

DOCKETED	
Docket Number:	26-OPT-01
Project Title:	Vaca Dixon Power Center Project
TN #:	273054
Document Title:	Project Description Update
Description:	Project Description Update to incorporate water supply and project design changes
Filer:	Adam Morrison
Organization:	Rincon Consultants, Inc.
Submitter Role:	Applicant Consultant
Submission Date:	10/6/2026 11:34:50 AM
Docketed Date:	10/6/2026



Vaca Dixon Power Center Project CEC Docket No. 26-OPT-01

Project Description Update

prepared for

California Energy Commission

715 P Street

Sacramento, California 95814

prepared by

Vaca Dixon BESS LLC/Arges BESS LLC

4350 Executive Drive, Suite 320

San Diego, California 92121

and

Rincon Consultants

601 University Avenue, Suite 201

Sacramento, California 95825

October 2026

Table of Contents

Table of Contents	i
1 Introduction and Purpose	1
2 Project Description Updates	2
2.1 Project Design Updates	2
2.1.1 Fire Water Supply	2
2.1.2 BESS Design	5
2.1.3 Arges BESS and Switchyard	5
2.1.4 Vaca Dixon BESS and Switchyard	5
2.2 Project Construction Update	6
2.2.1 Construction Methods and Activities.....	6
2.2.2 Construction Schedule.....	6
2.2.3 Construction Workforce.....	6
2.2.4 Construction Equipment.....	6
3 Environmental Impacts and Mitigation Measures	7
3.1 Cultural Resources and Tribal Cultural Resources.....	7
3.2 Land Use	7
3.3 Noise	7
3.4 Traffic and Transportation.....	8
3.5 Visual Resources.....	8
3.6 Socioeconomics.....	9
3.7 Air Quality.....	9
3.8 Public Health	9
3.9 Hazards Materials Handling	9
3.10 Worker Safety	10
3.11 Waste Management.....	10
3.12 Biological Resources.....	14
3.13 Water Resources	14
3.14 Soils.....	16
3.15 Paleontological Resources	16
3.16 Geological Hazards and Resources	17
3.17 Wildfire.....	17
4 References	18

Appendices

- Appendix A Updated Project Layout
- Appendix B Updated Grading and Drainage Plan
- Appendix C Updated Simulated Views

This page intentionally left blank.

1 Introduction and Purpose

Since the filing of the Vaca Dixon Power Center Project (Project) Opt-in Application (Application) in January 2026, additional Project description details are now available that require updates to the environmental analysis. The Application assumed that the water supply for the Project would be provided from an existing off-site water supply source and did not evaluate the use of an on-site water source. Since that time, the Project design has been revised to include an on-site groundwater well (non potable), associated pump equipment, and a 120,000 gallon water tank to provide fire water storage. Associated improvements include a groundwater well pump skid, fire water pump skid, extension of the Project security fence to enclose the new water infrastructure, and modification of the fire water distribution loop such that it would no longer connect to the off-site water main.

Additional changes within the existing Project footprint include modifications to the battery models, site arrangement and the layout of the battery energy storage system (BESS) and switchyard facilities. The BESS systems proposed for both the Vaca Dixon and Arges facilities have been updated to use new battery models. The revised equipment would not change the approved power rating, storage duration, or total energy storage capacity of either facility. The arrangement of battery enclosures and associated equipment has been adjusted within the existing Project footprint to accommodate the updated BESS design. Accordingly, this document serves as the updated Project Description and Environmental Analysis to account for these Project description updates.

Section 2 describes these Project description updates in further detail, and Section 3 analyzes the potential environmental impacts resulting from these updates relative to the analysis included in the Application. As discussed herein, the Project, with these updates, would not result in any significant environmental impacts.

2 Project Description Updates

The updates and additions to the Project design since submittal of the Application include the following elements:

- **Fire Water**
 - Addition of a 120,000 gallon water storage tank
 - Addition of a non-potable groundwater well and associated pump skid and fire water pump skid
 - Extension of fence to enclose the groundwater well, fire water storage tank, and pumps
 - Shortening fire water loop to no longer connect to an offsite water main north of the Project site
- **BESS System Updates**
 - Use of new battery models for the Vaca Dixon and Arges BESS facilities
- **Site Arrangement and Layout**
 - Relocation of control enclosures in Arges and Vaca Dixon switchyards to eastern portions of the respective switchyards
 - Relocation of medium voltage transformers for the Arges BESS facility and reduction in quantity from ten to six
 - Rearrangement of battery enclosures and associated equipment within the Vaca Dixon and Arges BESS facility areas to accommodate the updated BESS systems

The updated BESS models and associated layout modifications would not change the power rating, storage duration, or total energy storage capacity of either BESS facility.

2.1 Project Design Updates

The updated Project layout is presented in Appendix A, and the updated grading and drainage plan is presented in Appendix B. The existing key observation point (KOP) photographs and updated simulated views are provided in Appendix C.

2.1.1 Fire Water Supply

As discussed in Application Sections 2.1.1 and 5.13, the original Project design proposed obtaining fire water from the City of Vacaville's (City) existing 12-inch water main located adjacent to the northern border of the BESS Project Area. Under the revised Project design, an on-site groundwater well and a 120,000-gallon fire water storage tank would be installed to provide a dedicated on-site fire water supply for the Project. In conjunction with these additions, the previously proposed fire water loop has been modified and shortened such that it no longer connects to the City water main. The updated fire water supply would instead be supplied entirely by the on-site groundwater well, fire water storage tank, and associated pumping infrastructure. These facilities would support emergency fire suppression capabilities associated with the BESS facilities and provide a reliable on-site source of water independent of municipal water infrastructure.

Construction water would continue to be supplied from existing off-site sources, and the proposed on-site groundwater well and fire water storage tank would not be used to support construction activities. Landscaping water would be met through rainfall, water sourced from the on-site water well, or through existing off-site sources.

The revised Project design includes installation of an on-site groundwater well to supply water to a proposed 120,000-gallon fire water storage tank and associated fire water distribution infrastructure,

including the modified fire water loop surrounding the BESS facilities. Water withdrawn from the well would be used solely to initially fill the fire water storage tank and to replenish stored water following fire suppression activities, periodic testing, maintenance, or other operational uses of the fire water system. Because the fire water supply would be maintained in storage and only utilized during emergency response events or infrequent system testing and maintenance activities, ongoing operational water demand is expected to be minimal.

Additional minor site modifications are proposed to accommodate the new fire protection infrastructure. The Project's security enclosure fence would be expanded to include the on-site groundwater well, associated pumps and appurtenant equipment, and the proposed 120,000-gallon fire water storage tank. The fence expansion would ensure that all fire water supply facilities are secured within the operational Project area while maintaining consistency with the Project's overall site security and access control measures.

The proposed on-site fire water storage tank would be dedicated exclusively to fire protection purposes. Portable restroom facilities would continue to be utilized during construction and operation, and no on-site domestic water supply or wastewater treatment facilities would be required. No routine wastewater discharges are anticipated as part of Project construction or operation.

Fire Water Storage Tank

The Applicant is proposing to install an approximately 120,000-gallon on-site water tank to be used as a fire water supply resource by the City of Vacaville Fire Department (VFD) for local fire suppression needs. While fire suppression is not recommended for direct use on the BESS equipment, the water source could be used by first responders to fight wildfires or for fire events on other nearby properties at their discretion.

The proposed fire water storage tank would be located adjacent to and east of the Vaca Dixon BESS site access road (Appendix A). The water tank would be accessible via the proposed Vaca Dixon BESS access road off Kilkenny Road to the south. The water tank would include standard fire system connections compatible with VFD fire engine pumping apparatus. The water tank would be constructed using high-strength galvanized steel and would be placed on a poured concrete foundation. The tank diameter would be approximately 33 feet, and the tank height would be approximately 20 feet.

The water tank would be filled by the on-site groundwater well, further described below. Tank replenishment would be performed infrequently, on an as-needed basis. Tank inspections and maintenance would be performed in accordance with manufacturer specifications, with tank cleaning or repairs performed as needed.

On-site Groundwater Well

The Applicant is proposing to develop an on-site groundwater well with an associated supply pump and controls (pump skid) to serve Project fire water supply needs. The proposed groundwater well and pump skid would be installed adjacent to and south of the on-site fire water storage tank described above, as depicted in the updated Project layout (Appendix A). The approximately 10-acre Project site provides sufficient space to accommodate well construction activities, operational access, and compliance with applicable Solano County groundwater well setback requirements. Site selection for the well would be finalized during detailed design and permitting.

Prior to drilling, a well construction permit would be obtained from the Solano County Department of Resource Management, Environmental Health Division. Well construction would require an area of approximately 100 feet by 100 feet for drilling rig access, equipment staging, and associated construction activities. Final well design, including completion depth, screened intervals, casing configuration, and pumping equipment, would be determined during final engineering design based on site-specific hydrogeologic conditions, aquifer-zone testing conducted during drilling, and applicable regulatory requirements. The expected groundwater production capacity of the proposed well was evaluated in the Groundwater Feasibility Study prepared for the Project (CEC Docket TN #271961). During operation,

groundwater produced from the well would be used to supply the on-site fire suppression water storage system.

During operation, the 120,000-gallon fire water storage tank would remain filled and available for emergency use. The fire pump system would maintain the required pressure in the fire water distribution system and would automatically activate during a fire event when demand exceeds the capacity of the system pressure maintenance equipment. The groundwater well would be used to replenish the storage tank as needed to maintain available fire water supply.

Fire Water Pump House

The project would include construction of a fire water pump house associated with the new groundwater well and 120,000-gallon fire water storage tank system. The pump house would provide the equipment necessary to supply and maintain adequate water pressure and flow for the site's dedicated fire protection system. The fire water pump would have a capacity of 100 horsepower and would be paired with a 10-horsepower pressure-maintenance pump. The system would be electrically powered and would discharge water at approximately 125 pounds per square inch and a flow rate of 1,000 gallons per minute.

