



A leading solar and storage energy company that develops, owns and operates projects across the United States

**Public  
Information  
Meeting**

# Carriger Solar, LLC

April 25<sup>th</sup>, 2023



# Agenda

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1. Meet the Project Team
2. Cypress Creek Renewables – Our Business
3. Carriger Solar, LLC Project Introduction
4. Appendix – Application for Site Certification Site Plan Sheets



# Meet The Project Team

Cypress Creek Renewables – Website: [ccrenew.com](http://ccrenew.com)  
Carriger website

## Powering A Sustainable Future, One Project at a Time



**Sr. Development  
Director**  
CCR  
Tai Wallace



**Project  
Developer**  
CCR  
Lauren Altick



**Environmental  
Director**  
CCR  
Seija Stratton



**Sr. Environmental  
Manager**  
CCR  
Julie Alpert



**Consultant –  
Project Manager**  
Tetra Tech  
Leslie McClain





## OUR BUSINESS

A Mission-Driven  
Integrated Renewable  
IPP Platform

Founded

2014

Team Members

330+

Business Units

3

EQT Infrastructure  
acquired Cypress Creek,  
becoming the sole  
owner, in October 2021.



Our values are the guideposts as we work across  
hundreds of individual projects



### Care

We take care to be safe. We care for the well-being of our team, our communities and the environment and we carefully deploy our resources.

### Courage

We take smart risks; we speak up and we make decisions. We learn and constantly improve.

### Creativity

We innovate to create valuable projects. We embrace new ideas and find solutions to hard problems.

### Conviction

We are committed to making the world cleaner and healthier. We do the right thing when our values are challenged.

### Collaboration

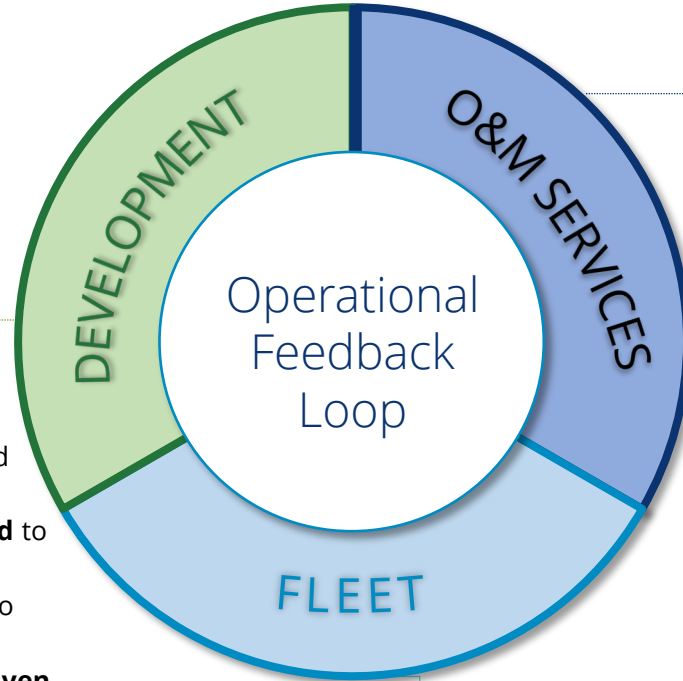
We come from different backgrounds to do our work together as one team.

## CORE COMPETENCIES

We are a fully integrated platform, from development to operations

### DEVELOPMENT

- Includes Project Development, Structured Finance and Engineering, Procurement and Construction management
- **12GW of solar energy projects developed** to date
- **55MW/161.3MWh of storage** developed to date.
- Selective market entry based on **policy-driven strategy**
- **Diversified experience** with both transmission and community solar as well as storage
- **Award-winning** Structured Finance team
- Innovative pre-construction design and third-party EPC contracting



### O&M SERVICES

- Services for internal fleet and third-party customers
- **4GW** of projects under contract
- State-of-the-art NERC-registered Control Center with **24 / 7 / 365 operations**
- Business services, including warranty administration and compliance
- Industry-leading **drone program** to provide best-in-class asset oversight
- **TRIR: 0.0** (2019-2021)

### FLEET

- **2GW** portfolio spanning 217 projects, 14 states
- Enough energy produced in 2021 to **offset 1.5 million metric tons of carbon dioxide**
- **Fleet optimization** via **optimized performance** to create **stable** and **recurring** operating **cash flows**
- Long-term owner mindset



# SOLAR AND STORAGE GROWTH

Our projects make the energy transition possible



**Solar is the most cost-effective** form of new generation, with the levelized cost decreasing by about 90% since 2009<sup>1</sup>



▲ Shoe Creek, 92MW project in North Carolina



**Solar accounted for 46% of all new electricity-generating capacity added in the US in 2021**, the third year in a row that solar has made up the largest share of new capacity<sup>2</sup>



**Battery storage technology costs have decreased** 80% from 2010 to 2020.<sup>3</sup>



▲ Birdie, a Solar + Storage Project in North Carolina.



