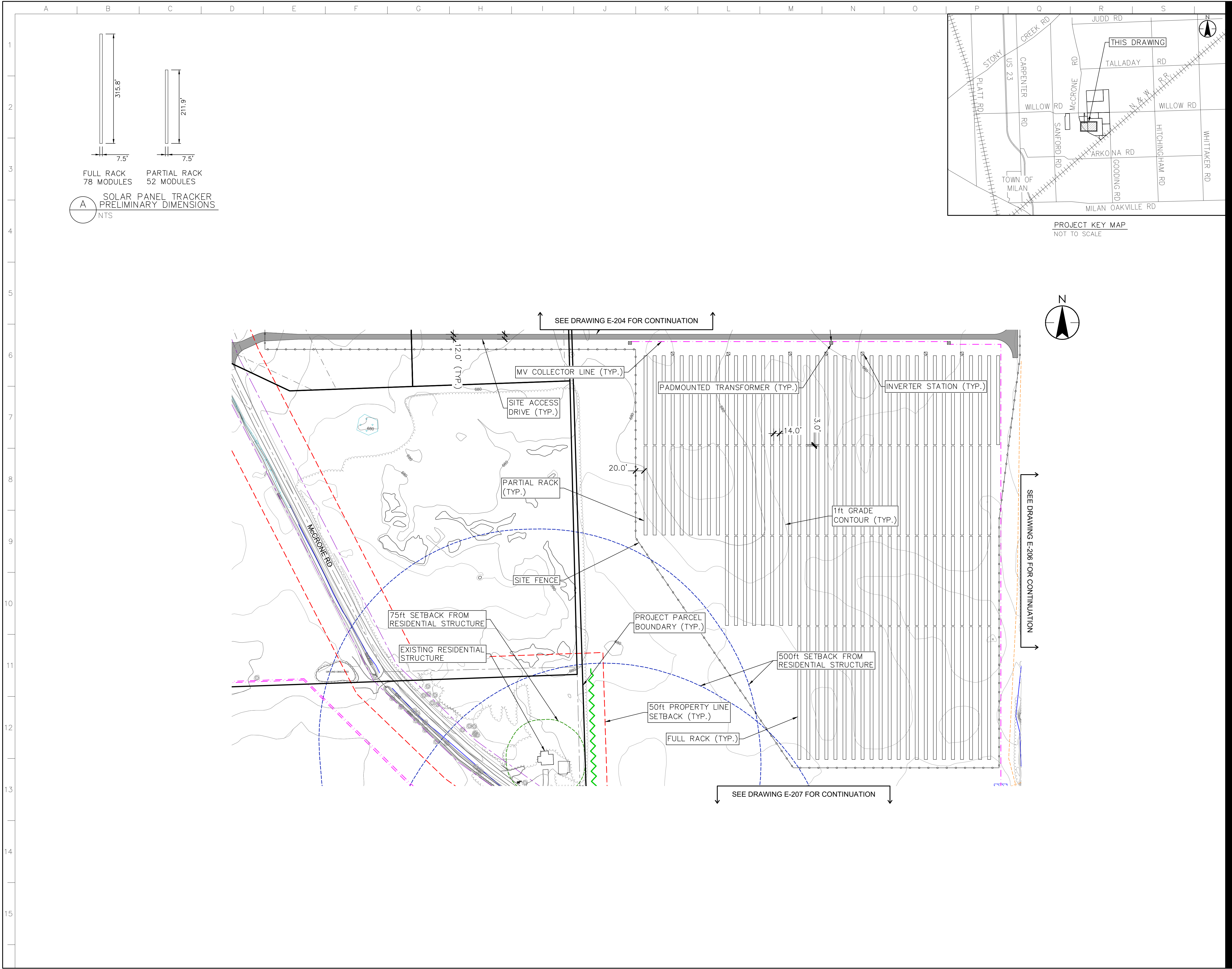
Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No. 193707626	Scale 1" = 100'	
Drawing No.	Sheet	Revision

E-204 4 of 8 |



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Legend

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- 1ft GRADING CONTOUR LINE
- RESIDENTIAL STRUCTURE SETBACK
- 75ft
- 500ft

Revision	By	Appd.	YY.MM.DD	
I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
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File Name:	193707233_Railsplitter_II_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
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Client/Project
RAILSPLITTER SOLAR, LLC

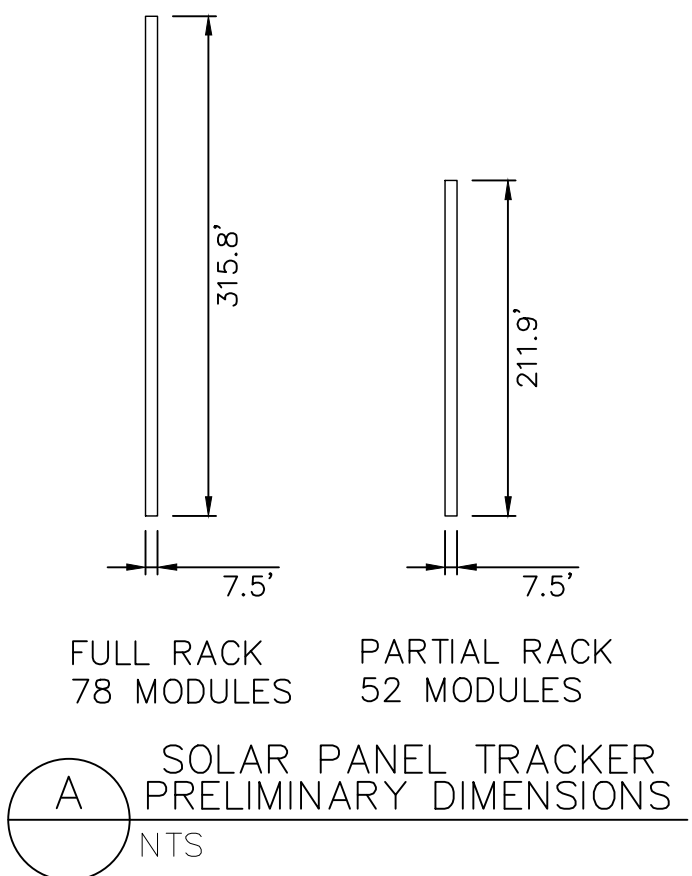
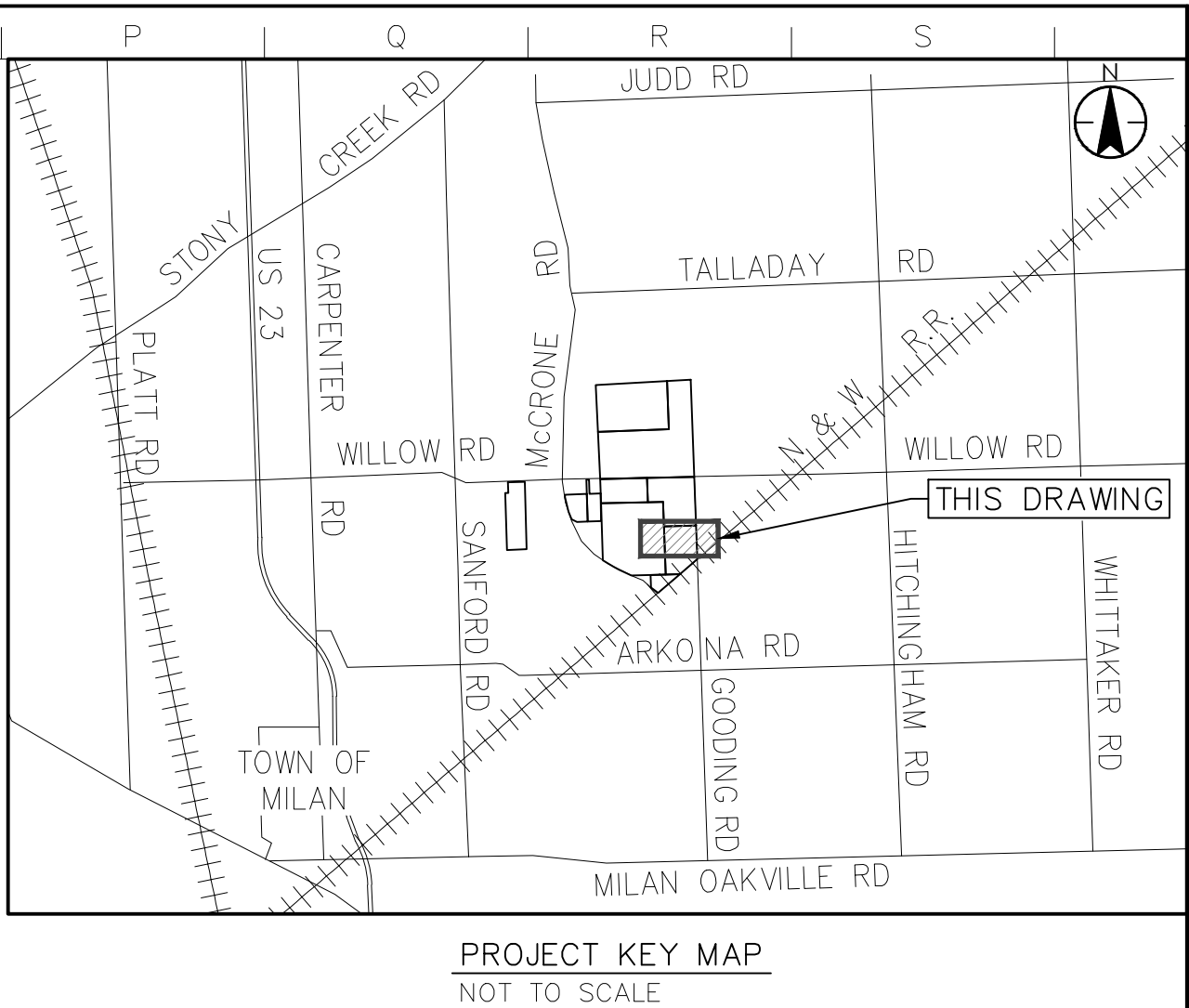
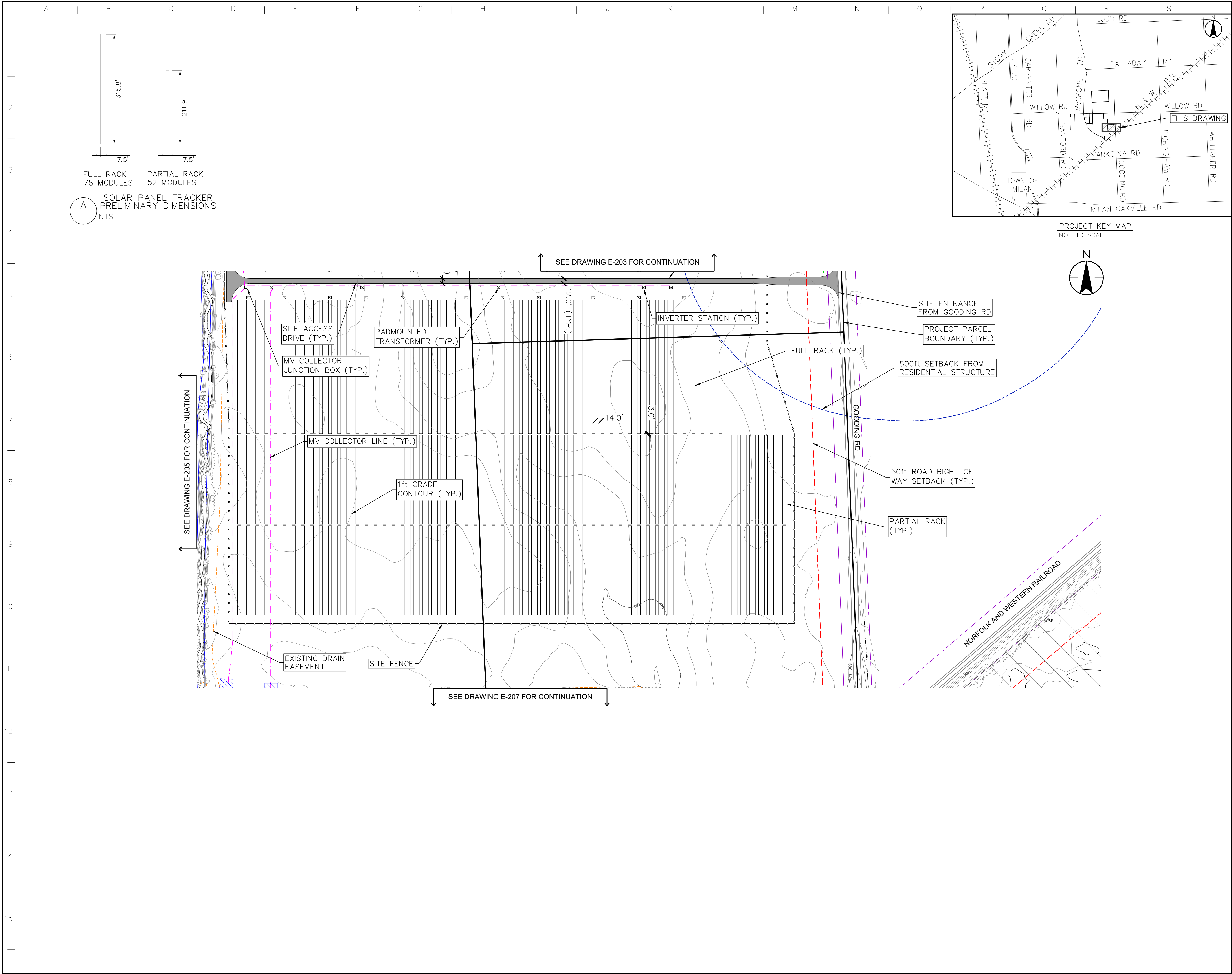
RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No.	Scale	
193707626	1" = 100'	
Drawing No.	Sheet	Revision

E-205 5 of 8 I

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E	DTE COMMENTS	AR	TG	21.05.18

Revision

By	Appd.	YY.MM.DD

File Name: 193707233_Railsplitter_II_Prelim_Siteplan.dwg MS AR MS 21.04.23
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Client/Project
RAILSPLITTER SOLAR, LLC

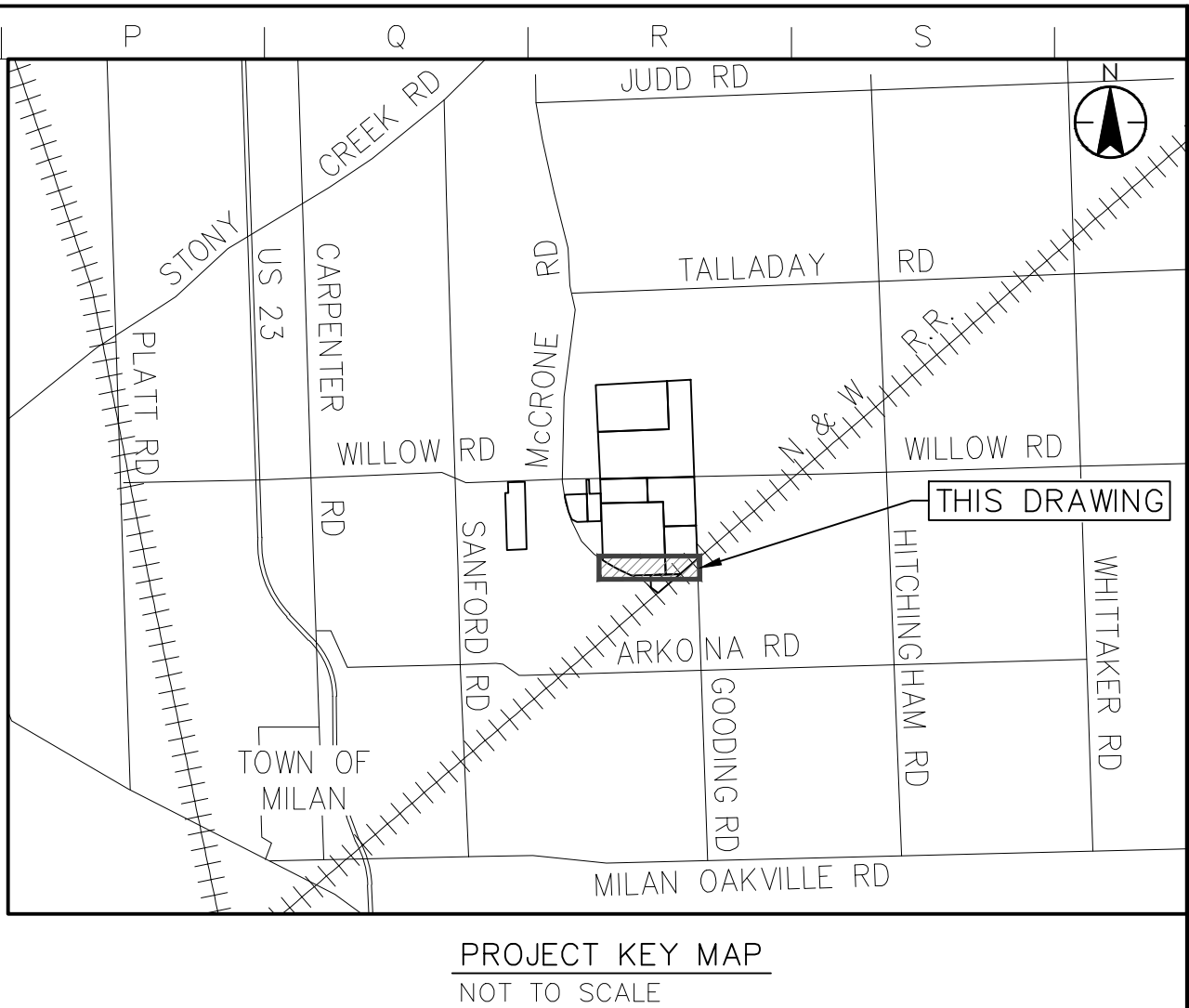
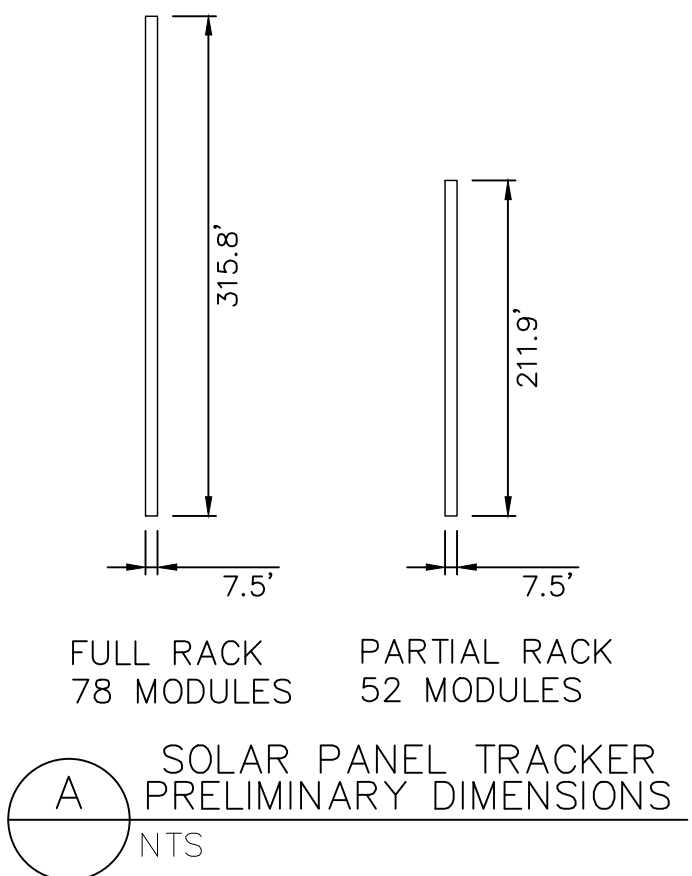
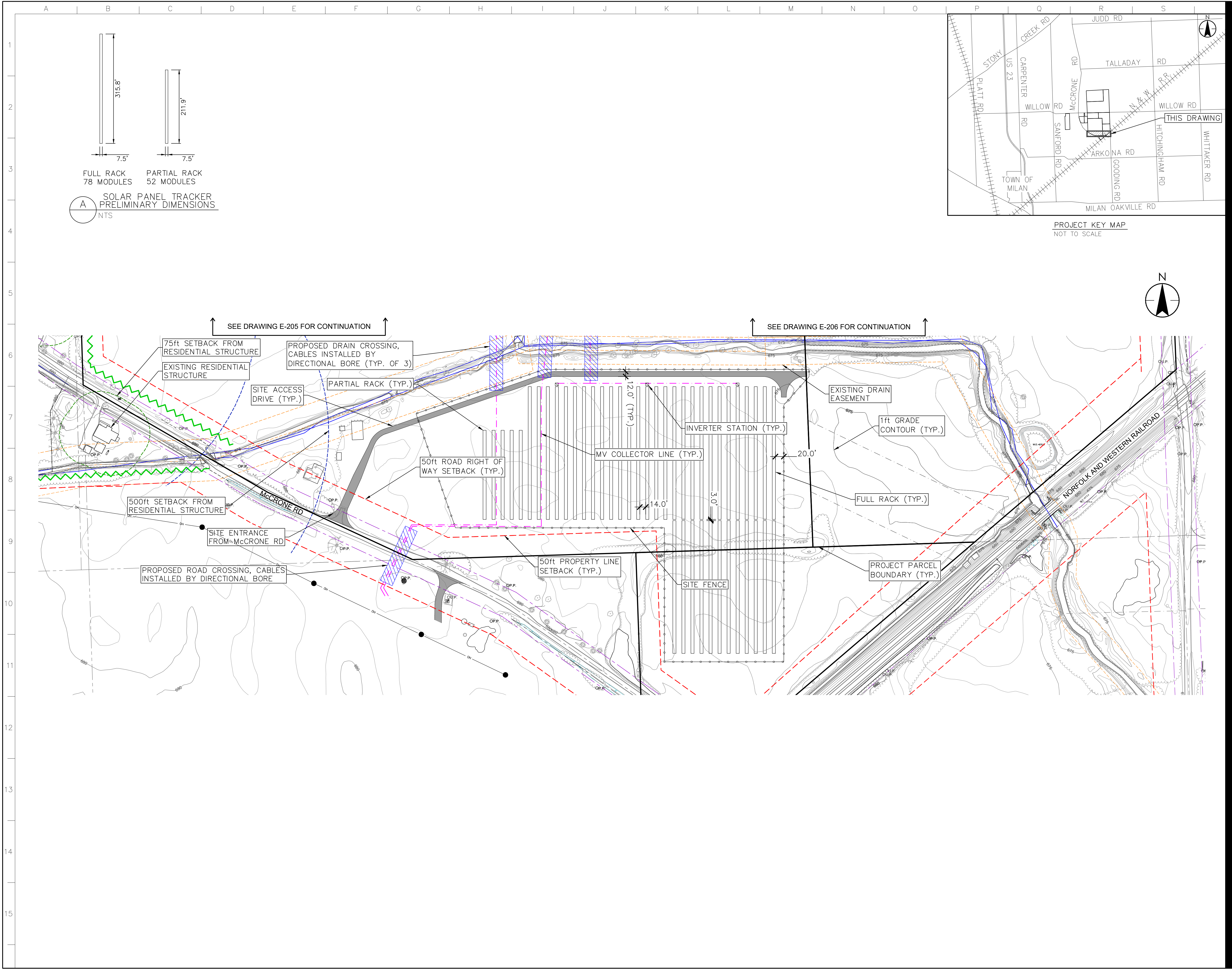
RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No. 193707626	Scale 1" = 100'
Drawing No.	Sheet Revision