The pump house would house the fire water pumps, pump controls, electrical equipment, piping, valves, and monitoring equipment required to transfer water from the storage tank to the fire water distribution system during a fire event. The system would be designed to provide reliable, on-demand fire protection water service for fire sprinklers, fire hydrants, and/or other site fire suppression systems, as applicable.

Key components of the fire water pump house would include:

- Electric fire water pump sized to provide the required fire flow and pressure demand for the facility.
- Electric jockey pump to maintain system pressure and minimize unnecessary cycling of the primary fire pump.
- Motor controllers and electrical switchgear to provide automatic start, operation, and protection of the fire pump equipment.
- Automatic fire pump controls to initiate pump operation upon detection of a pressure drop within the fire water distribution system.
- Suction and discharge piping, isolation valves, check valves, and flow monitoring equipment to convey water from the storage tank to the fire protection network.
- Pressure gauges, alarms, and monitoring instrumentation to verify system readiness and provide operational status.

The pump house would likely consist of a small prefabricated or site-built structure, anticipated to be approximately 200 square feet, constructed on a reinforced concrete foundation or equipment pad. The building would provide weather protection, ventilation, lighting, and adequate clearance around equipment for inspection and maintenance activities. The structure would be designed in accordance with applicable fire protection standards and local building requirements.

The fire water pump house would be normally unmanned and would only require periodic visits by operations and maintenance personnel for inspection, testing, and preventative maintenance. No routine water treatment processes or chemical storage would occur within the pump house.

Enclosure Fence

As depicted in the updated Project layout in Appendix A, the enclosure fence surrounding the Vaca Dixon Power Center facility would be extended in the southeast corner to enclose the groundwater well and associated pump skid and fire water storage tank. The overall Project area would not increase.

Fire Water Loop

As depicted in the updated Project layout in Appendix A, the fire water loop located south of the Vaca Dixon BESS would terminate at the fire hydrant and would no longer connect to the City water main. Hydrant locations associated with the fire water loop would not change.

2.1.2 BESS Design

The revised Project would use different BESS equipment for both the Vaca Dixon and Arges facilities than what was originally proposed in the Project application. The updated BESS systems incorporate new battery models at the cell, module, unit, and enclosure levels that meet current fire safety standards. The equipment substitutions and corresponding enclosure arrangement are design refinements and would not change the approved power rating, storage duration, or total energy storage capacity of either facility.

2.1.3 Arges BESS and Switchyard

Arges Switchyard Control Enclosure

As depicted in the updated Project layout in Appendix A, the control enclosure in the Arges switchyard would be moved approximately 100 feet to the east along the enclosure fence and oriented north to south. No other changes associated with the control enclosure are proposed, and the overall disturbance footprint would not change.

Medium Voltage Transformer Locations

As depicted in the updated Project layout in Appendix A, the medium voltage transformer locations would change, and the quantity of transformers would be reduced from ten to six. No other changes associated with the medium voltage transformers are proposed, and the overall disturbance footprint would not change.

Battery/PCS Chain Arrangement

As depicted in the updated Project layout in Appendix A, the arrangement of battery enclosures and associated PCS equipment within the Arges BESS facility have been revised to accommodate the updated BESS design. No other changes associated with the battery/PCS chains are proposed, and the overall disturbance footprint would not change.

2.1.4 Vaca Dixon BESS and Switchyard

Vaca Dixon Switchyard Control Enclosure

As depicted in the updated Project layout in Appendix A, the control enclosure in the Vaca Dixon switchyard has been moved approximately 20 feet to the east along the enclosure fence and oriented north to south. No other changes associated with the control enclosure are proposed, and the overall disturbance footprint would not change.

BESS Unit Layout

As depicted in the updated Project layout in Appendix A, the Vaca Dixon BESS layout has been revised by rearranging the battery enclosures and associated equipment to accommodate the updated BESS design. This design modification does not alter the overall Project disturbance footprint.

2.2 Project Construction Update

2.2.1 Construction Methods and Activities

Well construction would generally consist of drilling the borehole, installing casing and well screen materials, placing annular seal materials, and completing the well in accordance with California Well Standards and Solano County requirements. Following construction, the well would be developed and tested to verify production capacity and suitability for its intended use.

During drilling, well construction, development, and testing, soil cuttings, drilling mud, and groundwater would be generated. Soil cuttings and drilling fluids would be temporarily contained on-site and transported to an appropriate disposal facility following completion of drilling activities, with waste acceptance requirements and any necessary waste characterization confirmed prior to disposal. Waste groundwater generated during well development and pump testing would be managed on-site through percolation or irrigation without allowing runoff to enter drainage ditches or surface water bodies. The final quantity of waste groundwater generated would depend on the completed well design and testing program. If discharge to a drainage feature or surface water body becomes necessary, appropriate permit coverage would be obtained prior to discharge.

2.2.2 Construction Schedule

Project construction remains a 24-month schedule, as described in the Application, Section 2.3. Groundwater well development would begin immediately following site preparation and grading associated with the Vaca Dixon 57 MWh BESS facilities, concurrently with foundation and equipment installation. The additional Project features described in this Project Description Update would be integrated into the existing construction schedule as presented in Table 2.2-1 of the Application.

2.2.3 Construction Workforce

The revised Project would require an additional 6 to 8 construction laborers on-site for approximately three weeks beyond the workforce estimates provided in the Application.

2.2.4 Construction Equipment

In addition to the construction equipment discussed in the Application, additional construction equipment to be utilized would include the following: a truck-mounted rotary drill rig to drill the groundwater well, an air compressor, a vacuum truck to remove drilling fluids or development water, and a flatbed truck to deliver an anticipated two to six equipment deliveries of casing, the pump, pipe, and water tank components.

3 Environmental Impacts and Mitigation Measures

An analysis of each of the environmental areas included in the Application is presented below, as related to the Project changes included in Section 2.0. Additionally, applicable laws, ordinances, regulations, and standards (LORS) have been reviewed to determine the Project's consistency with them.

3.1 Cultural Resources and Tribal Cultural Resources

Construction and operation of the revised Project components described in Section 2.0 would not result in impacts to cultural resources or tribal cultural resources beyond those evaluated in the Application. The Project modifications consist primarily of the addition of an on-site groundwater well, fire water storage tank, fire water pump house and associated infrastructure, extension of the security fence, revisions to the fire water loop, updates to the BESS models at the cell, module, unit, and enclosure levels, and associated rearrangement of battery enclosures and electrical equipment within the previously approved BESS and switchyard facilities. These changes would occur within the previously analyzed Project site and would not expand the overall Project footprint.

Because the revised facilities would be located within the previously analyzed disturbance area and would not require development of new offsite facilities, the Project would not increase the potential to disturb previously unidentified cultural resources or tribal cultural resources beyond that evaluated in the Application. Existing mitigation measures, monitoring requirements, and applicable LORS identified in the Application would continue to apply. Therefore, impacts to cultural resources and tribal cultural resources would remain less than significant.

3.2 Land Use

The Project description updates would not result in impacts related to land use that would be greater than those analyzed in the Application. The on-site groundwater well, fire water storage tank, pump house, associated pumping equipment, and fence extension would be constructed within the approximately 10-acre Project site, and the overall Project area would not increase. Relocation of switchyard control enclosures, modifications to transformer locations, updated to the BESS equipment, and rearrangement of battery enclosures and associated equipment would occur entirely within the previously analyzed Project boundaries.

The revised Project would remain consistent with Project land use as described in the Project Application and would not introduce any new land uses. Accordingly, the updated Project would not create new land use conflicts or inconsistency with applicable LORS as related to land use. Land use impacts would remain less than significant.

3.3 Noise

Installation of the groundwater well, fire water storage tank, pump house, associated pumping equipment, and related infrastructure would occur during the foundation and equipment installation phase of construction, when higher-noise activities such as pile driving are already anticipated. The additional construction equipment required for the fire water system, including the well drilling rig, air compressor, vacuum truck, and material delivery trucks, would be less noise- and vibration-intensive than the pile driving equipment previously analyzed in the Application. As a result, construction noise and vibration

levels would remain within the range of impacts already evaluated, and no revisions to the construction noise or vibration analysis are warranted.

The updated BESS equipment would replace the previously proposed battery models and would be arranged within the previously analyzed BESS facility areas. The revised equipment may incorporate different heating, ventilation, and air-conditioning systems or other sound-generating components. The Applicant confirmed the updated transformers associated with the Arges BESS facilities would be Delta PCS5160 units rated at less than 80 dBA at 1 meter, compared to the 79 dBA at 1 meter reference level used in the Application. This difference of 1 decibel or less would not be perceptible at nearby sensitive receptors. All other equipment, including inverters and BESS units, would generate the same noise levels as analyzed. Accordingly, operational noise impacts would remain less than significant.

The proposed fire water pump house would contain electrically powered pumps that would operate intermittently for system testing, maintenance, tank replenishment, or emergency fire suppression events. The facility is located more than 1,500 feet from the nearest residence, and the limited operation of the pumps would not meaningfully contribute to ambient noise levels at sensitive receptors. Therefore, operational noise impacts would remain consistent with the conclusions of the Application and would remain less than significant.

3.4 Traffic and Transportation

Project construction would continue to occur over a 24-month period, and the revised features would be incorporated into the existing construction schedule. Installation of the fire water infrastructure would require temporary increases in construction-related truck trips and staffing, including approximately 50 import trips, 15 export trips, and an additional 6 to 8 workers for approximately three weeks.