**Battery storage is growing rapidly** in the US, with utility-scale battery storage to more than double in 2023 to 11.6GW of installed battery power with a projected additional 59.1GW installed from 2023-2026.<sup>4</sup>

## SPOTLIGHT

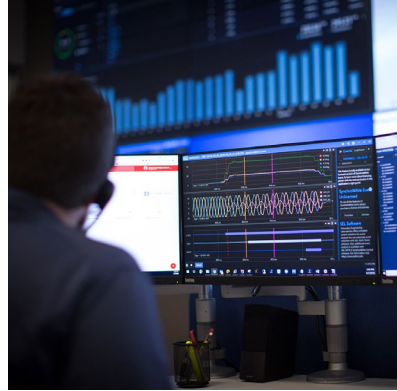
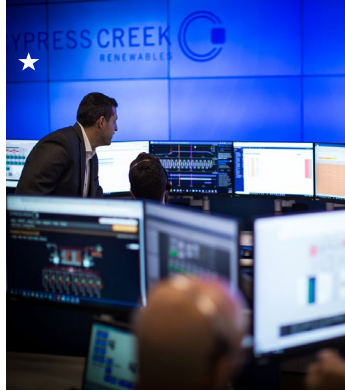
### Our Approach to Community Engagement



- We strive to go above and beyond to support communities where we live, develop and operate solar and storage projects
- In permitting our Palmetto Plains project in Orangeburg, SC, Cypress Creek worked alongside development partners to hold community meetings to garner community feedback and support
- Based on conversations with community members, we supported organizations including the County Engagement Fund and Orangeburg Tech, the community college near the project
- We also made contributions to improve the youth baseball field and to purchase electronic signage for Main Street

# 24 / 7 / 365 MONITORING

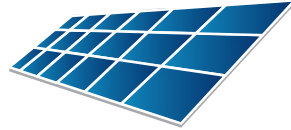
Performance  
optimization all day  
and night





# SOLAR 101

Key system components



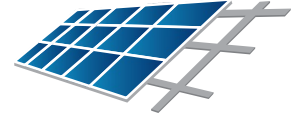
## SOLAR MODULE

Generates DC electricity from sunlight



## DC/AC INVERTER

Converts direct to alternating current



## MODULE RACKING

Mounts modules in array to the ground



## COMBINER BOX

Low-voltage DC electricity is fed through cables from each module row to a combiner box



