

**Phoenix
Solar**

Welcome

Phoenix Solar Project Public Open House

Pattern Development welcomes you to this public open house for the Phoenix Solar Project. Your questions and comments are important to us. Please be sure to sign in and complete a comment sheet.

Phoenix Project Overview

Project Size

- 82.5-MW utilizing roughly 590 acres
- Located 5 miles south of Bonham
- Generating renewable energy equal to the needs of 17,500+ homes each year

Construction & Financing

- Led by Pattern Development and experienced EPC firm
- ~12 month schedule starting early Summer 2019
- Funding Source: 100% private capital (no government grants or funding)
- Incentives: 30% federal investment tax credit (no state or local incentives)

Operations

- Injecting clean energy into the ERCOT at peak electric use hours
- 1-3 full time operations & contract jobs
- Fully decommissioned and removed after 35-40 year life

Phoenix Economic Benefits

Project Size

- **Local Jobs:** 150-200 construction jobs over 12 month period
 - Heavy equipment operators, electricians, laborers, etc
- **Local Contractors:** the selected EPC firm hire local contractors for various construction activities
- Demand for services industries, such as lodging, food services, etc.
- Community benefits for the broader area through sponsorships of local causes
- State sales tax on certain project equipment purchase

Operations

- Led by Pattern Development and experienced EPC firm
- Over the span of 35 years, the project will produce:
 - **Nearly \$3 million in Fannin County Property tax revenue**
 - **\$12 million in Bonham ISD property tax payments**
 - **State franchise taxes of over \$3 million**
- Federal income tax payer
- Lease payments to Fannin County residents & property owners
- 1-3 full time operations jobs + contract jobs during operations such as landscaping, preventative maintenance, and plant operations

Solar Panel Features

A.) Frame

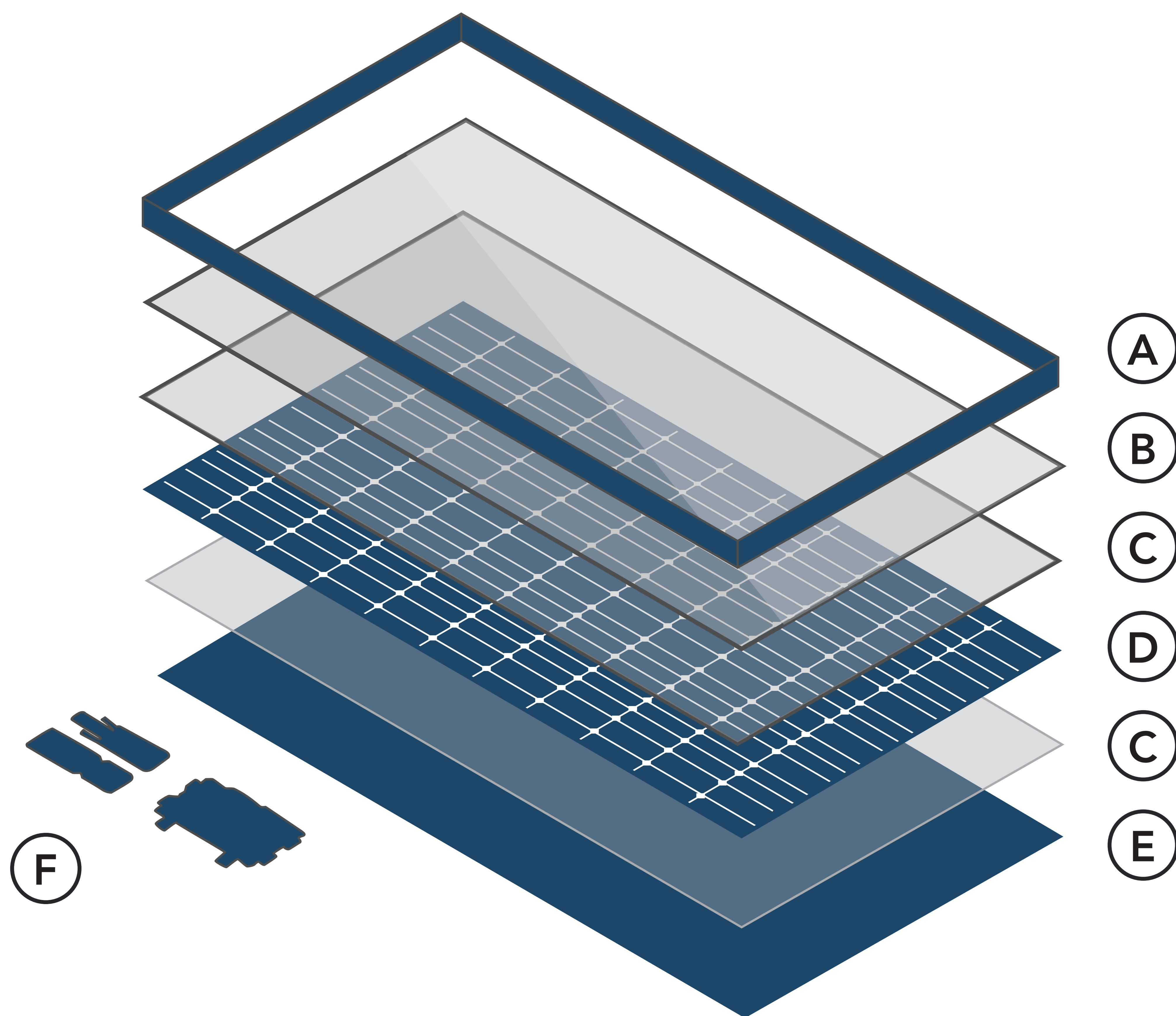
Made of anodised aluminum, the frame provides structural rigidity to the panel, protecting it from outdoor elements, and enables easy installation.