These temporary increases would represent a minor increase above the construction activity already analyzed in the Application and would occur within the context of an active construction site. No new permanent access roads, public roadway modifications, or changes in operational traffic are proposed. Therefore, the revised Project would not result in traffic and transportation impacts greater than those evaluated in the Application, would comply with applicable LORs as related to traffic and transportation, and traffic and transportation impacts would remain less than significant.

3.5 Visual Resources

The revised Project would be located on the same site as was previously analyzed in Section 5.5 of the Application. As discussed in Section 5.5 of the Application, scenic resources within the City of Vacaville and surrounding Solano County area include open space, natural resources, and agricultural uses.

The revised Project would not change the project footprint. However, due to new project components such as the proposed water tank and updates to the enclosure design, simulated views from KOPs 2, 3, 4, 6, and 7 would change slightly, as shown in Appendix C. For each of these simulated views, the water tank would add additional human-made structures (i.e., the water tank and pump house). The structures would be consistent with the tone and visibility of the infrastructure included in the original analysis.

The water tank would be visible from I-80 and neighboring properties to a similar extent as the BESS enclosures and switchyard. It would result in similar impacts to scenic resources because neighboring properties would remain in agricultural production and the revised Project would not substantially obstruct views of these scenic agricultural resources in the Project vicinity. Impacts to scenic vistas would remain less than significant.

Additionally, the revised Project would remain visible from I-80, which is a locally designated scenic roadway. However, due to the speed of motorists on this road and screening around the perimeter of the Project site, the revised Project would have similar impacts related to scenic roadways and impacts would remain less than significant.

The revised Project would not introduce additional sources of light or glare. The revised Project would comply with all applicable LORS as related to visual resources. Impacts would remain less than significant.

3.6 Socioeconomics

As discussed in Section 2.2, the revised Project would require an additional 6 to 8 construction workers on-site for a limited duration during construction activities. Monthly peak construction demand during fire water system installation would increase modestly above the estimates presented in the Application; however, the increase would be temporary and would not substantially alter the workforce demand associated with Project construction.

The revised Project would not increase long-term operational employment, housing demand, public service demand, or population growth beyond that evaluated in the Application. The temporary increase in construction workforce would provide a minor beneficial economic contribution to the local economy but would not result in significant socioeconomic effects. The revised Project would comply with all applicable LORS as related to socioeconomics. Therefore, socioeconomic impacts would remain consistent with the conclusions of the Application and would be less than significant.

3.7 Air Quality

The Project description updates would not result in air quality impacts greater than those analyzed in the Application. Construction of the groundwater well, fire water storage tank, pump house, associated infrastructure, and fence extension would require the use of additional construction equipment, including a drill rig, air compressor, vacuum truck, support vehicles, and a limited number of material delivery trucks.

Although these activities would generate temporary construction emissions, they would occur within the previously analyzed construction period and Project site. The scale of the additional activities is relatively minor compared to the overall Project construction program and would remain subject to all applicable dust control and emission-reduction measures identified in the Application. Operational emissions would not materially change because the added facilities would support emergency fire protection functions with minimal ongoing operational demand. The revised Project would comply with all applicable LORS as related to air quality. Therefore, air quality impacts would remain less than significant.

3.8 Public Health

The revised Project components are intended primarily to enhance on-site fire protection capabilities through the addition of a dedicated groundwater well, fire water storage tank, fire water pump house, and associated distribution infrastructure. These facilities would provide a reliable on-site fire water supply and improve emergency response capabilities associated with the BESS facilities.

The Project modifications would not introduce substantial new sources of public exposure to hazards, pollutants or nuisance conditions with the potential to exceed YSAQMD significance thresholds. The revised facilities would operate within the secured Project area and would remain subject to applicable fire protection, emergency response, and operational requirements identified in the Application. Accordingly, public health impacts would remain less than significant.

3.9 Hazards Materials Handling

Construction of the groundwater well, fire water storage infrastructure, and associated facilities would require the temporary use of fuels, lubricants, hydraulic fluids, and similar materials typical of

construction equipment operations. Waste drilling materials and groundwater generated during well development and testing would be managed in accordance with applicable regulatory requirements and disposed of at appropriate facilities or managed on-site as described in Section 2.0.

Operation of the groundwater well, fire water storage tank, and fire water pump house would not involve routine storage or use of substantial quantities of hazardous materials. The pump house would not include water treatment processes or chemical storage, and the revised Project would comply with all applicable LORS as related to hazardous materials handling.

The updated battery models include differing quantities of hazardous materials as what was provided in the original Project application. Updated chemical inventories and associated information are included in Table 1, Table 2, and Table 3. The types and quantities of coolants and refrigerants have been updated; however, these changes would not result in a substantial change to the overall quantities of hazardous materials stored on site. Accordingly, the revised Project would not result in hazards or hazardous materials impacts greater than those evaluated in the Application, and hazardous materials handling and public hazard impacts would remain less than significant.

3.10 Worker Safety

The revised Project would include installation of an on-site groundwater well, fire water storage tank, fire water pump house, associated pumping equipment, and related infrastructure within the previously analyzed Project site. These activities would be incorporated into the existing construction schedule and would involve construction methods, equipment, and operational activities typical of utility infrastructure installation, operation, and maintenance.

The Applicant is currently in the process of revising the Hazard Consequence Analysis, Hazard Mitigation Analysis, and Emergency Response Plan to incorporate battery design changes, as well as to implement methodology changes, requested by the CEC in the February 13, 2026, Request for Information. These documents will be submitted to the Project docket once completed.

Construction and operation of the revised facilities would remain subject to the worker safety requirements, construction safety practices, and applicable LORS identified in the Application. The revised facilities would support the Project's emergency fire protection system and would not introduce new or substantially different worker safety hazards beyond those previously evaluated. Accordingly, worker safety impacts related to construction and operation of the Project would remain consistent with the conclusions of the Application and would remain less than significant.

3.11 Waste Management

Construction of the updated Project facilities would generate limited quantities of solid waste associated with well drilling, equipment installation, and construction activities. Soil cuttings, drilling fluids, and groundwater generated during well construction and testing would be temporarily contained and transported to appropriate disposal facilities or otherwise managed in accordance with applicable requirements.

The revised Project would not substantially increase operational waste generation, and the revised Project would comply with all applicable LORS as related to waste management. Operation of the groundwater well and fire protection facilities would require only periodic inspection, testing, and maintenance, resulting in minimal routine waste generation. Therefore, waste management impacts would remain less than significant.

Table 1 Revised Table 5.9-1 Use and Location of Hazardous Materials

Chemical Name	Use/Purpose	Quantity – Vaca Dixon BESS	Quantity – Arges BESS	On-Site Storage Location	State	Type of Storage Container	Project Phase
R513A Refrigerant	BESS coolant	22.7 pounds per enclosure	0	Each battery enclosure (Vaca Dixon)	Gas	NA	Construction and/or O&M
R32 Refrigerant	BESS coolant	0	10.1 pounds per enclosure.	Each battery enclosure (Arges)	Gas	NA	Construction and/or O&M
Adhesives	Construction and O&M	Less than 5 gallons	Less than 5 gallons	Control House HazMat Storage Locker	Liquid, Solid	Small useable containers (4 oz)	Construction and/or O&M
Diesel No.2	Fueling Equipment	380 gallons	380 gallons	300 gallons in a reserve supply and 80 gallons on the power generator	Liquid	Tanks	Construction
Ethyl glycol solution	BESS –coolant	22.5 gallons per enclosure	66 gallons per enclosure	Each battery enclosure (Vaca Dixon)	Liquid	NA	Construction and/or O&M
FK-5-1-12	Fire Suppression Agent	1,186 pounds	2,372 pounds	Each battery enclosure	Gas	NA	Construction and O&M
Hydraulic fluid (FR3 natural ester fluid)	Construction and Periodic Maintenance	950 gallons	950 gallons	Various Mobile Equipment	Liquid	Vehicle tanks	Construction and O&M
Liquid Battery Electrolyte	Construction and O&M	5,880 gallons	44,800 gallons	Battery modules	Battery modules	Battery modules	Construction and/or O&M
Lithium-ion batteries	Construction and O&M	884,200 pounds	4,420,00000 pounds	Battery modules	Solid	Battery modules	Construction and/or O&M
Transformer oil (Soybean Oil)	O&M	11,130 gallons	26,650 gallons	Each inverter	Liquid	Inverters and GSU	O&M
Propane	Construction	120 pounds	120 pounds	Various equipment, propane storage cage	Gas	Portable tanks	Construction
Sealants	Construction and O&M	Less than 5 gallons	Less than 5 gallons	Control House HazMat Storage Locker	Liquid	NA	Construction and/or O&M

BESS: Battery Energy Storage System

NA: Not applicable - Materials would be brought on-site as needed and removed at the end of day O&M: Operation & Maintenance

Table 2 Revised Table 5.9-2 Chemical Inventory, Description of Hazardous Materials On-site, and Reportable Quantities

Trade Name	Chemical Name	CAS Number	Maximum Quantity On-site – Vaca Dixon BESS	Maximum Quantity On-site – Arges BESS	CERCLA SARA RQ [a]	RQ of Material as Used On-site [b]	EHS TPQ [c]	Regulated Substance TQ [d]	Prop 65
R513A	Mixture (Hydrofluorocarbon)	Mixture	476.7 pounds	0	–	–	–	–	No
R32 Refrigerant	Mixture (Hydrofluorocarbon)	Mixture	0	1,000 pounds	–	–	–	–	No
Adhesives	Various	Various	Less than 5 gallons	Less than 5 gallons	–	–	–	–	No
Diesel No. 2	Diesel No. 2	68476-34-6	380 gallons	380 gallons	–	–	–	–	No
Ethylene glycol solution	Ethylene glycol solution	107-21-1	472.5 gallons	6,600 gallons	–	–	–	–	Yes
Hydraulic fluid (FR3 natural ester fluid)	FR3	None	950 gallons	950 gallons	42 gallons [e]	42 gallons [e]	–	–	No
Liquid Battery Electrolyte	Mixture	Various	5,880 gallons	44,800 gallons	--	--	--	--	No
Lithium-ion batteries	Lithium-ion batteries	Various	884,200 pounds	4,420,000 pounds	–	–	–	–	No
Soybean oil	Soybean oil	8001-22-7	11,130 gallons	13,250 gallons	42 gallons [e]	42 gallons [e]	–	–	No
Propane	Propane	74-98-6	120 pounds	120 pounds	–	–	–	–	No
Sealants	Various	Various	Less than 5 gallons	Less than 5 gallons	–	–	–	–	No
Sulfur hexafluoride (SF6)	Sulfur hexafluoride	2551-62-4	NA	64 pounds	–	–	–	–	No

[a] RQs are for a pure chemical, per CERCLA SARA (ref. 40 CFR Section 302, Table 302.4). Releases equal to or greater than the RQ must be reported. Under California law, any amount that has a realistic potential to adversely affect the environment and human health or safety must be reported.