## MONITORING SYSTEMS

Meters and gauges to measure and report system preferences



## BATTERY SYSTEMS

Lithium-ion batteries store the sun's energy for use throughout the day

# PROJECTS DEVELOPED

We develop solar and  
storage projects of all  
shapes and sizes



Neff, Oregon | 11MWac



Wagyu, Texas | 124MWac



IS37, North Carolina | 85MWac

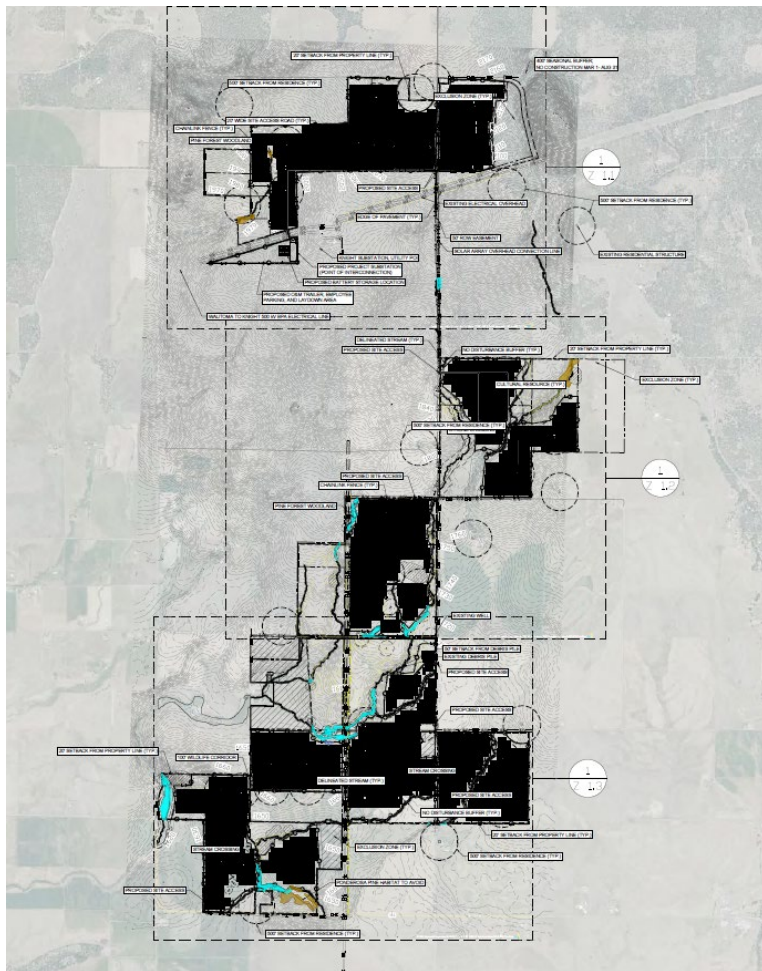


# CARRIGER SOLAR, LLC

## Project Details

### Carriger Development Timeline

- Initiated development in Q1 2018
- Initial Tribal notification letters sent in 2020
- Submitted preliminary application review to Klickitat County in 2019
- Added additional land under option in 2021
- Completed site-specific environmental and technical field surveys in 2019-2023
- Follow-up Tribal notification and Outreach letters in 2022 and 2023
- Began iterative and detailed designed process based on survey results and community feedback in 2021
- CCR holds initial public Town Hall held in spring 2021
- CCR holds second virtual town hall held in Q1 2023
- EFSEC Application for Site Certification (ASC) in Q1 2023










Development Item	Description/Status
Project Attributes	<ul style="list-style-type: none"> <li>• 160 MWac Nameplate Solar Capacity</li> <li>• 63 MW Battery Energy Storage System (Optional)</li> </ul>
Site Control	<ul style="list-style-type: none"> <li>• Exclusive option for site control secured</li> <li>• Seeking a franchise agreement for collector lines outside of Maximum Project Extent (MPE)</li> </ul>
Interconnection & Transmission Rights	<ul style="list-style-type: none"> <li>• Interconnection studies complete</li> <li>• Transmission studies complete &amp; transmission rights secured</li> </ul>
Engineering & Survey	<ul style="list-style-type: none"> <li>• ALTA/NSPS and topographic surveys complete</li> <li>• Preliminary geotechnical analysis complete</li> <li>• Hydraulic and hydrologic assessment complete</li> </ul>
Site Certification and Entitlements	<ul style="list-style-type: none"> <li>• Land use consistency hearing to be completed through EFSEC</li> <li>• Site Certification through EFSEC</li> </ul>
SEPA/Field Surveys	<ul style="list-style-type: none"> <li>• All preliminary field surveys complete</li> <li>• SEPA determination through EFSEC</li> </ul>
Wetlands Delineation / USACE Concurrence	<ul style="list-style-type: none"> <li>• Wetland delineation complete</li> <li>• US Army Corps of Engineering and State Dept of Ecology Review and concurrence pending</li> <li>• Design constraints complete</li> <li>• Avoiding all potential fish bearing waterways</li> </ul>
Taxes	<ul style="list-style-type: none"> <li>• Third party property tax memo and assessment complete</li> </ul>
Procurement and Construction	<ul style="list-style-type: none"> <li>• Initial EPC RFP complete</li> <li>• Preferred vendor review of designs, permit plan and ASC application in process</li> </ul>

# ECONOMIC BENEFITS

Directly attributable to  
Carriger Solar



## Carriger Tax Revenue Estimates<sup>1</sup>

	County Road	\$4.8 – 7.5M
	Goldendale School District	\$6.6 – 10.5M
	Fire	\$2.5 – 4.0M
	Klickitat County Hospital	\$1.9 – 3.0M
	EMS	\$1.4 – 2.2M
	Library	\$1.0 – 1.5M
	Recreational District	\$0.8 – 1.3M

**TOTAL**

**\$19 – 30M**

*1. Actual tax revenue depends on ultimate project size and other factors that impact assessed taxes, including offtake secured and changes to junior tax district allocations*



### Local Investment

Carriger is expected to provide between \$19 - \$30 million in tax revenue over the lifetime of the project



