DOCKETED	
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Project Title:	Vaca Dixon Power Center Project
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Document Title:	Project Description Redline Update (2 of 2)
Description:	This document includes redline changes to the Project Description originally submitted in the Project Application (Part 2 of 2).
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Figure 2-8 Grading and Drainage Plan – BESS Project Area

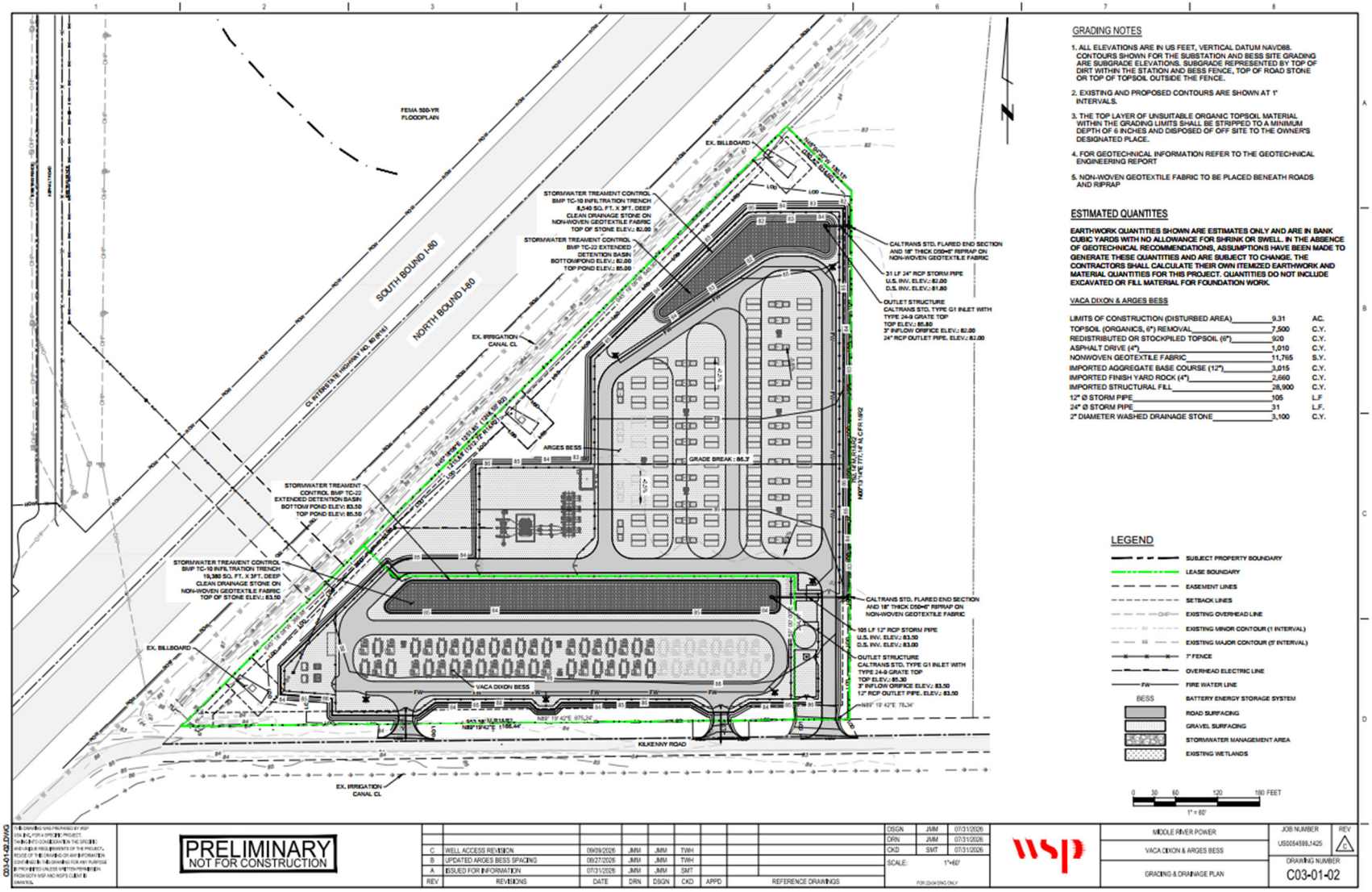


Figure 2-9 Grading and Drainage Plan – Vaca Dixon 57 MWh BESS Component

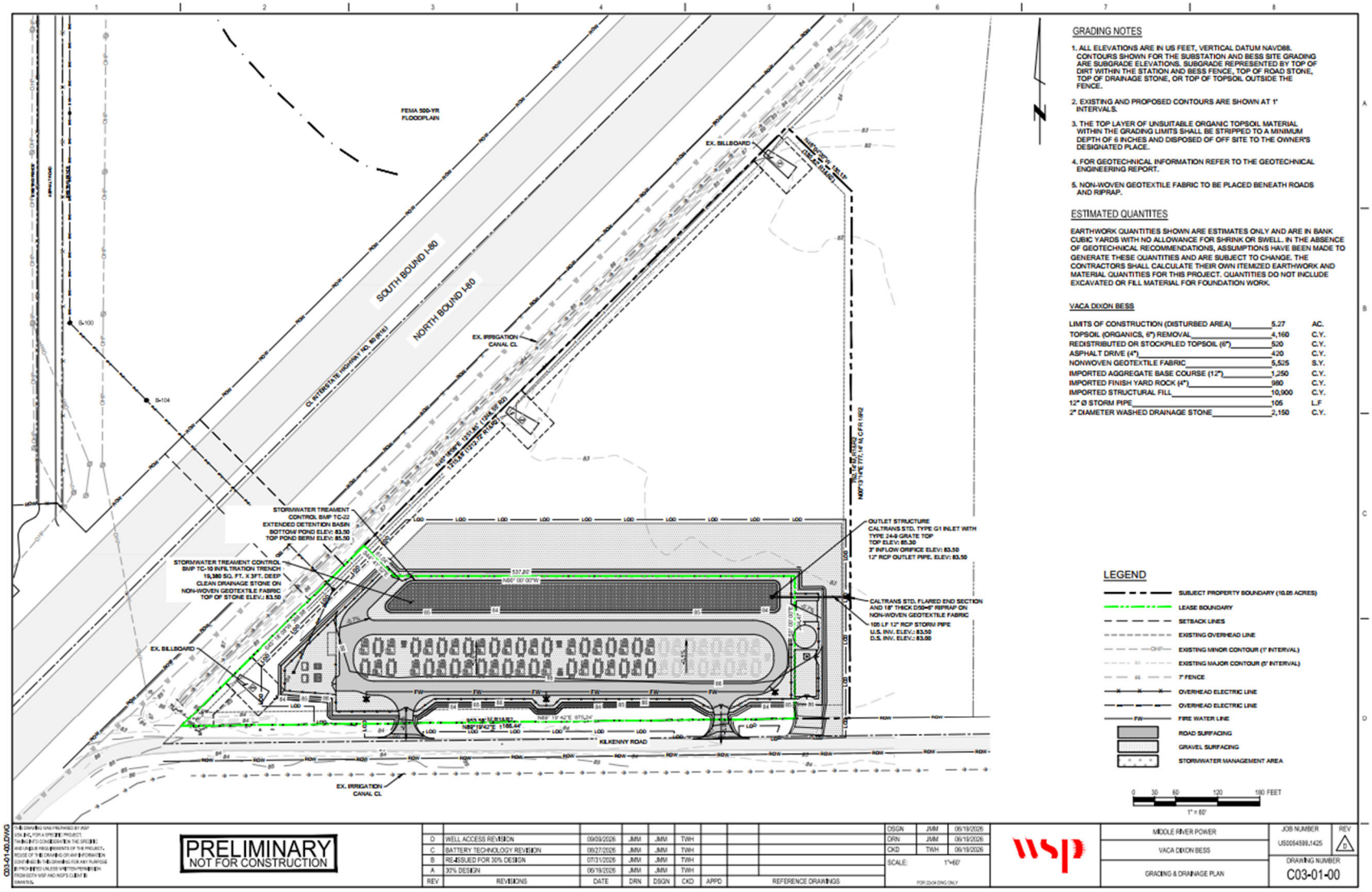
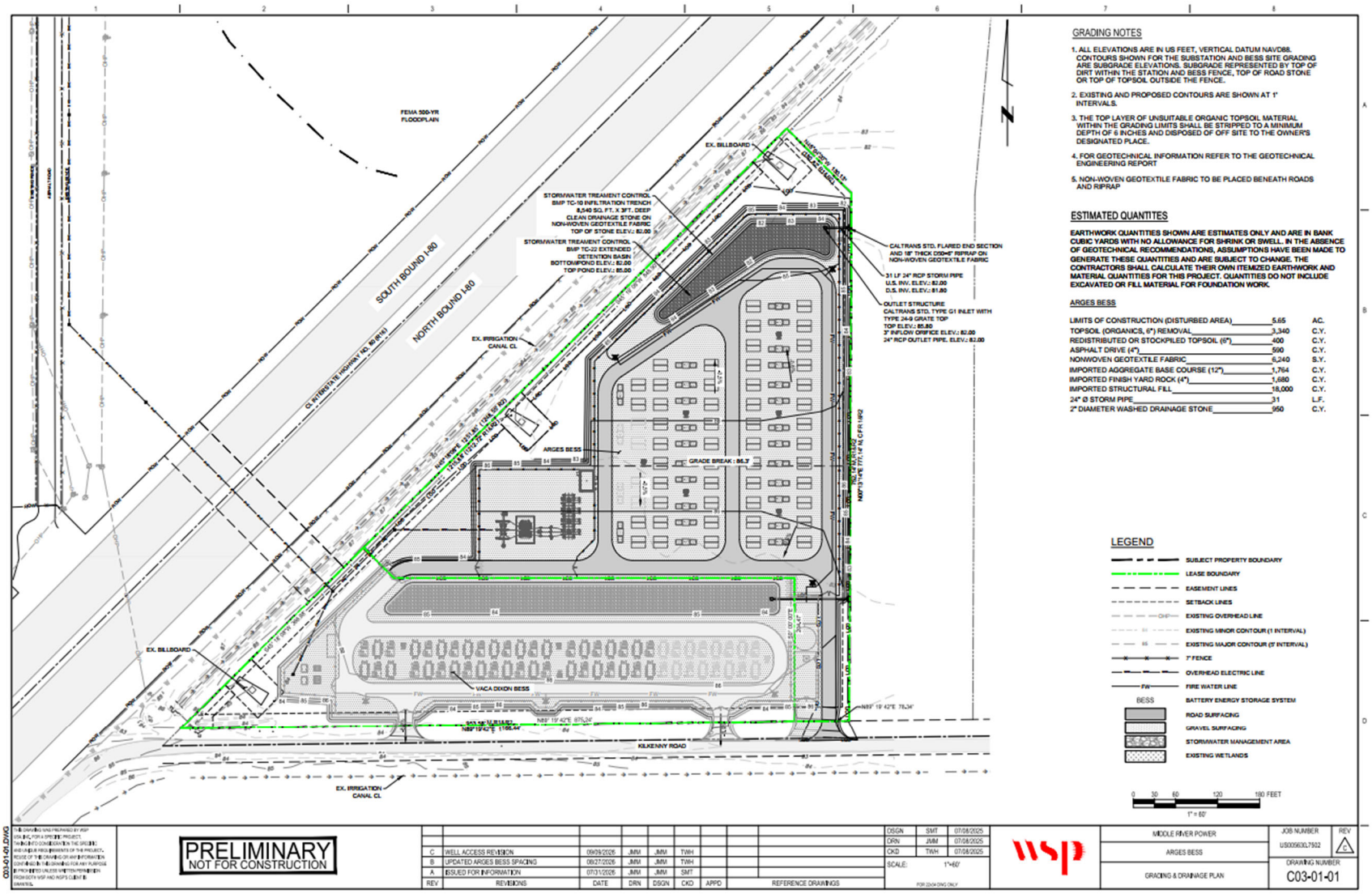


Figure 2-10 Grading and Drainage Plan – Arges 400 MWh BESS Component



2.1.7 Waste Management

Waste produced at Project facilities would be properly collected, treated if necessary, and disposed of. Waste would include nonhazardous waste and hazardous waste, both liquid and solid. Waste management is discussed below and in more detail in Section 5.11, *Waste Management*.

2.1.7.1 Wastewater Collection, Treatment, and Disposal

During Project construction and operation, sanitary facilities would consist of portable sinks and toilets that would be regularly maintained by a permitted provider. No wastewater generated through Project construction or operations would be disposed of through discharge to a sanitary sewer or directly to open waterbodies.

2.1.7.2 Solid Nonhazardous Waste

Solid nonhazardous waste would be produced during Project construction and operation. Nonhazardous construction waste would generally include soil, scrap wood, excess concrete, empty enclosures, scrap metal, insulation, and sanitary waste. Nonhazardous waste generated during Project operation would generally include scrap metal, spent battery and transformer components, sanitary waste, and typical refuse generated by workers.