[b] RQ for materials as used on-site. Since some of the hazardous materials are mixtures that only contain a percentage of an RQ, the RQ of the mixture can be different than for a pure chemical. For example, if a substance only contains 10 percent of a reportable chemical and the RQ is 100 pounds, the RQ for that material will be $(100 \text{ pounds}) / (10\%) = 1,000$ pounds.

[c] EHS TPQ (ref. 40 CFR Part 355, Appendix A). If quantities of EHS materials equal to or greater than the TPQ are handled or stored on-site, they must be registered with the local Administering Agency (i.e., Solano County Environmental Health – CUPA/Hazardous Materials and Waste Program).

[d] TQ is from Title 19 CCR Section 2770.5 (state) or Title 40 CFR Section 68.130 (federal).

[e] State RQ for oil spills that will reach California state waters [CA Water Code Section 13272(f)] Notes:

– No reporting requirements. The chemical has no listed threshold under this requirement.

Table 3 Revised Table 5.9-3 Toxicity, Reactivity, and Flammability of Hazardous Substances Stored On-site

Hazardous Material	Physical Description	Health Hazard/Toxicity	Reactivity and Incompatibilities	Flammability [a]
R513A refrigerant	Colorless gas	Liquid can cause burns similar to frostbite	None	Nonflammable
R32 Refrigerant	Colorless gas	Liquid can cause burns similar to frostbite	None	Mildly flammable
Adhesives	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Diesel No. 2	Oily, light liquid	May be carcinogenic	Strong oxidizers, acids	Flammable
Ethylene glycol solution	Viscous, colorless liquid	May cause skin, eye, and respiratory tract irritation	Strong oxidizers, strong acids, strong bases, aldehydes	Combustible
Hydraulic fluid (FR3 natural ester fluid)	Light green liquid	Minimal irritation or no effect	Strong oxidizers, Strong Alkali	Combustible
Liquid Battery Electrolyte	Clear, colorless liquid	May cause skin, eye, and respiratory tract irritation	Strong oxidizers, strong acids,	Flammable
Lubricants	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Soybean oil	Colorless or yellow oil	May be fatal if swallowed or enters airways	Strong oxidizers	Combustible
Propane	Colorless, odorless gas	Liquid can cause burns similar to frostbite	Strong oxidizers	Flammable
Sealants	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels	Refer to individual chemical labels
Sulfur hexafluoride (SF6)	Colorless, odorless gas	Can displace oxygen and cause rapid suffocation	None	Nonflammable
Lithium-ion batteries	Battery product	Aquatic chronic toxicity; may be carcinogenic	Not considered reactive under normal conditions at ambient temperature; incompatible with combustible materials, organic chemicals, strong acids, reducing substances, strong oxidizers, and chemically active metals.	Flammable

[a] In accordance with Caltrans regulations, under 49 CFR Section 173: flammable liquids have a flash point less than or equal to 141°F; combustible liquids have a flash point greater than 141°F

Source: Data were obtained from Material Safety Data Sheets.

3.12 Biological Resources

The revised facilities would be located within the previously analyzed Project area, and the overall disturbance footprint would not increase relative to the project evaluated in the Application. The fence extension, groundwater well, fire water storage tank, pump house, updated BESS equipment, and associated enclosure and equipment arrangement changes would occur within the Project site.

Because the Project would not expand beyond the previously analyzed limits of disturbance, the revised design would not affect additional biological resources, habitats, or special-status species beyond those assessed in the Application. Existing mitigation measures, avoidance requirements, and applicable biological resource LORS would continue to apply. Therefore, the Project description updates would not result in biological resource impacts greater than those evaluated in the Application, and biological resource impacts would remain less than significant.

3.13 Water Resources

The revised Project would introduce a new groundwater well and a water storage tank that were not specifically analyzed in the Application. This section addresses how components of the revised Project, including the new well and storage tank as well as appurtenances, could result in potential impacts to water resources.

Construction of a new water storage tank and groundwater well under the revised Project would be subject to the same requirements of the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) program authorized by Section 402 of the CWA. As such, the Construction General Permit and Project-specific Stormwater Pollution Prevention Plan (SWPPP) detailed in the Application would also be implemented for the revised Project components, and best management practices (BMPs) for stormwater control and management would be applied to minimize or avoid potential hydrology and water quality impacts. Such BMPs may include but would not be limited to the watering of disturbed areas to control dust, covering all disturbed areas and trucks hauling soil, sand, or other loose material to prevent migration, applying erosion barriers such as straw wattles and detention basins to control runoff from leaving the Project Site, and using designated areas for vehicle and equipment staging and refueling. Potential impacts associated with temporary construction disturbance would be less than significant, as detailed in the Application.

The new well included in the revised Project would produce groundwater from the Solano Subbasin of the Sacramento Valley Groundwater Basin, to provide fire water and to supplement water for landscaping irrigation during project operations. Prior to construction of a new groundwater well in the Solano Subbasin, a Well Construction Permit would be obtained from the Solano County Environmental Health Division (EHD).¹ The Application identified regulatory agencies with water-related permitting authority over the Project in Table 5.13-19, *Agency Contacts for Water Resources*, presented in Section 5.13.16, *Agencies and Agency Contact*. Solano County EHD was not identified in the Application because a new groundwater well was not previously included in the Project design. Therefore, agency contact information for Solano County EHD is provided below, to supplement the agency contact information provided in Table 5.13-19 of the Application.

¹ The Well Construction Application is available online: <https://www.solanocounty.gov/government/resource-management/environmental-health/water-protection-waste-management-technical-services/well-program>.

Supplement to Table 5.13-19 Agency Contacts for Water Resources

Issue	Agency	Contact
Construction of a new groundwater well subject to Solano County Code Chapter 13.10 and California Well Standards	Solano County Department of Resource Management, Environmental Health Division	Trey Strickland, Environmental Health Manager 675 Texas Street, Suite 5500 Fairfield, California 94533-6342 707-784-6765

Well standards are defined in Solano County Code Chapter 13.10, *Well Standards*, which require compliance with California Well Standards (Bulletin 74-81 and 74-90)² and construction conducted by a licensed C-57 well driller. In its responsibility to issue and enforce Well Construction Permits, Solano County EHD ensures that California Well Standards are met, including enforcing setbacks, annular seal requirements, inspections, and completion reporting.

In accordance with the Sustainable Groundwater Management Act (SGMA), the Solano Irrigation District (SID) Groundwater Sustainability Agency (GSA) for the Solano Subbasin must be notified of new well construction and may impose SGMA-related conditions on the new groundwater well, such as metering, reporting, or location restrictions. However, the SID GSA does not issue Well Construction Permits and has no authority over the Solano County EHD's Well Construction Permit Application process or approval. The revised Project would be conducted in compliance with all requirements of the Solano County EHD and SID GSA associated with construction and operation of the new groundwater well to meet fire water demands.

The Application quantified water demands during construction and operation of the Project, including for dust suppression during ground-disturbing activities, as well as for landscaping irrigation and emergency fire suppression, as needed. The revised Project would not alter the overall quantity of water required for dust suppression because, although the revised Project would introduce new components, the ground-disturbing activities required to install those components would be conducted during construction of previously assessed Project activities; the revised Project would not increase the intensity of dust suppression requirements or the overall duration of construction as assessed in the Application. In addition, the revised Project would not increase the amount of water anticipated to be required for emergency fire suppression; rather, the revised Project would incorporate storage of this water in an on-site tank for use as needed, but the use of a storage tank would not alter water demands or associated supply availability, as assessed in the Application.

The revised Project also would not increase the quantity of water associated with landscaping irrigation; however, it would change the source of water for non-rainfall landscaping irrigation from the City of Vacaville to on-site groundwater produced from a new well in the Solano Subbasin and/or existing off-site water supply sources. The Application assessed the City of Vacaville as the water supply source for the Project, with the City's supplies consisting of surface water from the federal Solano Project, surface water from the State Water Project (SWP), and local groundwater from the Solano Subbasin. The Application determined the City has sufficient water supplies available to meet all demands associated with the Project through 2045, including with consideration to single dry and multiple dry years.