### Jobs

Carriger is estimated to create between 350 - 450 full time construction jobs in addition to more than 50 jobs in the community, as well as up to three permanent Operations & Maintenance jobs, while providing financial benefits to local business for lodging, food, material needs, and the like



### Homes Powered

Carriger is anticipated to provide enough electricity to power 32,500 homes annually



### Carbon Offset

Carriger will produce more than 360 million kWh per year, equivalent to reducing CO2 emissions by ~50,000 metric tons annually and taking ~10,800 cars off the road per year

# SAFETY, NOISE, EMFs & REFLECTED LIGHT



Vale Air, Malheur County, Oregon | 13 MWdc

## SOUND

- Inverters and Transformers are the primary sources of sound
- Inverters have a fan that keeps them cool during the daytime
- Operational noise will not exceed the daytime limit of 60 dBA and nighttime limit of 50 dBA at the nearby residential structures

## ELECTRIC AND MAGNETIC FIELDS (EMF)

- Low levels of EMF are anticipated from the various electrical equipment at Carriger Solar; however, given the localized nature of EMF, no EMF from the proposed solar panels, collector lines, inverters, or transformers is anticipated to extend beyond the Project Area boundary

## DESIGN AND SAFETY CONSIDERATION

### Fire Safety

- Each section of the solar farm can be shut off remotely or manually and other mechanisms are in place for rapid shutdown
- Project operations monitored 24/7
- BESS containers include state of the art fire prevention and suppression systems
- 20-foot fire break established along perimeter fence line
- Emergency Response Plan provided to Fire Protection District and County
- Fire risk is extremely low

### Airplane Safety

- FAA Issued Determination of No Hazard to Air Navigation for preliminary solar layout

### Minimal Reflected Light

- Solar panels have anti-reflective glass coating and are designed to absorb as much light as possible
- Glare analysis was conducted; predicted glare is conservative given that the glare model does not account for varying ambient conditions
- Very limited amounts of glare predicted at Knight Road and along SR 142 during certain months in year

### Engineering and Building Permits

- Local building and electrical inspectors will review and approve all drawings
- Electrical design meets the National Electric Code
- Solar farms are designed by licensed engineers and plans are approved by local jurisdictions
- Industry leading equipment, material and design practices are utilized by CCR



# PERMITTING AND SEPA

EFSEC Certification  
Process and  
State Environmental  
Policy Act (SEPA)



## SEPA Checklist



Earth



Air



Surface Water



Ground Water



Storm Water  
Runoff



Plants



Animals



Energy & Natural  
Resources



Environmental  
Health



Noise



Land & Shoreline  
Use



Housing



Aesthetics



Light & Glare



Recreation



Historic & Cultural  
Preservation



Transportation



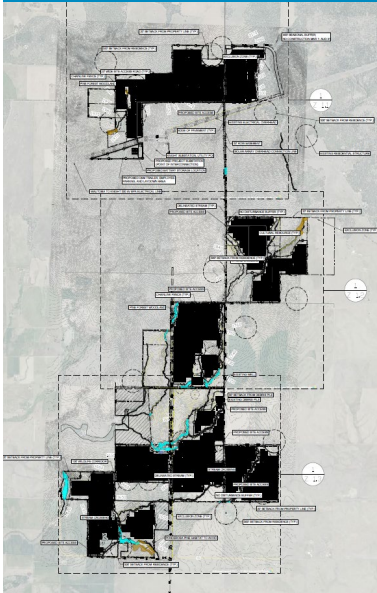
Public Services

## Key Points

- Energy Facility Site Evaluation Council (EFSEC) is responsible for evaluating applications for site certification to ensure that all environmental and socioeconomic impacts are considered before making a recommendation to the Governor to approve or deny the project
- State Environmental Policy Act (SEPA) checklist is included in the Application for Site Certification
- EFSEC conducts a SEPA review as part of the evaluation for site certification
- EFSEC must hold an initial public meeting on the proposed project to explain the proposed project and the Council process
- Following the public meeting, EFSEC must hold a land use hearing to determine if the proposed project is consistent with city, county or regional land use plans or ordinances