B.) Glass

Glass protects the top side of the panel while allowing an optimal amount of sunlight to reach the cells.

C.) EVA (2 layers)

Ethylene-vinyl acetate (EVA) is the glue that binds all the components of the panel together and prevents water, dirt, and other elements from reaching the cells.



D.) Cells

The engine of the panel, the solar cells are where sunlight is converted to electricity.

E.) Backsheet

The back of the module is protected by an electrically neutral backsheet that keeps water and dirt from entering the panel.

F.) Junction/Connectors

The junction box transfers the electricity produced by the cells to the greater solar array via cables and connectors.

Phoenix Solar Technology

Phoenix will utilize proven, UL Certified, and high quality components:

- Silicon based solar photovoltaic solar panels with anti-reflective glass
- Single access steel trackers (~4 ft high when panels rotated horizontal)
- Inverters, Transformers, & Cabling

Why Solar & Why in Fannin County?

- Solar power has become one of the cheapest forms of electricity, especially in sunny states like Texas
- Texas has installed 1,484 MW of solar and there are plans to install an additional 3,700 MW of solar capacity by 2021
- Fannin County and the broader DFW metropolitan area are large users of electricity and need a growing supply to maintain the grid



Environmental & Permitting

Critical Issue Analysis

- Permitting
- Land Use
- Local Zoning/Ordinances

Biological Resource Assessment

- Vegetation
- Threatened and Endangered Species Habitat
- Migratory Bird/Raptor Nesting Habitat

Cultural Resources Assessment

- Archaeological Sites
- Historic Sites

Jurisdictional Waters Determination

- Creeks
- Wetlands

Phase 1 Environmental Site Assessment

- Potential to Encounter Hazardous Materials

Ecological Considerations

- Field studies conducted by biologists indicated site does not include critical habitats for threatened or endangered species.
- Storm Water Pollution Prevention Plan implementation during construction will minimize stormwater runoff and ensure project will have no negative impacts to bodies of water.
- Project construction will avoid streams and forested wetlands, preventing impacts to aquatic species.
- Records review for archaeological/historical performed with no findings. Prior to construction, an onsite check for historical/cultural artifacts will occur.
- Pasture plant species will be allowed to propagate after construction; in absence of cattle grazing, large brushy plants will need to be managed.
- Project requires minimal water usage — primarily during construction for dust mitigation.
- All personnel will receive Environmental Awareness Training

Engineering & Construction

Construction Process

- Minimal site preparation and clearing
- Steel piles will be driven into the ground with no concrete foundation and with minimal force
 - Pile depth will average 10ft with max of 15ft for the solar trackers
- Panel installation
- Inverters assembled offsite and placed on pad locations
- Substation & Transmission

Construction Management

- We will also have a single point of contact during the construction process where stakeholders can go to ask questions, log complaints, or make requests.