In addition to assessing the Solano Subbasin as a component of the City of Vacaville's water supply sources, the Application also considered the Solano Subbasin as an alternative water supply source for the Project and assessed whether the Solano Subbasin would have sufficient supply availability to reliably meet the Project's water demands. As described above, water demands would be unchanged by the revised Project, including for landscaping irrigation needs, which would be served by the new groundwater well. The Application determined in Section 5.13.4, *Cumulative Impacts*, under "Alternative Water Supply Sources," that the Solano Subbasin has a positive water balance with surplus storage

² Bulletin 74-81 (December 1981) establishes the foundational standards for well construction in California. It includes definitions, applications, exemptions, and special standards for well drillers, as well as requirements for well location concerning contaminants and pollutants. Bulletin 74-90 (June 1991) is a supplement to Bulletin 74-81 and has been incorporated into local ordinances across California. It addresses specific standards for various types of wells, including monitoring and cathodic protection wells, and emphasizes the importance of groundwater quality protection.

conditions projected to continue through 2045, including with consideration to single dry and multiple dry year conditions.

Surplus storage projected to be available in the Solano Subbasin, as documented in the Groundwater Sustainability Plan (GSP) for the Solano Subbasin, would be sufficient to meet the water demands of the revised Project, including use of the new groundwater well. The revised Project would not impede implementation of the Solano Subbasin GSP or the Projects and Management Actions contained therein and would not affect existing sustainable conditions or sustainable management of the Solano Subbasin. Potential impacts of the revised Project to water resources would remain less than significant, as characterized in the Application.

3.14 Soils

Construction of the groundwater well, fire water storage tank foundation, pump house, and associated infrastructure would require localized excavation and earthwork within the Project site. Well construction would involve drilling and installation of casing, well screens, seals, and associated equipment, while the storage tank and pump house would require limited foundation excavation.

These activities would occur within the area previously evaluated for ground disturbance and would not alter the conclusions of the Application regarding erosion, soil stability, or soil-related impacts. Compliance with applicable grading, erosion control, and construction BMP requirements would continue to minimize potential impacts. Therefore, impacts related to soils would remain less than significant.

3.15 Paleontological Resources

Changes to the dimensions, volume, or location of ground-disturbing activities for a project could change its potential to significantly impact paleontological resources and/or the best strategies to mitigate those impacts. The entire Project site is mapped as a single geologic unit that was assigned high paleontological sensitivity, Pleistocene alluvial fan deposits (Dawson 2009). Therefore, moving project components throughout the project site will not require a change to the paleontological resources impact analysis or mitigation.

Excavations for the foundation for the water storage tank are anticipated to reach up to 2 feet below the surface, meaning they will remain within the 4.5-foot-thick layer of fill that will be placed on the project site in the beginning phases of construction. As stated in the Application, fill sediments are not considered paleontologically sensitive. Therefore, these excavations are not anticipated to impact paleontological resources.

Drilling for the groundwater well is anticipated to reach up to 600 feet below the surface and involve an auger at least 24 inches in diameter. At this depth, drilling will impact Pleistocene alluvial fan deposits and could impact the underlying Tehama Formation, which is mapped at the surface approximately 1.5 miles west of the project site (Dawson 2009). The Tehama Formation has produced dozens of scientifically significant paleontological localities (University of California Museum of Paleontology 2026), so it is considered to have high paleontological sensitivity per the Society of Vertebrate Paleontology (SVP) paleontological sensitivity scale (SVP 2010). Therefore, drilling could have a significant impact on paleontological resources. Implementation of Mitigation Measures PAL-1 through PAL-4 would effectively mitigate the potential impacts to paleontological resources resulting from this activity. Therefore, impacts related to paleontological resources would remain less than significant with mitigation.

3.16 Geological Hazards and Resources

The proposed groundwater well, fire water storage tank, pump house, and related infrastructure would be designed and constructed in accordance with applicable engineering standards, building codes, and regulatory requirements. Final well construction details would be determined during engineering design based on site-specific hydrogeologic conditions and regulatory requirements.

The revised Project does not alter the geologic setting of the site, increase exposure to seismic hazards, or require development in areas not previously evaluated. Therefore, the revised Project would not result in geological hazards or geologic resource impacts greater than those analyzed in the Application, and geological hazards and resources impacts would remain less than significant.

3.17 Wildfire

The revised Project includes installation of an on-site groundwater well, 120,000-gallon fire water storage tank, fire water pump house, and associated fire water distribution facilities dedicated to fire protection purposes. These facilities would provide a dedicated on-site source of water for emergency response and fire suppression support.

The Project modifications would not increase wildfire ignition risk or exposure beyond that evaluated in the Application. Rather, the addition of dedicated fire protection infrastructure would support emergency response and the availability of fire suppression resources associated with the Project. Compliance with applicable fire protection requirements and existing wildfire mitigation measures would continue. Therefore, wildfire impacts would remain less than significant.

4 References

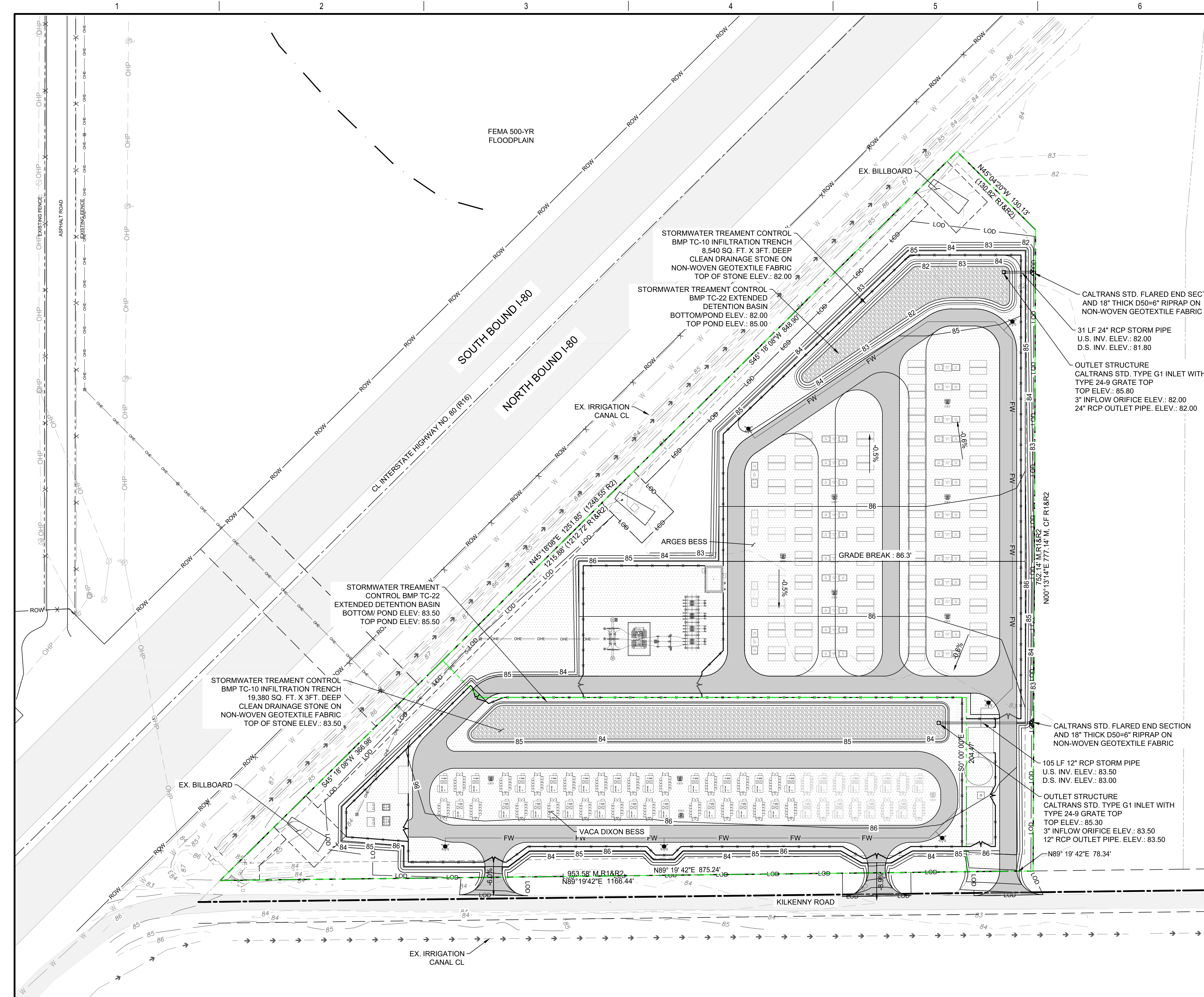
- Dawson, T.E. 2009. Preliminary geologic map of the Lodi 30' x 60' quadrangle, California. [map.] California Geological Survey. Preliminary Geologic Maps PGM-09-04, scale 1:100,000.
- Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.
- University of California Museum of Paleontology (UCMP). 2026. UCMP online database specimen search portal, <http://ucmpdb.berkeley.edu/> (accessed July 2026).

Appendix A

Updated Project Layout

Appendix B

Updated Grading and Drainage Plan



GRADING NOTES

- ALL ELEVATIONS ARE IN US FEET, VERTICAL DATUM NAVD88. CONTOURS SHOWN FOR THE SUBSTATION AND BESS SITE GRADING ARE SUBGRADE ELEVATIONS. SUBGRADE REPRESENTED BY TOP OF DIRT WITHIN THE STATION AND BESS FENCE, TOP OF ROAD STONE OR TOP OF TOPSOIL OUTSIDE THE FENCE.
- EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 1' INTERVALS.
- THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL MATERIAL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF 6 INCHES AND DISPOSED OF OFF SITE TO THE OWNER'S DESIGNATED PLACE.
- FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT
- NON-WOVEN GEOTEXTILE FABRIC TO BE PLACED BENEATH ROADS AND RIPRAP

ESTIMATED QUANTITES

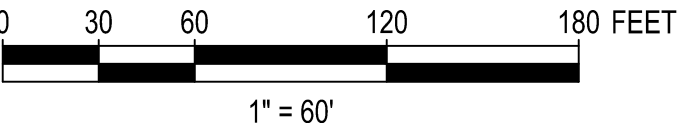
EARTHWORK QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL. IN THE ABSENCE OF GEOTECHNICAL RECOMMENDATIONS, ASSUMPTIONS HAVE BEEN MADE TO GENERATE THESE QUANTITIES AND ARE SUBJECT TO CHANGE. THE CONTRACTORS SHALL CALCULATE THEIR OWN ITEMIZED EARTHWORK AND MATERIAL QUANTITIES FOR THIS PROJECT. QUANTITIES DO NOT INCLUDE EXCAVATED OR FILL MATERIAL FOR FOUNDATION WORK.