# OUTREACH AND CONSULTATION

Consultation with agencies helped to inform project design



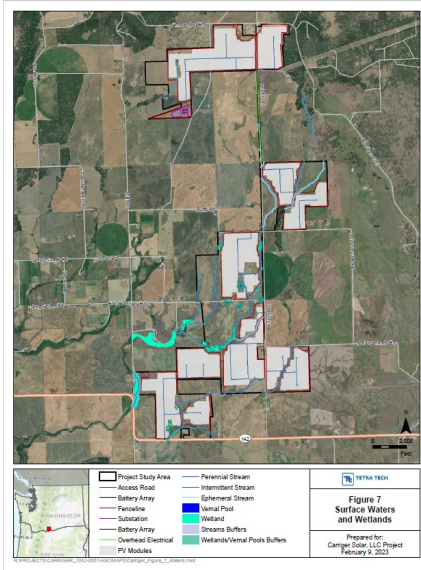
## Consultation, Coordination and Notification with Local, State, Tribal and Federal Agencies

Washington Department of Archaeology and Historic Preservation	Bonneville Power Administration
Washington State Department of Ecology	Confederated Tribes and Bands of the Yakama Nation
Washington Department of Fish and Wildlife	Confederated Tribes of the Warm Springs Reservation of Oregon
Department of Defense	Confederated Tribes of the Grande Ronde
Energy Facility Site Evaluation Council	Confederated Tribes of the Umatilla Indian Reservation
Klickitat County	Nez Perce Tribe
City of Goldendale	Wanapum Tribe
County Commission	U.S. Army Corps of Engineers
Goldendale Chamber of Commerce	Friends of the Gorge Area Parks



# COMPLETED STUDIES

Studies completed for Carriger that were incorporated into micrositing

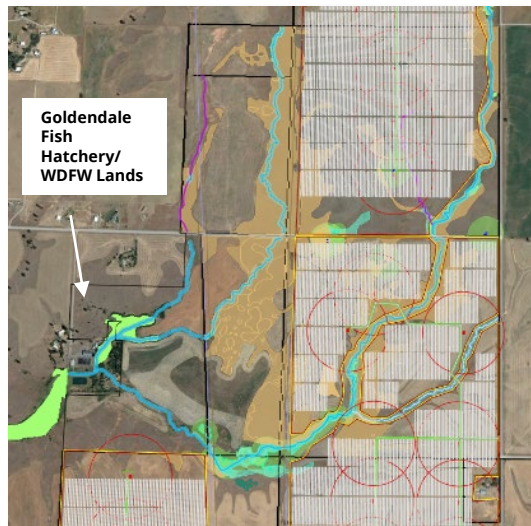


Topic	Study
Land Use	Land Use Consistency Review
Wildlife and Habitat Mapping	Habitat and General Wildlife Survey Report
Wildlife	Raptor Nest Survey Report
Wetlands and Surface Waters	Wetland Delineation Reports and Addendum
Vegetation	Botanical Survey Report
Glare	Solar Glare Analysis Report
Noise	Acoustic Assessment Report
Archaeological, Historical, and Cultural	Cultural Resources Survey Report and Unanticipated Discovery Plan
Socioeconomic	Socioeconomic Review
Earth	Geotechnical Engineering Report
Hydrology and Hydraulics Analysis	Hydrologic and Hydraulic Assessment
Environmental Health	Phase I Environmental Site Assessment
Visual and Aesthetics	Visual Impact Assessment Report
Habitat Restoration and Mitigation Plan	Draft Habitat Restoration and Mitigation Plan
Airspace	FAA Determination of No Hazard