Operations

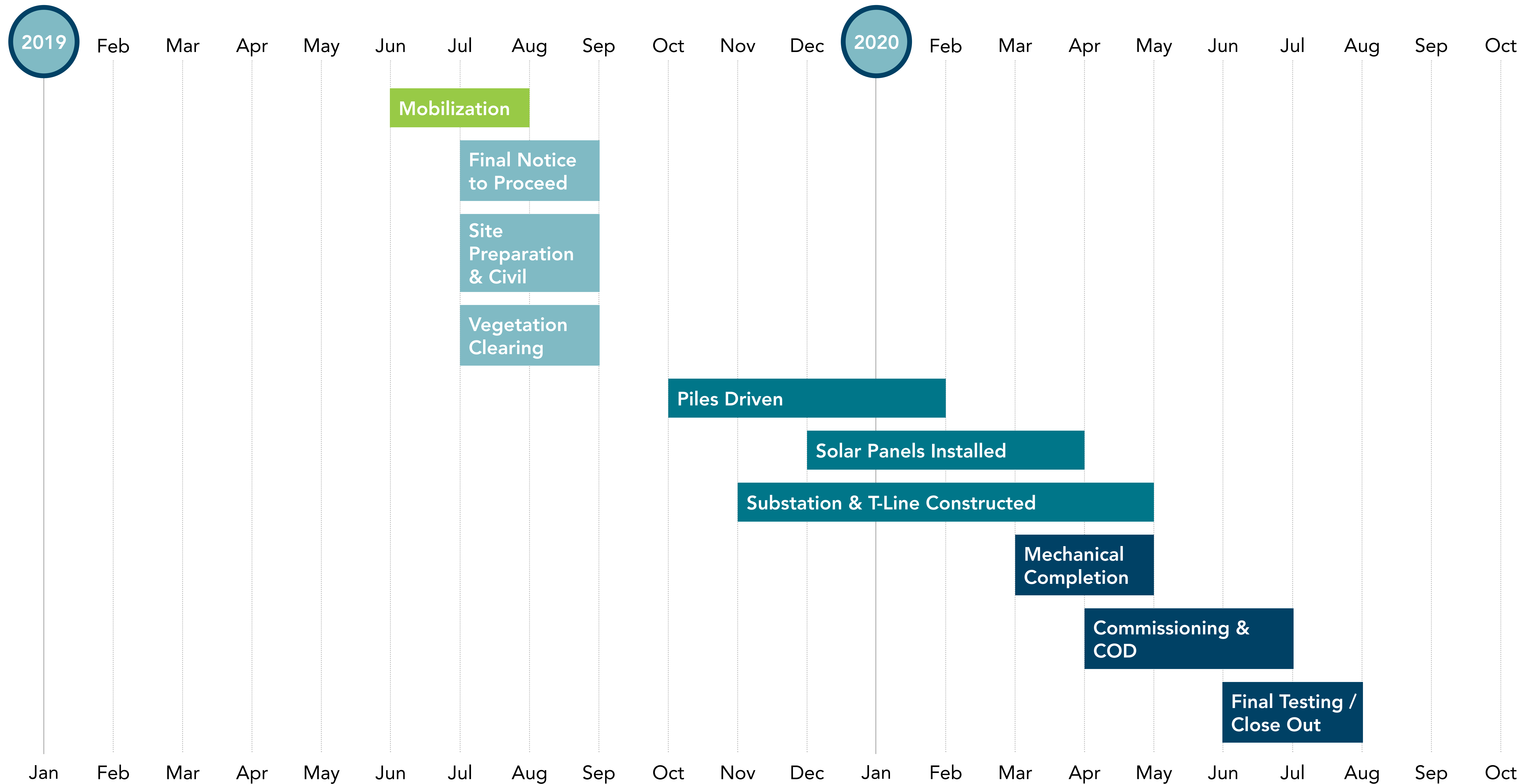
- 24/7 monitoring from central location
- Preventive maintenance plan will include items such as:
 - Vegetation management
 - Electrical checks
 - Visual, Electrical and Mechanical inspections
- Corrective maintenance will occur as required
- After useful life is completed in 35-40 years, equipment will be removed and the site will be restored to its natural state

Vendor Registration

We plan to use local vendors wherever possible. Process includes:

- Holding a job fair prior to construction to engage interested companies and workers. Likely to occur in February or March.
- Keeping a list of interested applicants and vendors during project development to share with the EPC company that is selected to hire subcontractors for construction.
- Establish a vendor and worker application portal.

Phoenix Solar Project Timeline



**Phoenix
Solar**

Contact Information

For more information:

- Leave a message at (903) 326-8549
- Visit the project website
PhoenixSolarTexas.com