VACA DIXON & ARGES BESS

LIMITS OF CONSTRUCTION (DISTURBED AREA)	9,31	AC.
TOPSOIL (ORGANICS, 6") REMOVAL	7,500	C.Y.
REDISTRIBUTED OR STOCKPILED TOPSOIL (6")	920	C.Y.
ASPHALT DRIVE (4")	1,010	C.Y.
NONWOVEN GEOTEXTILE FABRIC	11,765	S.Y.
IMPORTED AGGREGATE BASE COURSE (12")	3,015	C.Y.
IMPORTED FINISH YARD ROCK (4")	2,660	C.Y.
IMPORTED STRUCTURAL FILL	28,900	C.Y.
12" Ø STORM PIPE	105	L.F.
24" Ø STORM PIPE	31	L.F.
2" DIAMETER WASHED DRAINAGE STONE	3,100	C.Y.

LEGEND

- SUBJECT PROPERTY BOUNDARY
- LEASE BOUNDARY
- EASEMENT LINES
- SETBACK LINES
- OHP - EXISTING OVERHEAD LINE
- EXISTING MINOR CONTOUR (1 INTERVAL)
- EXISTING MAJOR CONTOUR (5' INTERVAL)
- 7' FENCE
- OVERHEAD ELECTRIC LINE
- FW - FIRE WATER LINE
- BESS - BATTERY ENERGY STORAGE SYSTEM
- ROAD SURFACING
- GRAVEL SURFACING
- STORMWATER MANAGEMENT AREA
- EXISTING WETLANDS



C03-01-02.DWG
THIS DRAWING WAS PREPARED BY WSP
USA, INC. FOR A SPECIFIC PROJECT.
TAKING INTO CONSIDERATION THE SPECIFIC
AND UNIQUE REQUIREMENTS OF THE PROJECT,
REUSE OF THIS DRAWING OR ANY INFORMATION
CONTAINED IN THIS DRAWING FOR ANY PURPOSE
IS PROHIBITED UNLESS WRITTEN PERMISSION
FROM BOTH WSP AND WSP'S CLIENT IS
GRANTED.

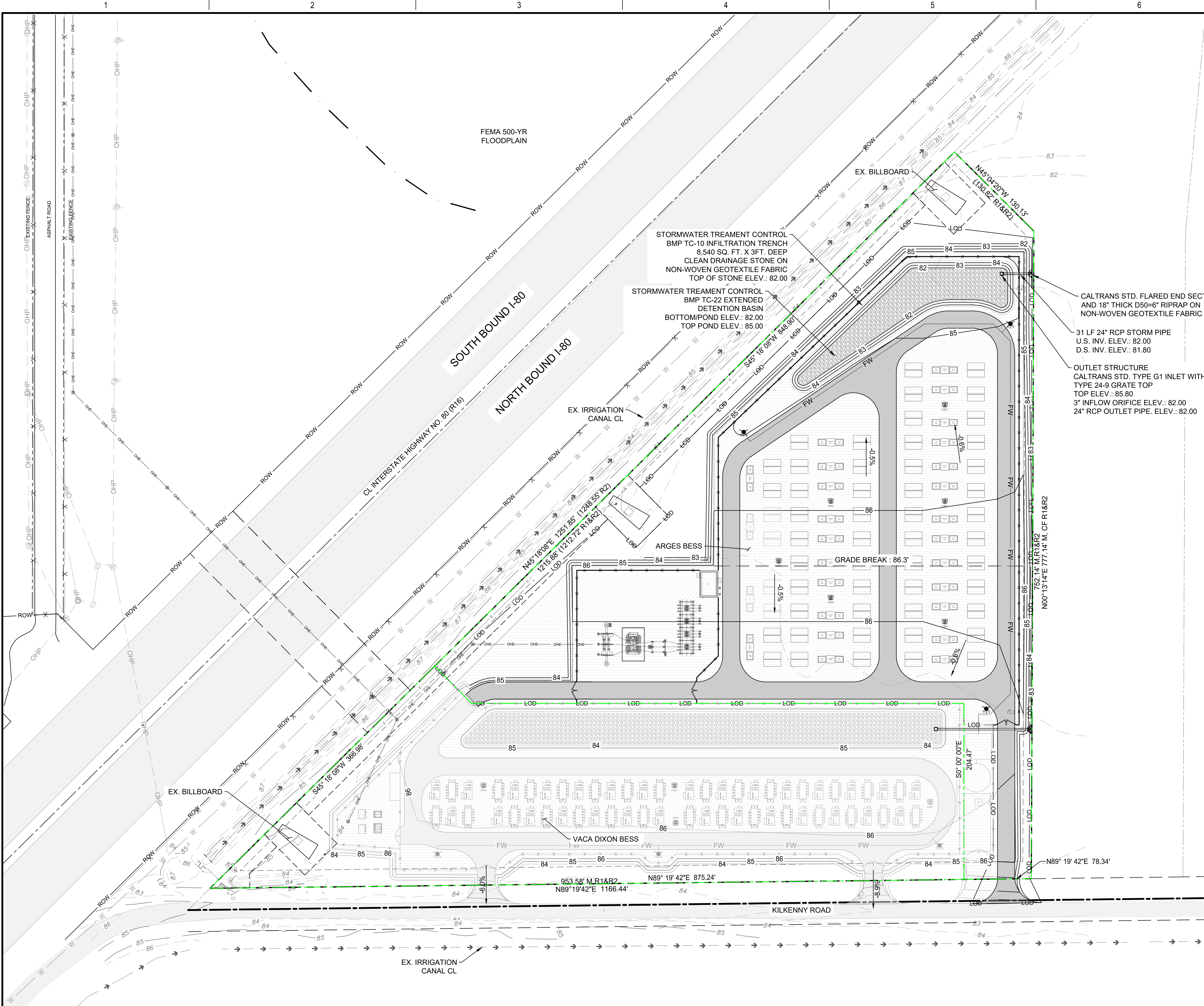
PRELIMINARY
NOT FOR CONSTRUCTION

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
C	WELL ACCESS REVISION	09/09/2026	JMM	JMM	TWH		
B	UPDATED ARGES BESS SPACING	08/27/2026	JMM	JMM	TWH		
A	ISSUED FOR INFORMATION	07/31/2026	JMM	JMM	SMT		

DSGN	JMM	07/31/2026
DRN	JMM	07/31/2026
CKD	SMT	07/31/2026
SCALE: 1"=60'		
FOR 22x34 DWG ONLY		



MIDDLE RIVER POWER	JOB NUMBER	REV
VACA DIXON & ARGES BESS	US0054599.1425	△
GRADING & DRAINAGE PLAN	DRAWING NUMBER	C03-01-02



GRADING NOTES

- ALL ELEVATIONS ARE IN US FEET, VERTICAL DATUM NAVD88. CONTOURS SHOWN FOR THE SUBSTATION AND BESS SITE GRADING ARE SUBGRADE ELEVATIONS. SUBGRADE REPRESENTED BY TOP OF DIRT WITHIN THE STATION AND BESS FENCE, TOP OF ROAD STONE OR TOP OF TOPSOIL OUTSIDE THE FENCE.
- EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 1' INTERVALS.
- THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL MATERIAL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF 6 INCHES AND DISPOSED OF OFF SITE TO THE OWNER'S DESIGNATED PLACE.
- FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT
- NON-WOVEN GEOTEXTILE FABRIC TO BE PLACED BENEATH ROADS AND RIPRAP

ESTIMATED QUANTITES

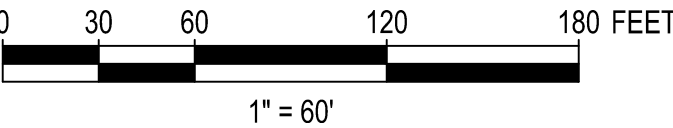
EARTHWORK QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL. IN THE ABSENCE OF GEOTECHNICAL RECOMMENDATIONS, ASSUMPTIONS HAVE BEEN MADE TO GENERATE THESE QUANTITIES AND ARE SUBJECT TO CHANGE. THE CONTRACTORS SHALL CALCULATE THEIR OWN ITEMIZED EARTHWORK AND MATERIAL QUANTITIES FOR THIS PROJECT. QUANTITIES DO NOT INCLUDE EXCAVATED OR FILL MATERIAL FOR FOUNDATION WORK.

ARGES BESS

LIMITS OF CONSTRUCTION (DISTURBED AREA)	5.65	AC.
TOPSOIL (ORGANICS, 6") REMOVAL	3,340	C.Y.
REDISTRIBUTED OR STOCKPILED TOPSOIL (6")	400	C.Y.
ASPHALT DRIVE (4")	590	C.Y.
NONWOVEN GEOTEXTILE FABRIC	6,240	S.Y.
IMPORTED AGGREGATE BASE COURSE (12")	1,764	C.Y.
IMPORTED FINISH YARD ROCK (4")	1,680	C.Y.
IMPORTED STRUCTURAL FILL	18,000	C.Y.
24" Ø STORM PIPE	31	L.F.
2" DIAMETER WASHED DRAINAGE STONE	950	C.Y.