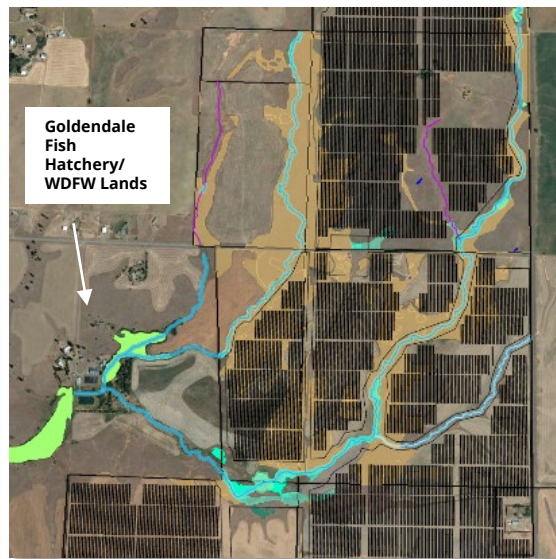
# CARRIGER SOLAR MICROSITING

Intentional approach to  
project design

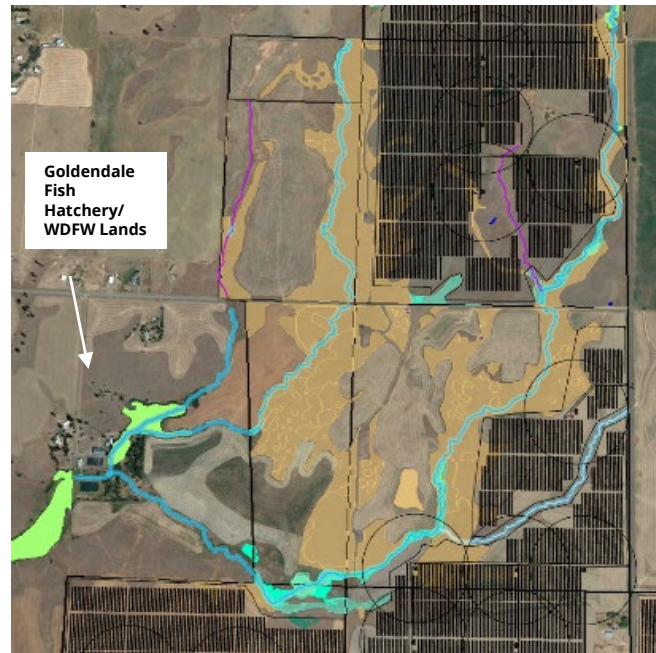
*Pre-Survey Site Plan*



*Revised Site Plan*



*Current Site Plan*





## BENEFITING COMMUNITIES

We strive to support communities where we live, develop and operate



Environmental Sustainability



STEM Education and Workforce Development



Economic Development and Community Investment



Veterans Initiatives

Our impact through end of year 2021:

**7.3M METRIC TONS** of carbon dioxide offset by our internal fleet since inception<sup>1</sup>

**\$65M** invested in communities including annual property tax payments and annual land lease payments



"Creating paths to well-paying jobs is a priority. Solar energy will be a bigger part of Illinois' energy mix, and through our partnership with Cypress Creek, KCC graduates will go to work doing what they love. It's a point of pride that we've prepared them for a bright future."

**Dr. John Avendano,**  
Kankakee Community College President



"The long-term lease will help ensure that the property will stay in my family for my children and grandchildren while helping to provide for my retirement. I am also pleased that having this solar farm on my property will greatly increase the tax base and provide much needed revenue that can be used to improve the infrastructure and services for this small rural town in which I grew up. I can think of no better use for this property and no better company with whom to work."

**Wannelle Witt Lefkowitz,** Landowner



"Your donations and match will pay for over 1,300 bags of food for the elementary children in the Orangeburg School District... We rely totally on the donations of caring people like you and your employees to fund our mission. We are proud to say 100% of all funds donated are used to purchase food. All administrative costs are donated by our very committed board."

**Melissa Cain, Executive Director, Into the Mouth of Babes**

Thank you.