E-206 6 of 8 1

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Revision	By	Appd.	YY.MM.DD	
File Name: 193707233_Railsplitter_IL_Prelim_Siteplan	MS	AR	MS	21.04.23
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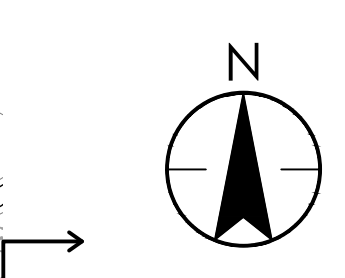
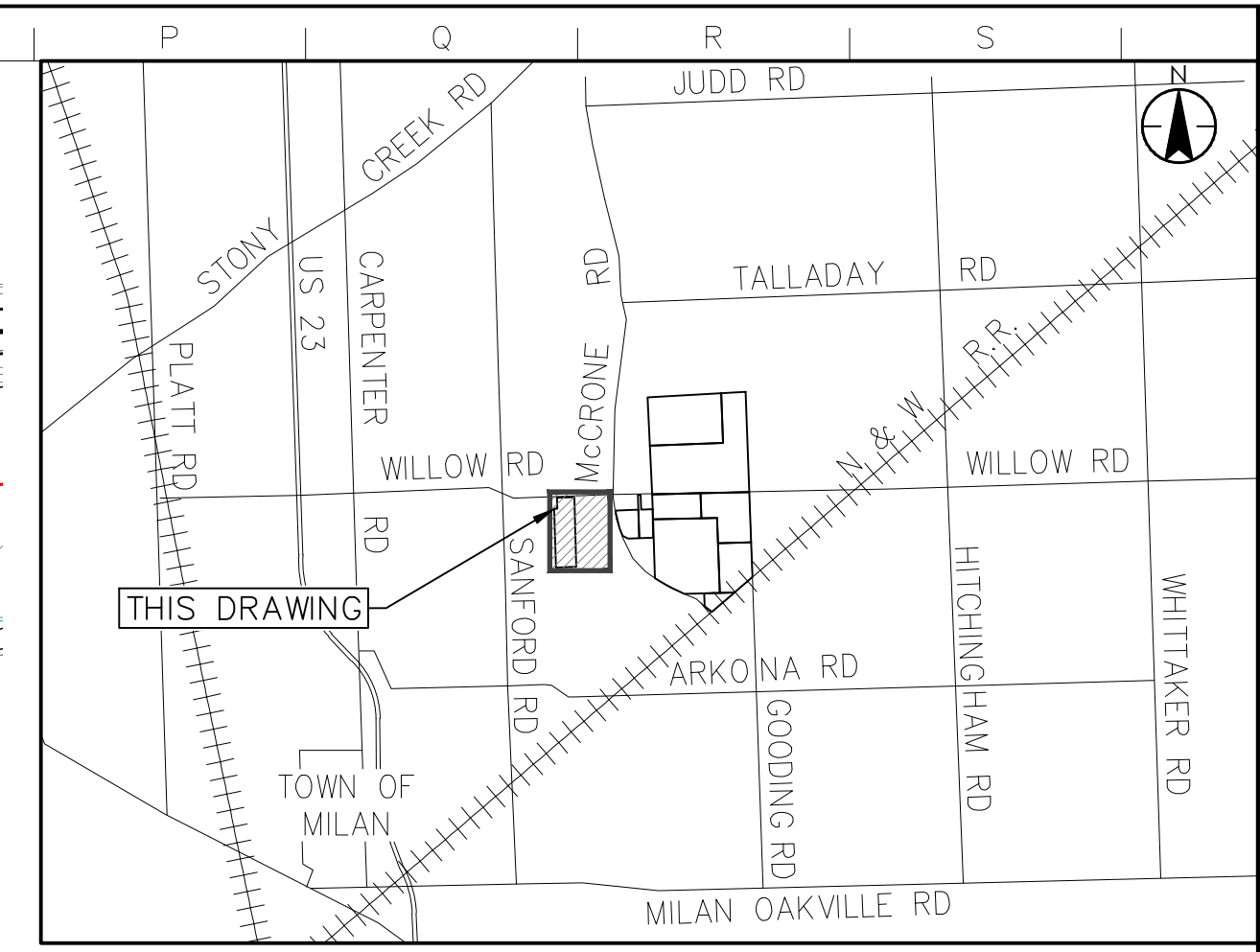
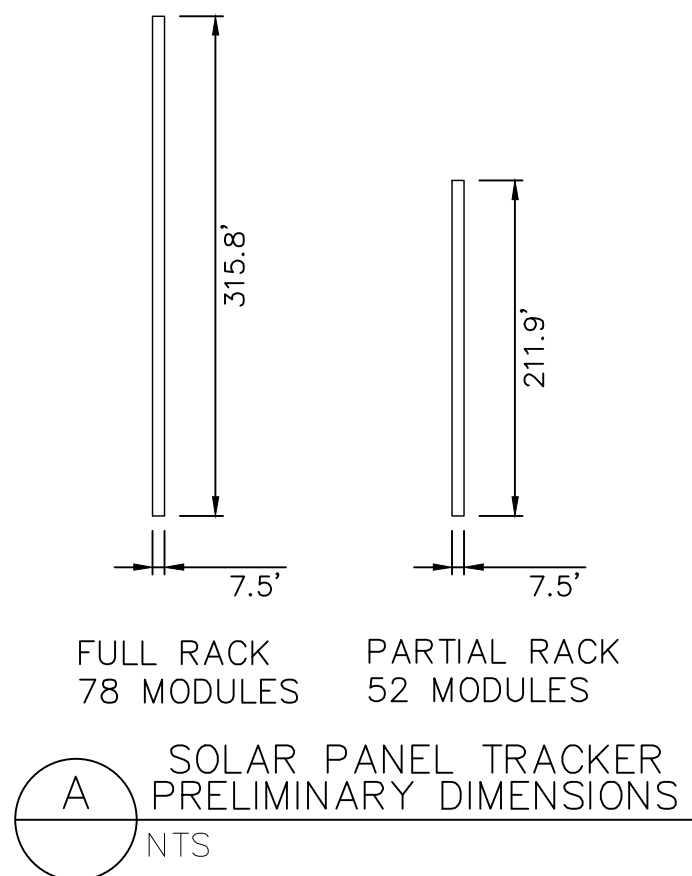
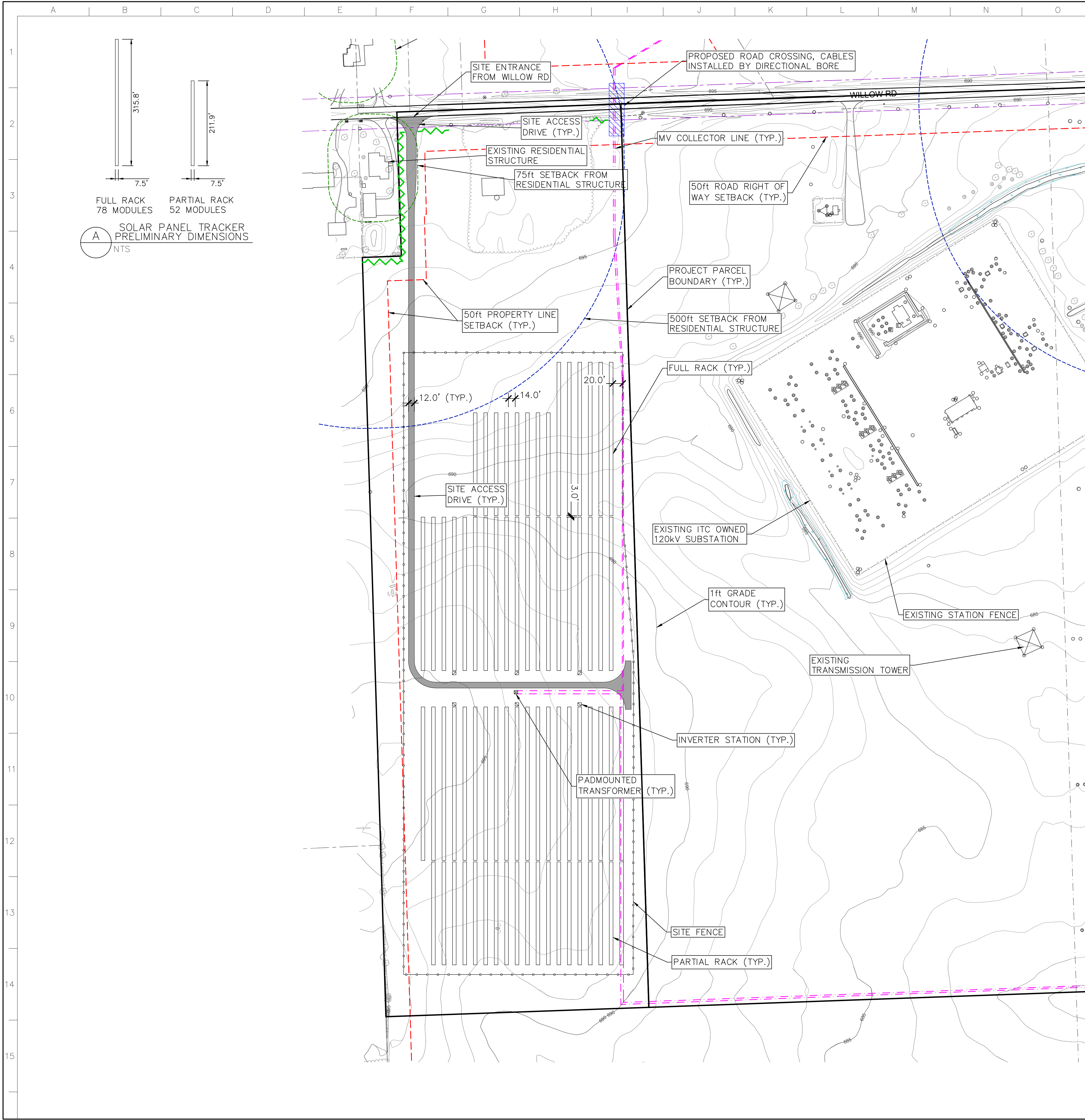
Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No.	Scale	
193707626	1" = 100'	
Drawing No.	Sheet	Revision

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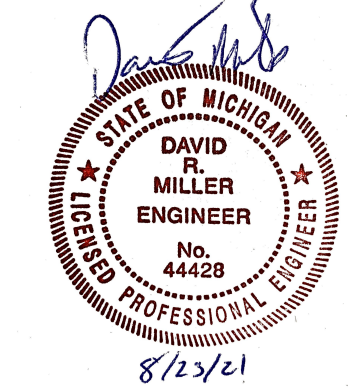
- Notes**
- SOLAR FACILITY DESIGN SHOWN IS PROVIDED BY MCCARTHY CONSTRUCTION. SITE ARRAY AND ELECTRICAL DESIGN IS IN PROGRESS AND MAY CHANGE FOR FINAL SITE PLAN.
 - PROPERTY BOUNDARIES PROVIDED BY ATWELL. REFER TO ALTA SURVEY DRAWINGS FOR MORE DETAILS.
 - LAND BASE SHOWN INCLUDING GRADING CONTOURS AND EXISTING TOPOGRAPHICAL FEATURES PROVIDED BY AIRLANDS SURVEY FLOWN VIA AERIAL SURVEY.
 - THERE ARE NO KNOWN EXISTING OR PROPOSED WELLS OR SEWAGE SYSTEMS.

Legend

- PROJECT PARCEL BOUNDARY
- PUBLIC ROAD RIGHT OF WAY
- SITE PERIMETER FENCE
- COLLECTOR LINE
- DIRECTIONAL BORED COLLECTOR CROSSING, DRAIN OR ROADWAY
- EXISTING DRAIN
- DRAIN RIGHT OF WAY
- SECTION LINE
- FIELD DELINEATED WETLAND
- INVERTER STATION
- PADMOUNTED TRANSFORMER
- MV COLLECTOR JUNCTION BOX
- VEGETATION SCREENING
- 12ft WIDE SITE ACCESS DRIVE
- PROPERTY LINE / ROW SETBACK
- EXISTING TREES
- EXISTING TREE LINE / VEGETATION
- EXISTING POWER POLE
- 1ft GRADING CONTOUR LINE
- RESIDENTIAL STRUCTURE SETBACK
- 75ft
- 500ft

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18
Revision		By	Appd.	YY.MM.DD

File Name:	193707233_Railsplitter_IL_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
	Dwn.	Chkd.	Dsgn.		YY.MM.DD



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Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
DETAILED LAYOUTS

Project No.	Scale
193707626	1" = 100'
Drawing No.	Sheet
	Revision

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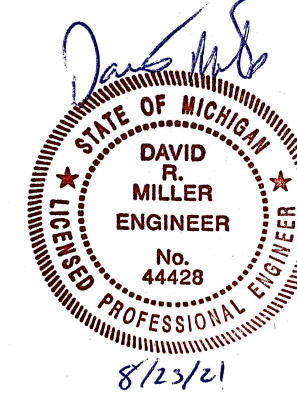
Notes

1. DETAILS PROVIDED ARE REPRESENTATIVE OF THE PROPOSED PROJECT. FINAL INSTALLATION DETAILS TO BE PROVIDED DURING ENGINEERING PHASE.

Legend

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
F	UPDATED SITE LAYOUT	AR	TG	21.08.06
E	DTE COMMENTS	AR	TG	21.05.18
Revision		By	Appd.	YY.MM.DD

File Name: 193707233_Railsplitter_IL_Prelim_Siteplan.dwg	MS	AR	MS	21.04.23
	Dwn.	Chkd.	Dsgn.	YY.MM.DD



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RAILSPLITTER SOLAR, LLC

RAILSPLITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN

Washtenaw County, MI

Title

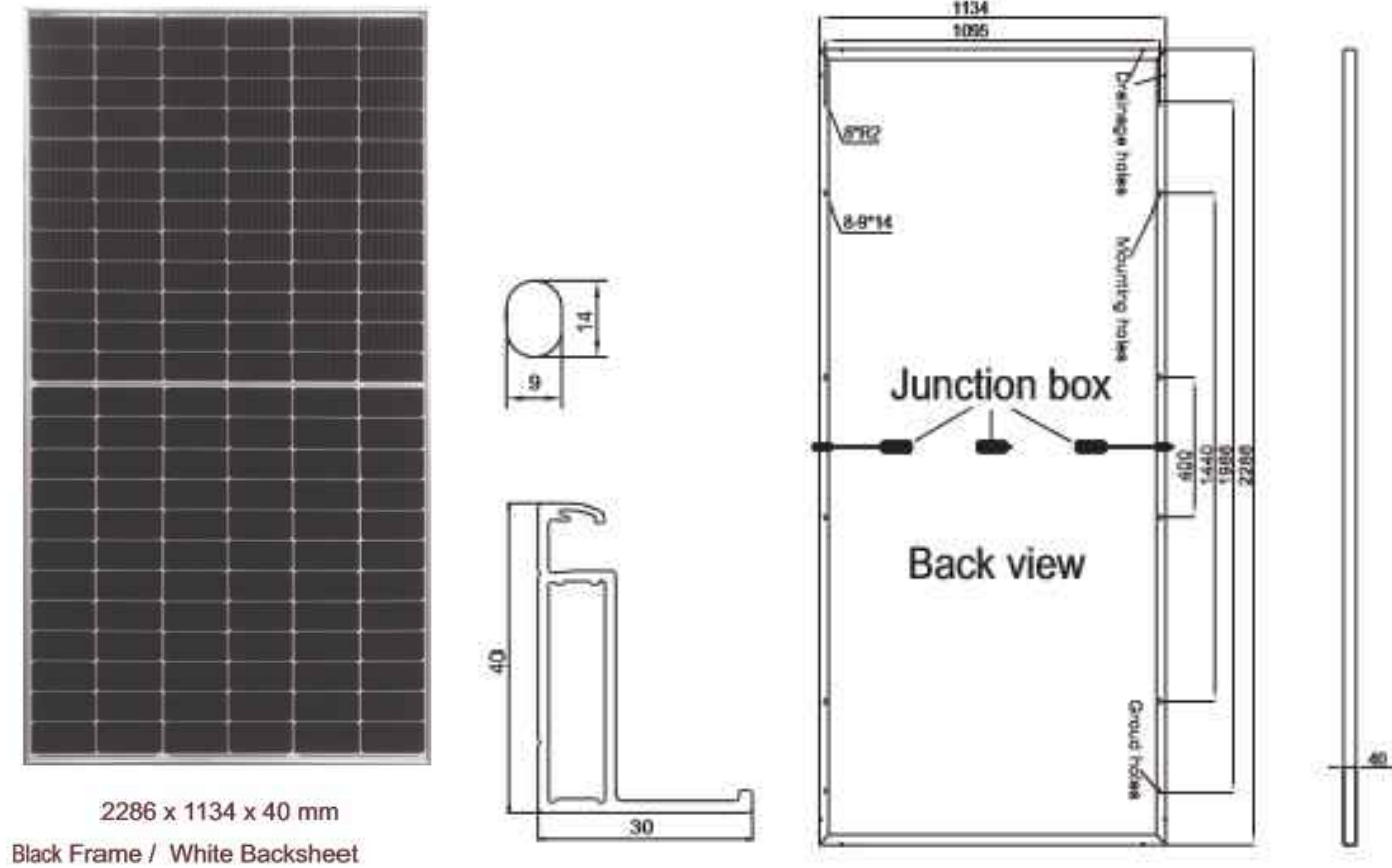
PRELIMINARY SITE PLAN
CONCEPTUAL DETAILS

Project No.	Scale
193707626	AS SHOWN
Drawing No.	Sheet
	Revision

D-300

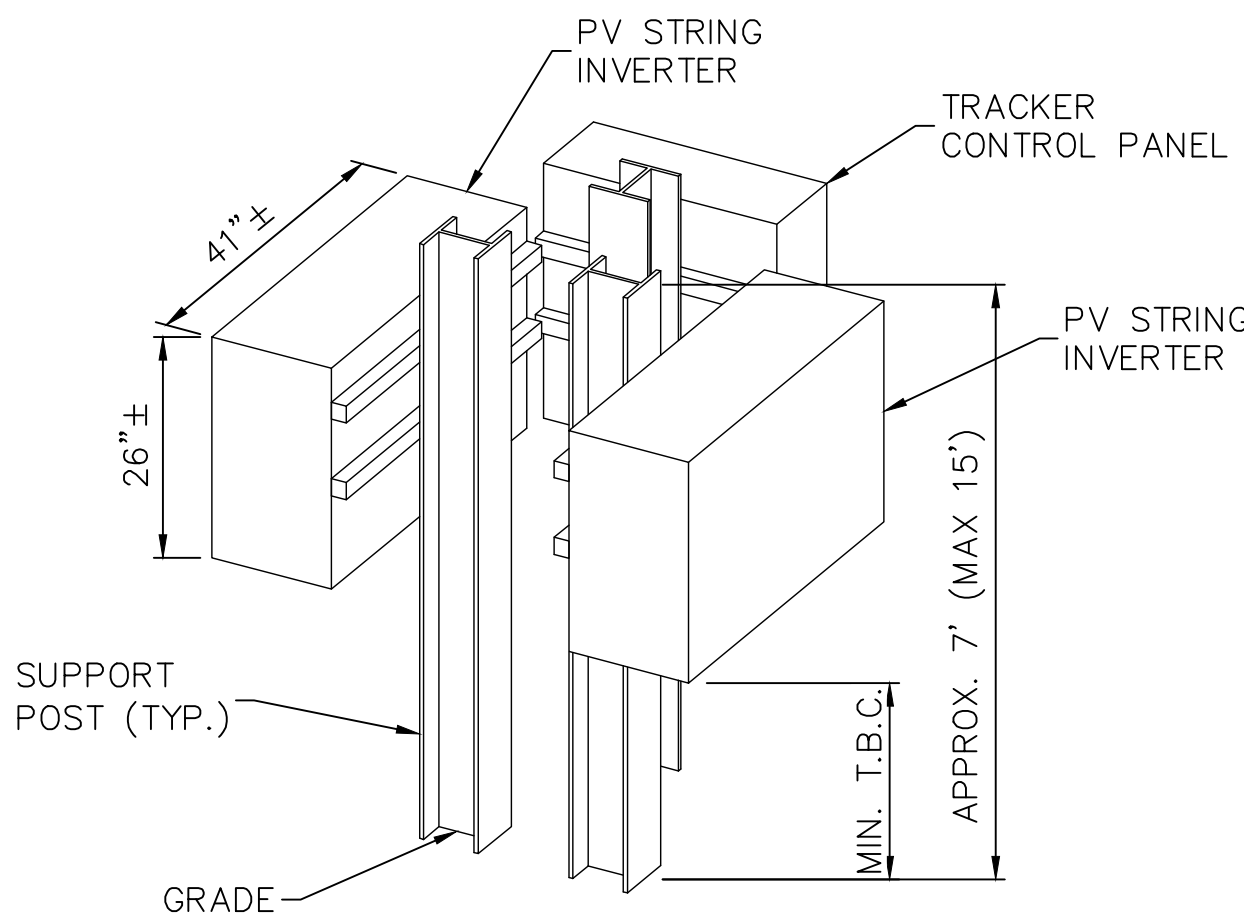
1 of 2

I

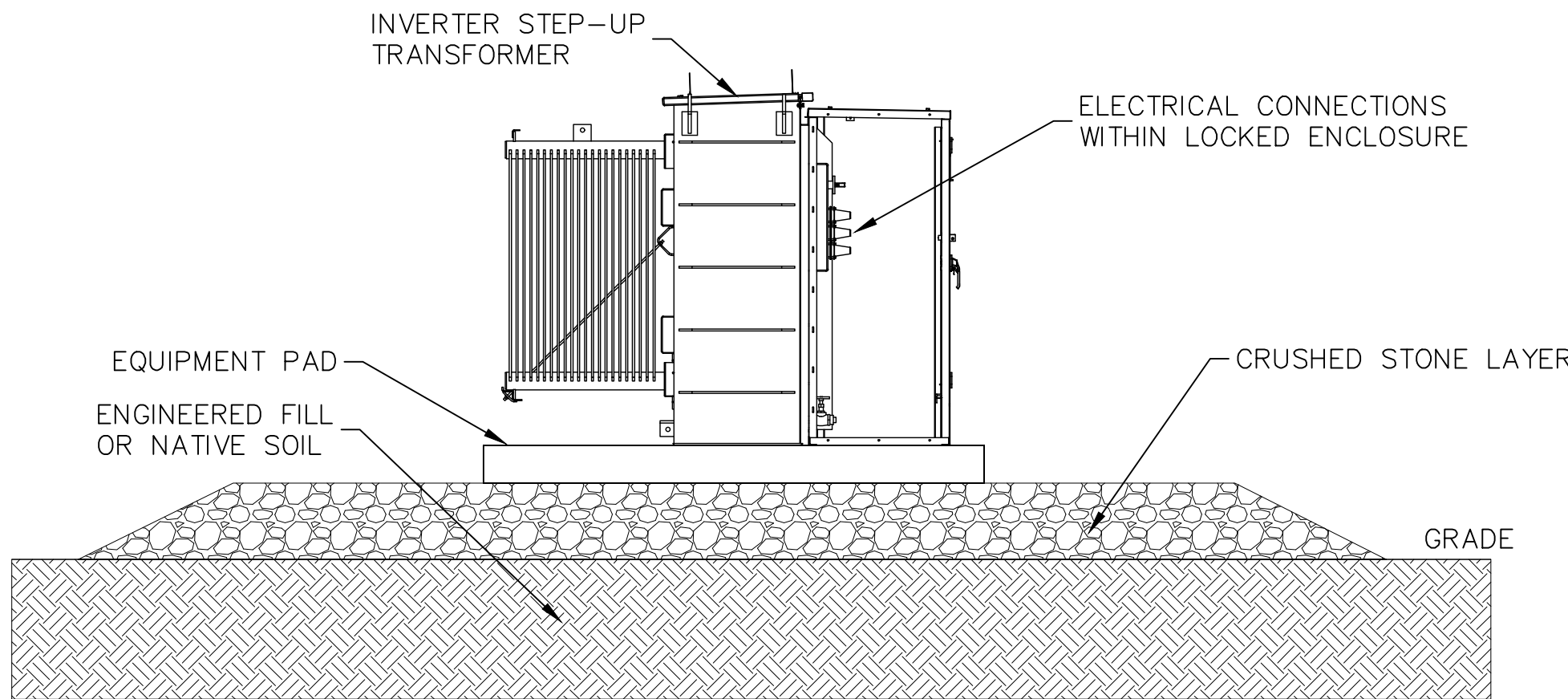


PV MODULE REPRESENTED ABOVE USED FOR PRELIMINARY SITE PLAN DESIGN. BOVIET SOLAR 540W, 144 CELL, BIFACIAL MONOCRYSTALLINE

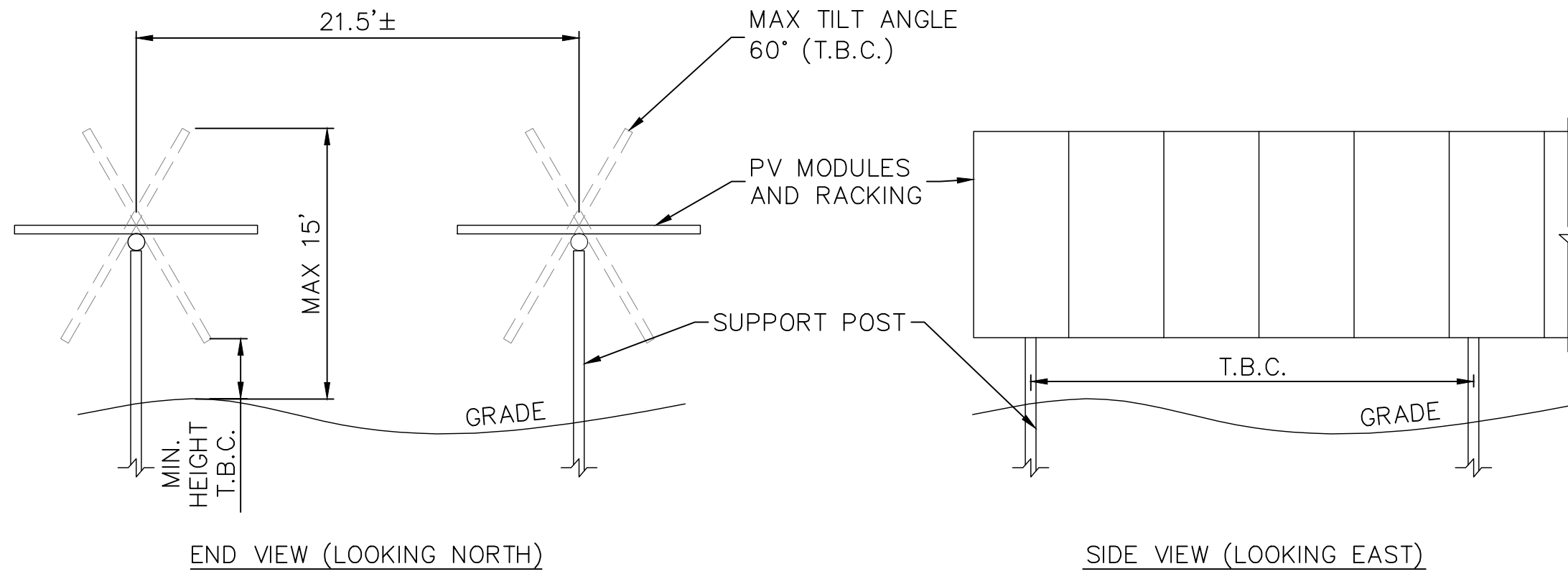
A PV MODULE DETAIL
NOT TO SCALE



B CONCEPTUAL STRING INVERTER STATION DETAIL
NOT TO SCALE



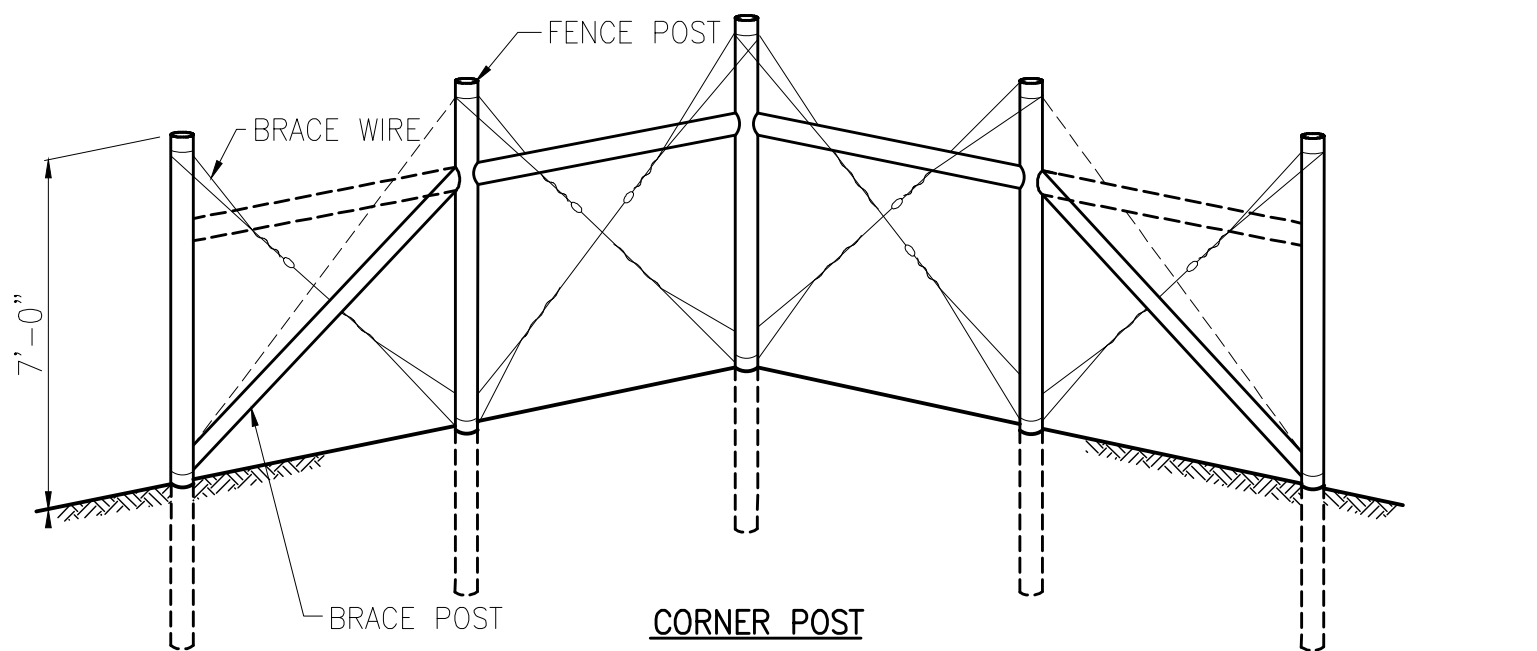
D CONCEPTUAL PADMOUNTED TRANSFORMER DETAIL
NOT TO SCALE



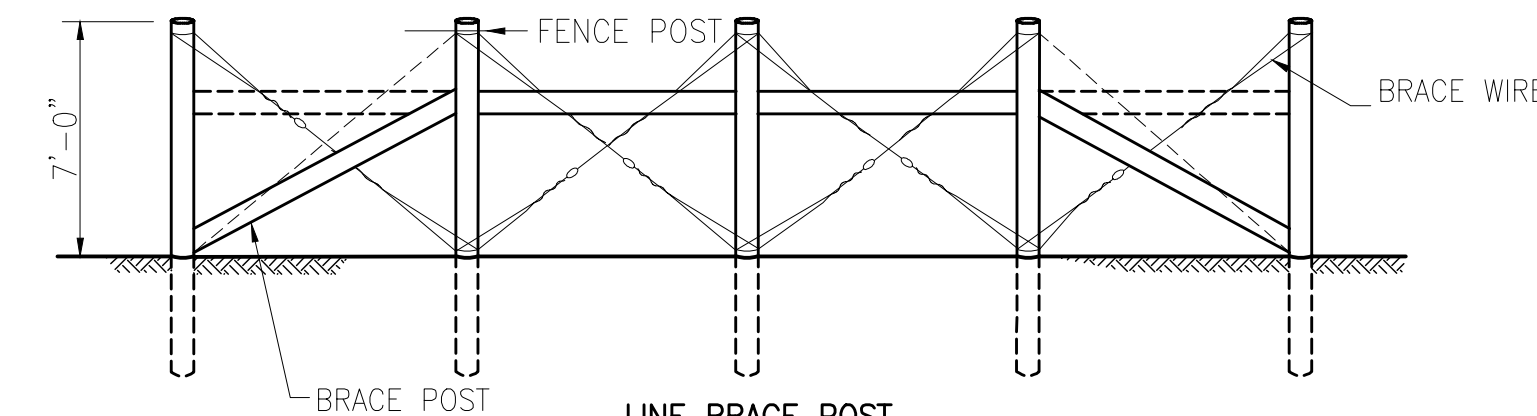
GENERAL ARRAY NOTES:

1. TRACKER SYSTEM DESIGNED TO FOLLOW EXISTING GRADES. MINIMAL AND LOCALIZED GRADING REQUIRED TO ACCOMMODATE MAXIMUM GROUND SLOPES ALLOWED BY RACKING MANUFACTURER
2. PV MODULE RACKING CONFIGURATION AND SUPPORT POST DESIGN (SIZE, EMBEDMENT DEPTH, SPACING, ETC.) TO BE DETERMINED DURING THE ENGINEERING PHASE.
3. SOLAR MODULES SHALL NOT BE INSTALLED WITHIN REQUIRED PERIMETER SETBACK AREAS.