Construction materials would be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they can be transported to a designated recycling facility. Recycling would be conducted in accordance with applicable California state requirements. Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted. Other compostable materials, such as non-invasive vegetation, may also be composted off-site.

Non-hazardous construction materials that cannot be reused or recycled would be disposed of at a Class II/III landfill when feasible. All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

Waste management is discussed further in Section 5.11, *Waste Management.*

2.1.7.3 Hazardous Wastes

Hazardous waste would be produced during Project construction and operations. Hazardous construction waste would generally include small amounts of waste oil, solvents, detergents, fuels, oily rags/sorbents, and empty hazardous material containers. Hazardous waste generated during operations would generally include small amounts of used oil, solvents, fuels, oily rags/sorbents, and spent batteries.

Several methods would be used to properly manage and dispose of hazardous wastes. Hazardous waste would not be placed in a landfill, but rather would accumulate on-site to be transported to a treatment, storage, and/or disposal facility by a licensed hazardous waste transporter. Waste lubricating oil would be recovered and recycled by a waste oil recycling contractor. Spent lubrication oil filters would either be recycled or disposed of in a Class I landfill. Workers would be trained to handle hazardous wastes generated at the Project Site.

Hazardous materials management is further discussed in Section 5.9, *Hazardous Materials Handling*, and Section 5.11, *Waste Management.*

2.1.8 Management of Hazardous Materials

A variety of chemicals would be used during the construction and operation of the Project. The handling and use of all chemicals would be conducted in accordance with applicable laws, ordinances, regulations, and standards. However, no chemicals or hazardous materials would be stored on-site.