CYPRESS CREEK  
RENEWABLES 

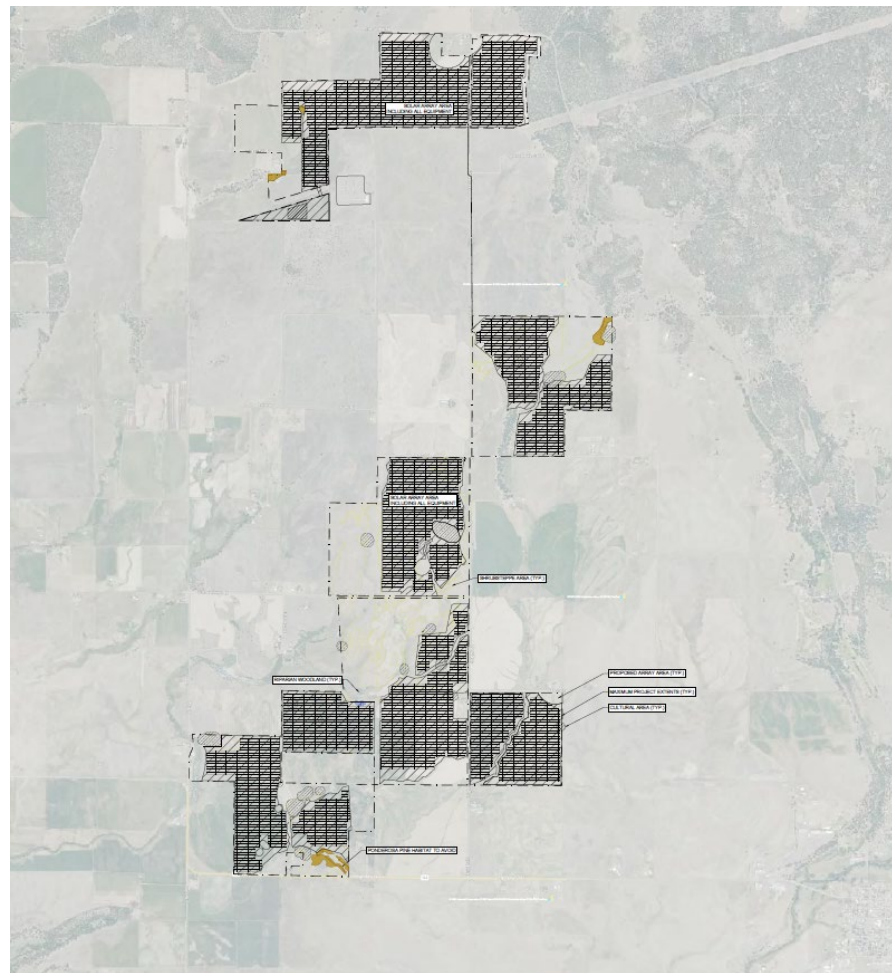


# Appendix

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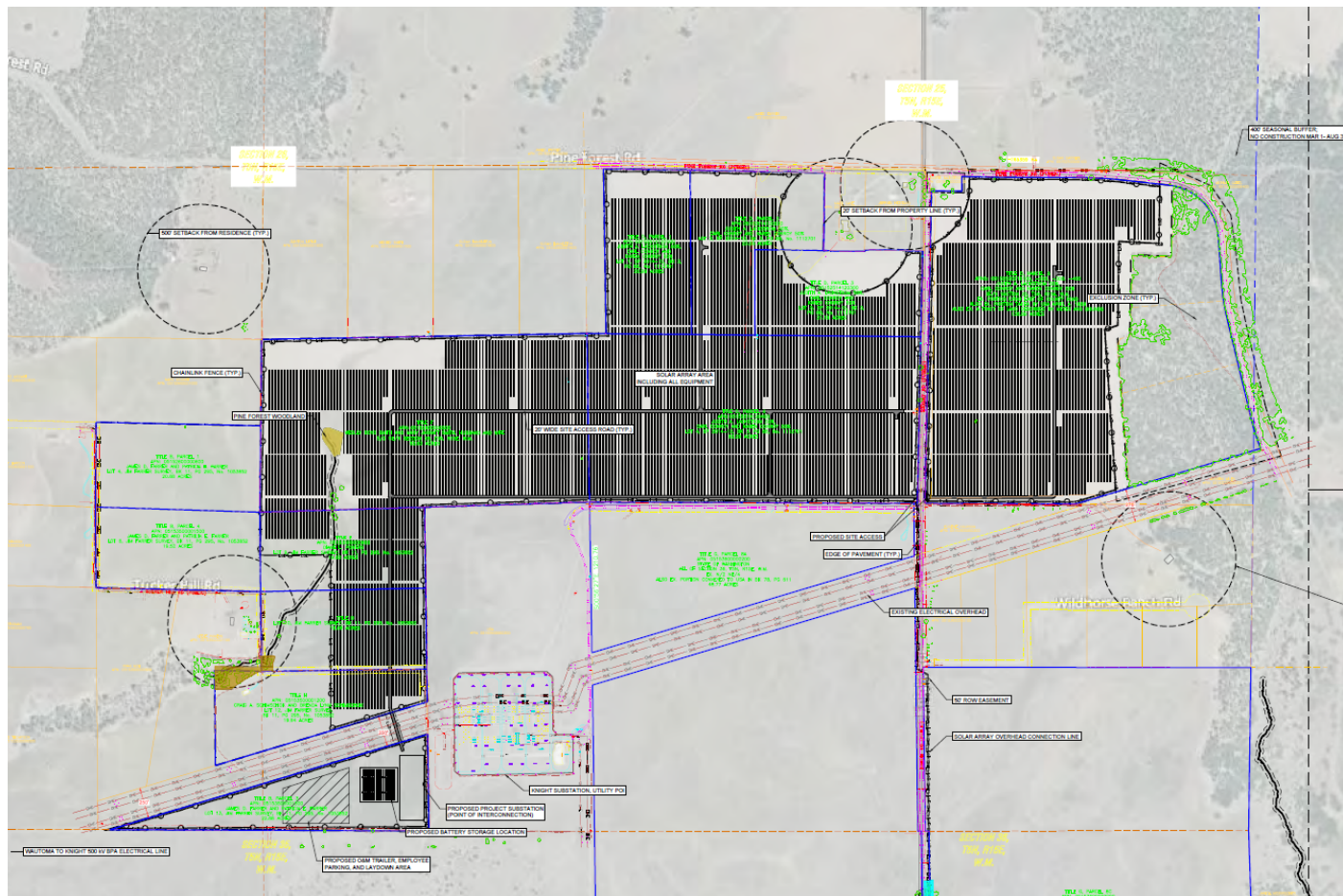
# CARRIGER SOLAR SITE PLAN