C CONCEPTUAL SOLAR TRACKER DETAIL
NOT TO SCALE



CORNER POST



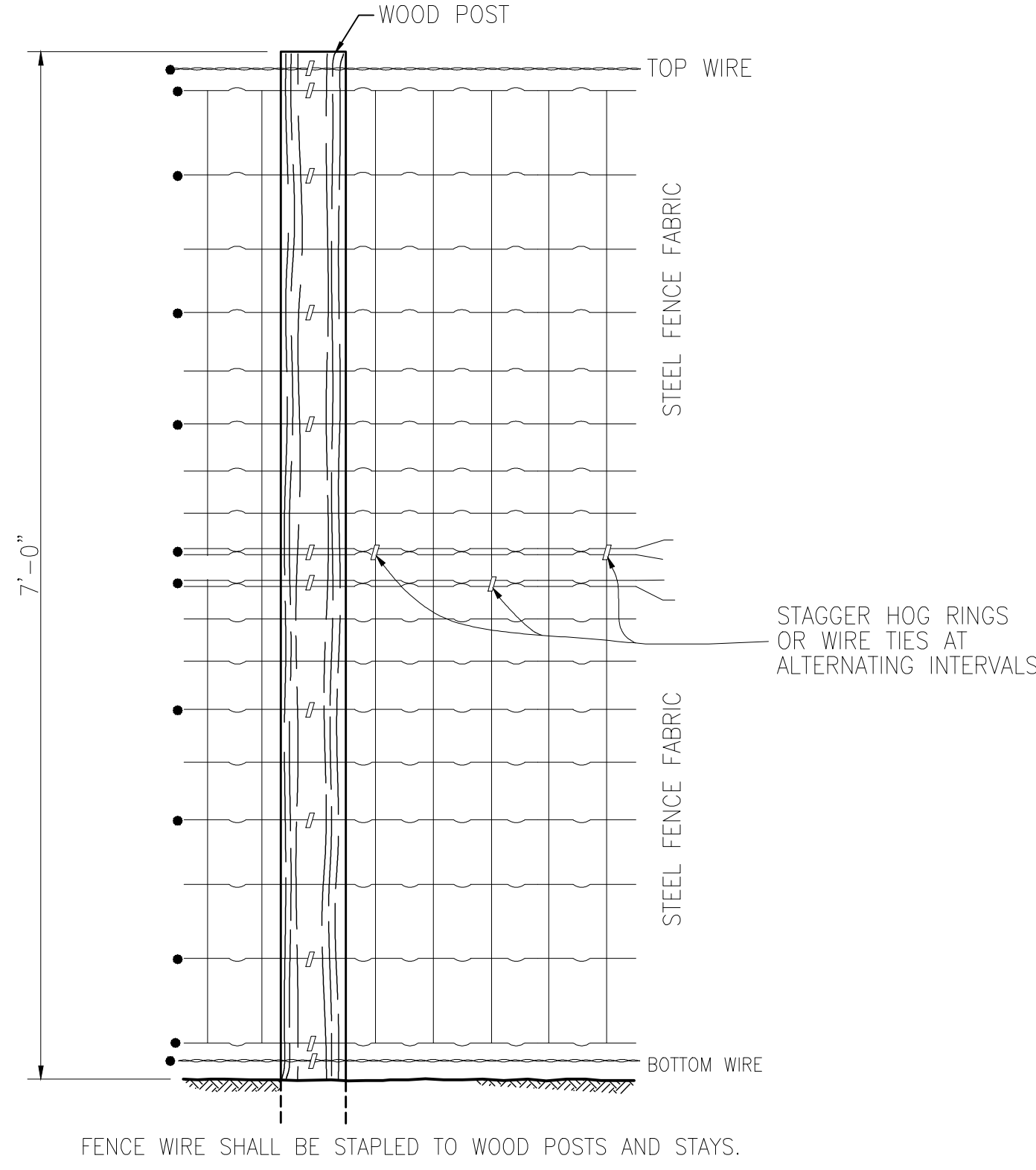
LINE BRACE POST

FENCE LINE BRACE POST DETAILS
NOT TO SCALE

AGRICULTURAL WIRE MESH FENCE NOTES

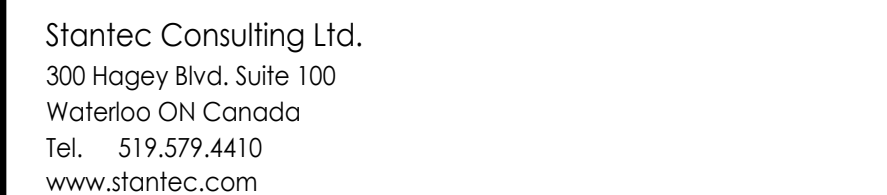
1. FENCE DRAWINGS ARE DIAGRAMMATIC AND NOT TO SCALE.
2. LINE BRACE POSTS SHALL BE SPACED AT STANDARD INTERVALS TO BE DETERMINED, WHERE FENCING IS CONTINUOUS AND WHERE END, CORNER & LINE BRACE POSTS ARE NOT SPECIFIED.
3. LINE POSTS AND BRACE POSTS DIAMETER TO BE DETERMINED. ALL POSTS AND BRACES SHALL BE TREATED.
4. WOODEN STAYS SHALL BE UNTREATED NATIVE TIMBER. BOTTOM ENDS OF STAYS SHALL REST ON THE NATURAL GROUND AND SHALL BE WIRED AND STAPLED AS INDICATED.
5. WIRE SHALL BE DOUBLE WRAPPED AND TIED OFF AT END POSTS, CORNER POSTS, AND LINE BRACE POSTS. WOVEN WIRE SHALL BE SINGLE WRAPPED AND TIED OFF.
6. FENCE MAY BE PLACED ON EITHER THE ROAD SIDE OR FIELD SIDE OF POSTS, DEPENDING ON LOCAL CONDITIONS; I.E., ON CURVES, THE WIRE SHOULD BE PLACED ON THE SIDE WHICH WOULD RESULT IN THE LEAST AMOUNT OF TENSION ON THE STAPLES. THIS WILL ALSO APPLY WHERE WIND DRIFT OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE.
7. GAP CLOSURE: EXCEPT FOR GATES, CONSTRUCT FENCE WITHOUT OPENINGS OR GAPS, ESPECIALLY AT STRUCTURES, CLIFFS, AND IRREGULAR GROUND.

E SITE PERIMETER FENCE DETAIL
NOT TO SCALE



FENCE WIRE MESH DETAIL
NOT TO SCALE

FENCE WIRE SHALL BE STAPLED TO WOOD POSTS AND STAYS.



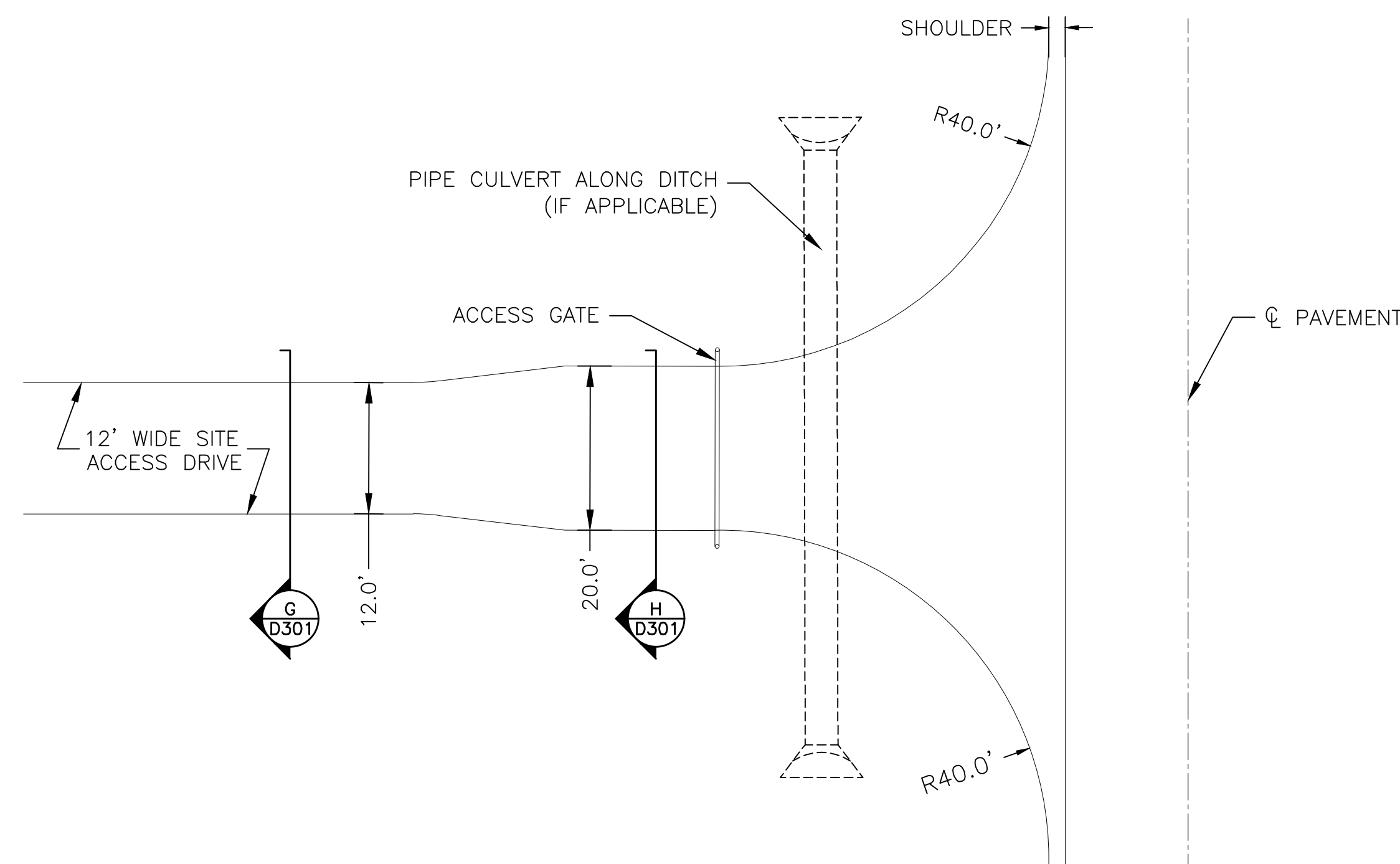
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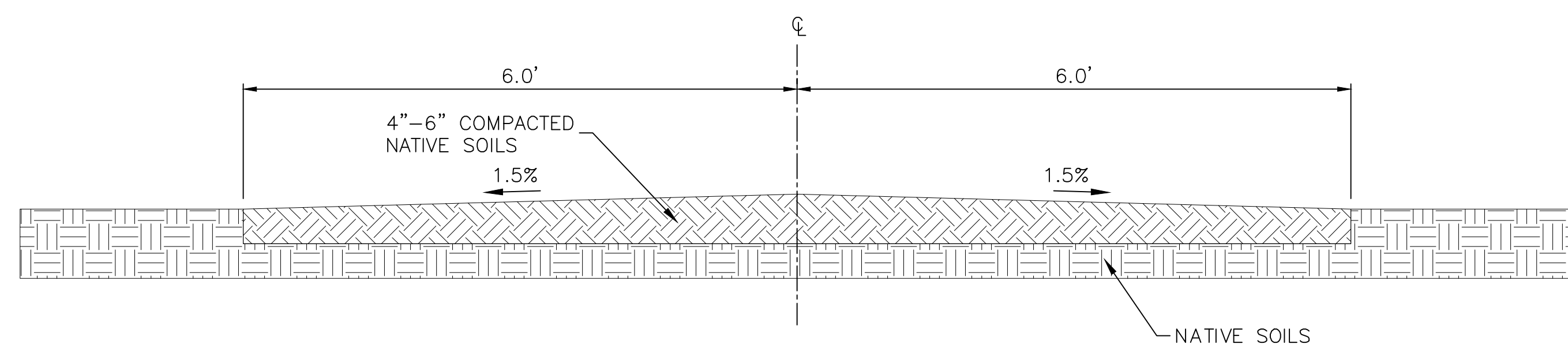
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1. DETAILS PROVIDED ARE REPRESENTATIVE OF THE PROPOSED PROJECT. FINAL INSTALLATION DETAILS TO BE PROVIDED DURING ENGINEERING PHASE.

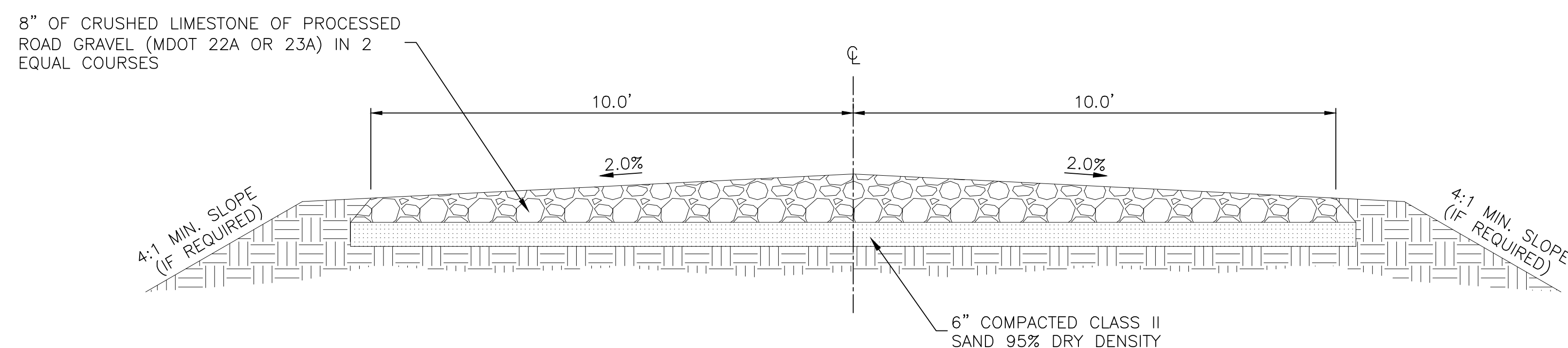
Legend



CONCEPTUAL SITE ACCESS ENTRANCE PLAN
NOT TO SCALE






 CONCEPTUAL SITE ACCESS ENTRANCE SECTION
 NOT TO SCALE

I	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.23
H	REVISED PSP FOR TWP SUBMITTAL	AR	TG	21.08.20
G	MINOR SITE UPDATES	AR	TG	21.08.06
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Revision		By	Appd.	YY.MM.DD

File Name: 193707233_Railsplitter_II_Prelim_Siteplan	MS	AR	MS	21.04.23
	Dwn.	Chkd.	Dson.	YY.MM.DD



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Client/Project
RAILSPLITTER SOLAR, LLC

RAILSPITTER SOLAR II PROJECT
PRELIMINARY SITE PLAN
Washtenaw County, MI

Title
PRELIMINARY SITE PLAN
CONCEPTUAL DETAILS

Project No. 193707626	Scale AS SHOWN
Drawing No.	Sheet Revision

D-301 2 of 2 |

**Railsplitter Solar II Project – Operational
Pre-Construction Sound Report**



Prepared for:
Railsplitter Solar, LLC

Prepared by:
Stantec Consulting Services Inc.
1165 Scheuring Road
De Pere, Wisconsin 54115

Project Number: 193708120

May 3, 2021
Revised August 21, 2021

RAILSPLITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

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RAILSPLITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

Abbreviations

AC	alternating current
dB	decibel
dB(Z) or dBZ	decibel (unweighted)
dB(A) or dBA	decibel (A-weighted)
dB(C) or dBc	decibel (C-weighted)
DC	direct current
Hz	hertz
L_{eq}	equivalent continuous sound level
MW	megawatt
Project	Railsplitter Solar II Project
PV	photovoltaic

RAILSPITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

1.0 Project Description

The Railsplitter Solar II Project (Railsplitter II, Railsplitter – Phase II, or the Project) is a proposed 44.42-megawatt (MW) utility-scale solar powered electric generating facility located in Washtenaw County, Michigan (Project). The Project will include photovoltaic (PV) solar panels mounted on a racking system to maximize solar energy capture and electric generation of the array. The Project will be sited on approximately 355 acres of agricultural land. The area is located approximately 1.75 miles northeast of the City of Milan.

In addition to photovoltaic modules, the Project will also include single access trackers, inverters, transformers, an electrical collection system, access drives, and perimeter security fencing. Railsplitter II retained the services of Stantec Consulting Services Inc. (Stantec) to conduct a pre-construction sound study assessing the potential sound due to operation of the Project.

The solar arrays will be constructed on predominantly agricultural parcels roughly bounded by Gooding Road to the east, Sanford Road to the west, Talladay Road to the north, and Arkona to the south. Much of the area for the Project is agricultural land with rural residential development.

The two main sources of sound emissions from the operational Project are the inverter strings and the associated transformers. The solar panels produce direct current (DC) voltage which must be converted to alternating current (AC) voltage through a series of inverters. Solar energy facilities operate by converting solar radiation into electricity, meaning the Project will only produce electricity between sunrise and sunset. After sunset, the site no longer receives solar radiation, and the inverters will shift into stand-by mode.

Approximately 212 inverters and 20 transformers will be installed in the Project area for the proposed 44.42-MW Project. The analysis performed for this report assumed the maximum sound level from each inverter is 85.7 decibels (A-weighted) (dBA) at the source and 74.4 dBA for the transformers. Manufacturer's specifications for an example inverter are provided in Appendix A.

2.0 Sound Level Description

Sound is caused by vibrations that generate waves of minute pressure fluctuations in the surrounding air. Sound levels are typically measured using a logarithmic decibel (dB) scale. Human hearing varies in sensitivity for different sound frequencies. The ear is most sensitive to sound frequencies between 800 and 8,000 hertz (Hz) and is least sensitive to sound frequencies below 400 Hz or above 12,500 Hz. Consequently, several different frequency weighting schemes have been used to approximate the way the human ear responds to sound levels. The decibel (A-weighted) or dBA scale is the most widely used for regulatory requirements, such as the Occupational Safety and Health Administration, because it discriminates against low frequencies, like the response of the human ear. The decibel (C-weighted) sound level (dBC) does not discriminate against low frequencies. Unweighted sound levels are generally reported as dB or dBZ.

RAILSPITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

For context, a soft whisper has a sound level of approximately 30 dBA, while a normal conversation is approximately 60 dBA. Common household appliances range in sound pressure levels from 40 dBA (refrigerator hum) to 60 dBA (air conditioner)¹.

3.0 Sound Regulations

Augusta Township Zoning Ordinance Article 6.25(H) *Large Solar Energy Systems - Setbacks* requires a minimum distance of 50 feet from all exterior property lines of a Large Solar Energy System and a 75-foot setback from any residential structure for all buildings and the Solar Arrays. Furthermore, Zoning Ordinance Article 6.25(L) *Large Solar Energy Systems - Noise* states that no component of any Large Solar Energy System shall emit noise exceeding 65 Decibel A-weighted(dBA) as measured at the exterior property boundary or existing Right-of-Way (ROW) line.

4.0 Predicted Sound Analysis Methods

Approximately 208 inverters will be installed within the Project area. The maximum sound pressure level from each inverter is assumed to be less than 85.7 dBA at the source (reference the manufacturer's specifications for the example inverter in Appendix A). A tonal penalty of 5 dBA was added to each octave band resulting in an overall sound pressure level of 90.7 dBA for each inverter, to be conservative. This analysis assumes 19 transformers will be installed with a sound power level of 74.4 dBA. A 5-dBA tonal penalty was also added to the transformer sound in the modeling analysis. The inverters will convert electricity only when the sun is shining; therefore, the inverters and transformers will operate in stand-by mode between sunset and sunrise.

Sound attenuates between the source and receptors due to a variety of factors, including but not limited to, atmospheric absorption, interaction with the ground, and attenuation due to vegetation and ground cover. Sound impact is also dependent on the distance between the sound source and a receptor. Locations of the inverters and transformers are based on the current layout of the Project provided by Railsplitter II. Elevations for inverters and transformers were calculated within the model, using the National Elevation Dataset acquired from the U.S. Geological Survey.

Sound results were calculated using the Decibel Module of WindPro Modelling software by EMD International, which utilizes conservative ISO 9613-2 algorithms to estimate sound propagation and atmospheric absorption. The parameters and assumptions made in developing the estimates include the following:

- All inverters and transformers were considered as running at all times.
- An inverter sound power level of 85.7 dBA was used.
- A transformer sound power level of 74.4 dBA was used.
- A ground attenuation factor of 0.5 (on a scale of 0.0 representing hard ground to 1.0 representing porous ground) was modelled.
- Meteorological conditions used were conducive to sound propagation (10 degrees Celsius and 70 percent relative humidity).

¹ Centers for Disease Control and Prevention. 2019. What Noises Cause Hearing Loss?
https://www.cdc.gov/nceh/hearing_loss/what_noises_cause_hearing_loss.html

August 21, 2021

5.0 Assessment of Sound Impacts during Operation

A sound analysis was completed for the invertors and transformers at full load. Coordinates (UTM Zone 17) of the inverter and transformer locations are included in Appendix B. Sound contours are displayed in Figure 1; the figure displays the overall expected sound levels from within the solar array, with a ground attenuation of 0.5. Results demonstrate that noise impacts outside the Project boundary will not exceed 65 dBA. Nighttime noise will be substantially less, as all equipment will be operating in stand-by mode only.

6.0 Summary

Sound analyses were completed for the Project, considering 208 inverters and 19 transformers throughout the Project Area. The sound signature of the inverter is based on information provided by the equipment manufacturer for the example inverter (Appendix A). Noise impacts at the exterior property boundary or existing ROW line will not exceed 65 dBA. The facility will operate converting power during daytime hours only. Sound from the inverters and transformers will be minimal during the nighttime hours, due to equipment operating in stand-by mode.

RAILSPITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

Figure

Sound Analysis Isolines

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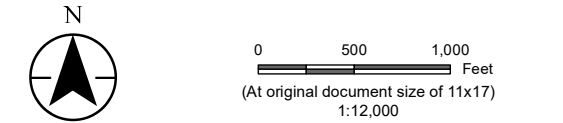
Figure No.
1
Title
Sound Analysis Isolines

Client/Project
Railsplitter Solar, LLC
Railsplitter Solar II

193707233

Project Location
Washtenaw County, MI

Prepared by JM on 2021-07-01
TR by AS on 2021-07-01
IR by XX on 2021-XX-XX



- Legend
- Railsplitter II Project Parcel
 - Inverter
 - Transformer
- NOISE
- 30
 - 35
 - 40
 - 45
 - 50
 - 55
 - 60



Notes

- Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
- Data Sources: Stantec, Ranger Power LLC, USGS, NADS
- Orthophotography: 2018 NAIP



RAILSPLITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

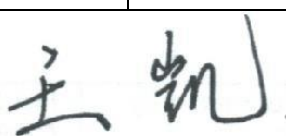
August 21, 2021

Appendix A

Acoustic Sound Specifications – Inverters

Noise Test Report

TYPE TEST SHEET

This Type Test sheet shall be used to record the results of the type testing of Generating Unit			
Type Tested reference number		SG250HX	
Generating Unit technology		Grid-connected PV Inverter	
System supplier name		Sungrow Power Supply Co., Ltd.	
Address		No.1699 Xiyou Rd., New & High Technology Industrial Development Zone, Hefei, P.R. China	
Tel	+86 551 65327834	Fax	+86 551 6532 7800
E:mail	info@sungrow.cn	Web site	www.sungrowpower.com
Maximum export capacity, use separate sheet if more than one connection option.	N/A	kW single phase, single, split or three phase system	
	225	kW three phase	
	N/A	kW two phases in three phase system	
	N/A	kW two phases split phase system	
Compiled by		On behalf of	Sungrow Power Supply Co., Ltd.
		Test Date	2020-06-08
<p>Note that testing can be done by the manufacturer of an individual component, by an external test house, or by the supplier of the complete system, or any combination of them as appropriate.</p> <p>Where parts of the testing are carried out by persons or organisations other than the supplier then the supplier shall keep copies of all test records and results supplied to them to verify that the testing has been carried out by people with sufficient technical competency to carry out the tests.</p>			

The aim of this test is to determine the noise level when the PV Grid inverter in rated working condition

Used settings of the measurement device for Noise measurement

Measurement device	Date of measurement
AWA6228	2020-03-05

The condition s during testing are specified below:

PGU operation mode	Rated Working Condition
Voltage range	860-1300V
Grid frequency range	50Hz/ 45-55Hz
Distance	1m
Date	2020-06-08

The system noise level please check the table below.

Orientation	Noise (dB)
Front	74.4
Behind	73.9
Sidepiece	72.6
Average Noise	73.6

Front Test :



Test Record

Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	72.8	1k	70.8
31.5	71.5	2k	65.8
63	68.3	4k	60.6
125	67.6	8k	53.9
250	73.5	16k	57.4
500	72.1	W_A	74.4

Behind:



Test Record

Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	67.4	1k	68.6
31.5	72.3	2k	64.7
63	69.0	4k	58.6
125	68.7	8k	50.2
250	75.1	16k	41.4
500	72.5	W_A	73.9

Sidepiece:



Test Record

Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	65.3	1k	67.9
31.5	71.7	2k	64.4
63	67.7	4k	57.8
125	66.3	8k	50.0
250	73.6	16k	39.1
500	69.7	W_A	72.6

Sungrow Power Supply Co., Ltd.
Add: No. 1699 Xiyou Road, Hefei, China
Tel: +86 551 6532 7834
Email: info@sungrow.cn
Website: www.sungrowpower.com



Additional comments
Type test only for reference.