Personnel would use approved personal protective equipment during chemical spill containment and cleanup activities, would be properly trained in the handling of these chemicals, and would be instructed in the procedures to follow in case of a chemical spill or accidental release. Adequate supplies of emergency response equipment, such as absorbent material, would be stored on-site for spill cleanup. Worker safety and training is further discussed in Section 5.10, *Worker Safety*.

A list of the chemicals anticipated to be used at the Project facility is provided in Section 5.9, *Hazardous Materials Handling.*

2.1.9 Fire Protection

Fire protection would be provided to limit the risk of Project and emergency response personnel injury, property loss, and possible disruption of the electricity generated by the Project. A Fire Protection and Prevention Plan would be implemented during both Project construction and operations and is discussed in Section 5.10, *Worker Safety*. Additionally, a discussion on Project fire risks and prevention is included in Section 5.17, *Wildfire*. Individual Project component fire protection is discussed below.

Battery Energy Storage System Facilities

The Project would be designed in compliance with National Fire Protection Association (NFPA) Section 855. A hazard mitigation analysis ~~developed by the BESS manufacturer~~ would be provided to the local authorities and would comply with California Codes 1207.1.4.1 and 1207.1.4.2.

CATL enclosures proposed for the Vaca Dixon 57 MWh BESS facilities ~~Each BESS enclosure~~ would house approximately 80 battery modules and the AESC enclosures proposed for the Arges 40 MWh BESS facilities would house approximately 48 battey modules per enclosure. The battery banks would have ventilation systems to keep battery cores at optimal operating temperature, and the BESS enclosures would have a robust network of water cooling and associated chilling systems to maintain the modules in a safe operating temperature regime. ~~Fire suppression systems in the BESS enclosures would include a gaseous fire suppressant agent (e.g., FirePro 200, 3M™ Novec™ 1230 Fire Protection Fluid, or similar) designed to flood the entire container in the event of a fire.~~ The enclosure would be equipped with combustible gas detection, early smoke detection, alarms, emergency ventilation, and remote monitoring. A fire water loop would also be installed around the BESS facilities and would terminate at the fire hydrant, as shown in Figure 2-5.

Fire safety and suppression measures would be installed and available at the control enclosures, in accordance with current California Fore Code (CFC). Enclosures would be equipped with a fire and gas detection and alarm system.

Fire Water Supply

As described in Section 2.1.5 Water Supply and Use, the Project would include a dedicated on-site fire water supply consisting of a non-potable groundwater well and associated pump skid, a 120,000-gallon fire water storage tank, associated pump house, and a fire water distribution loop

surrounding the BESS facilities. The system would support emergency response and fire suppression and would be secured within the Project's security fencing.

The 120,000-gallon fire water storage tank would be located east of the Vaca Dixon BESS site access road and accessible from Kilkenny Road, as shown in Figure 2-5. The approximately 33-foot-diameter, 20-foot-high galvanized-steel tank would be constructed on a poured concrete foundation and equipped with connections compatible with City of Vacaville Fire Department (VFD) fire engine pumping apparatus. Although direct application of water to BESS equipment is not recommended, VFD could use the stored water for wildfires or fires on nearby properties at its discretion.

The proposed on-site non-potable groundwater well and associated pump skid would be installed south of the fire water storage tank. During operation, the well would supply and replenish the fire water storage tank, which would remain filled and available for emergency use.

The approximately 200-square-foot fire water pump house would contain the pumps, controls, electrical equipment, piping, valves, and monitoring equipment required to maintain system pressure and convey water to fire hydrants, fire sprinklers, and other site fire suppression systems, as applicable. The electrically powered system would include a 100-horsepower fire water pump and a 10-horsepower pressure-maintenance pump and would provide approximately 1,000 gallons per minute at 125 pounds per square inch. The pump house would be constructed on a reinforced concrete foundation or equipment pad in accordance with applicable fire protection standards and local building requirements. It would be normally unmanned, require periodic inspection, testing, and preventative maintenance, and would not include routine water treatment or chemical storage.

2.1.10 Emergency Power

BESS enclosure designs would protect against deflagration[3] through approved NFPA Part 68 or NFPA Part 69 certified designs, as required. NFPA Part 68 designs would allow for venting via the release of the doors under pressure, preventing an explosive release. NFPA Part 69 designs would include a backup Uninterruptible Power Supply that would allow the gas detection and ventilation system to operate for up to 24 hours to minimize equipment down times from maintenance activities, unexpected events, or emergencies.

2.1.11 Auxiliary Systems

2.1.11.1 SCADA and Telecommunications Facilities

The facility would be designed with a comprehensive SCADA system to allow remote monitoring of facility operation and/or remote control of critical components. The fiber optic or other cabling required for the monitoring system would be installed in buried conduit within the access road or planned trenching leading to a SCADA system cabinet at the on-site switchyard for the Project facility, or a SCADA system cabinet within the control enclosure. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers.

The Project's SCADA system would interconnect to an external fiber optic network or fixed wireless service at the on-site collector switchyard and would require installation of buried fiber optic cables

[3] Deflagration is defined by NFPA as propagation of a combustion zone at a velocity less than the speed of sound in the unreacted medium.

or fixed wireless antennas. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers, so no additional disturbance associated with telecommunications is anticipated. As such, the Project would not require any substantial construction efforts regarding telecommunications facilities and structures. No relocation of existing telecommunication structures would occur.

2.1.12 Fuel Types, Handling, and Use Scenarios

A description of hazardous materials to be used during Project construction and operations and maintenance, handling, and use scenarios are included in Section 5.9, *Hazardous Materials Handling.*

2.1.13 Safety

The Project would be designed to maximize safe operation. Potential hazards could occur during both Project construction and operation. Facility operators would be trained in safe operation, maintenance, and emergency response procedures to minimize the risk of personal injury and damage to the facilities. The Project BESS components would comply with the current CFC, which governs the code requirements to minimize the risk of fire and life safety hazards specific to BESS used for load shedding, load sharing and other grid services (Chapter 12 Section 1206 of the 2019 CFC). In accordance with the CFC, the battery enclosure and site installation design are all required to be approved by the local or State Fire Marshal.

Section 5.10, *Worker Safety*, provides a hazards analysis and describes Project training and safety programs.

2.1.14 BESS Site and Facilities Selection

The Project Site was selected primarily due to its proximity to existing electrical interconnection infrastructure (e.g., the VDPP and the PG&E Vaca-Dixon Substation). The Project Site is located in an area of growing electrical demand and is adjacent to appropriate electrical infrastructure to operate and service demand efficiently. The Project Site is located in the direct vicinity of the existing VDPP and the CAISO-controlled grid at the PG&E-owned 115 kV Vaca-Dixon Substation. The proposed BESS facilities would be strategically located in the direct vicinity of their respective interconnection facilities, thereby minimizing the need for construction of lengthy electrical connection lines. In addition, the Vaca Dixon 57 MWh BESS component would interconnect to the PG&E Vaca-Dixon Substation through the existing VDPP switchyard, which would allow for hybridized operation of the Vaca Dixon 57 MWh BESS and the VDPP. The proposed Project would utilize the existing access road that connects the VDPP to Quinn Road to the south for gen-tie access, and the BESS Project Area and gen-tie routes would be strategically located near I-80 for convenient access during construction and operations. The area surrounding the Project also includes existing generation and transmission facilities that would be similar in form, function, and visual character to the proposed Project facilities.