LEGEND

- SUBJECT PROPERTY BOUNDARY
- LEASE BOUNDARY
- EASEMENT LINES
- SETBACK LINES
- OHP EXISTING OVERHEAD LINE
- EXISTING MINOR CONTOUR (1 INTERVAL)
- EXISTING MAJOR CONTOUR (5' INTERVAL)
- 7' FENCE
- OVERHEAD ELECTRIC LINE
- FW FIRE WATER LINE
- BESS BATTERY ENERGY STORAGE SYSTEM
- ROAD SURFACING
- GRAVEL SURFACING
- STORMWATER MANAGEMENT AREA
- EXISTING WETLANDS



C03-01-01.DWG
THIS DRAWING WAS PREPARED BY WSP
USA, INC. FOR A SPECIFIC PROJECT.
TAKING INTO CONSIDERATION THE SPECIFIC
AND UNIQUE REQUIREMENTS OF THE PROJECT,
REUSE OF THIS DRAWING OR ANY INFORMATION
CONTAINED IN THIS DRAWING FOR ANY PURPOSE
IS PROHIBITED UNLESS WRITTEN PERMISSION
FROM BOTH WSP AND WSP'S CLIENT IS
GRANTED.

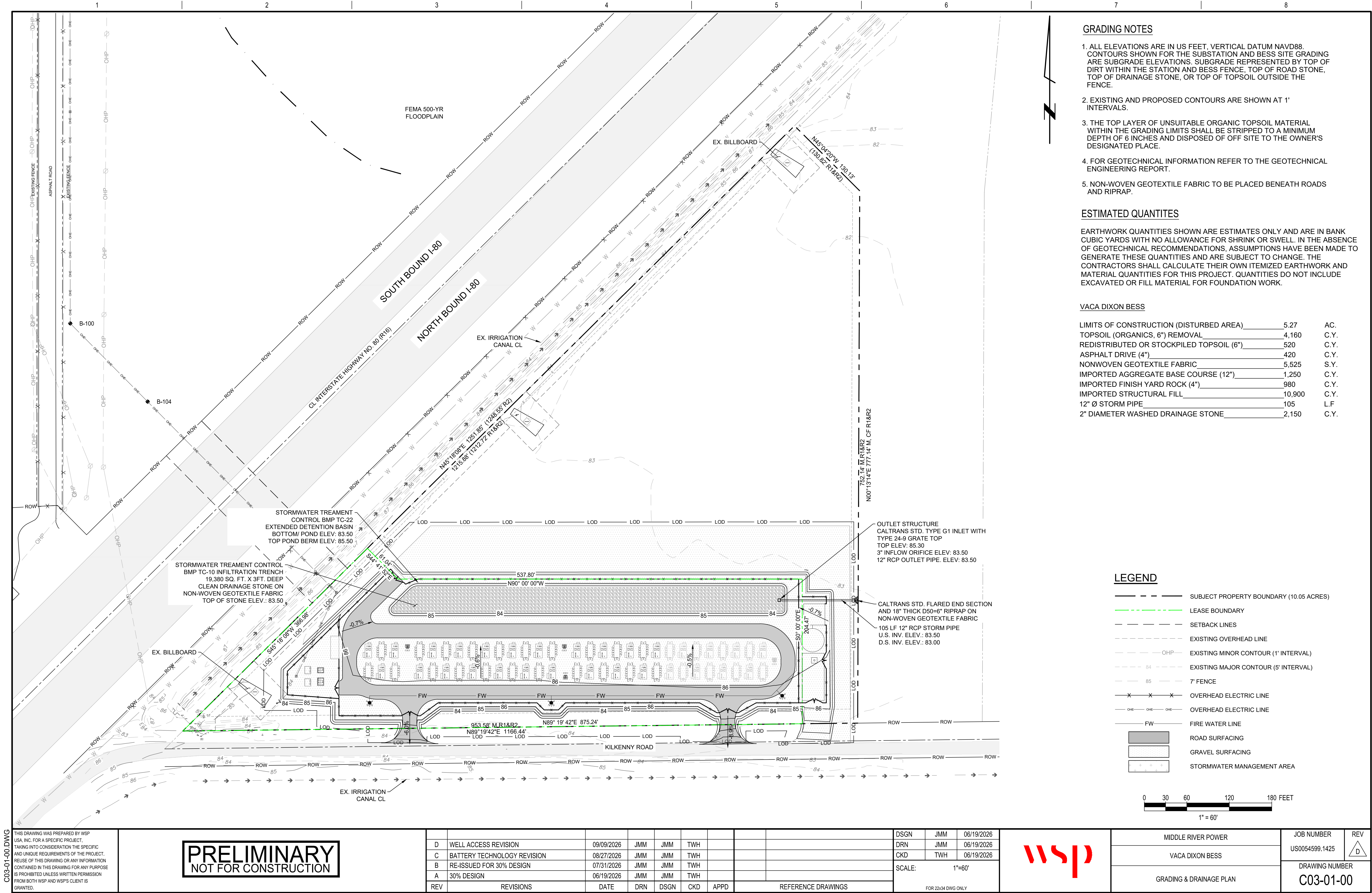
PRELIMINARY
NOT FOR CONSTRUCTION

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
C	WELL ACCESS REVISION	09/09/2026	JMM	JMM	TWH		
B	UPDATED ARGES BESS SPACING	08/27/2026	JMM	JMM	TWH		
A	ISSUED FOR INFORMATION	07/31/2026	JMM	JMM	SMT		

DSGN	SMT	07/08/2025
DRN	JMM	07/08/2025
CKD	TWH	07/08/2025
SCALE: 1"=60'		
FOR 22x34 DWG ONLY		



MIDDLE RIVER POWER	JOB NUMBER	REV
ARGES BESS	US005630.7502	△
GRADING & DRAINAGE PLAN	DRAWING NUMBER	C03-01-01



GRADING NOTES

- ALL ELEVATIONS ARE IN US FEET, VERTICAL DATUM NAVD88. CONTOURS SHOWN FOR THE SUBSTATION AND BESS SITE GRADING ARE SUBGRADE ELEVATIONS. SUBGRADE REPRESENTED BY TOP OF DIRT WITHIN THE STATION AND BESS FENCE, TOP OF ROAD STONE, TOP OF DRAINAGE STONE, OR TOP OF TOPSOIL OUTSIDE THE FENCE.
- EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 1' INTERVALS.
- THE TOP LAYER OF UNSUITABLE ORGANIC TOPSOIL MATERIAL WITHIN THE GRADING LIMITS SHALL BE STRIPPED TO A MINIMUM DEPTH OF 6 INCHES AND DISPOSED OF OFF SITE TO THE OWNER'S DESIGNATED PLACE.
- FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT.
- NON-WOVEN GEOTEXTILE FABRIC TO BE PLACED BENEATH ROADS AND RIPRAP.

ESTIMATED QUANTITES

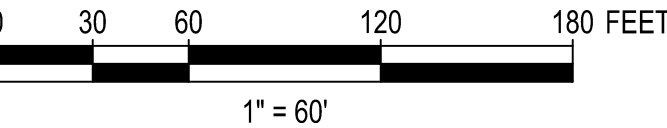
EARTHWORK QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK OR SWELL. IN THE ABSENCE OF GEOTECHNICAL RECOMMENDATIONS, ASSUMPTIONS HAVE BEEN MADE TO GENERATE THESE QUANTITIES AND ARE SUBJECT TO CHANGE. THE CONTRACTORS SHALL CALCULATE THEIR OWN ITEMIZED EARTHWORK AND MATERIAL QUANTITIES FOR THIS PROJECT. QUANTITIES DO NOT INCLUDE EXCAVATED OR FILL MATERIAL FOR FOUNDATION WORK.

VACA DIXON BESS

LIMITS OF CONSTRUCTION (DISTURBED AREA)	5.27	AC.
TOPSOIL (ORGANICS, 6") REMOVAL	4,160	C.Y.
REDISTRIBUTED OR STOCKPILED TOPSOIL (6")	520	C.Y.
ASPHALT DRIVE (4")	420	C.Y.
NONWOVEN GEOTEXTILE FABRIC	5,525	S.Y.
IMPORTED AGGREGATE BASE COURSE (12")	1,250	C.Y.
IMPORTED FINISH YARD ROCK (4")	980	C.Y.
IMPORTED STRUCTURAL FILL	10,900	C.Y.
12" Ø STORM PIPE	105	L.F
2" DIAMETER WASHED DRAINAGE STONE	2,150	C.Y.

LEGEND

- SUBJECT PROPERTY BOUNDARY (10.05 ACRES)
- LEASE BOUNDARY
- SETBACK LINES
- EXISTING OVERHEAD LINE
- OHP
- EXISTING MINOR CONTOUR (1' INTERVAL)
- EXISTING MAJOR CONTOUR (5' INTERVAL)
- 7' FENCE
- OVERHEAD ELECTRIC LINE
- OVERHEAD ELECTRIC LINE
- FW
- FIRE WATER LINE
- ROAD SURFACING
- GRAVEL SURFACING
- STORMWATER MANAGEMENT AREA



C03-01-00.DWG

THIS DRAWING WAS PREPARED BY WSP
USA, INC. FOR A SPECIFIC PROJECT.
TAKING INTO CONSIDERATION THE SPECIFIC
AND UNIQUE REQUIREMENTS OF THE PROJECT,
REUSE OF THIS DRAWING OR ANY INFORMATION
CONTAINED IN THIS DRAWING FOR ANY PURPOSE
IS PROHIBITED UNLESS WRITTEN PERMISSION
FROM BOTH WSP AND WSP'S CLIENT IS
GRANTED.