RAILSPITTER SOLAR II PROJECT – OPERATIONAL PRE-CONSTRUCTION SOUND REPORT

August 21, 2021

Appendix B

Project Inverter Locations (UTM 15 Coordinates)

Appendix B
Railsplitter Solar II Project - Inverter and Transformer Locations

Inverter ID	X (UTM 17)	Y (UTM 17)
1	4,665,513	281,792
2	4,665,448	281,764
3	4,665,024	281,561
4	4,665,026	281,496
5	4,665,029	281,430
6	4,665,300	281,790
7	4,665,333	281,765
8	4,665,334	281,733
9	4,665,336	281,700
10	4,665,337	281,661
11	4,665,338	281,635
12	4,665,339	281,608
13	4,665,341	281,562
14	4,665,342	281,536
15	4,665,343	281,510
16	4,665,344	281,477
17	4,665,345	281,451
18	4,665,352	281,734
19	4,665,353	281,707
20	4,665,355	281,668
21	4,665,356	281,635
22	4,665,358	281,603
23	4,665,359	281,570
24	4,665,360	281,544
25	4,665,361	281,511
26	4,665,363	281,465
27	4,665,381	281,372
28	4,665,382	281,346
29	4,665,383	281,300
30	4,665,385	281,274
31	4,665,386	281,248
32	4,665,387	281,203
33	4,665,389	281,163
34	4,665,398	281,386
35	4,665,399	281,360
36	4,665,400	281,334
37	4,665,401	281,301
38	4,665,403	281,275
39	4,665,404	281,248
40	4,665,406	281,190

Inverter ID	X (UTM 17)	Y (UTM 17)
41	4,665,409	281,117
42	4,665,412	281,026
43	4,665,416	280,934
44	4,665,884	281,809
45	4,665,885	281,763
46	4,665,889	281,678
47	4,665,891	281,619
48	4,665,895	281,508
49	4,665,898	281,455
50	4,665,901	281,357
51	4,665,901	281,816
52	4,665,903	281,764
53	4,665,906	281,711
54	4,665,907	281,672
55	4,665,908	281,639
56	4,665,910	281,594
57	4,665,912	281,535
58	4,665,914	281,502
59	4,665,915	281,469
60	4,665,916	281,436
61	4,665,919	281,358
62	4,665,922	281,299
63	4,665,830	281,207
64	4,665,831	281,181
65	4,665,832	281,148
66	4,666,262	281,831
67	4,666,263	281,798
68	4,666,265	281,745
69	4,666,266	281,712
70	4,666,268	281,680
71	4,666,270	281,627
72	4,666,271	281,595
73	4,666,273	281,555
74	4,666,275	281,503
75	4,666,277	281,463
76	4,666,278	281,424
77	4,666,280	281,372
78	4,666,282	281,333
79	4,666,283	281,300
80	4,666,286	281,228

Appendix B
Railsplitter Solar II Project - Inverter and Transformer Locations

Inverter ID	X (UTM 17)	Y (UTM 17)
81	4,666,288	281,182
82	4,666,281	281,812
83	4,666,283	281,759
84	4,666,284	281,726
85	4,666,286	281,687
86	4,666,288	281,628
87	4,666,290	281,589
88	4,666,291	281,556
89	4,666,293	281,498
90	4,666,295	281,464
91	4,666,296	281,425
92	4,666,298	281,373
93	4,666,300	281,333
94	4,666,301	281,301
95	4,666,303	281,248
96	4,666,304	281,222
97	4,666,305	281,189
98	4,666,307	281,150
99	4,665,374	280,340
100	4,665,373	280,379
101	4,665,371	280,418
102	4,665,353	280,418
103	4,665,355	280,378
104	4,665,356	280,339
105	4,665,513	281,792
106	4,665,448	281,764
107	4,665,024	281,561
108	4,665,026	281,496
109	4,665,029	281,430
110	4,665,300	281,790
111	4,665,333	281,765
112	4,665,334	281,733
113	4,665,336	281,700
114	4,665,337	281,661
115	4,665,338	281,635
116	4,665,339	281,608
117	4,665,341	281,562
118	4,665,342	281,536
119	4,665,343	281,510
120	4,665,344	281,477

Inverter ID	X (UTM 17)	Y (UTM 17)
121	4,665,345	281,451
122	4,665,352	281,734
123	4,665,353	281,707
124	4,665,355	281,668
125	4,665,356	281,635
126	4,665,358	281,603
127	4,665,359	281,570
128	4,665,360	281,544
129	4,665,361	281,511
130	4,665,363	281,465
131	4,665,381	281,372
132	4,665,382	281,346
133	4,665,383	281,300
134	4,665,385	281,274
135	4,665,386	281,248
136	4,665,387	281,203
137	4,665,389	281,163
138	4,665,398	281,386
139	4,665,399	281,360
140	4,665,400	281,334
141	4,665,401	281,301
142	4,665,403	281,275
143	4,665,404	281,248
144	4,665,406	281,190
145	4,665,409	281,117
146	4,665,412	281,026
147	4,665,416	280,934
148	4,665,884	281,809
149	4,665,885	281,763
150	4,665,889	281,678
151	4,665,891	281,619
152	4,665,895	281,508
153	4,665,898	281,455
154	4,665,901	281,357
155	4,665,901	281,816
156	4,665,903	281,764
157	4,665,906	281,711
158	4,665,907	281,672
159	4,665,908	281,639
160	4,665,910	281,594

Railsplitter Solar II Project - Inverter and Transformer Locations

[illegible]

Special Land Use Findings

May 18, 2021

Revised August 23, 2021

A. Will be harmonious and in accordance with the general objectives or any specific objectives of the Augusta Charter Township Master Plan.

The Railsplitter Solar II Project (“Railsplitter Solar II” “Railsplitter II”, or the “Project”) is harmonious and compatible with both the general and the specific objectives of the Augusta Township Master Plan (“Master Plan”). As outlined below, Railsplitter Solar II not only complies with the existing land use policies and development objectives in the Master Plan, but also furthers the Master Plan’s stated goals and plans for future development.

Master Plan Goals and Objectives: The Master Plan contains several goals and objectives with the intent to “provide the basis for wise and consistent public decisions for future development proposals in Augusta Charter Township.”¹

*Goal: Preserve the rural character of Augusta Charter Township through the management of growth and preservation of natural resources and active farming.*²

Railsplitter Solar II is consistent with and furthers this stated goal in several ways. First, Railsplitter Solar II has worked with individual farmer/landowners to voluntarily execute real estate agreements for the Project. These voluntary agreements provide the farmer/landowners with stable payments, which helps diversify farming income and will support continued agricultural operations and multi-generational family farm ownership. The Project also prevents subdivision of land, which further preserves the large tracts of land for future farming use. The Project offers an opportunity to keep large parcels of land together for future agriculture uses and avoid breaking up or dividing land as a means of revenue generation.

Second, Large Solar Energy Systems are permitted in Agricultural Residential and Limited Industrial zones under the Ordinance. The compatibility of Large Solar Energy Systems was recognized by the Township when the Zoning Ordinance was amended on January 28, 2020 to specifically allow Large Solar Energy Systems in the Agricultural Residential, General Industrial, and Limited Industrial zones. The Limited Industrial zones within the Project area are currently utilized as agriculture fields. As a result, the land does not need to be rezoned for the Project and importantly, after decommissioning (discussed below), the land will be available for future farming operations. Relatedly, the Project is low-impact and will have no impacts on adjacent agricultural operations, further protecting the rural character of the Township, natural resources, and active farming.

Third, upon decommissioning, the solar panels and related equipment will be removed, making the land available again for agricultural use. The Project has provided a comprehensive decommissioning plan to the Planning Commission with its application (see Appendix G Decommissioning Plan) and will ensure adequate funds for decommissioning by posting a

¹ Augusta Township Master Plan, p. 37.

² Master Plan at 37-39.

financial assurance as required under the Ordinance.³ Accordingly, once decommissioned, the land will again be available for agricultural purposes.

Fourth, as noted above, agricultural soils will be preserved. This will result in fertile soils post-decommissioning. Additionally, there will be limited soil disturbance associated with the Project. Existing soils will remain onsite and generally in place. During Project operation, groundcover will be maintained, including vegetation attracting pollinators. The vegetation will improve water retention and allow the soil nutrient base to regenerate. Accordingly, the Project design, construction, operation, and decommissioning methods support future agricultural activities in the Township.

Fifth, a Large Solar Energy System preserves the natural resources. As discussed more below, the Project has avoided and minimized potential impacts to the natural ground, wetlands, trees, sensitive natural environments, and drainage patterns. Project impacts to natural features are limited to the replacement of crops with ground vegetation and solar arrays, minimal tree clearing and a minor wetland impact for the purpose collection line boring beneath wetlands. It should be noted, the Augusta Township County Drain Map portrays Buck Creek present in the Project's northeast corner; however, aerial photography shows the creek had been rerouted north and this area farmed since at least 1993. At the time of this submittal, Railsplitter Solar II is in coordination with the Washtenaw Water Resources Commissioner to verify the drain easement has been officially abandoned. Pending abandonment verification, it is being depicted in the preliminary site plan. There will be no waterway impacts at this location. If any County or EGLE permits or approvals related to the former Buck Creek location are required, they will be obtained by the Project. Simply stated, the Large Solar Energy System will generate electrical power with minimal impact to the natural environment.

*Goal: Protect the environment and the Township's natural resources.*⁴

Railsplitter Solar II is consistent with and furthers the Master Plan's stated goal of environmental protection. As part of its development process, Railsplitter Solar II has conducted an extensive environmental review, including surveys for wetlands, watercourses, floodplains, threatened and endangered species, woodlands, and cultural resources to ensure that impacts to sensitive environmental resources are avoided. The Project has been developed to optimize the solar resource while avoiding impacts on natural resources and potentially sensitive areas. Specifically, see Appendix D (Preliminary Site Plan), Figure 1.3 (Wetlands and Waterways), and Figure 1.5 (FEMA Mapping), which demonstrate that the Project will predominately be located outside or setback from all wetlands, waterways, floodways and flood zones by a minimum setback distance of twenty-five (25) feet, as required under the Ordinance.⁵

Moreover, the Master Plan states that a specific objective is to protect the Township's surface and groundwater resources.⁶ At the time of this submittal, Railsplitter Solar II is conducting infiltration testing and is currently coordinating with the Washtenaw County Water Resource Commissioner to develop a Soil Erosion and Sedimentation (SESC) plan, a Stormwater Pollution Prevention Plan (SWPPP), and to obtain a drainage permit under the County's requirements. Additionally, as noted

³ See Appendix G to the Special Land Use and Preliminary Site Plan Application

⁴ Master Plan at 37.

⁵ Augusta Township Zoning Ordinance, Article 9.15.E.

⁶ Master Plan at 45.

above, the area beneath the solar panels will be vegetated, which will support onsite water retention and mitigate sheet flow.

The Master Plan also identifies the specific objective of protecting the Township's air quality and discouraging the siting of industries which have the potential of creating excessive air quality emissions.⁷ The Project has a meaningful and direct impact on air quality. As a solar electric generation facility, the Project's fuel source is the sun. The Project generates electricity with no emissions and produces power during the day when demand is high, which reduces the need to rely on other polluting generation sources. According to the Solar Energy International Association ("SEIA"), one (1) megawatt (MW) of energy powers approximately 150 homes in Michigan.⁸ Railsplitter Solar II proposes generating approximately 33.75 MW AC (alternate-current) of power in Augusta Township, enough electricity to power approximately 5,063 homes with clean energy.⁹

*Goal: Provide the highest quality public facilities and services possible at an affordable rate for the residents of Augusta Township.*¹⁰

Railsplitter Solar II is part of a larger 120 Megawatt (MW) solar project consisting of Railsplitter I (permitted under existing Special Land Use Permit 16-01) and the project area in York Township (approved by the York Township Planning Commission on June 14, 2021 (Resolution #2021-01PC)). Together the three project areas represent a total investment of roughly \$130 million in the county. A significant portion of that investment will be made in Augusta Township. See Appendix M (Economic Impact Study), prepared by Anderson Economic Group.¹¹ Under current Michigan tax law and millage rates, the Project's projected first year tax liability is approximately \$1.35 million.¹² These property taxes will directly benefit Washtenaw County and Augusta Township.

The Economic Impact Study also addresses the other economic benefits the Project will bring to Augusta Township and Washtenaw County. The Project is expected to generate approximately 150 construction jobs in Michigan, drawing principally from the Southeast Michigan workforce. Once the Project is constructed and in operation, the Project is expected to create two permanent solar operations jobs.¹³

Therefore, it will support high quality public facilities and services and reduce the need for residents of Augusta Township to support such facilities and services. Moreover, the Project will not require additional public services or municipal infrastructure like other types of developments. The Project will not require any additional municipal personnel and will not require any additional public safety or public works personnel. The Large Solar Energy System is a completely passive and self-contained use. Therefore, Augusta Township will receive the economic and tax benefits from the Project, without an increase demand on public services and additional infrastructure.

In addition to the various direct benefits outlined in the Economic Impact Study, there are significant benefits to the communities located near solar projects. These community-wide

⁷ Master Plan at 46-47.

⁸ SEIA, *What's in a Megawatt?* (<https://www.seia.org/initiatives/whats-megawatt>).

⁹ See Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System.

¹⁰ Master Plan at 38.

¹¹ See Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

¹² See Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

¹³ See Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

economic benefits have been observed first-hand at Railsplitter Solar II's affiliate project, the Assembly Solar Project, which is located in Shiawassee County, Michigan.

Goal: Provide adequate infrastructure to safely, effectively and efficiently service the residents of Augusta Charter Township, in a manner consistent with the Township's growth management objectives.¹⁴

Because the Project does not require public services or new public infrastructure, it will not detrimentally impact the Township's goal of providing safe, effective and efficient public services to residents, consistent with the Township's growth management. Further, as discussed above, the Project will contribute to the Augusta Township tax base and will result in additional economic benefits in the Township without a corresponding need for public services and infrastructure. Therefore, the Project supports the goal to provide improved infrastructure to serve the residents of the Township.

Future Land Use: The Master Plan also outlines key concepts for future land use. Among those concepts are Agricultural Preservation and Coordinated Infrastructure Improvements.¹⁵ As discussed above, the Project implements these concepts for future developments. Railsplitter Solar II is located in the area within the Township designated as "Agricultural" and "Planned Development" in Figure 16: Future Land Use.¹⁶ As described in the Master Plan, the intent of an "Agricultural Land Use" is to "protect existing agricultural land uses, maintain rural character, minimize population density, and preserve open spaces."¹⁷ Railsplitter Solar II furthers the intent of the "Agricultural Land Use" as a Future Land Use by ensuring that the land within the Project will not be converted to residential development and will not result in a permanent loss of agriculture. The Master Plan describes the intent of an "Planned Development Land Use" is to "include industrial, high-tech, research, office, commercial and residential land uses, with a golf course and environmental preserve areas." Solar energy is the fastest growing form of energy generation due to high-tech advances in solar project technology, including improvements in solar panel technology resulting in a more than 80% decline in solar energy costs and solar tracking technology which has increased solar project efficiency. Accordingly, Railsplitter Solar II represents a high-tech land use that furthers the intent of the "Planned Development Land Use".

B. Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area.

Railsplitter Solar II will be designed, constructed, operated, and maintained to be harmonious with and appropriate in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area.

Under the Augusta Township Zoning Ordinance, Large Solar Energy Systems are permitted in Agricultural Residential and Limited Industrial zoning districts as Special Land Use. The Ordinance was amended in January 2020 to allow Large Solar Energy Systems in Agricultural Residential districts.

¹⁴ Master Plan at 38.

¹⁵ Master Plan at 61.

¹⁶ Master Plan at 71.

¹⁷ Master Plan at 55.

Within the context of the amendment to the Ordinance it is important to note the type of development intended for the Agricultural Residential district as set forth in the Ordinance. Section 3.4. C. provides, “The intent of the Agricultural Residential district is to provide a district in which low-density single-family residential development and agricultural pursuits may occur in close proximity to each other **along with other compatible uses often occupying large area...**” (emphasis added).

Not only is the Large Solar Energy System specifically compatible with existing adjacent residences, it is also compatible with any future uses to be developed in the Agricultural Residential district as listed in Section 3.5(C) of the Ordinance. Permitted uses include: (a) agricultural uses in compliance with Right to Farm Act; (b) keeping of farm animals, subject to Section 5.19(B); (c) public or private conservation area, forest preserve, game refuge, wildlife preserve, or park; (d) single family dwelling; (e) family day care home; (f) foster family home; (g) foster family group home; (h) adult foster care family or group home; (i) home occupations; subject to Section 5.17; (j) essential services and structures, transmission lines and distribution lines...; (k) accessory buildings and structures. Special uses include: (a) Farm implement sales or repairs, fertilizer sales, feed or seed sales; (b) livestock auction yard; (c) veterinary clinic or domestic pets and farm animals; (d) commercial kennel or animal shelter, subject to Section 5.19(A)(3); (e) private kennel, subject to Section 5.19(A)(2); (f) commercial, non-farm related nursery or greenhouse; (g) campground, subject to Section 5.7; (h) country club; (i) golf course or driving range; (j) church; (k) cemetery; (l) bed and breakfast establishments, subject to Section 6.6; (m) commercial outdoor recreation, subject to Section 6.12; (n) gravel, sand and mineral extraction, subject to Section 6.16; (o) oil or gas extraction; (p) recreational vehicle storage, subject to Section 6.26; (q) private elementary, middle, or secondary school, college or university; (r) group day care homes, subject to Section 6.8; (s) governmental/municipal buildings; (t) private airport, subject to Section 6.23; (u) domestic radios, television, broadcast station, receiving or broadcasting towers, excluding wireless/cellular towers/facilities; (v) wireless communication facilities, subject to Section 6.27.¹⁸

Accordingly, the Ordinance expressly contemplates this type of use in the proposed area and deems it compatible with both current and future land uses authorized in the Agricultural Residential district.

The Project is low-impact and, as designed and screened, is the type of use to be in close proximity to neighboring residential development. The Project was specifically sited and designed with due consideration to the character of the area.

First, the Project is sited near existing electric grid infrastructure. High voltage overhead electric transmission lines run through the Project area. Moreover, a 120kV substation is located in close proximity (less than a mile) to the proposed Project area. Accordingly, electric infrastructure is present in the area and the proposed Project is consistent with that existing use.

Moreover, the Project does not change the aesthetics of the area as the Project’s panels are limited in height, the Project is setback from all residential properties and public roadways, and the Project will have a vegetative buffer and additional vegetative screening in relationship to nearby

¹⁸ See Augusta Township Zoning Ordinance Section 3.5(C).

residences and sections of public roadways. Specifically, the Project's panels will not exceed fifteen (15) feet at maximum tilt, as required under Section 6.25 of the Ordinance. Furthermore, the Ordinance requires a minimum set back of 75 feet from habitable structures to solar arrays. Not only will Railsplitter Solar II comply with this setback requirement, its site plan maintains a minimum distance of 150 feet between all habitable structures and the Project's solar arrays. This represents a 100% increase from the required setback under the Ordinance. Further, the Project's solar arrays are set back a minimum of 50 feet from all public road rights-of-way as required under the Ordinance.¹⁹ As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will not be out of character with the landscape and adjacent residences will be screened with a vegetative buffer planted with deer and drought-resistant landscaping.

Furthermore, during operations, the Project will not generate additional traffic in the area and will create no discernible sounds, odors, or other impacts to adjacent land uses or the general vicinity. Solar panels do not emit sound. Railsplitter Solar II conducted a sound analysis (see Appendix I), which demonstrates that the Project will comply with the sound requirements under the Ordinance based on the location of the Project's sound emitting equipment. In addition, there will be minimal new additional impervious surface area associated with the Project and the Project will include a vegetative cover during Project operations. The Project was also sited to avoid and minimize impacts to sensitive natural resources, conserving the natural features in the area. Based on desktop surveys, field work, and correspondence with state and federal agencies, the Project was designed to prevent potential impacts to wildlife. As illustrated in Appendix D (Preliminary Site Plan), Figure 1.3 (Wetlands and Waterways), and Figure 1.5 (FEMA mapping), the Project will be located outside or setback from all wetlands, waterways, floodways and flood zone. Railsplitter Solar II is engaged in ongoing coordination with county, state and federal agencies to ensure the Project will not adversely impact natural features, habitat, or wildlife in the area.

Importantly, upon decommissioning pursuant to the proposed Decommissioning Plan (see Appendix G), the underlying land will be available to return to agricultural use. As noted above, the Project design for construction generally preserves topsoil properties, which support future agricultural activities following the fallow period during Project operations, similar to the resting of agricultural lands. After decommissioning, the land will still be zoned as agricultural, further supporting agricultural land uses in the area and supporting agricultural use for future generations.

The Project also provides farm-based landowners with stable payments, which helps diversify the farmed-based landowners' income, supporting continued agricultural operations and multi-generational family land ownership. The Project also prevents subdivision of land, which further preserves the land for future farming use. Moreover, the Project doesn't affect adjacent uses of the land for agricultural or residential purposes.

The Project will comply with all applicable Township, county, and federal rules and regulations during development, construction, and long-term operations and maintenance.

C. Will not be hazardous or disturbing to existing or future nearby uses.

The Project will not be hazardous or disturbing to existing or future nearby uses. The Project will comply with all aspects of the Augusta Township Zoning Ordinance, including the sound limits prescribed through Section 6.25L of the Ordinance as shown by the Applicant's sound analysis.

¹⁹ See Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System.

As a passive land use, the Project will not produce any discernible noise or dust. Solar panels generate electricity through absorption of sunlight and are designed to minimize/avoid light reflection, making glare minimal. Moreover, the Project does not present any likelihood of any toxic materials contaminating the soil or groundwater as there will be no exposure of such materials from the solar panels. The primary material in the panel itself is silicon, a very common earth element used in cement, ceramics, glass and many other products. The panels are encapsulated in an aluminum casing and tempered glass. Like any other construction project, limited materials (e.g., fuels, lubricants, adhesives) will be used onsite during construction; all materials will be properly stored and managed onsite and have very low risk for spills or contamination. The Project skid-mounted transformers will use a mineral oil, and a spill prevention, contingency, and countermeasure plan will be prepared in accordance with applicable regulations.

As noted in the Railsplitter Solar II's Special Land Use and Preliminary Site Plan Application, "[t]he Project does not include artificial lighting within the solar arrays and therefore there will be no adverse impact from lighting on adjacent parcels."²⁰

The Project will include perimeter security fencing and will have detailed safety protocols. The Project will have 24/7 security monitoring during the construction period and 24/7 remote monitoring during the operations period.

As noted in Section 2.4 of the Railsplitter Solar II Special Land Use and Preliminary Site Plan Application, the solar arrays are self-grounded, and the Project will be developed according to all National Electrical Safety Code (NESC) and industry standards.²¹ The Project will also comply with building codes as applicable and accepts this as a condition to a special use permit, as noted in the Railsplitter Solar II Special Land Use and Preliminary Site Plan Application.²²

Railsplitter Solar II is completing soil infiltration testing at the time of this submittal and is currently coordinating with the Washtenaw County Water Resource Commission to design and implement storm water runoff controls. The project will obtain applicable drain crossing and SESC permits and stormwater management plan approval from the Washtenaw County Water Resources Commission in connection with the site plan review process. Perennial herbaceous vegetation will be planted between and below the panel arrays and, except for the impervious structures, the site will be vegetated.

Moreover, the Project does not change the aesthetics of the area as the Project's panels are limited in height, the Project is setback from all residential properties and public roadways, and the Project will have a vegetative buffer. Furthermore, the Ordinance requires a minimum set back of 75 feet from habitable structures to solar arrays. Not only will Railsplitter Solar II comply with this setback requirement, its site plan maintains a minimum of 150 feet between all habitable structures and the Project's solar arrays. This represents a 100% increase from the required setback under the Ordinance. Further, the Project's solar arrays are set back a minimum of 50 feet from all public road rights-of-way as required under the Ordinance.²³ As demonstrated in Appendix H (Elevation

²⁰ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.13 (at p. 11).

²¹ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.2 (at p. 4).

²² Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.4 (at p. 7).

²³ See Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System.

Drawings of Vegetative Buffering), the Project will not be out of character with the landscape and adjacent residences will be screened with a vegetative buffer. Additionally, the site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing of drought and deer-resistant evergreens and two staggered rows of drought and deer-resistant shrubs every eight feet (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance).²⁴ Railsplitter Solar proposes to plant drought and deer-resistant evergreens every eight (8) feet and two, staggered rows of drought and deer-resistant shrubs every eight (8) feet along the residential sections of Gooding Road, McCrone Road, and Willow Road where existing vegetation is not present.

Additionally, the Project will have no impact on adjacent property values. To specifically understand the potential impacts of the proposed Project on property values, Railsplitter Solar II commissioned an independent real estate appraiser, CohnReznick, to conduct an analysis. The Property Value Impact Study, which is included as Appendix N to the Special Land Use and Preliminary Site Plan Application, concludes that there is “no measurable and consistent difference in property values for properties adjacent to solar farms when compared to similar properties locationally removed from their influence.”²⁵ The analysis also included interviews with local real estate brokers and County and Township Assessors for areas where utility-scale solar projects are located. The real estate brokers and local assessors confirmed that there is no difference in price, marketing periods or demand for the homes directly adjacent to the solar farm facilities.²⁶ The study also includes a review of other studies prepared by real estate valuation experts that have similarly analyzed whether a solar project has any impact on adjacent property values. These studies similarly concluded there was no measurable or consistent impact on nearby property values.²⁷ In summary, the analysis concludes that properties adjacent to operating solar projects “were not adversely affected by their proximity to the solar farm,” and further, “that properties surrounding other proposed solar farms operating in compliance with all regulatory standards will similarly not be adversely affected, in either the short- or long-term period.”²⁸

D. Will be an improvement in relation to property in the immediate vicinity and to the Township as a whole.

Railsplitter Solar II will be an improvement in relation to property in the immediate vicinity and to the Township as a whole.

The Project will improve water quality in and around the area of the Project as the Project will reduce fertilizer or pesticide use on the Project area. Railsplitter Solar II is completing soil infiltration testing and is currently coordinating with the Washtenaw County Water Resource Commission to obtain applicable drain crossing and SESC permits and stormwater management plan approval under the County’s requirements. This permit will ensure that Railsplitter Solar II’s use of the property will not have any adverse impacts on drainage on adjacent properties. Additionally, as noted above, the area under the solar panels will be vegetated, which will support onsite water retention. Moreover, the use of the property for the Project will contribute positively to air quality in the region by providing a clean form of electricity generation.

²⁴ Augusta Township Zoning Ordinance, Article 6.25.J

²⁵ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

²⁶ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

²⁷ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

²⁸ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

Additionally, the Project will preserve the subject property for future agricultural use and avoid other types of developments – like residential development, which is discouraged in primary agricultural areas as noted in the Township Master Plan.²⁹

Furthermore, as discussed above, the Project represents a significant investment in the Township, which will contribute to the Township tax base and support all Township residents through increased revenue. *See* Anderson Economic Impact Study. Importantly, the Project provides these benefits without resulting in any negative or adverse impact on adjacent property values.³⁰

E. Will be served adequately by essential public services and facilities or that the persons responsible for the establishment of the proposed use will provide adequately for any such service or facility.

The Project will be served adequately by existing essential public service and facilities and will not require any additional public services and facilities. The Project will not require on-site water and septic systems. The absence of any need for substantial public services for the Project meets the objective of Section 3.4(C) of the Ordinance in its regulation of Agricultural Residential zones, which provides in pertinent part, “[t]hese regulations are also designed to exclude uses and buildings which demand substantial public services, such as major thoroughfares, centralized sewer or water facilities, and other public services.”