2.2 Transmission Lines Description, Design, and Operation

The Project gen-tie lines would cross I-80 to connect the BESS facilities to the existing PG&E Vaca-Dixon Substation located on a PG&E-owned parcel (APN 0133-060-070). Both BESS components would interconnect to the existing PG&E Vaca-Dixon Substation at 115 kV. The Vaca Dixon 57 MWh BESS is proposed to connect to the existing 13.8/115 kV GSU transformer at the existing CalPeak Power – VDPP on the PG&E parcel via a new ~~overhead~~ 13.8 kV line from the proposed BESS switchyard to the low side of the VDPP GSU transformer to the north. The existing GSU transformer in the VDPP switchyard is connected to the PG&E substation by an existing 115 kV line. The Arges 400 MWh BESS would interconnect to the PG&E substation via a new ~~overhead~~ 115 kV gen-tie to be constructed from the Arges 400 MWh BESS switchyard at the BESS Project Area south of I-80 to the PG&E substation to the north.

The proposed gen-tie components for the Vaca Dixon 57 MWh and Arges 400 MWh BESS facilities would be co-located on shared transmission structures carrying both 13.8 kV and 115 kV conductors for approximately 1,~~500~~ 450 feet of the gen-tie lengths, from the vicinity of the BESS switchyards across I-80 and up to the northwest corner of the VDPP facility site. As shown in Figure 2-3, from that point, the 13.8 kV gen-tie component for the Vaca Dixon 57 MWh BESS would continue approximately 125~~150~~ feet to the ~~east~~east via an underground cable trench or duct bank for connection to the low side of the 13.8/115 kV GSU transformer at the VDPP. The Arges 400 MWh BESS 115 kV gen-tie route would continue approximately 725 feet north and east to the connection point at the PG&E Vaca-Dixon Substation. The gen-tie crossing of I-80 would require an encroachment permit Caltrans. Figure 2-3 shows the gen-tie design and work areas.

Figure 2-11 provides a map of the proposed gen-tie route, Vacaville city limits, and existing transmission lines within one mile of the Project. There are no parks, recreational areas, or scenic areas within one mile of the gen-tie route. Section 5.5, *Visual Resources*, provides photographic simulations of the Project. The design details upon which the photographic simulations are based are located in Appendix C.

The interconnecting Arges 400 MWh BESS 115 kV transmission circuit would consist of single-circuit, overhead configuration installed on steel monopoles. The Arges 400 MWh BESS gen-tie line would be constructed with ~~approximately~~ nine~~12~~ steel monopoles, six of which would also carry 13.8 kV circuits for the Vaca Dixon 57 MWh BESS. The interconnecting Vaca Dixon 57 MWh BESS 13.8 kV gen-tie circuit would also consist of single-circuit, overhead configuration, steel monopoles with one section of underground line within the VPP fenceline. The Vaca Dixon 57 MWh BESS gen-tie line would be constructed with approximately ~~eight~~ seven steel monopoles, six of which would also carry the Arges 400 MWh BESS 115 kV circuits. The total number of gen-tie structures would be determined by final design. Detailed descriptions of the gen-tie structures are included below. All Project transmission facilities would be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (Avian Power Line Interaction Committee [APLIC] 2006) where feasible. Transmission facilities would also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012).

Vaca Dixon 57 MWh BESS

The Vaca Dixon 57 MWh BESS component, located in the southern portion of the BESS Project Area, would connect to the low side of the existing 13.8/115 kV GSU transformer at VDPP via a new 13.8 kV overhead line and cable trench or duct bank within the VDPP fenceline, approximately 1,~~815~~ 580 feet in length of overhead and 125 feet of underground, from the proposed BESS switchyard to the existing VDPP GSU transformer to the north (see Figure 2-3). The VDPP GSU transformer is connected to the PG&E Vaca-Dixon Substation by an existing overhead 115 kV line. The Vaca Dixon 57 MWh BESS would be charged and discharged from the grid at 13.8 kV. The BESS facilities would be connected together utilizing underground cables in a duct bank. All Project underground 13.8 kV feeder cables would be collected in the Project distribution switchyard with a 13.8 kV switchgear. The Project 13.8 kV gen-tie line would share gen-tie steel monopole structures with the Arges 400 MWh BESS for the majority of the route. The 13.8 kV gen-tie line would be twin-bundled 1590 kcmil Falcon ACSR mounted under the 115 kV Arges gen-tie conductors for the shared structures portion of its route. The Project gen-tie would terminate at the existing VDPP substation's main power transformer.

Arges 400 MWh BESS

As shown in Figure 2-3 and Figure 2-7, the Arges 400 MWh BESS switchyard would be interconnected to PG&E's Vaca-Dixon Substation by a new overhead 115 kV gen-tie line, approximately 2,350 feet in length.

The Arges 400 MWh BESS would be charged and discharged from the grid at 115 kV. The BESS facilities would be connected together and operate at 34.5 kV utilizing underground cables in a duct bank. All Project underground 34.5 kV feeder cables would be collected in the BESS yard step up/down 34.5 kV/115 kV switchyard. The Project voltage would be stepped up to 115 kV with a main power transformer before transmitting to PG&E's Vaca-Dixon Substation. The Project 115 kV gen-tie line would share gen-tie steel monopole structures with the Vaca Dixon 57 MWh BESS for the majority of the route. The 115 kV gen-tie line would be 477 kcmil Hawk ACSR mounted above the 13.8 kV Vaca Dixon gen-tie conductors for the shared structures portion of its route. The Project gen-tie would terminate at the monopole west of the existing PG&E's Vaca-Dixon Substation.

2.2.1 Transmission Facilities Selection

The selection process for transmission facilities also followed the process described in Section 2.2.1. Existing land use activities within the Project Site would be consistent with the overall region. In addition, the gen-tie route selected was the shortest possible distance connecting the Project BESS components to the ~~Points of Interconnection at~~ PG&E's Vaca-Dixon~~DPP~~ Substation. Where possible, the proposed gen-tie abuts existing roads and parcel boundaries and circumvents existing landowner permanent infrastructure.