ASC  
Maximum  
Project Extent



# CARRIGER SOLAR SITE PLAN

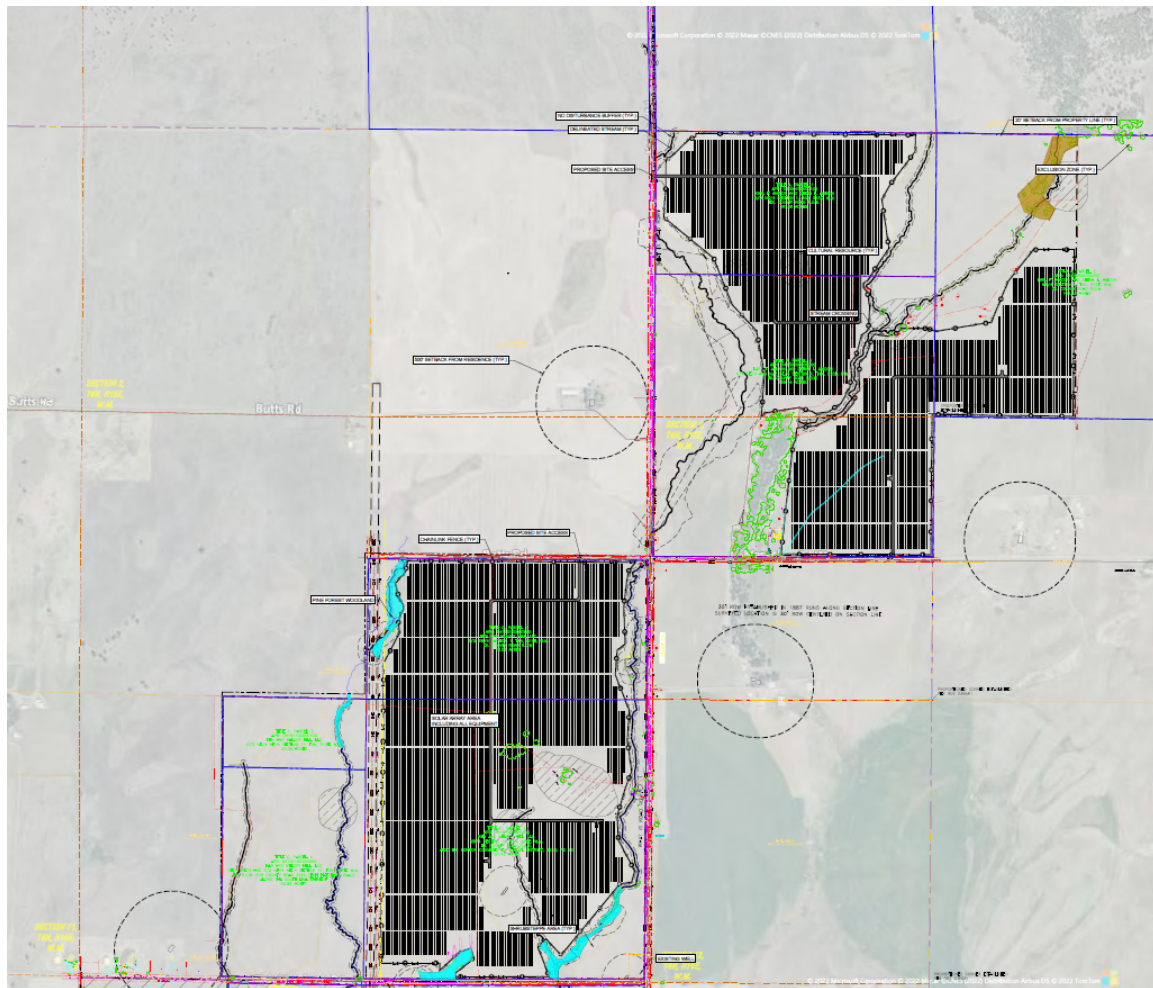
ASC Site Plan  
Detail North





# CARRIGER SOLAR SITE PLAN

ASC Site Plan  
Detail Mid



# CARRIGER SOLAR SITE PLAN

ASC Site Plan  
Detail South