Unlike residential, commercial, or industrial developments, the Project will not require new public services or facilities and will not burden existing public services and facilities.

The Project will be responsible for financing, construction, operating, and decommissioning any new infrastructure required to interconnect the Project. In addition, the Project will support public services through its property tax revenues.

Per Section 6.25.U of the Ordinance, in the event there is any material damage to a public road resulting from the Project, Railsplitter Solar II will restore damaged roads at its expense.³¹

F. Will not create excessive additional public costs and will not be detrimental to the economic welfare of the Township.

The Project will not create additional public costs and will not be detrimental to the economic welfare of the Township. Not only will the Project not create additional public costs, it will actually positively contribute to public resources. As discussed above, Railsplitter Solar II represents a total investment of roughly \$130 million. A significant portion of that investment will be made in Augusta Township. The Project also represents a long-term addition to the Augusta Township tax base. *See* Appendix M (Economic Impact Study), prepared by Anderson Economic Group.³² The Project’s projected first year tax liability is approximately \$1.35 million, \$23,914 of which is

²⁹ Master Plan at p. 55.

³⁰ *See* CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

³¹ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.21 (at p. 14). *See also* Transportation Plan, submitted as Figure 2-1 with the Project’s application that shows the routes that construction and maintenance vehicles will use to access the Project.

³² *See* Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

anticipated to go directly to Augusta Township.³³

The Economic Impact Study also addresses the other economic benefits the Project will bring to Augusta Township and Washtenaw County. The Project is expected to generate approximately 150 construction jobs in Michigan, drawing principally from the Southeast Michigan workforce. Once the Project is constructed and in operation, the Project is expected to create two permanent solar operations jobs.³⁴

Importantly, the Project will not require significant public services or municipal infrastructure like other types of developments. Therefore, Augusta Township will receive the economic and tax benefits from the Project, without an increase demand on public services and additional infrastructure and will not create additional public costs that would be detrimental to the economic welfare of the Township.

Further, the Project will not impact property values of adjacent properties. The Project developer has developed utility-scale solar projects throughout the country and is unaware of any documented evidence of a material reduction in property values arising as a direct result of a solar project. To specifically understand the potential impacts of the proposed Project on property values, Railsplitter Solar II commissioned an independent real estate appraiser, CohnReznick, to conduct an analysis. The Property Value Impact Study, which is included as Appendix N to the Special Land Use and Preliminary Site Application, concludes that there is “no measurable and consistent difference in property values for properties adjacent to solar farms when compared to similar properties locationally removed from their influence.”³⁵ The analysis also included interviews with local real estate brokers and County and Township Assessors for areas where utility-scale solar projects are located. The real estate brokers and local assessors confirmed that there is no difference in price, marketing periods or demand for the homes directly adjacent to the solar farm facilities.³⁶ The study also includes a review of other studies prepared by real estate valuation experts that have similarly analyzed whether a solar project has any impact on adjacent property values. These studies similarly concluded there was no measurable or consistent impact on nearby property values.³⁷ In summary, the analysis concludes that properties adjacent to operating solar projects “were not adversely affected by their proximity to the solar farm,” and further, “that properties surrounding other proposed solar farms operating in compliance with all regulatory standards will similarly not be adversely affected, in either the short- or long-term period.”³⁸

G. Will be consistent with the intent, purposes and specifications of this Ordinance.

Railsplitter Solar II will be consistent with the intent, purposes and specifications of this Ordinance. The Ordinance specifically contemplates the “siting, installation, operation, repair, decommissioning, and removal of Large Solar Energy Systems within Agricultural Residential...Districts as a Special Land Use.”³⁹ The Ordinance specifically contemplates large non-agricultural uses in close proximity to residential developments. The Project, which is a Large Solar Energy System, is located in the Agricultural Residential and Light Industrial districts and,

³³ See Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

³⁴ See Economic Impact Study, prepared by Anderson Economic Group, submitted as Appendix M.

³⁵ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

³⁶ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

³⁷ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

³⁸ CohnReznick, Property Value Impact Analysis, Appendix N, at 4.

³⁹ See Section 6.25A of the Ordinance.

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as established in the documentation submitted to the Township and the history of large solar energy developments in Michigan and across the country, it is the very type of development contemplated and intended to be located in these districts. The Project has complied with all obligations and requirements of the Ordinance.

Section 11.4
Site Plan Review Standards

A. The proposed use will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood.

The Project will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood. The Project will include perimeter security fencing and will have detailed safety protocols. The Project will have 24/7 security monitoring during the construction period and 24/7 remote monitoring during the operations period.

Moreover, as a passive land use, the Project does not present any likelihood of any toxic materials contaminating the soil or groundwater as there will be no exposure of such materials from the solar panels. The primary material in the panel itself is silicon, a very common earth element used in cement, ceramics, glass and many other products. The panels are encapsulated in an aluminum casing and tempered glass. Like any other construction project, limited materials (e.g., fuels, lubricants, adhesives) will be used onsite during construction; all materials will be properly stored and managed onsite and have very low risk for spills or contamination. The Project skid-mounted transformers will use a mineral oil, and a spill prevention, contingency, and countermeasure plan will be prepared in accordance with applicable regulations.

As noted in Section 2.4 of the Railsplitter Solar II Special Land Use and Preliminary Site Plan Application, the solar arrays are self-grounded, and the Project will be developed according to all National Electrical Safety Code (NESC) and industry standards.⁴⁰ The Project will also comply with building codes as applicable and accepts this as a condition to a special use permit, as noted in the Railsplitter Solar II Special Land Use and Preliminary Site Plan Application.⁴¹

Furthermore, during operations, the Project will not generate additional traffic in the area and there will be no discernible sounds, odors, or other impacts to adjacent land uses or the general vicinity.

B. The location of buildings, outside storage receptacles, parking areas, screen walls and utility areas is such that the adverse effects of such uses will be minimized for the occupants of that use and surrounding areas.

The Project facilities will not have adverse impacts on the surrounding areas. Specifically, the Project's panels will not exceed fifteen (15) feet at maximum tilt, as required under Section 6.25 of the Ordinance. As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will not be out of character with the landscape and adjacent residences will be screened with a vegetative buffer. The site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing for drought and deer-resistant evergreens and two, staggered rows of 8-foot spaced shrubs of a drought and deer-resistant variety (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance).⁴² Railsplitter Solar II proposes to plant drought and deer-resistant evergreens every fifteen (15) feet and two rows of staggered drought and deer-resistant shrubs every eight (8) feet along residential

⁴⁰ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.2 (at p. 4).

⁴¹ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System, Section 2.4 (at p. 7).

⁴² Augusta Township Zoning Ordinance, Article 6.25.J

sections of Gooding Road, McCrone Road and Willow Road, where existing vegetation is not present.

In addition, during operations, the Project will not generate additional traffic in the area and will not create discernible sounds, odors, or other impacts to adjacent land uses or the general vicinity. Solar panels do not emit sound. Railsplitter Solar II conducted a sound analysis (see Appendix I), which demonstrates that the Project will comply with the sound requirements under the Ordinance based on the location of the Project's sound emitting equipment.

C. The design of storm sewers, stormwater facilities, roads, parking lots driveways, water mains, sanitary sewers and other site improvements meets the design and construction standards of the Township and other appropriate agencies.

The Project's design will meet all design and construction standards of the Township and other appropriate agencies.

Railsplitter Solar II is completing soil infiltration testing and is currently coordinating with the Washtenaw County Water Resource Commission to develop a stormwater management plan and Soil Erosion and Sedimentation Control (SESC) permit and secure a drainage permit under the County's requirements. Additionally, as noted above, the area under the solar panels will be vegetated, which will support onsite water retention and reduce soil exposure and sheet flow runoff.

An Operations & Maintenance Building is proposed on the adjacent Railsplitter Solar I Project area but is not being proposed as a part of this Project. Railsplitter Solar I is working in coordination with the Washtenaw County Health Department to coordinate required permit approvals for the Operation & Maintenance Building's on-site well and septic system.⁴³

Railsplitter Solar II is coordinating with the Washtenaw County Road Commission to obtain road approach permits, commercial driveway approach permits, and utility/installation repair permits as required under the Ordinance.⁴⁴ Access road to the Project site and within the Project site information can be found in Appendix D.⁴⁵

D. Proper access to all portions of the site and all sides of any structure is provided. All structures or groups of structures shall be so arranged as to permit emergency vehicle access by some practical means to all sides. Site features such as, but not limited to, trees and other plant materials, fences, retaining walls, berms, outdoor furniture, outdoor structures, and natural and artificial water bodies shall be arranged to permit adequate emergency vehicle access.

Railsplitter Solar II is being designed in a manner to allow for proper access to all portions of the site. In addition to twelve (12)-foot wide access roads and turnarounds located periodically throughout the Project Site, Project facilities, including solar panels and inverters, are spaced apart

⁴³ Augusta Township Zoning Ordinance (Section 11.3.B.1)

⁴⁴ Augusta Township Zoning Ordinance (Section 11.3.B.1)

⁴⁵ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System Appendix D: Preliminary Site Plan

at a distance to allow for vehicular access to areas of the site during routine Project maintenance or if emergency access is required. Access road information can be found in Appendix D.⁴⁶ The Project has been designed so that access roads are minimized and will most efficiently serve the Project. Applicable site features including trees, fences, and outdoor structures are designed to allow for adequate access, including emergency vehicle access, throughout the site.

E. Site planning and design of specific improvements will accomplish, the preservation and protection of existing natural resources and features such as lakes, ponds, streams, wetlands, floodplains, steep slopes, groundwater, trees, and wooded areas, including understory trees.

As part of its development process, Railsplitter Solar II has conducted surveys for wetlands, threatened and endangered species, and cultural resources to ensure that impacts to sensitive environmental resources are avoided, where feasible. The Project has been developed to optimize the solar resource while avoiding impacts on natural resources and potentially sensitive areas. Specifically, see Appendix D (Preliminary Site Plan), Figure 1.3 (Wetlands and Waterways), and Figure 1.5 (FEMA Mapping), which demonstrate that the Project will predominately be located outside or setback from all wetlands, waterways, floodways and flood zones by a minimum setback distance of twenty-five (25) feet, as required under the Ordinance.⁴⁷

F. The proposed development respects the natural topography to the maximum extent possible by minimizing the amount of cutting, filling and grading required.

The Project respects the natural topography to the maximum extent possible by minimizing the amount of cutting, filling and grading required. The intended racking and panel system is highly adaptable to the existing terrain and natural undulations, thereby minimizing cut and fill. Further, Railsplitter Solar II has specifically selected the project land based on its generally flat topography. Railsplitter Solar II will provide a grading plan in connection with the Final Site Plan submittal, as required under the Ordinance.

G. The proposed development will not cause soil erosion or sedimentation. The drainage plan is adequate to handle anticipated stormwater runoff.

The Project is in the process of completing soil infiltration testing and is currently coordinating with the Washtenaw County Water Resource Commission to develop a stormwater management plan and secure a drainage permit under the County's requirements. Additionally, as noted above, the area under the solar panels will be vegetated, which will support onsite water retention and reduce soil exposure and sheet flow runoff. Prior to construction, a Soil Erosion and Sediment Control (SESC) plan will be developed and SESC permit obtained per the Washtenaw County SESC Ordinance. Thus, the Project plans will adequately manage anticipated stormwater runoff.

H. A stormwater management system and facility will preserve the natural drainage characteristics and enhance the aesthetics of the site to the maximum extent possible, and will not substantially reduce or increase the natural retention or storage capacity

⁴⁶ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System Appendix D: Preliminary Site Plan

⁴⁷ Augusta Township Zoning Ordinance, Article 9.15.E.

of any wetland, water body or water course, or cause alterations which could increase flooding or water pollution on or off site. The Washtenaw County Drain Commission Standards shall be used for the review and approval of all stormwater management systems.

The Washtenaw County Drain Commissioners office shall provide review comments on the stormwater management system of all site plans for the consideration of the Planning Commission. Comments shall be provided for all Preliminary and Final Site Plans. Final Site Plan approval shall not be granted until approval is granted by the Drain Commissioners Office with regard to the stormwater management plan.

Railsplitter Solar II will require minimal grading, allowing for minimal alteration of existing drainage throughout the Project site. The Project is in the process of completing soil infiltration testing and is currently coordinating with the Washtenaw County Water Resource Commission to develop a stormwater management plan and secure a drainage permit under the County's requirements. Additionally, as noted above, groundcover will be planted below and between panel arrays and, except for roadways and structure footprints, will be entirely vegetated, which will improve natural drainage throughout the Project site.

The Project will incorporate appropriate stormwater best management practices (BMPs) to address the minor grading and minimal amount of impervious surface that will be created by the Project. One such BMP includes groundcover that will be planted below and between panel arrays, which will improve natural drainage throughout the Project site. The Applicant has been coordinating with the Washtenaw County Drain Commissioners to confirm acceptable storm water strategies. Railsplitter Solar II will provide comments from the Washtenaw County Drain Commissioners office to the Planning Commission.

I. Wastewater treatment systems, including on-site septic systems will be located to minimize any potential degradation of surface water or ground water quality.

A septic system is planned for the proposed substation and the Operations and Maintenance Building, which are proposed for Railsplitter Solar I Project. No wastewater treatment systems are proposed for Railsplitter Solar II.⁴⁸

J. Sites which include storage of hazardous materials waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the air or to the ground, groundwater or nearby water bodies, with a specific plan to achieve such objectives being incorporated as part of the site plan.

As a passive land use, the Project does not present any likelihood of any toxic materials contaminating the soil or groundwater as there will be no exposure of such materials from the solar panels. The primary material in the panel itself is silicon, a very common earth element used in cement, ceramics, glass and many other products. The panels are encapsulated in an aluminum casing and tempered glass. Like any other construction project, limited materials (e.g., fuels, lubricants, adhesives) will be used onsite during construction; all materials will be properly stored and managed onsite and have very low risk for spills or contamination. The Project skid-mounted

⁴⁸ Augusta Township Zoning Ordinance, Article 11.3.C.2.m

transformers will use a mineral oil, and a spill prevention, contingency, and countermeasure plan will be prepared in accordance with applicable regulations.

K. The location of buildings, parking, drives, landscaping and other improvements on the site is appropriate and consistent with good design standards for the lot size, shape and general location.

The location of buildings, parking, drives, landscaping and other improvements on the site will be appropriate and consistent with quality design standards for the lot size, shape and general location.

The Project will have a vegetative buffer. Specifically, the Project's panels will not exceed fifteen (15) feet at maximum tilt, as required under Section 6.25 of the Ordinance. As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will not be out of character with the landscape and adjacent residences will be screened with a vegetative buffer. The site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing for drought and deer-resistant evergreens and two, staggered rows of 8-foot spacing for shrubs of a drought and deer-resistant variety (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance).⁴⁹

L. Landscaping, including grass, trees, shrubs and other vegetation is provided to maintain and improve the aesthetic quality of the site and area.

The site plan includes setbacks and landscaping that exceeds the requirements under the Ordinance. The Ordinance requires a minimum setback of 75 feet from habitable structures to solar arrays. Not only will Railsplitter Solar II comply with this setback requirement, its site plan maintains a minimum distance of 150 feet between all habitable structures and the Project's solar arrays. This represents a 100% increase from the required setback under the Ordinance. Further, the Project's solar arrays are set back a minimum of 50 feet from all public road rights-of-way as required under the Ordinance.⁵⁰ As demonstrated in Appendix H (Elevation Drawings of Vegetative Buffering), the Project will maintain and improve the aesthetic quality of the site and area. Additionally, the site plan proposes denser screening for adjacent residential properties from the Project consisting of 8-foot spacing for drought and deer-resistant evergreens and 8-foot spacing for two, staggered rows of shrubs of a drought and deer-resistant variety (in place of the 15-foot spacing for evergreens and 7-foot spacing for shrubs required under the Ordinance).⁵¹

The Project site will have a vegetative groundcover, which will be maintained throughout Project operations.

M. The means of ingress and egress to and from the site shall be planned with the objective of achieving recognized planning, engineering and safety standards, and shall not result in an unreasonable risk of danger to persons and/or property on the site and/or off the site. In general, this standard shall be met based upon the design of ingress and egress in terms of the number, location and design of access(es), and

⁴⁹ Augusta Township Zoning Ordinance, Article 6.25.J.

⁵⁰ See Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System.

⁵¹ Augusta Township Zoning Ordinance, Article 6.25.J.

utilization of acceleration, deceleration and passing lanes and approaches. The Planning Commission shall review the ingress and egress proposed for the purpose of promoting and protecting traffic safety, and shall require improvements accordingly.

The design of ingress and egress from the Project will not result in an unreasonable risk of danger to persons and/or property on the site and/or off the site. Railsplitter Solar II is working in coordination with the Washtenaw County Road Commission to obtain road approach permits and commercial driveway approach permits from the County as required under the Ordinance for all points of ingress and egress to the Project area.⁵² The Project has been designed so that internal access roads are minimal and will most efficiently serve the Project. Access road information can be found in Appendix D.⁵³ The locations of ingress and egress to the Project from applicable County roads are also depicted in Appendix D.⁵⁴

A Transportation Plan showing the routes that construction and maintenance vehicles will utilize to access the project is provided in Figure 2-1 of the Railsplitter Solar II Special Use Permit and Preliminary Site Plan Application.

N. The site plan complies with all Township Ordinances and design standards, and any other applicable laws.

The site plan complies with all Township Ordinances and design standards, including any other applicable laws and regulations.

⁵² Augusta Township Zoning Ordinance (Section 11.3.B.1).

⁵³ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System Appendix D: Preliminary Site Plan.

⁵⁴ Special Use Permit and Preliminary Site Plan Application for Large Solar Energy System Appendix D: Preliminary Site Plan.

Railsplitter Solar II Project

Glare Hazard Analysis



Prepared for:
Railsplitter Solar, LLC

Prepared by:
Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon, WI 53092

April 29, 2021

Revised August 21, 2021

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APPENDIX A – GLARE ANALYSIS SUMMARY REPORTS



Abbreviations

AGL	Above Ground Level
deg	degrees (0 is due north, 180 is due south)
DNI	Direct Normal Irradiance
FAA	Federal Aviation Administration
FP	Flight Path (landing path from threshold to two miles out)
ft	feet
kW	kilowatt
kWh	kilowatt hour
m	meters
mi	mile
min	minutes
mrاد	milliradian
OP	Observation Point (e.g. control tower, vehicle location)
PV	Photovoltaic



Glossary*

Correlate Slope Error with Surface Type?	Correlates the slope error value based on the surface material type; default value is 8.43 milliradians (mrads).
Eye Focal Length (m)	Typical distance between the cornea and the retina of the human eye, default is 0.017, though some sources indicate that the typical length is 0.022.
Glide Slope (deg)	Angle at which the plane approaches the runway during landing (default is 3 degrees [deg] from horizontal).
Maximum Tracking Angle (deg)	Rotation limit of panels in either direction. Full rotation is 2*maximum tracking angle. E.g. maximum tracking angle of 60 deg indicates full panel rotation range of 120 deg.
Resting Angle (deg)	Angle modules return to after maximum angle is reached.
Observation Point	A specific location, such as a control tower or vehicle, from which an observer might experience glare.
Ocular Transmission Coefficient	Related to the ability of the eye to transmit light, set by at 0.5 by Forge Solar.
Offset angle of module (deg)	Additional tilt/elevation angle between the tracking axis and the panel.
Orientation of Tracking Axis (deg)	Azimuthal position of tracking axis measured clockwise from true north. Tracking systems in the northern hemisphere are typically oriented near 180 deg. Tracking systems in the southern hemisphere are typically oriented near 0 deg.
Peak DNI (W/m ²)**	This value is set at 1,000 by ForgeSolar and is the amount of solar radiation per unit surface area by a surface perpendicular to the sun's rays in a straight line from the direction of the sun at its current position in the sky.
Pupil Diameter (m)	Typical pupil diameter for observer, default is 0.002 meters (m).
PV Array Axis Tracking	Panel tracking mode, if any. Panel can be set to track along one (single) or two (dual) axis tracking. This parameter affects the positioning of the panels at every time step when the sun is up.
PV Array Panel Material	Surface material of panels, including use of anti-reflective coating (ARC). Options include: smooth glass without ARC, smooth glass with ARC, light-textured glass without ARC, light-textured glass with ARC, and deeply textured glass.



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Rated Power (kW)	Power rating of the solar array - used to estimate the energy output per year of the array (optional).
Slope Error (mrad)	Accounts for beam scatter of sunlight on the array. Default is 8.43 mrad but the value may be adjusted based on the panel material type.
Subtended Angle of Sun (mrad)	The angle above horizontal at which the viewer observes the sun, default value is 9.3 mrad.
Threshold	The physical beginning of the runway. Aircraft are typically expected to be 50 ft above ground at this point.
Time Interval (min)	Time step intervals used by the program for analyses. Default is set to analyze for glare at every one minute interval throughout the year.
Timezone	Time zone difference from Greenwich Mean Time at the location of the analysis.
Tilt of Tracking Axis (deg)	The elevation angle of the tracking axis upon which panels rotate (e.g. torque tube), measured from flat ground. 0 deg implies the axis is on level, flat ground. Values between 0 and 30 deg are typical.
Vary Reflectivity	Varies panel reflectivity with sun position at each time step.
Maximum Downward Viewing Angle (deg)	The angle extending downward from the horizon indicating the maximum downward viewing angle from the cockpit. Used to determine whether glare is visible by the pilot along the flight path. Default is 30 degrees.

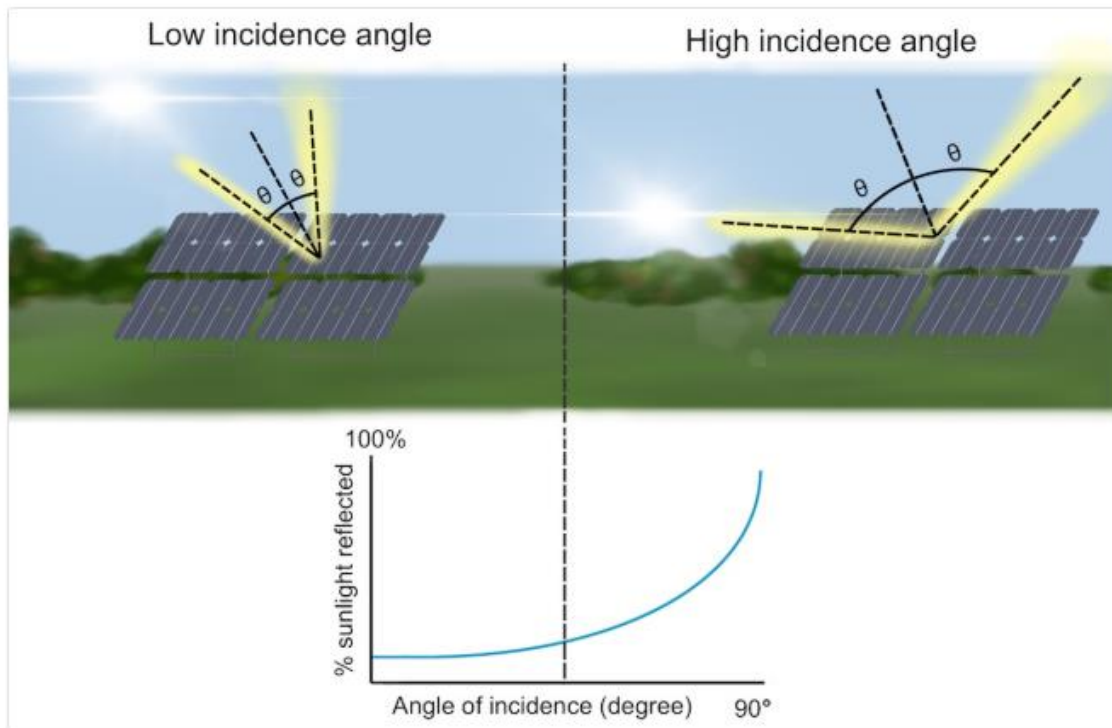
*Sources:

- Ho, Clifford, K., Cieran A. Sims, Julius E. Yellowhair. 2015. Solar Glare Hazard Analysis Tool (SGHAT) Users Manual v. 2H. Sandia National Laboratories
- <https://www.forgesolar.com/>

**Source: <http://www.3tier.com/en/support/solar-prospecting-tools/what-direct-normal-irradiance-solar-prospecting/>



Incidence Angle Diagram from ForgeSolar.com Documentation:



PV panel reflectance depends on incidence angle between panel normal (i.e. facing) and sun position. Large incidence angle yields more reflected sunlight.

Source: ForgeSolar, 2021



EXECUTIVE SUMMARY

Stantec utilized the web-based ForgeSolar glare hazard analysis program to analyze the potential for glare from a proposed photovoltaic solar power project as depicted in **Figure 1**. The program identifies the three following types of glare (no color indicates no glare predicted):

- GREEN** - Low potential for temporary after-image.
- YELLOW** - Potential for temporary after-image.
- RED** - Potential for permanent eye damage.

Based on the solar array parameters provided, glare is not predicted to occur from the proposed Railsplitter Solar II Project (Project) at eight airports, one heliport (**Table 1**) and two air traffic control towers (ATCTs) located within 10 miles of the Project (**Figure 2**). Glare is not predicted for drivers of vehicles on three roads and one railroad (**Table 2**) analyzed adjacent to the project at either five-foot (cars and small trucks) or nine-foot (semi-trucks) viewing heights (**Figure 3**). The viewing height for train engineers was assumed to be 15 feet. Glare is also not predicted for the 40 buildings (primarily residences) analyzed adjacent to the project site (**Figure 3**). All routes, flight paths and buildings were also analyzed using five-foot, nine-foot, and 12-foot panel heights. Note that all elevations used as inputs for the analysis are above ground level (AGL) heights. Additionally, the glare analysis was conducted without factoring the screening effects of existing or proposed landscaping along Project property boundaries.

*****It should be noted that a 'resting angle' of 60 degrees was used for the panels in the analysis. If a resting angle of 0 degrees (panels horizontal/facing straight up) is used in the analysis, the program moves the panels to 0 degrees instantly once the sun drops below 60 degrees in either direction. This results in the panels being horizontal/facing straight up during sunrise and sunset, under which conditions the program predicts extensive green and yellow types of glare. Panels should therefore not be 'rested' in a 0- degree position when the sun is close to the horizon (near dawn and dusk daylight hours). (See Incidence Angle diagram in Glossary above).***

Under typical operating conditions, panels for this project will not be at 0 degrees during sunrise and sunset and, therefore, will not generate glare. Based on this analysis, it is predicted the proposed Project does not have the potential for causing glare impacts on nearby airports or adjacent roadways and buildings.



1.0 INTRODUCTION

Stantec utilized the web-based ForgeSolar glare hazard analysis program for the glare analysis. This interactive tool provides a quantified assessment of (1) when and where glare will occur throughout the year for a prescribed solar installation, and (2) potential effects on the human eye at locations where glare occurs.

ForgeSolar employs an interactive Google map for site location, mapping the proposed PV array(s), and specifying observer locations, vehicular travel routes, or flight paths. Latitude, longitude, and elevation are automatically recorded through the Google interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the PV panels, reflectance, environment, and ocular factors are entered by the user.

If glare is found, the tool calculates the retinal irradiance and subtended angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn. The results are presented in a plot that specifies when glare will occur throughout the year, with color codes indicating the potential ocular hazard.