Figure 2-11 Existing Transmission Lines Within One Mile of the Project Site

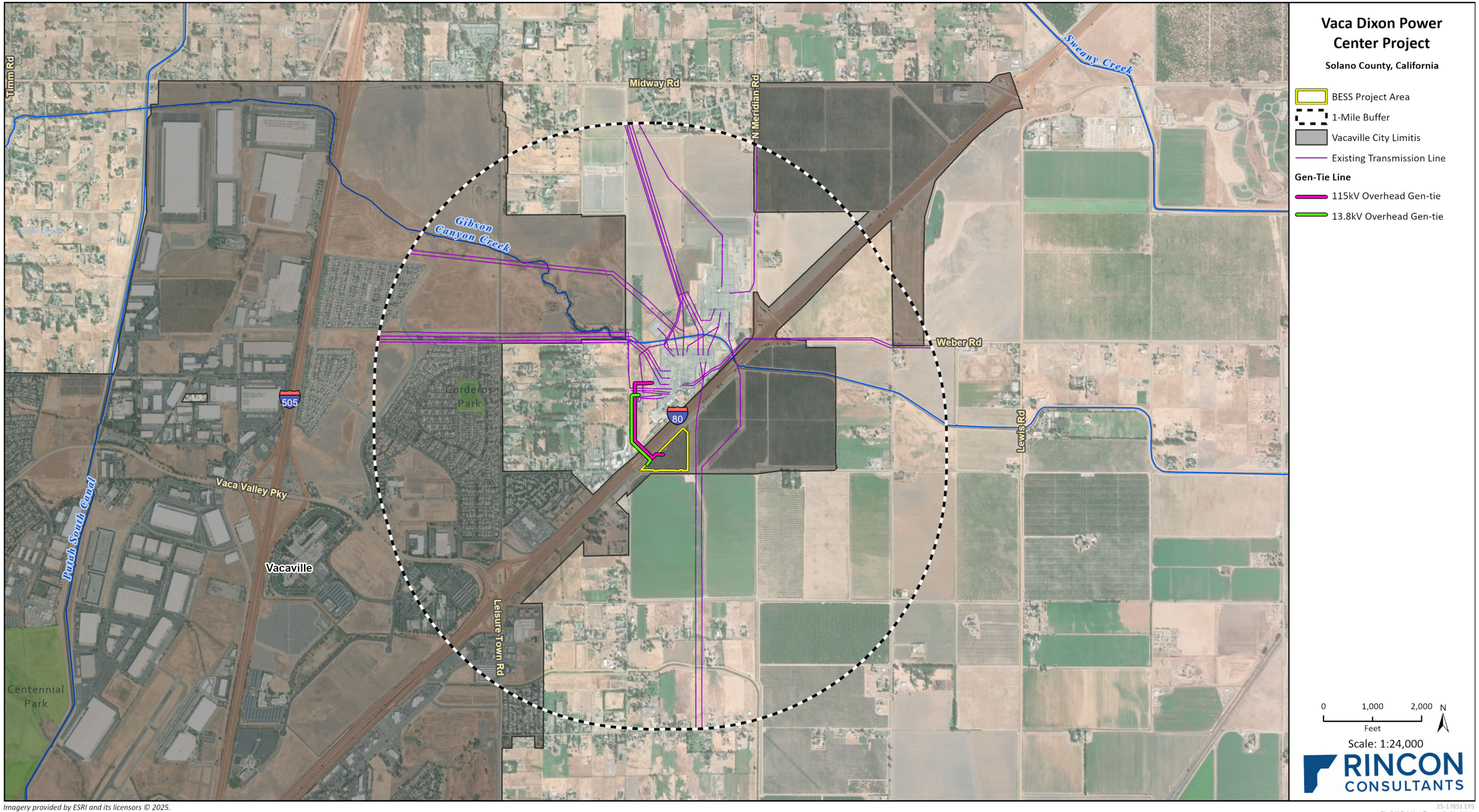


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Fig 2-X Existing Transmission Lines

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2.3 Project Construction

This section describes the construction of the overall Project, including the BESS facility components and transmission components. Construction of the Project is anticipated to take approximately 24 months to complete, including approximately one year each for the Vaca Dixon 57 MWh and Arges 400 MWh BESS components. Construction of the Vaca Dixon 57 MWh BESS component would begin in ~~July~~ November of 2027 and would be operational by December~~July~~ 2028. Construction of the Arges 400 MWh BESS component would begin in ~~June~~ April of 2029~~8~~ and would be operational by ~~June 2029~~April 2030. The Vaca Dixon 57 MWh BESS would require a peak workforce of approximately 58~~0~~ personnel and Arges 400 MWh BESS would require a peak workforce of approximately 68~~0~~ personnel. In compliance with City of Vacaville noise regulations (City of Vacaville Municipal Code Chapter 8.10), construction would typically occur Monday through Saturday from 7:00 a.m. to 7:00 p.m.

Table 2-3 below includes the anticipated construction phases and dates for each of the construction scenarios.

Table 2-3~~2~~ Preliminary Construction Schedule

	Duration		
Construction Activity	**Start Date**	**End Date**	**Days**
Vaca Dixon 57 MWh BESS			
Access Road	Q4~~3~~ 2027	Q4~~3~~ 2027	24
Site Preparation and Grading	Q4~~3~~ 2027	Q4 2027	72
Foundation and Equipment Installation	Q4 2027	Q1 2027	48
Groundwater Well Installation	Q4 2027	Q1 2027	48
Set Modules, Inverters, and Switchgear	Q1 2028	Q1 2028	48
Electrical Wire Installation and Finish Grading	Q1 2028	Q2 2028	48
Testing and Commissioning	Q3~~2~~ 2028	Q4~~3~~ 2028	72
Arges 400 MWh BESS	**Start Date**	**End Date**	**Days**
Access Road	Q2~~2~~ 2029~~8~~	Q2 2029~~8~~	24
Site Preparation and Grading	Q2 2029~~8~~	Q3 2029~~8~~	72
Foundation and Equipment Installation	Q3 2029~~8~~	Q4 2029~~8~~	48
Set Modules, Inverters, and Switchgear	Q4 2029~~8~~	Q1 2030~~29~~	48
Electrical Wire Installation and Finish Grading	Q1 2030~~29~~	Q1 2030~~29~~	48
Testing and Commissioning	Q1 2030~~29~~	Q2 2030~~29~~	72

Prior to site grading, the existing agricultural irrigation system would be capped where it enters the BESS Project Area and the existing pipe and drip irrigation system within the BESS Project Area would be removed. During construction, construction equipment and construction worker vehicles would be staged at a temporary staging and laydown area. As shown in Figure 2-6, the temporary staging and laydown area for the Vaca Dixon 57 MWh BESS would be located along the northern and eastern boundary of the Vaca Dixon 57 MWh BESS component layout. As shown in Figure 2-7, the temporary staging and laydown area for the Arges 400 MWh BESS would be centrally located on the western Arges component layout boundary.

Construction equipment to be utilized would include the following: backhoes, bore/drill rigs, ~~truck-mounted rotary drill rig,~~ compactors, compressors, cranes, dozers, graders, dump trucks, excavators, flatbed trucks, forklifts, hydraulic excavators, loaders (front-end, rubber-tired, and skid steer), mounted rotary drill rig, pavers, portable electric generators, rough terrain forklifts, soil compaction equipment, sweepers, truck-welders~~welders~~, ~~pump, pipe, water tank components,~~ vacuum trucks, ~~flatbed trucks, dump trucks,~~ and water trucks~~and water trucks~~[4].

The following sections describe the construction methods and activities for the major Project components.

2.3.1 Battery Energy Storage System Construction Methods and Activities

The Project BESS and switchyard facilities would be built on imported fill to elevate equipment, achieving positive surface drainage towards planned stormwater management areas as shown in Figure 2-9 and Figure 2-10. The new facilities are planned to be constructed on up to 4.5 feet of compacted fill material placed over prepared subgrade. Existing topsoil would be removed prior to placing the engineered fill material.

Foundation excavations for the Project BESS and switchyard facilities would be at a depth of up to two feet. Excavations for foundations to support heavy equipment inside the Project switchyard may require excavation extending to bedrock. Once the foundations are in place for the BESS, the batteries, inverters, and other electrical equipment would be mounted and installed. Equipment would be delivered to the site on trucks.

Site preparation would also include construction of drainage components to capture and direct stormwater flows around the BESS facilities to proposed stormwater basins. The proposed stormwater basins consist of open vegetated extended dry detention basins with subsurface infiltration trenches along the pond bottoms. The infiltration trench would be constructed by excavating up to two feet below existing grade, placing geotextile fabric, and backfilling with washed drainage stone. Above the infiltration trench, the ponds would store additional runoff volume temporarily, releasing water slowly to mimic the pre-construction site runoff characteristics.

Construction of the on-site fire water supply system would include drilling and constructing the non-potable groundwater well; installing the well pump skid, controls, and appurtenant equipment; constructing foundations for the 120,000-gallon fire water storage tank and approximately 200-square-foot fire water pump house; and installing associated piping and the fire water distribution loop. Well construction would require an approximately 100-foot by 100-foot area for drilling rig access, equipment staging, and construction activities. Final well siting and design would be determined during detailed design and permitting based on site-specific hydrogeologic conditions, aquifer-zone testing, and applicable regulatory requirements. A well construction permit would be obtained from the Solano County Department of Resource Management, Environmental Health Division. The expected groundwater production capacity was evaluated in the Groundwater Feasibility Study prepared for the Project (CEC Docket TN #271961).

Site preparation and grading would include exporting topsoil and importing fill material on trucks. It is anticipated that dump trucks with a 16 cubic yard capacity would be used for both soil export and fill import, representing approximately 3,700~~650~~ round trip-way truck trips. Delivery of other

[4] Light duty helicopter usage is anticipated very briefly during the Electrical Wire Installation/Finish Grading phase to string lines between the two poles at the I-80 crossing.

construction material (fire water supply system components, storm pipes, and geotextile fabric) ~~required for stormwater basins~~ would involve additional truck trips.

2.3.2 Gen-tie Construction Methods and Activities

2.3.2.1 Overhead

The Vaca Dixon 57 MWh BESS component and Arges 400 MWh BESS component would include the use of steel monopoles, approximately 45-100 feet tall, to support the 13.8 kV and 115 kV gen-tie lines. The two BESS facilities would share gen-tie structures for most of the route. The Vaca Dixon 57 MWh BESS component's 13.8 kV gen-tie line connection would be from the BESS switchyard to the existing VDPP GSU transformer. The Arges 400 MWh BESS component's 115 kV gen-tie line connection would be from the northern Arges 400 MWh BESS component to the PG&E Vaca-Dixon Substation. All structures would be made of steel. Tangent structures would be directly embedded at 10 percent of pole length plus four additional feet (10% + 4), and angle structures would be installed on concrete pier foundations. These foundations would be between 7-10 feet in diameter and 30-40 feet deep, depending on soil conditions and wire selection. Figure 2-12, Figure 2-13, Figure 2-14, and Figure 2-15 provide examples of each structure type for the gen-tie line. During the electrical wire installations, a single helicopter may be used to assist with pulling the gen-tie lines across I-80 to connect to the PG&E Vaca-Dixon Substation. The helicopter installation support would be required twice, once for the Vaca Dixon 57 MWh BESS component and again for the Arges 400 MWh BESS component. The helicopter would likely take off from Napa County Airport, located approximately 18 miles southwest of the Project Site. Helicopter use would include retrieval of the gen-tie cable from the Project Site, and transporting ~~of~~ it across the highway to connect to the monopole on the PG&E parcel north of I-80.

2.3.2.2 Underground

The Vaca Dixon 57 MWh BESS component 13.8 kV gen-tie component would include approximately 125 feet of underground cable within the paved VDPP footprint. This portion of the gen-tie line would utilize medium-voltage electrical cables consisting of approximately five conductors per phase (15 total conductors). The cables would be installed within a prefabricated Trenwa-type concrete cable trench system or an underground concrete-encased duct bank. The anticipated trench dimensions would be approximately 3 to 5 feet wide and 3 to 5 feet deep, depending on the final cable arrangement, required electrical clearances, thermal considerations, and site conditions. The proposed cable trench would originate at the gen tie pole in the northwest corner of the VDPP paved area taking the 13.8 kV gen-tie to the low side of the existing 13.8 kV/115 kV GSU at the VDPP. The high side of the VDPP GSU is connected to the PG&E Vaca-Dixon Substation at 115 kV. Excavation would be performed along designated cable routes, followed by preparation of the trench bedding, placement of prefabricated concrete trench sections or installation of conduits and concrete encasement, and subsequent backfilling and compaction as applicable.