The Project is in Augusta Charter Township, Washtenaw County, Michigan, approximately eight miles south-southeast of the City of Ann Arbor. The site is located within 10 miles of eight active airports and one heliport (**Table 1, Figure 2**). This glare study analyzes potential glare for landing paths at airports, two air traffic control towers (ATCTs), one heliport and for drivers of vehicles at a five-foot (cars and small trucks) and nine-foot (semi-truck) viewing height on three roadways and one railroad track adjacent to and near the Project (**Table 2, Figure 3**). The viewing height for train engineers was assumed to be 15 feet. Heights for the ATCTs at Ann Arbor Municipal Airport and Willow Run Airport are not provided on airport diagrams found via AirNav¹ and therefore, a conservative height of 100 feet was assumed for each.

The analysis also included a determination of potential glare to viewers at 40 buildings (primarily residences) in the vicinity of the Project locations at 25-foot viewing heights (**Figure 3**). The red, numbered balloons (e.g., OP 40) in Figure 3 represent the 40 building (primarily residences) locations for the glare analysis. The blue-shaded parcels depict the approximate proposed project PV areas. All routes, flight paths and buildings (primarily residences) in the vicinity of the Project location were analyzed using five-foot, nine-foot, and 12-foot panel heights.

NOTE: The arrays used in the analysis program were drawn to be larger than the actual planned and designed arrays shown in Figure 1 in order to be conservative in the glare analysis by analyzing more area than the panels will actually occupy. This in no way implies that that planned PV arrays are larger or different from the actual planned and designed arrays shown in Figure 1.

¹ <https://www.airnav.com>



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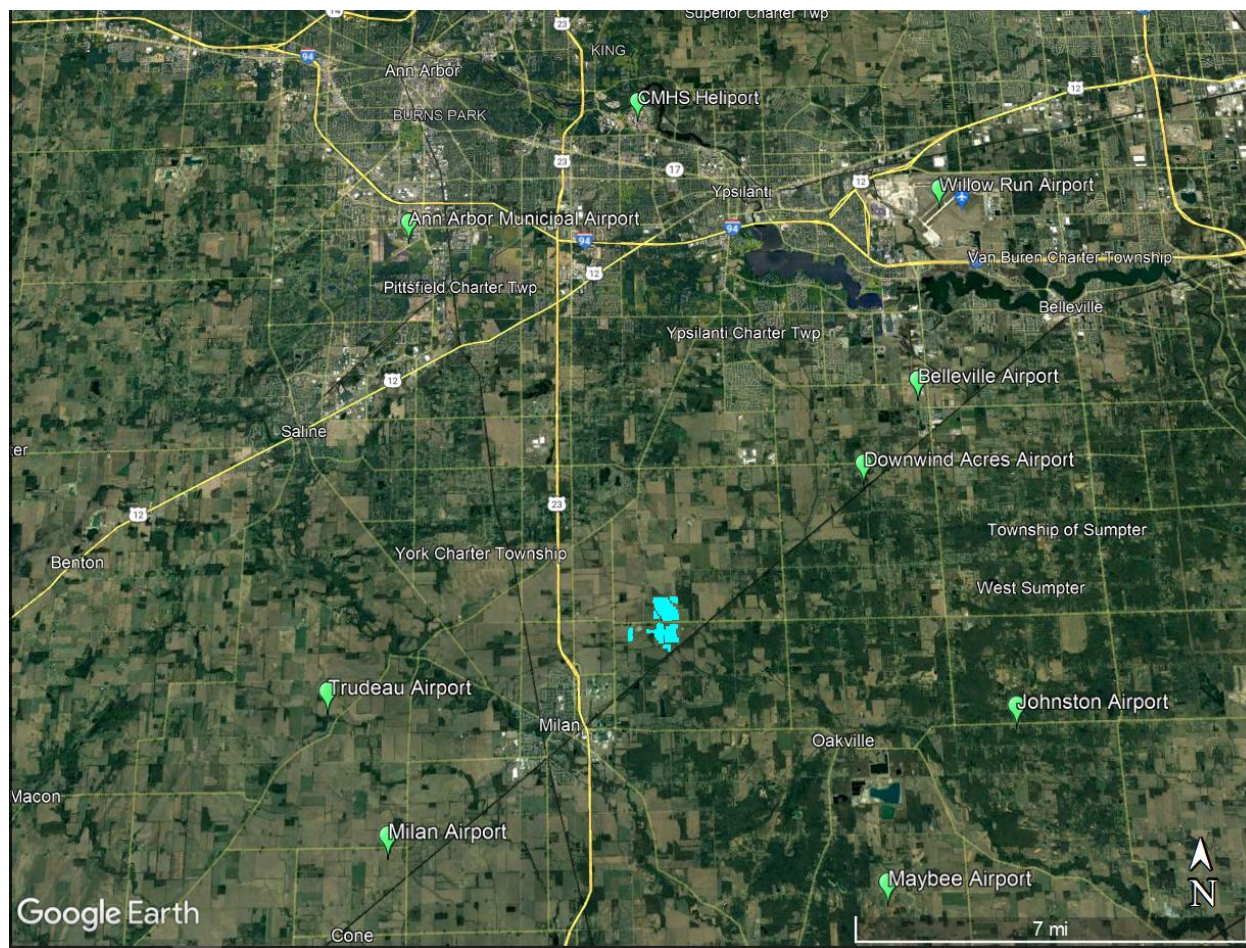
Figure 1 - Railsplitter Solar II Project – PV Array layout.



Source: Google Earth Imagery, March 2020



Figure 2 – PV Array (red) and Airports/Heliport Analyzed.



Source: Google Earth imagery, March 2020

Table 1 – Airports and Approach Paths/Runways/Heliport Analyzed for Glare

Airport Name	Approach Paths/Runways Analyzed	Air Traffic Control Tower?
Ann Arbor Municipal Airport	Runways 6-24, and 12-30	Yes
Willow Run Airport	Runways 5R, 5L, 23R, 23L, 9 and 27	Yes
Belleville Airport	Runway 18-36	No
Maybee Airstrip	Runway 18-36	No
Downwind Acres Airport	Runway 6-24	No
Johnston Airport	Runway 14-32	No
Trudeau Airport	Runway 9-27	No
Milan Airport	Runway 18-36	No
CMHS Heliport	Heliport analyzed hovering at 500-ft AGL	No

Table 2 – Roadways Adjacent to Project Analyzed for Glare

Roadway Name	One-Way or Two-Way
Willow Road	Two-Way
McCrone Road	Two-Way
Gooding Road	Two-Way
Railroad	Two-Way



Figure 3 – PV Array and Residences and Roadways Analyzed.



Source: ForgeSolar, Google Earth Imagery, March 2020

(Note: the colors above are used to simply depict locations and do not represent glare)

2.0 DATA INPUT SUMMARY

The parameters used for the analyses are listed below. “Default” indicates the default parameter value set by ForgeSolar and is considered the most conservative value for the parameter. “Chosen” parameters were selected to perform the most conservative analysis with respect to glare potential. “Provided” parameters are Project specific information provided by the client.



2.1 SOLAR ARRAY

The location of the solar array and array parameters used for the analyses are based on information provided by Railsplitter Solar, LLC. The analyses described in **Table 3** below were conducted using five-foot, nine-foot, and 12-foot panel heights.

Table 3: Solar Panel Parameters Used (a detailed description of each parameter is provided in the Glossary):

Parameter	Value Used	Default, Chosen or Provided?
Axis tracking	Single	Provided
Tracking Axis Tilt (deg)	0.0	Provided
Tracking Axis Orientation (deg)	180.0	Provided
Tracking Axis Panel Offset (deg)	0.0	Default
Maximum Tracking Angle (deg)	60.0	Provided
Resting Angle (deg)	60.0	Provided
Rated Power (kW)	Not Used	NA
Vary reflectivity?	Yes	Default
Panel material	Smooth glass with Anti-Reflective Coating	Provided
Timezone offset	-5	Based on site location
Subtended angle of sun (mrad)	9.3	Default
Peak DNI (W/m ²)	1,000	Default
Ocular transmission coefficient	0.5	Default

Pupil diameter (m)	0.002	Default
Eye focal length (m)	0.017	Default
Time interval (min)	1	Default
Correlate slope error with surface type?	Yes	Default
Slope error (mrad)	8.43	Default

2.2 AIRPORT LANDING PATHS AND AIR TRAFFIC CONTROL TOWERS (ATCTS)

A total of 22 approach paths for airport and grass airstrip runways were analyzed for glare (**Table 1**). Flight paths used for the analyses were based on locating a point at the center of the estimated runway thresholds for the runways and grass landing strips using aerial photography and indicating a flight/landing path direction extending outward from the center of the runway. The ForgeSolar program automatically plots and analyzes points at the threshold and continuously for up to two miles in a straight direction from the threshold. The program also determines the altitude at each point based on the plane height at the threshold and the glide slope for landing.

The flight path input values used were the Federal Aviation Administration (FAA) standard 50-ft altitude at the threshold and a 3-degree glide slope, unless otherwise published. In addition, the analysis considered pilot visibility from the cockpit, and the default values of 30 degrees for the vertical view restriction and 50 degrees for the azimuthal view restriction for pilots were used. Because FAA ATCT tower heights at eye level are not publicly published due to safety measures, a conservative height estimate of 100 feet was used for towers located at each airport. These are included as Observation Points (OPs) 1 and 3 in the extra airport glare analysis reports.

In addition, one heliport was located within 10 miles of the Project. Since helicopters have no approach path, the helicopter was analyzed as an observation point (OP2) in the extra airport glare analysis report) located above the heliport, hovering at 500 feet.



2.3 ROADWAYS AND PROPERTIES LOCATED ADJACENT TO THE SOLAR ARRAYS

This analysis included potential glare to vehicles travelling on three roads and one railroad in the vicinity of the Project site (**Table 2**). The ForgeSolar program sets the default viewing angle of the array at 50 degrees from the driver's direct line of sight (when looking forward). The FAA has determined that glare beyond 50 degrees from the line of sight will have no impact on the viewer².

Potential glare to drivers was evaluated for both passenger vehicles and semi-trucks, where the passenger vehicles were assumed to have a maximum viewing height of five feet while the viewing height for drivers of semi-trucks was assumed to be a maximum of nine feet. The viewing height for train engineers was assumed to be 15 feet. The location of the routes analyzed are shown as blue-green route lines on **Figure 3**.

Potential glare to viewers from 40 buildings (primarily residences) located in the vicinity of the Project site was also analyzed at a 25-foot viewing height.

3.0 GLARE ANALYSES RESULTS

Stantec utilized the web-based ForgeSolar program for the glare analysis. ForgeSolar was used to analyze glare potential in one-minute increments throughout the year and the program identifies the three following types of glare (no color indicates no glare predicted):

- GREEN** - Low potential for temporary after-image.
- YELLOW** - Potential for temporary after-image.
- RED** - Potential for permanent eye damage.

The Appendix depicts the ForgeSolar results. As depicted in the graphical portions of these results, none of the colors are present and therefore, no potential for glare is predicted.

3.1 AIRPORT LANDING PATHS AND ATCTS

Glare is not predicted for planes landing at any of the 22 approach paths for the eight airports shown in **Figure 2** above. Glare is not predicted for the ATCTs located at the Ann Arbor Municipal Airport or the Willow Run Airport. Glare is not predicted for a helicopter hovering at 500 feet above the CMHS heliport.

3.2 ROADWAYS AND BUILDINGS LOCATED ADJACENT TO THE SOLAR ARRAYS

Glare is not predicted for drivers along the three roadways and one railroad analyzed (**Table 2**) adjacent to and near the Project for drivers with viewing heights of five feet (cars and small trucks)

² Rogers, J. A., et al. (2015). Evaluation of Glare as a Hazard for General Aviation Pilots on Final Approach, Federal Aviation Administration ([link](#))



or nine feet (semi-trucks) above ground. The viewing height for train engineers was assumed to be 15 feet. Glare is also not predicted for the 40 buildings (primarily residences) analyzed at 25-foot viewing heights for this Project, as shown in **Figure 3**.

4.0 CONCLUSIONS

Based on the solar array parameters provided, glare is not predicted for planes landing, or for observers in the two ATCTs at the eight airports and one heliport located within 10 miles of the project site. Glare is also not predicted for drivers of vehicles on three roadways and one railroad adjacent to or near the project site, at either five-foot (cars and small trucks) or nine-foot (semi-trucks) viewing heights, or 15-foot viewing heights for train engineers, nor for 40 buildings (primarily residences) with 25-foot viewing heights. All viewpoints were analyzed at five-foot, nine-foot, and 12-foot panel heights.

Based on this analysis, it is predicted the proposed Project does not have the potential for causing glare impacts on nearby airports or adjacent roadways and buildings.



Economic Impact of Solar Energy Project in Washtenaw County, MI

Commissioned by Railsplitter Solar, LLC, April, 2021



Ranger Power, a utility-scale solar developer, has proposed building a 120 megawatt solar project ("The Project") in Augusta and York Townships, Washtenaw County, Michigan. For the purposes of this analysis, Ranger Power assumed 50 megawatts of solar would be installed in York Township and 70 megawatts in Augusta Township. The Project will encompass approximately 1,600 acres of land primarily in agricultural use. The Project is currently seeking the necessary permits for the project and conducting community outreach. Ranger Power retained Anderson Economic Group to estimate the economic and fiscal impacts of the project.

Economic Impact

The Project represents an approximately \$130 million investment. Construction will create approximately 150 jobs in Michigan, many of which will be hired locally. Once complete, the Project's operations will create approximately two permanent solar operations jobs.

TABLE 1. Project Economic Drivers

Total Investment	\$130 million
Estimated Construction Jobs Created	150
Estimated Operations Jobs Created	2

Source: Anderson Economic Group analysis of base data from Railsplitter Solar, LLC.

The expenditures that will be made to build and operate the Project will recirculate throughout the local and state economies. As these expenditure recirculate, they will support additional indirect jobs and sales for Michigan businesses.

Fiscal Impact

The Project will generate sales and income tax revenue for the State of Michigan through construction and operations jobs. The earnings for these workers will be subject to state income tax, and a portion of the earnings will be spent on goods and services subject to state sales tax. The Project will also generate property tax revenue for local governments. The projected tax liability for the project is based upon current applicable millage rates at the time of this analysis, which are subject to change in the future. The projected first year tax liability for a project of this size is approximately \$1.36 million.

TABLE 2. Project Net Property Tax Liability, 2022

Washtenaw County ^a	Augusta Township	York Township ^b	Education ^c	Other Districts ^d	Total
\$349,776	\$23,914	\$47,761	\$922,845	\$13,624	\$1,357,920

Source: Anderson Economic Group analysis of base data from Railsplitter Solar, Washtenaw County Assessor, State of Michigan Tax Commission.

(a) County operating, parks and recreation, conservation, roads, veterans, and public safety

(b) Township operations and public safety.

(c) Milan and Lincoln area school debt, Washtenaw ISD, and Washtenaw Community College

(d) Huron-Clinton metropolitan authority and land preservation

The projected property tax liability for a project of this size in its tenth year of service is approximately \$550,000, including \$9,700 for Augusta Township and \$19,300 for York Township, assuming no change in millage rates or property tax laws.

About Anderson Economic Group

Anderson Economic Group is an economics and public policy consulting firm based in East Lansing Michigan. For more information, see www.AndersonEconomicGroup.com.



**Decommissioning Plan –
Railsplitter Solar II, Augusta
Charter Township, Washtenaw
County, Michigan**

May 17, 2021
Revised August 20, 2021

Prepared for:

Railsplitter Solar, LLC

Prepared by:

Stantec Consulting Services, Inc.
209 Commerce Parkway
Cottage Grove, Wisconsin 53527



**DECOMMISSIONING PLAN – RAILSPLITTER SOLAR II, AUGUSTA CHARTER TOWNSHIP,
WASHTENAW COUNTY, MICHIGAN**

This document entitled Decommissioning Plan – Railsplitter Solar II, Augusta Charter Township, Washtenaw County, Michigan was prepared by Stantec Consulting Services Inc. (“Stantec”) for the account of White Tail Solar, LLC along with Railsplitter Solar, LLC or its assets (the “Client”). The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

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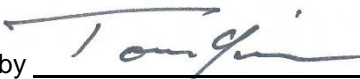
Matthew A. Clementi, PE

Sr. Project Manager

Reviewed by 
(signature)

JoAnne J. Blank, MS

Associate, Senior Scientist

Approved by 
(signature)

Tom Girman

Senior Environmental Project Manager



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1.0 INTRODUCTION

Railsplitter Solar, LLC, a subsidiary of Ranger Power, LLC (Ranger Power) is developing the Railsplitter Solar II Project (Railsplitter II, Railsplitter – Phase II, or the Project), on agricultural land in Augusta Charter Township, Washtenaw County, Michigan. Stantec Consulting Services Inc. (Stantec) has prepared this Large Solar Energy System (LSES) Decommissioning Plan (Plan) to describe the decommissioning phase of the Project. The Project is being developed near the western boundary of Augusta Charter Township northeast of Milan, Michigan.

The Project boundary encompasses approximately 243 acres of land within perimeter fencing. The maximum nameplate generating capacity of the Project will be approximately 44.42 megawatts (MW) alternating current (AC). Construction of the Project is planned to begin in 2021 with the Commercial Operation Date (COD) projected in 2022.

This Plan has been prepared in accordance with Augusta Charter Township Large Solar Energy System Ordinance (the “Ordinance”); Article 6.25, Sections B.12 and O. This Plan is applicable to the decommissioning/deconstruction and restoration phases of the Project. A summary of the components to be removed is provided in Section 1.1. A summary of estimated costs associated with decommissioning is included in Section 4.0.

During operation, maintenance and repair activities will include periodic inspections and performance assessments of the electrical and mechanical systems onsite. Activities include coatings touchup of metal enclosures and infrastructure, replacement of damaged PV modules, and vegetation management on an as-needed basis. The project will be remotely monitored and operated 24 hours per day, 365 days per year.

1.1 SOLAR PROJECT COMPONENTS

Major components of the Project covered under this Plan include (also see Figure 1):

- Solar panels and tracking system
- Foundations and steel piles
- In-string inverters
- Transformer stations
- Electrical cabling and conduits
- Site access and internal drives
- Perimeter fencing



1.2 DECOMMISSIONING SEQUENCE

The ground will be restored to its original topography, to the extent reasonably possible, within 12 months of abandonment or decommissioning. Restoration of the Project may extend beyond this period as more time may be required to monitor for successful revegetation and restoration. The general sequence of decommissioning and removal is described below; however, overlap of activities is expected:

- Prepare site for component removal;
- Install temporary erosion fencing and other best management practices (BMPs) to protect sensitive resources and control erosion;
- De-energize solar arrays;
- Dismantle panels and racking;
- Remove frame and internal components;
- Remove structural foundations or piles and backfill sites;
- Remove inverters;
- Remove transformers and skids;
- Remove above and below-ground electrical cables and conduits;
- Remove access and internal drives and grade areas, as needed or agreed upon with landowner;
- De-compact subsoils (as required), restore and revegetate disturbed land to pre-construction conditions to the extent practicable.



2.0 PROJECT COMPONENTS AND DECOMMISSIONING ACTIVITIES

Project components and decommissioning activities are further described within this section.

2.1 OVERVIEW OF SOLAR FACILITY SYSTEM

The Project will use bifacial, mono-crystalline solar modules, with a total nameplate generating capacity of approximately 44.42 MW_[AC]. The Railsplitter Solar II Project generating facilities will be placed within the 243 acres of potential land bounded by perimeter fencing as shown on Figure 1. The land within the perimeter fencing is predominantly agricultural land. Statistics and estimates provided in this Plan are based on a bifacial Boviet 540-watt module, although the final panel manufacturer has not been selected at the time of this report.

Project facilities, including modules, tracking system, foundations, steel piles, perimeter fencing, electric cabling and conduit will be removed. Access drives may be left in place if requested and/or agreed to by the landowner; however, for purposes of this assessment, all access drives are assumed to be removed (as described in Section 2.8). Public roads damaged or modified during the decommissioning and reclamation process will be repaired upon completion of the decommissioning phase. The Project will enter into an agreement with the Washtenaw County Road Commission to address any public road impacts or modifications required as part of the decommissioning process.

Estimated quantities of materials to be removed and salvaged or disposed of are included in this section. Many of the materials described have salvage value; although, there are some components that will likely have none at the time of decommissioning. All materials will be salvaged or recycled to the extent possible. All other waste materials will be disposed of in accordance with state and federal law in an approved licensed solid waste facility.

Solar panels will have value in a resale market, decreasing over time. For purposes of this report, salvage values only, not resale, were considered, as this is the more conservative estimate strategy.

Table 1 presents a summary of the major Project components included in this Plan.



**DECOMMISSIONING PLAN – RAILSPLITTER SOLAR II, AUGUSTA CHARTER TOWNSHIP,
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Table 1 Major Components of Solar Project to be Decommissioned

Component	Quantity	Unit of Measure
Solar Modules	97,318	Each
Tracking System (equivalent full trackers based on 78 panels per tracker)	1248	Tracker
Steel Piles (including trackers and inverter stations)	14,046	Each
Inverters (within arrays)	204	Each
Transformer Stations (on skids and piles)	19	Each
Underground Collection System	230,060	Linear Foot
Perimeter Fencing	29,530	Linear Foot
Access Drives (estimated)	13,890	Linear Foot

2.2 SOLAR MODULES

The Project is planning to use a bifacial monocrystalline silicon (mono-Si) panel (540 watt) from Boviet or other manufacturers for the Project. Each module assembly (with frame) has a total weight of approximately 60.41 pounds (27.4 kg). The modules will be approximately 90.0 by 44.6 inches (228.6 by 113.4 cm) in size and are mainly comprised of non-metallic materials such as silicon, glass, composite film, plastic, and epoxies, with an anodized aluminum frame.

At the time of decommissioning, module components in working condition may be refurbished and sold in a secondary market yielding greater revenue than selling as salvage material; however, for purposes of this report, only salvage value of the components is considered.

2.3 TRACKING SYSTEM AND SUPPORT

The solar modules will be mounted on a single-axis tracking system, such as those manufactured by Nevados. Each full tracker is approximately 96.3 meters (316.0 feet) in length and will support approximately 78 solar modules in single-portrait format. Smaller trackers will be employed at the edges of the layout, to efficiently utilize available space. The tracking system is mainly comprised of galvanized and stainless steel; steel piles that support the system are comprised of structural steel.

The solar arrays will be deactivated from the surrounding electrical system and made safe for disassembly. Lubricants will be removed and properly disposed of or recycled according to regulations current at the time of decommissioning. Electronic components, and internal electrical wiring will be removed and salvaged. The steel piles will be completely removed from the ground.

The supports, tracking system, and posts contain salvageable materials which can be sold to provide revenue to offset the decommissioning costs.



2.4 INVERTERS AND TRANSFORMER STATIONS

Railsplitter II is proposing to use the Sungrow SG250HX inverters, which will be located within the solar arrays; each mounted individually on a dedicated post. The transformers typically sit on a skid assembly mounted on steel pile foundations within the array. The inverters and associated equipment will be deactivated, disassembled and removed. Depending on condition, the equipment may be sold for refurbishment and re-use. If not re-used, they will be salvaged or disposed of at an approved solid waste management facility.

2.5 ELECTRICAL CABLING AND CONDUITS

The Project's underground electrical collection system will be installed at a depth greater than 36 inches, unless circumstances require a shallower installation depth. All below ground electrical cables and infrastructure, regardless of depth, will be removed from the Project area.

2.6 PROJECT SUBSTATION

Railsplitter Solar II will utilize a substation being constructed for the Railsplitter Solar I project; therefore, the cost of decommissioning will not be included in this Plan.

2.7 OPERATIONS AND MAINTENANCE BUILDING

The Project will utilize a building for operations and maintenance being constructed for the Railsplitter Solar I Project; therefore, no cost of decommissioning is included in this Plan.

2.8 PERIMETER FENCING, SITE ACCESS AND INTERNAL DRIVES

The Project site will include a perimeter fence for security. Railsplitter II has requested to install a seven-foot-high agricultural fencing consisting of wood posts and a wire mesh, as this design blends into the rural / natural surroundings while still providing site security. The perimeter fencing will be completely removed from the Project site during decommissioning.

Access drives will provide direct access to the solar facility from local roads. Internal drives will be located within the array to allow access to the equipment. The access and internal drives will total approximately 13,890 feet (2.63 miles) in length. The internal access drives will be approximately 12 feet wide and consist of compacted native soils. Width of access drives will be increased to 20 feet near public road entrances and will be constructed of an 8-inch-thick layer of aggregate base material. Access and internal drive lengths may change with final Project design. The estimated quantity of aggregate is provided in Table 2. To be conservative, the decommissioning estimate assumes that all access and internal drives will be completely removed.



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Table 2 Typical Access Drive Construction Materials at Public Road Entrance

Item	Quantity	Unit
Aggregate Base Course, 8-inch depth	247	Cubic Yards

Decommissioning activities include the removal and stockpiling of aggregate materials onsite for salvage preparation. Following removal of aggregate, the access drive areas near public road entrances will be graded, de-compacted with deep ripper or chisel plow (ripped to 18 inches), backfilled with native subsoil and topsoil, as needed. Internal access drives will be decompacted. All access drive areas will be graded to restore land contours as near as practicable to preconstruction conditions.



3.0 LAND USE AND ENVIRONMENT

3.1 SOILS AND AGRICULTURAL LAND

Areas of the Project that were previously utilized for agricultural purposes will be restored to a condition similar to their preconstruction condition and land use. Restored areas will be revegetated in consultation with the current landowner. Decommissioning activities will comply with regulations as stated in the current project permit and any environmental agency regulations in place at the time of decommissioning. Land disturbed by Project facilities will be restored in such a way to be used in a reasonably similar manner to its original intended use as it existed prior to Project construction.

3.2 RESTORATION AND REVEGETATION

Project areas that have been excavated and backfilled will be graded as previously described to restore land contours as near as practicable to preconstruction conditions. The current site terrain is relatively flat. Soils compacted during decommissioning activities will be de-compacted, as necessary, to restore the land to pre-construction conditions. If present, drain tiles that have been damaged will be repaired or replaced to pre-construction condition.

3.3 SURFACE WATER DRAINAGE AND CONTROL

The Project area is predominantly located in active agricultural land. The terrain is relatively flat. The Project facilities have been sited to avoid wetlands and waterways to the extent practicable. The existing Project site conditions and proposed BMPs to protect surface water features will be detailed in a Stormwater Pollution Prevention Plan (SWPPP) for the Project prior to the commencement of construction activities.

Surface water conditions at the Project site will be reassessed prior to the decommissioning phase. Railsplitter II will obtain the required water quality permits if needed, before decommissioning of the Project. Construction storm water permits will also be obtained and a SWPPP prepared describing the protections needed reflecting conditions present at the time of decommissioning. BMPs may include: construction entrances, temporary seeding, permanent seeding, mulching (in non-agricultural areas), erosion control matting, silt fence, filter berms, and filter socks.

3.4 MAJOR EQUIPMENT REQUIRED FOR DECOMMISSIONING

Equipment required for the decommissioning activities is similar to what is needed to construct the solar facility and may include, but is not limited to: small cranes, low ground pressure (LGP) track mounted excavators, backhoes, LGP track bulldozers, LGP off-road end-dump trucks, front-end loaders, deep rippers, water trucks, disc plows and tractors to restore subgrade conditions, and ancillary equipment. Standard dump trucks will be required to transport material removed from the site to disposal facilities.



4.0 DECOMMISSIONING COST ESTIMATE SUMMARY

Expenses associated with decommissioning the Project will be dependent on labor costs at the time of decommissioning. For the purposes of this report approximate 2020-2021 average market values were used to estimate labor expenses. Fluctuation and inflation of the labor costs were not factored into the estimates.