Figure 2-12 Typical Co-located 13.8 kV and 115 kV Monopole Deadend Design

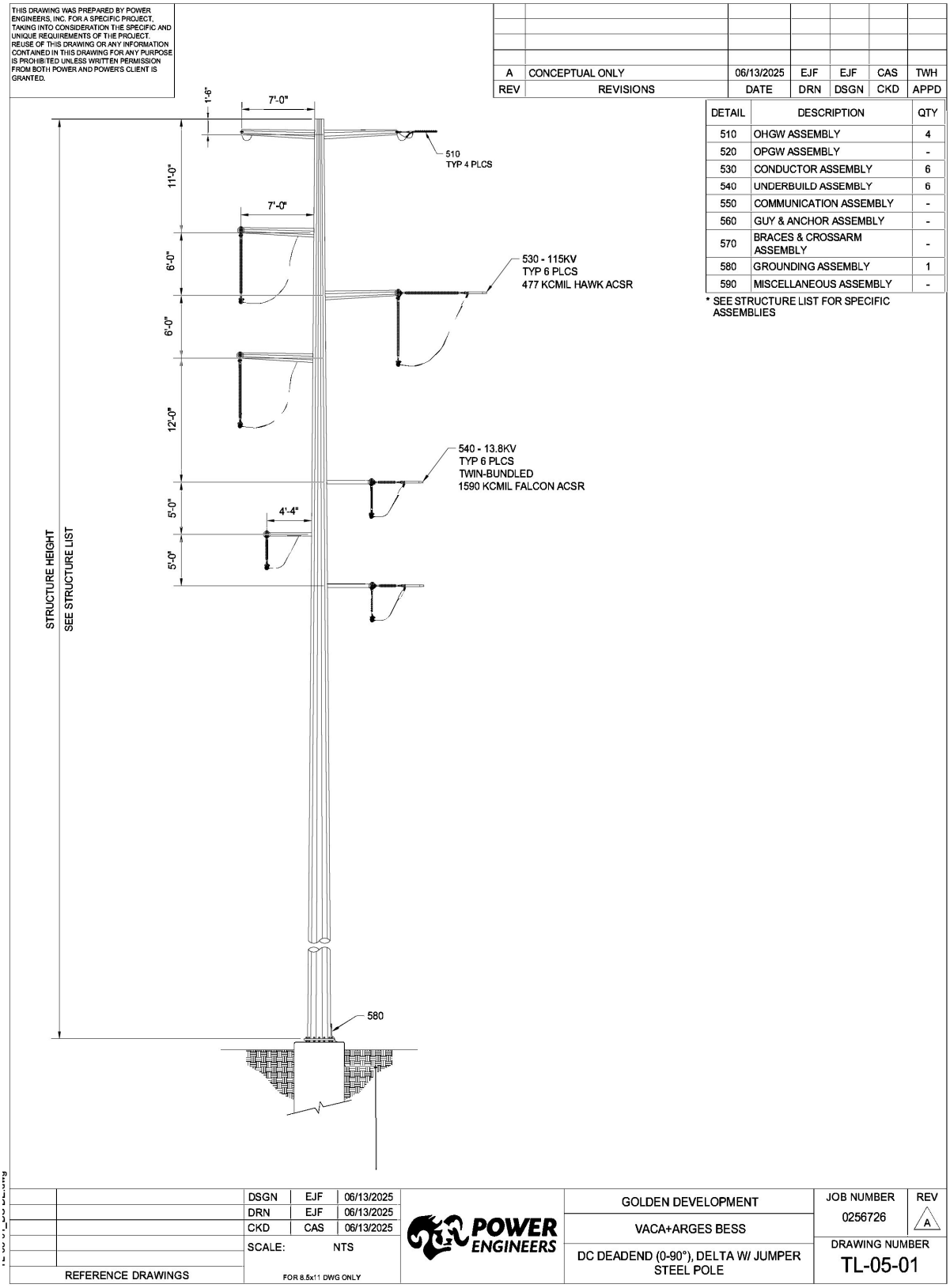


Figure 2-13 Typical Co-located 13.8 kV and 115 kV Monopole Suspension Design

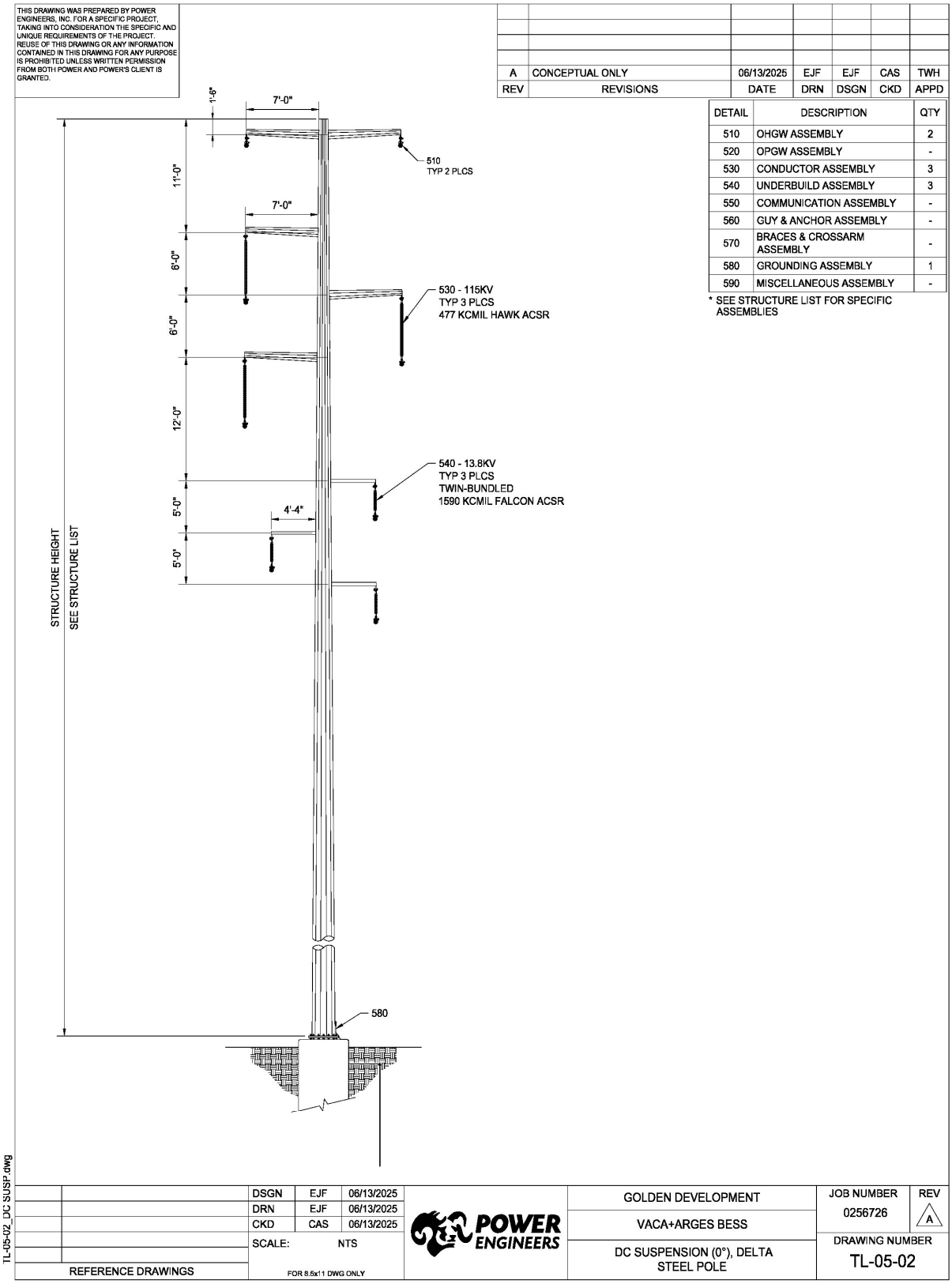


Figure 2-14 Typical 13.8 kV Monopole Design

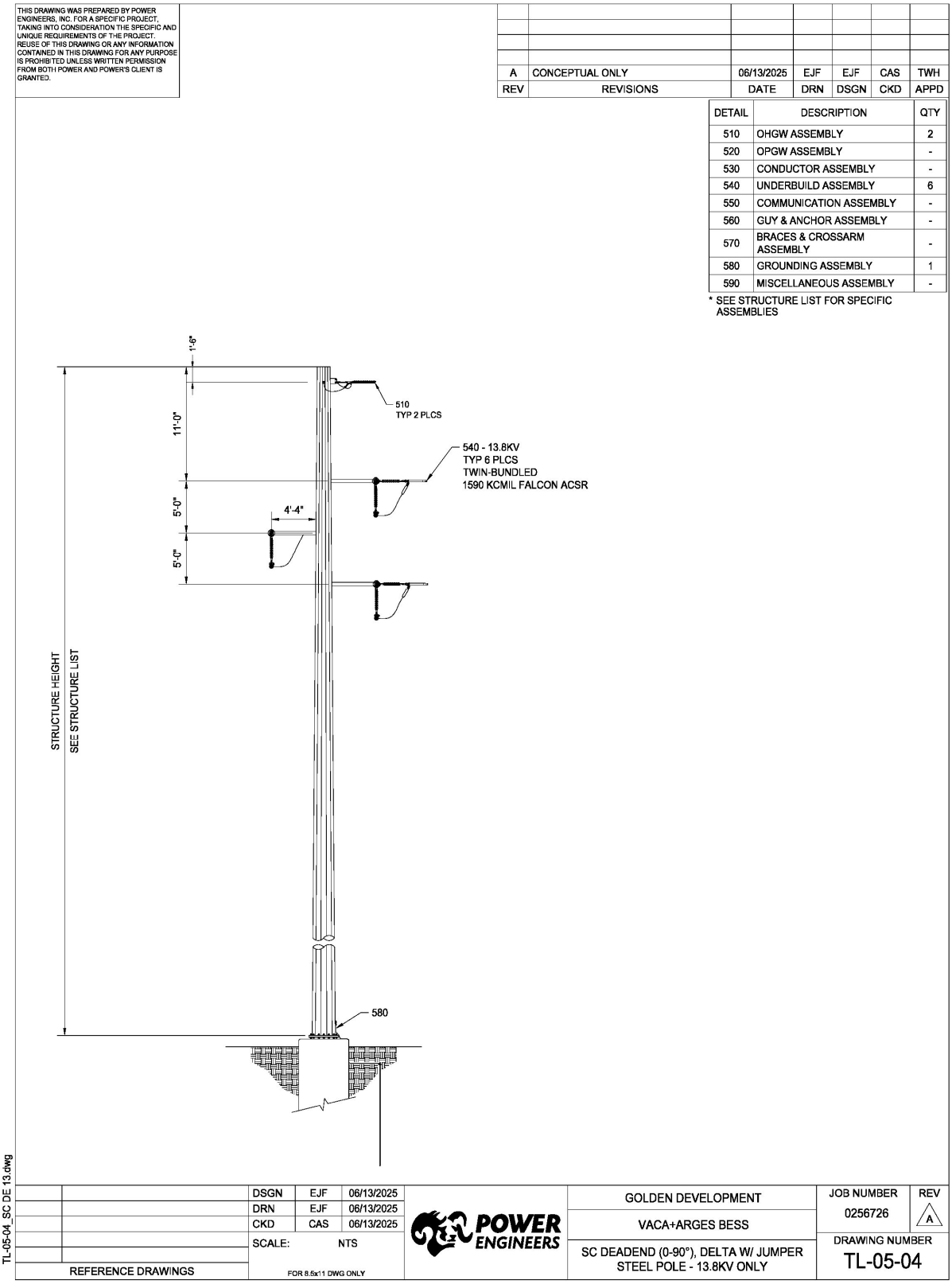
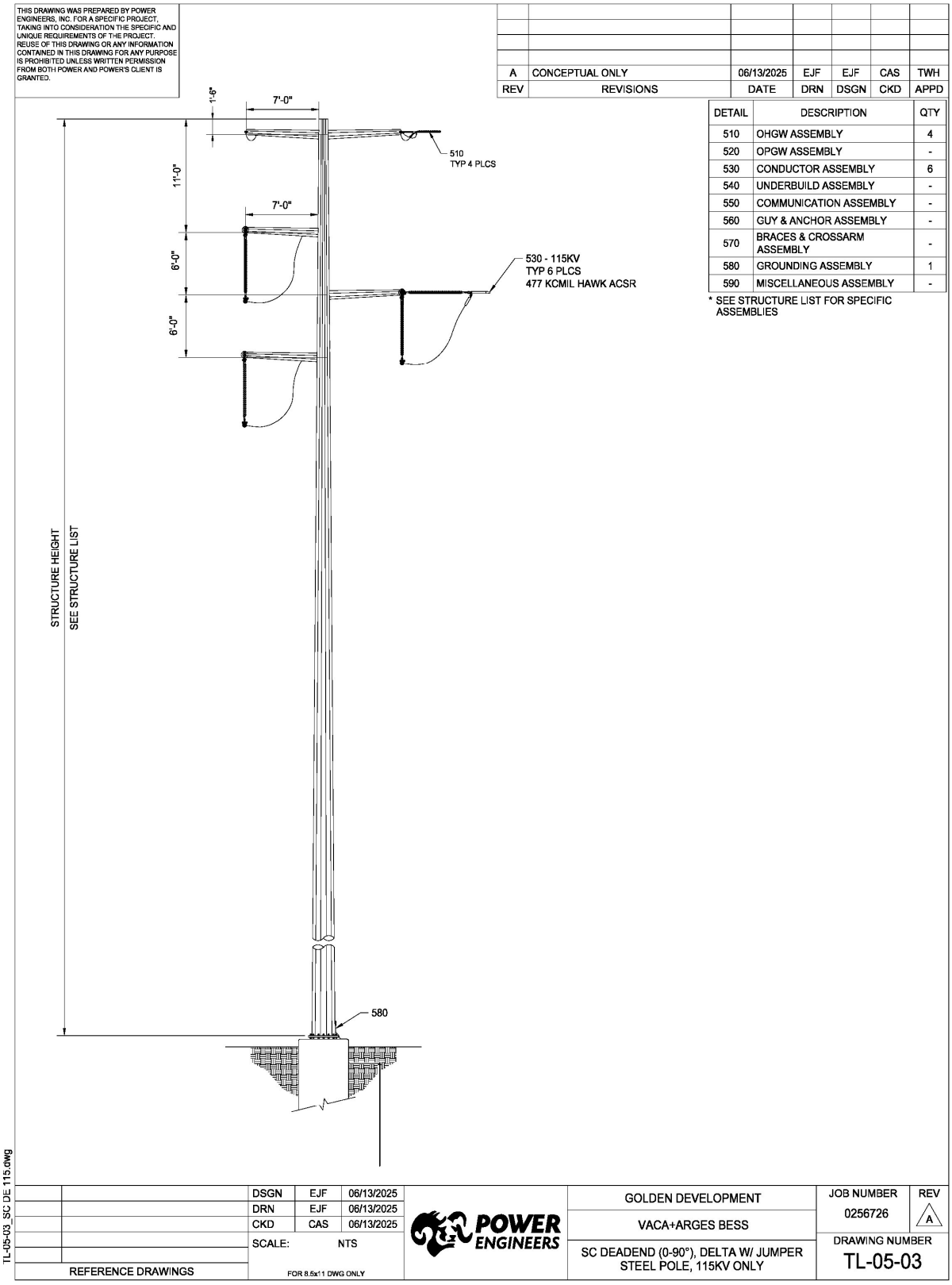


Figure 2-15 Typical 115 kV Monopole Design



2.3.3 Commissioning

As the last phase of the construction process after each BESS component is completely built (i.e. once after completion of the Vaca Dixon 57 MWh BESS component and once after completion of the Arges 400 MWh BESS component), the Project would go through a commissioning phase that entails energization and testing before full site operation. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting prior to commencement of commercial operations. Upon completion of successful testing, the equipment would be energized. During commissioning, qualified personnel would conduct energization procedures and troubleshoot potential anomalies to ensure proper operation and safety of the Project BESS facilities. Typically, heavy equipment and large crews would not be needed at this point, unless repairs or part replacements are required.

2.4 Agency Contacts

Table 2-4 below lists the agency contacts for the Project. Additional contacts related to specific resource areas are included in the individual sections of Chapter 5, *Environmental Analysis*.