The value of the individual components of the solar facility will vary with time. In general, the highest component value would be expected at the time of construction with declining value over time. During most of the operational period, components such as the solar panels could be sold in the wholesale market for reuse or refurbishment. As panel efficiency and power production decrease due to aging and/or weathering, the resale value will decline accordingly. Secondary markets for used solar components include other utility scale solar facilities with similar designs that may require replacement equipment due to damage or normal wear over time; or other buyers (e.g., developers, consumers) that are willing to accept a slightly lower power output in return for a significantly lower price point when compared to new equipment.

4.1 DECOMMISSIONING RISK DURING PROJECT OPERATION

The probability of an event that would lead to abandonment or long-term interruption is extremely low during the first 10 to 15 years following the Project's construction. Accordingly, the risk of decommissioning the Project is extremely low during this time frame. The reasons why the risk to decommission the Project is extremely low in the early phases of the Project include, but are not limited to:

- Project owners have sophisticated financing structures that allow the lender or tax equity partner to step in and rectify the event that may lead to abandonment.
- Most critical solar components have original equipment manufacturer (OEM) warranties with terms in excess of five years that include labor and parts. A warranty is an agreement or guarantee outlined by a manufacturer to a customer that defines performance requirements for a product or service. Warranties give customers a form of insurance if the purchased product or service does not adhere to quality standards. These warranties assure the project owner, financing parties, and other stakeholders, that equipment will perform as expected which minimizes the risk of a decommissioning event. Average warranty lengths for critical solar components range from 5 to 10 years, with production warranties on solar panels extending to 20 to 25 years.
- Solar projects consist of many networked components designed to convert solar radiation into electrical energy. The failure of any single component will not result in a substantial reduction of energy generation that could lead to a decommissioning event.



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- Solar projects are required to maintain replacement value property damage insurance coverage and business interruption insurance coverage. Business interruption insurance covers the loss of income that a business suffers after a disaster or equipment failure. Typical solar business interruption insurance covers income loss for twelve months from the date of the event triggering the loss.
- The replacement costs of solar components will typically decline over time, and accordingly, costs to replace failed or damaged equipment after lapsed OEM warranties will not create large financial hurdles for the Project.

Solar power is an increasingly popular form of renewable energy around the world. Recent rises in popularity and use can be linked to low installation and operation costs and it is expected that this pattern will continue into the future, further reducing the risk of a decommissioning event.

4.2 DECOMMISSIONING RISKS OVER TIME

As previously noted, the probability of a decommissioning event that would lead to abandonment or long-term interruption is extremely low during the first 15 to 20 years of the Project's operation and accordingly, the financial risk to decommission the Project is also extremely low. The risk analysis is presented here for informational purposes only and has not been considered in the final decommissioning cost estimates presented in this Plan.

It is important to note that there are two aspects to consider in evaluating the risk for decommissioning the Project: the risk of the need to decommission the Project as a whole (Project termination risk), and the risk of failing to recuperate the cost of the decommissioning activities (decommissioning funding). The most important concern for the Township is the ability to recuperate the cost of decommissioning and restoration of the land to pre-Project conditions.

The financial value of the Project or equipment in the early years would far exceed the cost of the decommissioning and restoration activities.

The factors taken into consideration in estimating the risk include, but were not limited to:

- Years 1-5 – Nearly no Project termination or financial risk, value of components, component warranties, value of facility as a whole.
- Years 5-10 – Minimal Project termination risk, value of components, component warranties, value of facility as a whole; however, some increased financial risk due to the decrease in resale value of used components and rise in technological improvements of new equipment in market.
- Years 10-15 – Similar consideration of previous period, with slightly increased risk as warranties start to expire. Value of equipment is still substantial but decreasing.
- Years 15-20 – Warranties continue to expire; value of equipment diminishes with age and technological improvements in market.



DECOMMISSIONING PLAN – RAILSPLITTER SOLAR II, AUGUSTA CHARTER TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

- Years 20 and beyond – Project termination and funding risks increase, value of equipment diminishes, and technological improvements in market. A rise in salvage value of removed equipment is expected due to diminishing natural resources and improvements in the efficiency of recycling/extraction technologies.

4.3 DECOMMISSIONING EXPENSES

Project decommissioning will incur costs associated with disposal of components not sold for salvage, including materials which will be disposed of at a licensed facility, as required. Table 4 summarizes the estimates for activities associated with the major components of the Project. The total estimated decommissioning cost in Table 3 also covers costs for backfilling, grading and restoration as described in Section 2.

Table 3 Estimated Decommissioning Expenses

Activity	Unit	Quantity	Cost per Unit	Total
Overhead and management (includes estimated permitting required)	Lump Sum	1	\$175,000	\$175,000
Contingency (5% of Project cost)	Lump Sum	1	\$96,000	\$96,000
Solar modules; disassembly and removal*	Each	97,318	\$4.00	\$389,272
Tracking system disassembly and removal (equivalent full trackers; includes above-ground electrical cabling)	Each	1,248	\$620	\$773,760
Steel pile/post removal (includes piles for inverter stations)	Each	14,046	\$9.70	\$136,246
Inverter (in-string)	Each	204	\$550	\$112,200
Transformer stations	Each	19	\$1,100	\$20,900
Below-ground electrical cabling	Lineal Feet	230,060	\$0.40	\$92,024
Access drive excavation and removal (aggregate only)	Lump Sum	1	\$1,144	\$1,144
Perimeter fence removal	Lineal Feet	29,530	\$2.80	\$82,684
Topsoil replacement and rehabilitation of site	Lump Sum	1	\$147,700	\$147,700
Total Estimated Decommissioning Cost				\$2,026,930

* Cost of equipment removal would be higher if retaining for resale rather than salvage; however, the increased revenue would offset the added costs.

4.4 DECOMMISSIONING REVENUES

Revenue from decommissioning the Project will be realized through the sale of the solar facility components and construction materials. As previously described, the value of the decommissioned



DECOMMISSIONING PLAN – RAILSPLITTER SOLAR II, AUGUSTA CHARTER TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

components will be higher in the early stages of the Project and decline over time. Resale of components such as solar panels is expected to be greater than salvage (i.e., scrap) value for most of the operations phase.

Modules and other solar plant components can be sold within a secondary market for re-use. A current sampling of reused solar panels indicates a wide range of pricing depending on age and condition (\$0.10 to \$0.40 per watt). Future pricing of solar panels is difficult to predict at this time, due to the relatively young age of the market, changes to solar panel technology, and the ever-increasing product demand. A conservative estimation of the value of solar panels at \$0.10 per watt would yield approximately \$5,255,000. Increased costs of removal, for resale versus salvage, would be expected in order to preserve the integrity of the panels; however, the net revenue would be substantially higher than the estimated salvage value.

The resale value of components such as trackers, may decline more quickly; however, the salvage value of the steel that makes up a large portion of the tracker is expected to stay at or above the value used in this report.

The market value of steel and other materials fluctuates daily and has varied widely over the past five years. Salvage value estimates were based on an approximate five-year-average price of steel and copper derived from sources including on-line recycling companies and United States Geological Survey (USGS) commodity summaries. The price used to value the steel used in this report is \$204 per metric ton (with allowance for freight); aluminum at \$0.40 per pound; silicon at \$0.40 per pound and glass at \$0.05 per pound. The main component of the tracking system and piles is assumed to be salvageable steel. Solar panels are estimated to contain approximately 75 percent glass, 8 percent aluminum and 5 percent silicon. A 50 percent recovery rate was assumed for aluminum and all panel components, due to the processing required to separate the panel components. Alternative and more efficient methods of recycling solar panels are anticipated before this Project is decommissioned, given the large number of solar facilities that are currently being developed. Table 4 summarizes the potential salvage value for the solar array components and construction materials.

Table 4 Estimated Decommissioning Revenues

Item	Unit of Measurement	Quantity per Unit	Salvage Price per Unit	Total Salvage Price per Item	Number of Items	Total
Panels - Silicon	Pounds per Panel	1.5	\$0.40	\$0.600	97,318	\$58,391
Panels - Aluminum	Pounds per Panel	2.4	\$0.40	\$0.960	97,318	\$93,425
Panels - Glass	Pounds per Panel	22.7	\$0.05	\$1.135	97,318	\$110,456
Tracking System and Posts	Metric tons per MW _[DC]	43.2	\$204	\$8,812.80	52.55	\$463,113



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Item	Unit of Measurement	Quantity per Unit	Salvage Price per Unit	Total Salvage Price per Item	Number of Items	Total
Total Potential Revenue						\$725,385

* Revenue based on salvage value only. Revenue from used panels at \$0.10 per watt could raise \$5,255,000 as resale versus the estimated salvage revenue.

4.5 DECOMMISSIONING COST SUMMARY AND FINANCIAL ASSURANCE

The following is a summary of the net estimated cost to decommission the Project, using the information detailed in Sections 4.1 and 4.3. Estimates are based on average 2021 prices, with no market fluctuations or inflation considered.

Table 5 Net Decommissioning Summary

Item	Cost/Revenue
Decommissioning Expenses	\$2,026,930
Potential Revenue – salvage value of panel components and recoverable materials	\$725,385
Net Decommissioning Cost	\$1,301,545

4.6 FINANCIAL ASSURANCE

Railsplitter II will post decommissioning security in the amount and manner provided in a decommissioning agreement with the Township. The Financial Assurance value over the Project's operations period has been calculated and shown in Table 7, considering the estimated risk of funding the decommissioning (i.e., multiplying the net estimated removal cost by the percent risk at each milestone year [1, 5, 10, 15, and 20]). For example, the proposed total Financial Assurance Requirement in Year 10 is:

$$30\% \text{ (Decommissioning Funding Risk)} \times \$1,301,545 \text{ (Net Estimated Decommissioning Cost)} \\ = \$390,464 \text{ (Financial Assurance Requirement)}$$

Note that the decommissioning funding risk uses a “one percent” as the lowest risk; however, the financial value of the Project or equipment in the early years of the Project would far exceed the cost of the decommissioning and restoration activities and provide a net revenue to the Township.



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Table 6 Financial Assurance Summary

Decommissioning Funding Risk	Project Year	Net Estimated Costs¹	Financial Assurance Requirement²
1% Decommissioning Risk	Year 1	\$1,301,545	\$13,015
10% Decommissioning Risk	Year 5	\$1,301,545	\$130,155
30% Decommissioning Risk	Year 10	\$1,301,545	\$390,464
50% Decommissioning Risk	Year 15	\$1,301,545	\$650,773
100% Decommissioning Risk	Year 20	\$1,301,545	\$1,301,545

¹ Net Estimated Cost (decommissioning expense minus revenue) assumes a worst-case scenario of salvage value only. This is an unlikely scenario during the early stages of the Project, when resale value of the facility and the components is high.

² Financial assurance is calculated multiplying the Decommissioning Funding Risk (percent) times the Net Estimated Cost.



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Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: June 30, 2021

Revised: September 7, 2021

Special Land Use and Preliminary Site Plan For Augusta Township, Michigan

Applicant:	Railsplitter Solar, LLC – Paul Harris
Project Name:	Railsplitter #2
Plan Date:	August 23, 2021
Location:	North of Arkona Road, east of Sanford Road, south of Talladay Road, west of Hitchingham Road (355 acres)
Zoning:	AR, Agricultural Residential / LI, Limited Industrial
Action Requested:	Special Land Use Approval
Required Information:	As noted in review.

PROJECT AND SITE DESCRIPTION

The applicant is proposing to construct a large solar electricity generation facility in the southwest portion of the Township adjacent to the previously approved Railsplitter #1 (formerly Sugar Creek Solar project) encompassing approximately 355 acres of land (10 properties and 3 properties for transmission collector lines only) that are zoned AR, Agricultural Residential and LI, Limited Industrial. The project is being developed by Ranger Power, LLC.

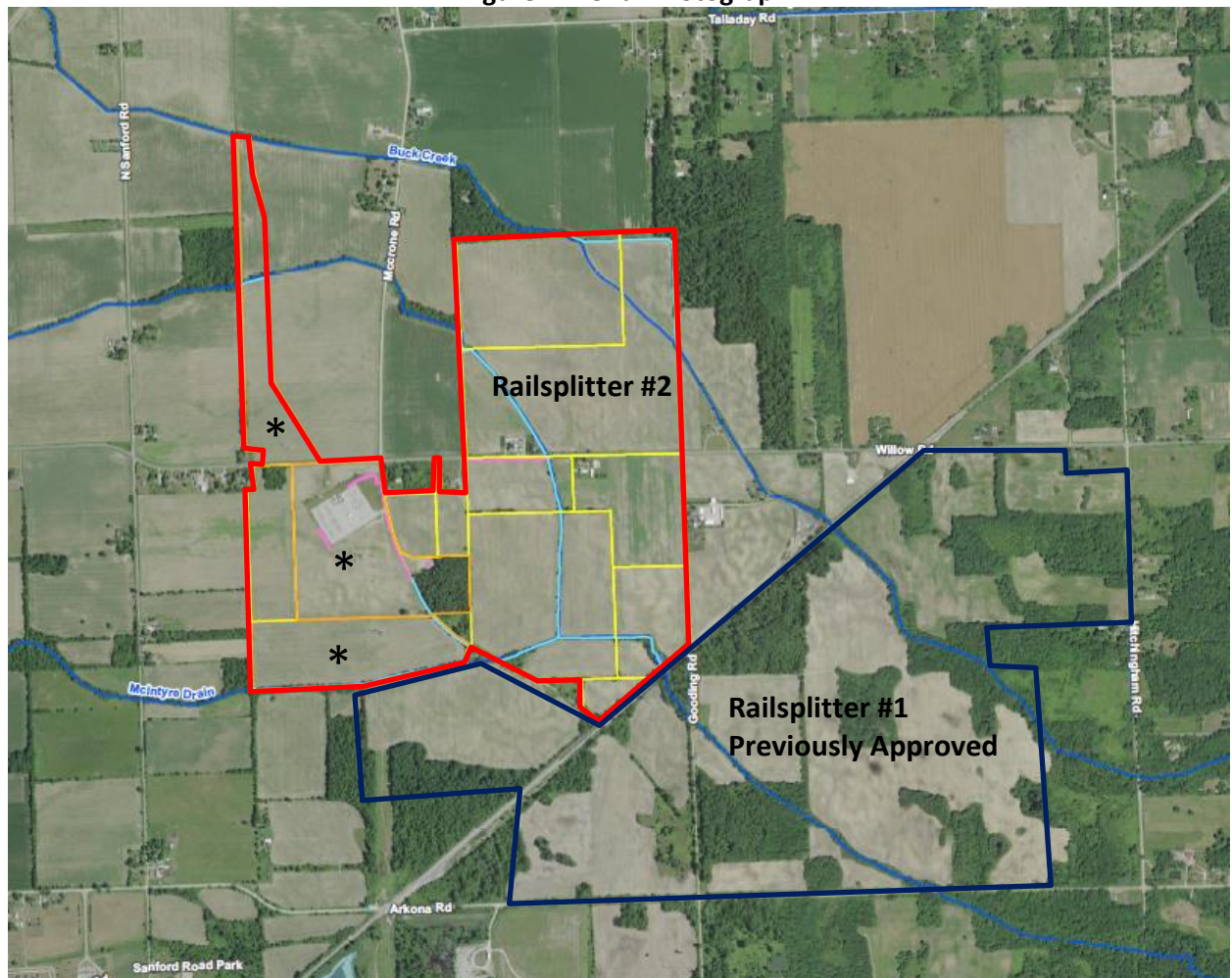
The proposed large solar energy system is described by the applicant as a 33.75-megawatt photovoltaic solar energy generating facility consisting of hundreds of solar panels organized in several photovoltaic (PV) areas. The solar panels are demonstrated to rotate independently toward the sun. The maximum height (at perpendicular setting) is shown at 15 feet from grade. The site layout was developed to optimize

the solar resource while minimizing impacts on natural resources and potentially sensitive areas. The topography of the site and existing natural resources dictate solar array placement. Wetlands and floodplains located on participating parcels have been excluded from PV areas/development areas and a minimum 25-foot buffer will be maintained around all wetlands and floodplains with the exception of a minor wetland impact for the purpose of collection line boring beneath the wetland(s). The intent of the project design is to place solar arrays and associated infrastructure primarily on undeveloped, open fields.

We note the applicant states they have acquired the necessary rights to develop, construct, and operation a large-scale solar facility. These rights are by easement agreement or by purchase agreement. Landowner signatures are provided as part of the special land use application. The applicant anticipates that project construction will begin in 2022, with a planned operation date in 2023.

A recent Zoning Ordinance Text Amendment approved by both the Planning Commission and the Township Board added Large Solar Energy Systems as a special land use in in the AR, Agricultural Residential zoning district.

Figure 1. Aerial Photograph



*These properties will be utilized for transmission connections only – no photovoltaic panels.

This special land use application is the second step undertaken by the applicant as part of the Township's 4-step review process. The applicant has also submitted a preliminary site plan application (third step) to be reviewed concurrently with special land use review. The preliminary site plan information is contained in its own section of this report. The applicant has applied for preliminary site plan at their own risk, as special land use approval is needed before preliminary site plan approval can be granted. A final site plan will be required to be submitted for review after preliminary site plan approval and all outside agency approvals have been granted.

1. Pre-Application Conference: The applicant's pre-application conference with the Planning Commission was conducted at the November 18, 2020, meeting.
2. Special Land Use Review: **Currently under review.**
3. Preliminary Site Plan Review: **Currently under review.**
4. Final Site Plan Review: As outlined in Section 11.3.C.

MODIFICATIONS SINCE LAST SUBMITTAL

In addition to the revised materials submitted for review, we asked the applicant to provide a listing of modifications made as part of the revised submittal. This information was provided via email from Sergio Trevino on Monday, August 30, 2021, and has been included in the digital agenda packet.

As provided, we note the following substantive revisions as noted by the applicant to this submittal for review:

- Increased 500-foot setback from the project to adjacent, non-participating residences as requested by the Planning Commission.
- Information regarding how the project will meet the Michigan Department of Agriculture and Rural Development's (MDARD) PA 116 solar project program criteria.
- Removal of references to "White Tail Project" throughout application documents.
- A modified glare study based on the 500-foot setback.
- A revised decommissioning plan and cost estimate to provide for full removal of all project equipment, including electric lines buried deeper than three (3) feet, as requested by the Planning Commission.

LAND USE, ZONING, AND MASTER PLAN DESIGNATIONS

The zoning, land use and Master Plan designations of the subject site and surrounding properties is provided in Table 1, below:

Table 1
Zoning, Land Use and Master Plan Designations

	Subject Property	North	South	East	West
Zoning	AR	AR	AR/LI	AR	AR/York Township
Land Use	Vacant	Vacant	Vacant	Vacant/ Residential	Vacant /York Township

Master Plan	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture/York Township
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The subject site and the surrounding area are mainly vacant farmland with sparse rural residential home sites. The entire project area is classified as Agricultural on the Future Land Use Map. The Agricultural future land use category is intended to protect existing agricultural land uses, maintain rural character, minimize population density and preserve open spaces.

The Agriculture land use classification coincides with the AG, Agricultural zoning district. There are no properties zoned AG in the Township at this time. The agricultural future land use category is located in areas of the Township where public utilities are not present and soil suitability for septic systems may be poor. These factors limit potential development. The most compatible uses are listed as: farming operations and similar uses of land; low-density clustered single-family residential development with open space; single-family residential on 5-acre parcels or larger; landscape features such as orchards, out-buildings, such as silos and barns, fences, and sound farm structures; and scenic views consisting of natural features.

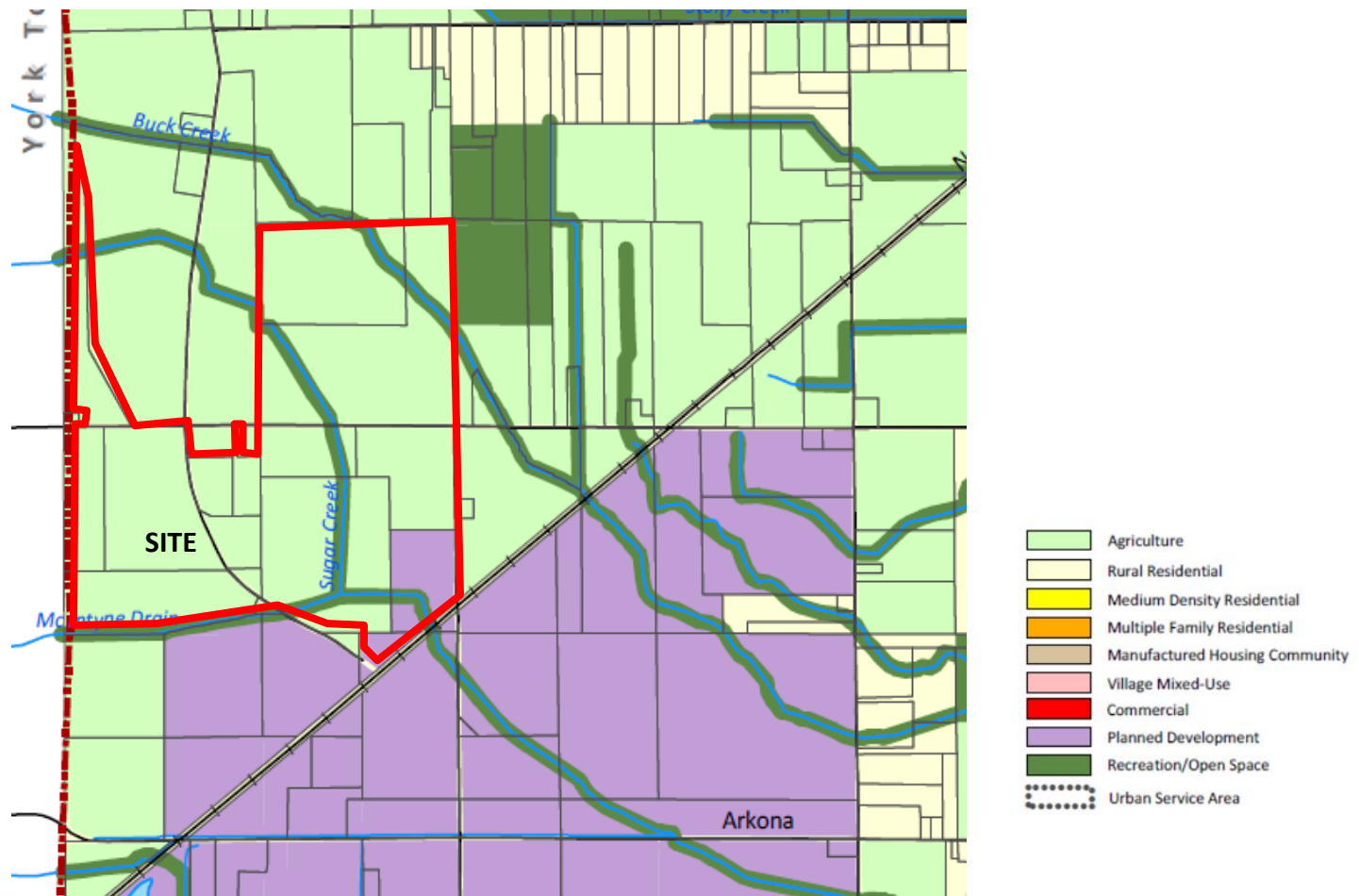
Additionally, we note the subject site is primarily designated as prime agricultural soils by the farmland classification map and a number of properties taking part in the project have been approved as P.A. 116 properties designated by the State of Michigan. The Michigan Department of Agriculture allows for solar facilities on P.A. 116 properties when certain criteria are met. The applicant has outlined the MDARD Policy for Allowing Commercial Solar Panel Development on PA 116 lands as part of their modified cover letter and in Section O of their application.

The conditions under which solar energy generation is allowed on land in the P.A. 116 program are described in summary below:

- The landowner must amend the Farmland Development Rights Agreement with MDARD to extend the term for a period equal to the amount of time the land is used for solar energy generation plus the remaining term of the Farmland Development Rights Agreement. This results in no net change in the length of the Farmland Development Rights Agreement.
- Tax credits cannot be claimed from the start of construction of the solar facility until the removal of solar panels and related structures. The past 7 years of tax credits are calculated at the time of the Amended Farmland Development Rights Agreement is record and held by the State unit the land is returned to agricultural production. If the landowner leaves the Farmland Development Rights Program at any time while the land is used for a solar facility, the calculated 7 years of tax credits is payable to the state.
- The solar facility site must be planted to achieve and maintain a score of at least 76 on the Michigan Pollinator Habitat Planning Scorecard for solar sites.
- Portions of the site not included in pollinator plantings must maintain U.S. Department of Agriculture – Natural Resource Conservation Service Consideration Cover Standard 327.
- Financial security sufficient to ensure the solar facility is decommissioned and the land returned to agricultural use must be provided and maintained for the period the solar facility is in use.

- The solar facility must be established and maintained in a manner that ensures the land is returned to agricultural use after the solar facility is decommissioned, including maintaining drainage infrastructure.
- The land is returned to agricultural use after decommissioning and remains submit to the Farmland Development Rights Agreement. Decommissioning must be completed in time for normal agricultural operations the following season.

Figure 2- Future Land Use Map



Project Area

While not specifically listed as a compatible use, a large-scale solar facility is a low-impact use that once removed the properties can be reactivated for farming operations.

Items to be Addressed: Planning Commission to determine compatibility of large-scale solar facility use with the Master Plan.

SPECIAL USE CONSIDERATIONS – BASIS OF DETERMINATIONS

Section 4.4 describes the information the Planning Commission shall review for each individual case and make findings of fact relative to the following criteria:

- A. *Will be harmonious and in accordance with the general objectives or any specific objectives of the Augusta Charter Township Master Plan.*

CWA Comment: As mentioned in the previous section, the proposed large solar energy facility while not specifically listed, may be considered compatible with the Augusta Township Master Plan objectives which envisions the subject site and the surrounding area.

Specific goals and objectives related to the proposed large solar energy facility in the Master Plan include:

- Preserve the rural character of Augusta Township through the management of growth and preservation of natural resources and active farming.
- Protect the environment and the Township's natural resources.
- Provide the highest quality public facilities and services possible at an affordable rate for the residents of Augusta Township.

Properties along the north, east, and west of the site are primarily agricultural / environmentally sensitive properties with some single-family residential neighbors. This type of use is of extremely low intensity in terms of other uses. By comparison, residential development in this area would increase traffic, require additional Township services, and remove this area from farming production. The proposed solar facility will not generate traffic after the construction period, nor any Township services. The use can also be removed, and farming operations may return after the life of the solar facility has ended.

Further, the applicant has provided for 500-foot setbacks from the project to adjacent, non-participating residences as requested by the Planning Commission, and noted areas where additional landscape screening will be installed. These landscape areas are primarily along both sides of Willow Road; behind the two (2) non-participating parties along Willow Road; across from the non-participating residence across Gooding Road, and at the Arkona and McCrone Roads intersection screening non-participating residences at this location.

Based on this information, the Planning Commission will need to determine if the proposed use of the subject site as a large solar energy facility is harmonious and in accordance with the Augusta Charter Township Master Plan.

- B. *Will be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity and will not change the essential character of the area.*

CWA Comment: The applicant has provided a preliminary site plan demonstrating locations of where proposed solar arrays will be erected as well as areas to remain in a natural state, and buffer/screening areas where the solar arrays will be located adjacent to neighboring single-family residences. The applicant notes in their application solar farms are a low-intensity use and will be operated, maintained, and managed as such.

- C. *Will not be hazardous or disturbing to existing or future nearby uses.*

CWA Comment: The large solar energy facility is a low-intensity use which will be harmonious with the surrounding agricultural and single-family residential uses.

- D. *Will be an improvement in relation to property in the immediate vicinity and to the Township as a whole.*

CWA Comment: The proposed large solar energy facility will bring tax base to the Township while also providing an alternative source of energy to the community and potentially the region. The nature of the facility is very low intensity requiring only maintenance and minor operational management after construction. Additionally, once the facility's useful life is over, the equipment can be removed, and farming activities can be reactivated.

- E. *Will be served adequately by essential public services and facilities or that the persons responsible for the establishment of the proposed use will provide adequately for any such service or facility.*

CWA Comment: No water or sewer facilities are required due to the nature of the project. The developer will work with the local emergency service providers for any additional training to serve this facility at the developer's cost. The developer will also construct the necessary infrastructure to connect the proposed project to the power grid.

- F. *Will not create excessing additional public costs and will not be detrimental to the economic welfare of the Township.*

CWA Comment: See CWA comments above. Additionally, the applicant has noted the project will not be detrimental to the economic welfare of the Township. The fees paid by the project will cover any additional expenses for reviews and inspections during the planning and construction phases. Once operational, the project will generate a tax base higher than the existing agriculture use, and proportionally greater than any additional requirements of the Township's resources.

- G. *Will be consistent with the intent, purposes, and specifications of this Ordinance.*

CWA Comments: As part of this special land use review, and future corresponding site plan review submittals, CWA will ensure compliance with the large solar energy system standards as outlined in Section 6.25.

The Planning Commission shall not approve any Large Solar Energy System Special Land Use Permit unless it finds that all of the general standards for Special Land Uses listed above have been met.

Items to be Addressed: *Planning Commission to determine if all general standards applying to special land uses has been met.*

SPECIFIC USE STANDARDS

Section 6.25 outlines specific standards for large solar energy systems in applying for special land use and site plan approvals. The following information is specifically required in review of large solar energy systems special land use applications:

Site Plan and Supporting Materials: All applications for a Large Solar Energy Systems use must be accompanied by detailed site plans, drawn to scale and dimensioned and certified by a registered engineer licensed in the State of Michigan, displaying the following information:

1. All requirements for a site plan contained in Article 11 of the Augusta Charter Township Zoning Ordinance.

CWA Comment: As presented, the site plan contains all information required in Section 11.3.B.2.

2. All lot lines and dimensions, including a legal description of each lot or parcel comprising the Large Solar Energy System.

CWA Comment: All lot lines and dimensions are provided on Sheet PRP of the preliminary site plan.

3. Names of owners of each lot or parcel within Augusta Charter Township that is proposed to be within the Large Solar Energy System.

CWA Comment: This information has been provided.

4. Vicinity map showing the location of all surrounding land uses.

CWA Comment: A Vicinity Map is provided on the cover page of the preliminary site plan (Appendix D).

5. Location and height of all proposed Solar Array(s) buildings, structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities associated with a Large Solar Energy System.

CWA Comment: The location of all proposed arrays, structures, transmission lines, etc. have been provided on the preliminary site plan. The height of proposed site elements is proposed on various on the last page of the site plan (Sheet D-300 - Appendix D) and include maximum height of arrays – 15 feet; fence height – 7 feet; and maximum height of inverter station – 15 feet.

6. Horizontal and vertical (elevation) to scale drawings with dimensions that show the location of the proposed Solar Array(s), buildings, structures, electrical tie lines and transmission lines, security fencing and all above ground structures on the property.

CWA Comment: The general location of all planned facilities are shown on the concept plan provided, as are cross-section elevations of all proposed structures and drives.

7. Location of all existing and proposed overhead and underground electrical transmission or distribution lines within the Large Solar Energy System and within 100 feet of all exterior property lines of the Large Solar Energy System.

CWA Comment: An electrical line connections are provided on the preliminary site plan.

8. Proposed setbacks from the Solar Array(s) to all existing and proposed structures within the Large Solar Energy System.

CWA Comment: The required 50-foot required setback from property lines is depicted on the various plan sheets. We note in many cases, the actual distance to the perimeter fence and proposed panels is much greater than the required 50 feet; however, actual distances have not been provided. Distances from existing residential structures adjacent to the project area are also provided. A 75-foot setback is required from all existing residential structures. As noted previously, all setbacks from non-participating residences have been increased to 500 feet as requested by the Planning Commission. All participating residences are shown to be the minimum 75-foot from the project area as well; however, setback distances from all residences are not included on the site plans.

9. *Land elevations for the Solar Array(s) location and the relationship to the land elevations of all existing and proposed structures within the Large Solar Energy System at a minimum of 5-foot contours.*

CWA Comment: Topographic information has been provided as required on the site plan supplied with the special land use application.

10. *Access driveways within and to the Large Energy Solar Energy System, together with a detailed narrative regarding dimensions, composition, and maintenance of each proposed driveway. All access drives shall be subject to Washtenaw County Road Commission approval, and shall be planned so as to minimize the use of lands for that purpose.*

CWA Comments: The site will be accessed at a number of locations along McCrone, Willow and Gooding Roads. Information related to maintenance of the drives has been included in the applicant's submittal – see #12 below. Further, approval of drive placement by the Washtenaw County Road Commission is required prior to final site plan approval by the Planning Commission.

A cross-section of the access road(s) is provided in Appendix D demonstrating a 20-foot-wide access entry with 12-foot-wide access drives to be gravel surfaced throughout the site. Further review of the proposed construction of the access drives will be undertaken during site plan review. We defer further comment on the access entry and drives to the Township Engineer.

11. *Planned security measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Large Solar Energy System.*

CWA Comment: The applicant has demonstrated the site will be completely enclosed by perimeter security fencing to restrict unauthorized access. Their application narrative notes, "Railsplitter Solar II has designed the Project to conform with applicable industry safety standards to minimize hazards to adjacent properties, roadways, and the general public. Access to the Project arrays and substation will be restricted by perimeter seven-foot fencing and locked gates. Electricity generated by the arrays will be transmitted to the Project substation, which is being permitted separately under Special Land Use Permit SLU-16-01, through buried collector lines. Electricity from the project substation will be transferred to the power grid through an overhead transmission system. As noted, above, the overhead electric line connecting the project substation to the power grid is permitted as an essential service under Section 5.18 of the Augusta Charter Township Zoning Ordinance and is identified here and in the Preliminary Site Plan for informational purposes only."

12. *A written description of the maintenance program to be used for the Solar Array and other components of the Large Solar Energy System, including decommissioning and removal. The description shall include*

maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Large Solar Energy System is decommissioned.

CWA Comment: The applicant notes the following related to maintaining the facility: “Aside from snow plowing, conducted as needed, little to no additional road maintenance is anticipated for the all-weather gravel access roads within the project. Project equipment and components have been designed to be very low maintenance. If repairs to the Project are required, Railsplitter Solar II will utilize a Professional Engineer to certify the safe continued operation of the facility. Railsplitter Solar II will consult with the Township to determine the appropriate documentation is provided.” A decommissioning plan is provided in Appendix G as required.

We note the decommissioning plan has been revised to include the removal of all equipment, including electric lines buried deeper than three (3) feet as requested by the Planning Commission. The Township Engineer has recommended that the decommissioning plan be reviewed by a registered municipal financial consultant.

13. Planned lightning protection measures.

CWA Comment: The applicant notes, “the solar arrays are self-grounded, and the facility will be developed according to all National Electrical Safety Code (NESC) and industry standards.”

Height. *Maximum height of a Solar Array, the collection device, components, or buildings of the Large Solar Energy System, excluding substation and electrical transmission equipment, shall not exceed fifteen (15) feet (as measured from the natural grade at the base of improvements) at any time or location on the property. Substation and electrical transmission equipment shall not exceed one hundred (100) feet.*

CWA Comments: The applicant notes that the inverters and self-powered tracking equipment proposed for the project will not exceed 15 feet at maximum tilt. Detailed cross-sections with typical and maximum heights are provided in the application materials. The heights of all structures will need to be confirmed during site plan review.

Lot Size. *A Large Solar Energy System shall be located on one or more parcels with an aggregate area of ten (10) acres or greater.*

CWA Comment: The proposed subject site encompasses approximately 355 acres.

Setbacks. *A minimum setback distance of fifty (50) feet from all exterior property lines of the Large Solar Energy System and existing public roads and railroad rights-of-way shall be required for all buildings and Solar Arrays, provided that a setback of seventy-five (75) feet shall be required adjacent to any residential structure.*

CWA Comment: Required 50-foot setback dimensions from property lines and 75-foot setbacks from residential structures are shown on the preliminary site plan. As noted previously, all setbacks from non-participating residences have been increased to 500 feet as requested by the Planning Commission. All participating residences are shown to be the minimum 75-foot from the project area as well; however, setback distances from all residences are not included on the site plans.

Screening / Security. *A Large Solar Energy System shall be completely enclosed by perimeter security fencing to restrict unauthorized access. Such fencing shall be six (6) feet in height with a one (1) foot extension arm consisting of a minimum of three (3) strands of barbed-wire placed above the fencing and slanting outward as measured from the natural grade of the fencing perimeter. The perimeter of Large Solar Energy Systems shall also be screened and buffered by installed evergreen or native vegetative plantings whenever existing natural vegetation does not otherwise reasonably obscure the Large Solar Energy System from adjacent residential structures, subject to the following:*

The evergreen or native vegetative buffer shall be composed of native or evergreen trees that at planting shall be a minimum of four (4) feet in height and shrubs two (2) feet in height. The evergreen trees shall be spaced no more than fifteen (15) feet apart on center (from the central trunk of one plant to the central trunk of the next plant), native trees shall be placed no more than thirty (30) feet apart on center and shrubs shall be spaced no more than seven (7) feet apart on center. All unhealthy (sixty percent (60%) dead or greater) and dead material shall be replaced by the applicant within one (1) year, or the next appropriate planting period, whichever occurs first.

CWA Comment: The applicant is proposing to install a perimeter fence around the PV areas and substation facilities that is 7-feet tall. A 7-foot-tall deer fence is proposed as detailed in Appendix D. The applicant is requesting the Planning Commission consider modifying the fencing requirement outlined in Section 6.25.J. in accordance with Section 6.25.R. Section 6.25.R. allows for the Planning Commission to consider reasonable conditions and modifications that are in relation to and consistent with the nature of the applicable or adjacent zoning districts. The applicant notes they believe the deer fence is more compatible with the rural setting and provides sufficient security. Further, they note screening and landscaping in areas where existing natural vegetation does not otherwise reasonably obscure the facility from adjacent residential areas will be provided. These landscape areas are primarily along both sides of Willow Road; behind the two (2) non-participating parties along Willow Road; across from the non-participating residence across Gooding Road, and at the Arkona and McCrone Roads intersection screening non-participating residences at this location.

Signage. *No advertising or non-project related graphics shall be on any part of the Solar Arrays or other components of the Large Solar Energy System. This exclusion does not apply to entrance gate signage or notifications containing points of contact or any and all other information that may be required by authorities having jurisdiction for electrical operations and the safety and welfare of the public.*

CWA Comment: The applicant states the signage will be installed identifying appropriate contact information and facility ownership at access points and on perimeter fencing. Further noting that signage will be installed per applicable code requirements and will provide adequate safety and property protection information. Signs will be similar to those on other utility or agricultural facilities in the area.

Noise. *No component of any Large Solar Energy System shall emit noise exceeding sixty-five (65) dBAs measured at the exterior property boundary or the existing ROW line.*

CWA Comment: The applicant provides that the sound producing equipment includes transformers and inverters. The solar panels do not emit sound. A sound analysis (Appendix I) of the transformer and inverter manufacturer's data (Appendix E) indicates that the sound produced by this equipment at 50 feet (required setback) is less than 65dBA, meeting this requirement.

***Lighting.** All lighting for parking lots, driveways, external illumination of buildings, or the illumination of signs shall be directed away from and be shielded from adjacent properties and shall be so arranged as to not adversely affect driver visibility on adjacent public roads in accordance with Section 9.13.*

CWA Comment: The project does not include artificial lighting within the solar arrays.

***Distribution, Transmission, and Interconnection.** All collection lines and interconnections from the Solar Array(s) to any electrical substations shall be located and maintained underground inside the Large Solar Energy System, except in areas where technical or physical constraints make it preferable to install equipment above ground. This requirement excludes transmission equipment meant to connect the project substation to the local transmission system.*

CWA Comment: The applicant notes the project has been designed to comply with the Ordinance and all collection lines and interconnections inside of the facility are planned to be underground where possible. The high voltage transmission interconnection will utilize overhead lines associated with the project substation.

***Items to be Addresses:** 1) Planning Commission to consider deer fence alternative as proposed in accordance with Section 6.25.R. 2) Review of the decommissioning plan by a registered municipal financial consultant.*

PRELIMINARY SITE PLAN REVIEW

AREA, HEIGHT, SETBACKS

Area: A minimum lot area of 10 acres is required (Section 6.25.G.). The site encompasses approximately 355 acres.

Setbacks: Section 6.25.H. requires *a minimum setback distance of fifty (50) feet from all exterior property lines of the Large Solar Energy System and existing public roads and railroad rights-of-way shall be required for all buildings and Soar Arrays, provided that a setback of seventy-five (75) feet shall be required to any residential structure.*

The required 50-foot required setback from property lines is depicted on the various plan sheets. We note in many cases, the actual distance to the perimeter fence and proposed panels is much greater than the required 50 feet; however, actual distances have not been provided. Distances from existing residential structures adjacent to the project area are also provided. A 75-foot setback is required from all existing residential structures. As noted previously, all setbacks from non-participating residences have been increased to 500 feet as requested by the Planning Commission. All participating residences are shown to be the minimum 75-foot from the project area as well; however, setback distances from all residences are not included on the site plans.

Lot Coverage: Large solar energy systems are exempt from maximum lot coverage limitations.

Height: Section 6.25.F. states *maximum height of a solar array, the collection device, components, or buildings of the Large Solar Energy System, excluding substation and electrical transmission equipment, shall not exceed fifteen (15) feet (as measured from the natural grade at the base of improvements) at any*

time or location on the property. Substation and electrical transmission equipment shall not exceed one hundred (100) feet.

The height of proposed site elements is proposed on various on the last page of the site plan (Sheet D-300 - Appendix D) and include maximum height of arrays – 15 feet; fence height – 7 feet; and maximum height of inverter station – 15 feet.

Items to be Addressed: *None.*

NATURAL RESOURCES

Topography:	Existing topography is relatively level. The property has been historically used for farming.
Woodlands:	A small woodland area is located in the northwest corner of the site on the south side of Willow Road. This area is proposed to remain untouched.
Wetlands:	The applicant has not demonstrated the location of any wetlands within the project area.
Soils:	Soils information has not been provided as part of the preliminary site plan submittal. This information is required to be supplied during final site plan review.

Additionally, the applicant is proposing several drain crossings throughout the site. All drain crossings will be reviewed and approved by the Washtenaw County Water Resources Commission. The applicant has indicated they have been in contact with the WCWRC. As part of the Preliminary Site Plan Review process, preliminary review comments from the WCWRC are required to be provided and have not been included in the application materials.

Items to be Addressed: *1) Provide soils information during final site plan review. 2) Preliminary WCWRC comments not provided.*

BUILDING LOCATION AND SITE ARRANGEMENT

Site arrangement appears satisfactory.

Items to be Addressed: *None.*

ESSENTIAL FACILITIES

No public utility connections or stormwater management facilities are proposed or required. We note the proposed location of overhead lines associated with the project are demonstrated on the preliminary site plan.

Items to be Addressed: *None.*

PARKING, LOADING

No parking or loading facilities are required for large scale solar facilities.

Items to be Addressed: *None.*

SITE ACCESS AND CIRCULATION

The site will be accessed at a number of locations along McCrone, Willow and Gooding Roads. All access will need to be reviewed and approved by the Washtenaw County Road Commission. The applicant has noted they have been in contact with the WCRC. As part of the Preliminary Site Plan review process, preliminary comments from the WCRC are required, and have not been provided as part of the application materials.

Items to be Addressed: *Provide preliminary WCRC comments.*

LANDSCAPING

A landscaping plan is not required for preliminary site plan review. However, the applicant has demonstrated locations where potential landscape buffers may be located in accordance with Section 6.25.J. which requires:

The perimeter of large solar energy systems shall also be screened and buffered by installed evergreen or native vegetative plantings whenever existing natural vegetation does not otherwise reasonably obscure the large solar energy system from adjacent residential structures, subject to the following requirements:

The evergreen or native vegetative buffer shall be composed of native or evergreen trees that at plantings shall be a minimum of four (4) feet in height and shrubs two (2) feet in height. The evergreen trees shall be spaced no more than fifteen (15) feet apart on center (from the central trunk of one plant to the central trunk of the next plant), native trees shall be placed no more than thirty (30) feet apart on center and shrubs shall be spaced no more than seven (7) feet on center.

Locations and detail of all landscape screening will be required to be provided on the final site plan.

Items to be Addressed: *Provide landscape plan demonstrating all required screening at final site plan review.*

LIGHTING

No artificial lighting is proposed as part of this project.

Items to be Addressed: *None.*

SIGNS

The applicant states the signage will be installed identifying appropriate contact information and facility ownership at access points and on perimeter fencing. Further noting that signage will be installed per applicable code requirements and will provide adequate safety and property protection information. Signs will be similar to those on other utility or agricultural facilities in the area.

Items to be Addressed: *None.*

FLOOR PLAN AND ELEVATIONS

No buildings are proposed.

Items to be Addressed: *None.*

CRITERIA FOR SITE PLAN REVIEW

Section 11.4 outlines fourteen (14) criteria for site plan review. They are listed below:

- A. *The proposed use will not be injurious to the general health, safety and welfare of the Township and surrounding neighborhood. **This criteria will be determined during special land use review.***
- B. *The location of the buildings, outside storage receptacles, parking areas, screen walls and utility areas as such that the adverse effects of such uses will be minimized for the occupants of that use and surrounding areas. **The applicant has provided increased setbacks and landscaping in areas where surrounding residential neighbors will be impacted by sight lines***
- C. *The design of storm sewers, stormwater facilities, roads, parking lots, driveways, water mains, sanitary sewers and other site improvements meets the design and construction standards of the Township and other appropriate agencies. **The Township Engineer has provided a separate technical review of applicable construction and design standards. Further, preliminary comments from the Washtenaw County Road Commission and Washtenaw County Water Resources Commission were not provided as part of the preliminary site plan application.***
- D. *Proper access to all portions of the site and all sides of any structure is provided. All structures or groups of structures shall be so arranged as to permit emergency vehicle access by some practical means to all sides. Site features such as, but not limited to, trees and other plant materials fences, retaining walls, berms, outdoor furniture, outdoor structures. And natural and artificial water bodies shall be arranged to permit adequate emergency vehicle access. **Emergency vehicle access has been reviewed and provided as part of the Township Engineer's report.***
- E. *Site planning and design of specific improvements will accomplish, the preservation and protection of exiting natural resources and features such as lakes, ponds, streams, wetlands, floodplains, steep slopes, groundwater, trees and wooded areas, including*

understory trees. All areas to remain in a natural state are noted on the site plan. No wetlands or woodland areas will be impacted by the proposed large solar facility.

- F. The proposed development respects the natural topography to the maximum extent possible by minimizing the amount of cutting, filling and grading required. **The topography of the site is naturally, generally level. Minimal grading will be required for development of the site as a large commercial solar facility....***
- G. The proposed development will not cause soil erosion or sedimentation. The drainage plan is adequate to handle anticipated stormwater runoff. **Soil erosion and sedimentation is reviewed by the Township Engineer and the Washtenaw County Water Resources Commission.***
- H. A stormwater management system and facility will preserve the natural drainage characteristics and enhance the aesthetics of the site to the maximum extent possible and will not substantially reduce or increase the natural retention or storage capacity of any wetland, water body or water course, or cause alterations which could increase flooding or water pollution on or off site.*

*The Washtenaw County Water Resource Commission's office shall provide review comments on the stormwater management system of all site plans for the consideration of the Planning Commission. Comments shall be provided for all Preliminary and Final Site Plans. Final Site Plan approval shall not be granted until approval is granted by the Water Resources Commission with regard to the stormwater management plan. **Review of stormwater management facilities is reviewed by the Township Engineer and the Washtenaw County Water Resources Commission.***

- I. Wastewater treatment systems, including on-site septic systems will be located to minimize any potential degradation of surface water or ground water quality. **No wastewater facilities are required for the proposed large scale solar facility use.***
- J. Sites which include storage of hazardous materials, waste, fuels, salt, or chemicals will be designed to prevent spills and discharges of polluting materials to the surface of the air or to the ground, groundwater or nearby water bodies, which a specific plan to achieve such objectives being incorporated as part of the plan. **Storage of hazardous materials is not proposed.***
- K. The location of buildings, parking, drives, landscaping and other improvements on the site is appropriate and consistent with good design standards for the lot size, shape and general location. **The site arrangement is acceptable.***
- L. Landscaping, including grass, trees, shrubs and other vegetation is provided to maintain and improve the aesthetic quality of the site and area. **Landscaping has been provided for screening of the facility to neighboring residential properties. All natural vegetation around the periphery of the development is proposed to remain.***
- M. The means of ingress and egress to and from the site shall be planned with the objective of achieving recognized planning, engineering and safety standards, and shall not result in an unreasonable risk of danger to persons and/or property on the site and/or off the site. In*

general, this standard shall be met based upon the design of ingress and egress in terms of the number, location and design of access(es), and utilization of acceleration, deceleration and passing lanes and approaches. The Planning commission shall review the ingress and egress proposed for the purpose of promoting and protecting traffic safety and shall require improvements accordingly. Ingress/egress locations are located throughout the development for maintenance and emergency access purposes. Washtenaw County Road Commission will determine whether access points as proposed are suitable.

- N. *The site complies with all Township Ordinances and design standards, and any other applicable laws. Preliminary site plan approval will be conditioned upon approval of the special land use application for the large-scale solar facility.*

RECOMMENDATIONS

The applicant has requested the Planning Commission to review the special land use and the preliminary site plan of the proposed Railsplitter #2 simultaneously. As you are aware, the review of the preliminary site plan is at the risk of the applicant, will only be considered upon approval of the special land use. Below, we have divided our comments on the Railsplitter #2 special land use application and the preliminary site plan:

Special Land Use:

The Planning Commission should consider the following in review of the proposed large-scale solar facility:

The proposed large solar energy facility while not specifically listed, may be considered compatible with the Augusta Township Master Plan objectives which envisions the subject site and the surrounding area.

Specific goals and objectives related to the proposed large solar energy facility in the Master Plan include:

- Preserve the rural character of Augusta Township through the management of growth and preservation of natural resources and active farming.
- Protect the environment and the Township's natural resources.
- Provide the highest quality public facilities and services possible at an affordable rate for the residents of Augusta Township.

Properties along the north, east, and west of the site are primarily agricultural / environmentally sensitive properties with some single-family residential neighbors. This type of use is of extremely low intensity in terms of other uses. By comparison, residential development in this area would increase traffic, require additional Township services, and remove this area from farming production. The proposed solar facility will not generate traffic after the construction period, nor any Township services. The use can also be removed, and farming operations may return after the life of the solar facility has ended.

Based on this information, the Planning Commission will need to determine if the proposed use of the subject site as a large solar energy facility is harmonious and in accordance with the Augusta Charter Township Master Plan.

The Planning Commission must also consider whether the proposed use meets the general standards applying to special land uses as listed in this report, and in Article 4 of the Zoning Ordinance.

Further, the Planning Commission will need to consider the alternative deer fencing in accordance with Section 6.25.R.

In addition to the items listed above, the Planning Commission can require reasonable conditions of approval related to the Railsplitter #2 special land use approval. These could include:

- Review of the decommissioning plan by a registered municipal financial consultant.
- Specific landscaping/buffer plantings.
- Other reasonable conditions brought forth by the Planning Commission.

Preliminary Site Plan:

As presented, the following information was not provided as required as part of the preliminary site plan application:

1. Preliminary comments from the Washtenaw County Water Resources Commission.
2. Preliminary comments from the Washtenaw County Road Commission.

Additionally, the following items will need to be addressed during final site plan review:

Items to be Addressed During Future Site Plan Review Submittals:

1. Provide soils information.
2. Demonstrate Washtenaw County Water Resources approval.
3. Demonstrate Washtenaw County Road Commission approval.
4. Provide landscape plan demonstrating all required screening at final site plan.


CARLISLE/WORTMAN ASSOC., INC.
Laura K. Kreps, AICP
Senior Associate

cc: Paul Harris via paul@rangerpower.com
Sergio Trevino via sergio@rangerpower.com
Heather Rowland
OHM

September 8, 2021

Augusta Charter Township

Planning Commission

P.O. Box 100

Whittaker, MI 48190

Regarding: **Railsplitter Phase 2 Solar Array**
Preliminary Site Plan Review- Revised
OHM Job No. 0026-21-1040

We have reviewed the preliminary site plan material, dated August 23, 2021 and received on August 26, 2021, as revised from the May 27, 2021 previously reviewed plan set. The proposed development of a 44.42 MW solar array on several parcels around the existing ITC transformer site at Willow and McCrone. A total of 10 tax parcels are involved in this proposed phase 2 development with a total area of 355 acres, although not all of that area is proposed to be developed with a solar array. The plans are part of a larger solar array project able to produce 120 MW in combination with; Railsplitter Phase 1(Augusta Twp) and York Twp site. Plans were reviewed according to Township guidelines and engineering best practices. The applicant is requesting preliminary site plan approval for a proposed solar array on existing farmed land. No public utilities exist in this area or are proposed. No habitable structure is proposed. The applicant Ranger Power has been in contact with Washtenaw County Water Resources Commission and Washtenaw County Road Commission regarding proposed utility crossings and service drive approaches.

The principal changes to these plans over the previously reviewed plans are a re-distribution of the solar arrays to maintain 500 ft setback from outside of an inhabited residential building not included in the project.

Permits and Other Agency Approvals

Copies of all permits and/or letters of waiver, obtained to date, shall be forwarded to this office. The current status of all necessary permits should be included on the cover sheet. Before construction plan approval can be issued, the applicant must submit all necessary permits/approvals, including but not limited to the following agencies:

- Washtenaw County Road Commission (WCRC) for the 3 proposed underground utility crossings and the 6 driveway approaches within Willow, McCrone, and Gooding ROW.
- Washtenaw County Water Resources Commissioner's Office (WCWRC) for proposed underground utility crossings for the 5 proposed drain crossings, and soil erosion and sedimentation control permits.
- Washtenaw County Drain Commission vacating the former Buck Creek Drain, thru parcels T 20-19-400-01 and T-20-19-400-002, The revised preliminary plans show an array across the full extent of the formerly occupied drain easement. The applicant is



communication with the Drain Office regarding the necessary steps for dedicating the new drain easement.

Limitations of Review

OHM Advisors is unable to provide financial review of the submitted decommissioning plan. We recommend that this aspect of the site plan be reviewed by a registered municipal financial consultant.

Conclusion and Recommendations

As submitted, we recommend the Planning Commission to consider approval of the preliminary site plans.

- No proposed changes to grades, or construct within existing wetlands or waterways, with exception of the relocated Buck Drain easement.
- No proposed drain crossings for service roads.
- Proposed service road internal to the site within gated enclosure are proposed to be 12 ft width, which has been reviewed and deemed acceptable to provide sufficient width for select Fire Department emergency vehicle access.
- Applicant indicated that any hazardous materials will be in approved containers, with secondary containment having a capacity of 110% of the largest container.

Please feel free to contact me at (734) 466-4538 or nicholas.bayley@ohm-advisors.com if you have any questions or concerns regarding this review.

Sincerely,
OHM ADVISORS

Nicholas Bayley, P.E.
Township Engineer

cc: Kim Gonczy, Township Clerk (via e-mail)
Laura Kreps, Carlisle Wortman Associates, Inc. (via e-mail)