Table 2-4 Agency Contacts

Agency	Contact
United States Fish and Wildlife Services	Megan Cook, Sacramento Division Supervisor
California Department of Transportation	Jeffrey Leung, Transportation Engineer
California Energy Commission	Renee Longman, Project Manager Eric Knight, Manager, Siting & Environmental Branch Joseph Hughes, Supervisor, Air Resources Caroline Grey, Senior Advisor to Chair David Hochschild Ryan Young, Deputy Public Advisor Jimmy Qaqundah, Assistant Chief Counsel
City of Vacaville, Community Development Department	Erin Morris, Director Claudia Garcia, Assistant Director Albert Enault, Senior Planner
City of Vacaville Fire Department	Alex Nourot, Deputy Fire Chief Jill Childers, Fire Safety Coordinator
City of Vacaville Utility Department	Daniel DeCaro, Engineering Project Coordinator
Solano County, Resource Management Department	Allan Calder, Planning Manager
Solano Irrigation District	Hunter Kett, Asst Civil Engineer
California Department of Fish and Wildlife	Brenda Blinn, Senior Environmental Scientist (Supervisor) Crystal Sinclair, Senior Environment Scientist (Specialist)
Regional Water Quality Control Board	Stephanie Tadlock, Environmental Scientist (Senior))
Department of Toxic Substances Control	Rebecca De Pont, Supervising Environmental Planner
Yolo- Solano Air Quality Management District	Emmanuel Orozoco, Engineering Manager
Airspace, Utilities, Caltrans	Michael O'Callaghan, District Office Chief