PRELIMINARY

NOT FOR CONSTRUCTION

D	WELL ACCESS REVISION	09/09/2026	JMM	JMM	TWH					DSGN	JMM	06/19/2026
B	BATTERY TECHNOLOGY REVISION	08/27/2026	JMM	JMM	TWH					DRN	JMM	06/19/2026
C	RE-ISSUED FOR 30% DESIGN	07/31/2026	JMM	JMM	TWH					CKD	TWH	06/19/2026
A	30% DESIGN	06/19/2026	JMM	JMM	TWH					SCALE:	1"=60'	
REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS			FOR 22x34 DWG ONLY		

MIDDLE RIVER POWER

VACA DIXON BESS

GRADING & DRAINAGE PLAN

WSP

JOB NUMBER

US0054599.1425

DRAWING NUMBER

C03-01-00

REV

Δ

Appendix C

Updated Simulated Views

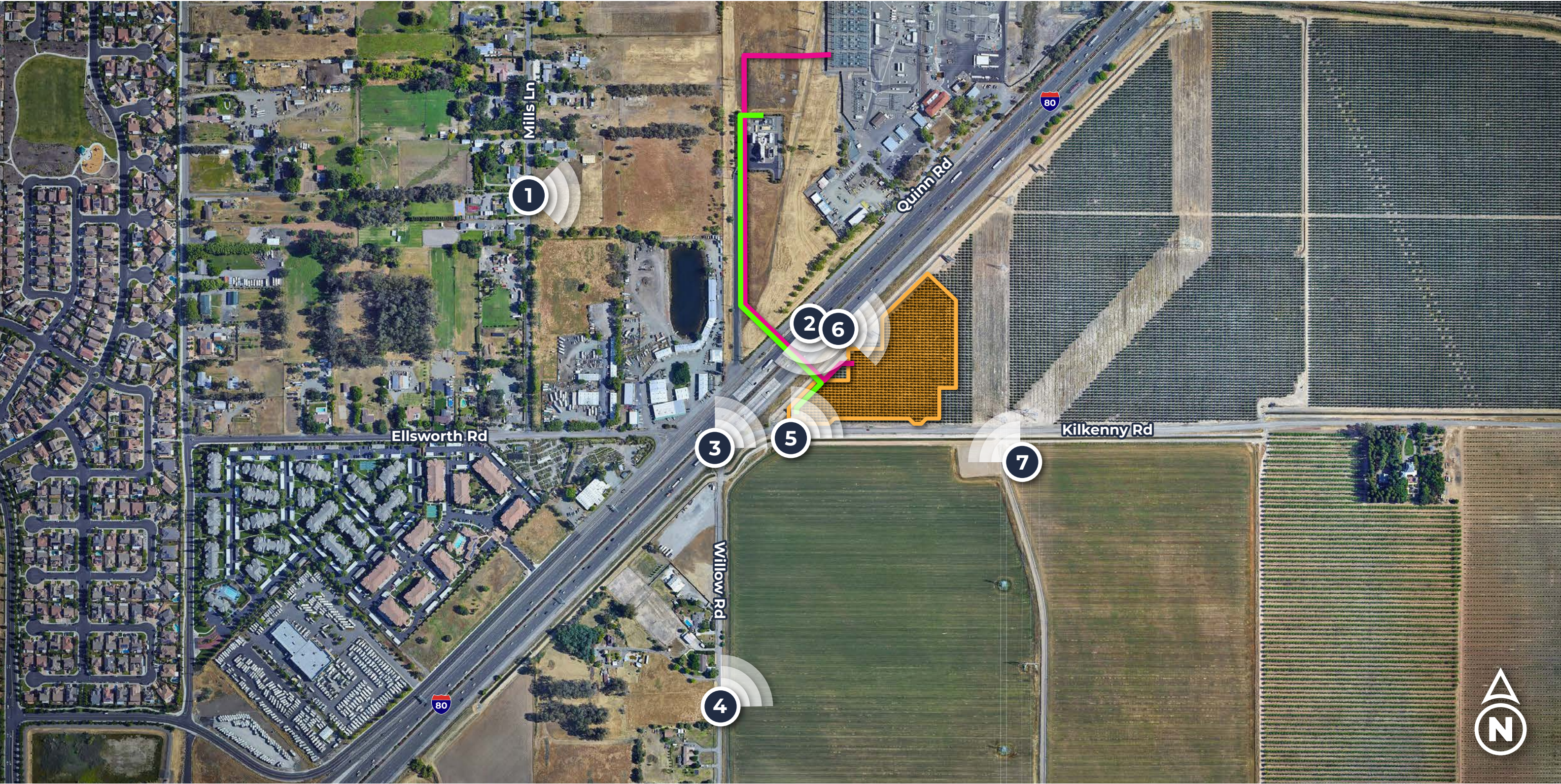
VACA DIXON

POWER CENTER PROJECT

- ① Viewpoint Location
- Orange Vaca Arges BESS Site
- Green Vaca Dixon Gen-Tie
- Pink Arges Gen-Tie

Visualization is for discussion purposes only.
Final design is subject to change pending
engineering and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC





EXISTING CONDITIONS



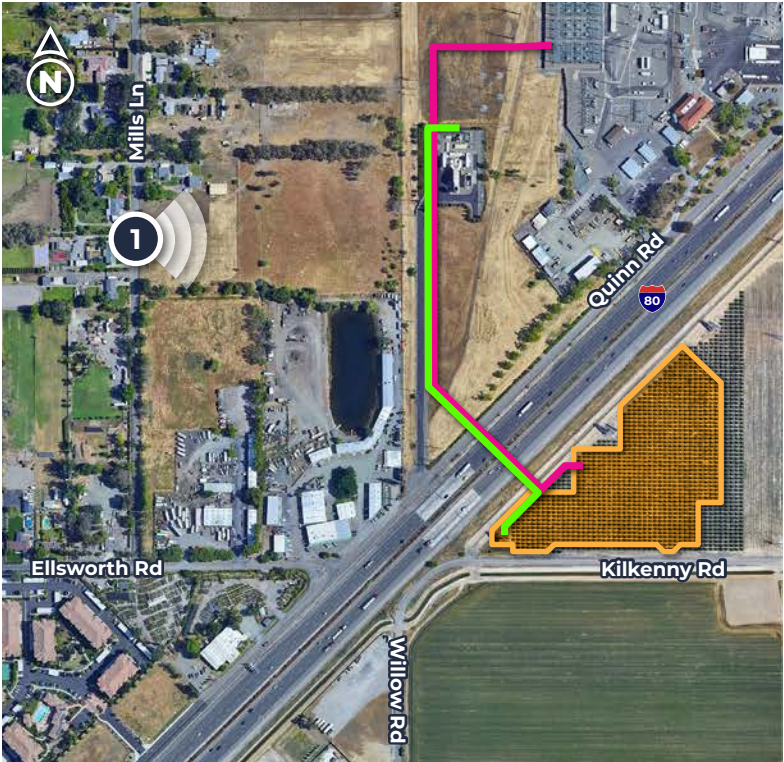
PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 1

1/22/2025 • 2:47 pm • Looking East



- 1 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS **OVERLAY** 1 YEAR GROWTH

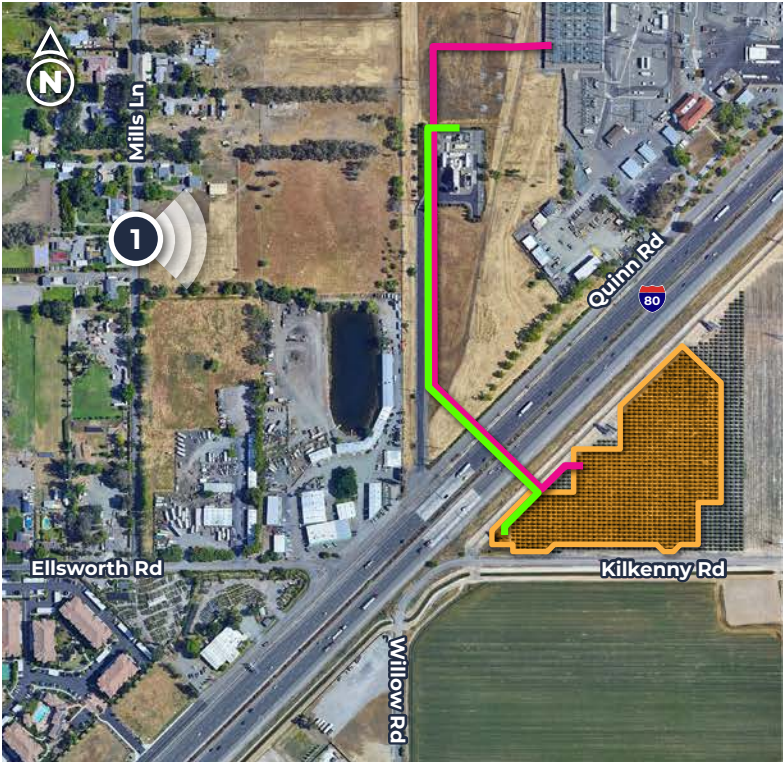
Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 1

1/22/2025 • 2:47 pm • Looking East



- ① Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 5 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 1

1/22/2025 • 2:47 pm • Looking East



- ① Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS **OVERLAY** 5 YEAR GROWTH

Objects displayed in yellow will be fully or partially obscured by terrain and vegetation.

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 1

1/22/2025 • 2:47 pm • Looking East



- ① Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 2

8/14/2025 • 9:18 am • Looking South



- 2 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 5 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 2

8/14/2025 • 9:18 am • Looking South



- ② Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 3

8/14/2025 • 9:29 am • Looking Northeast



- 3 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 5 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 3

8/14/2025 • 9:29 am • Looking Northeast



- 3 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 4

8/14/2025 · 9:44 am · Looking Northeast



- 4 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 5 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 4

8/14/2025 • 9:44 am • Looking Northeast



- ④ Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



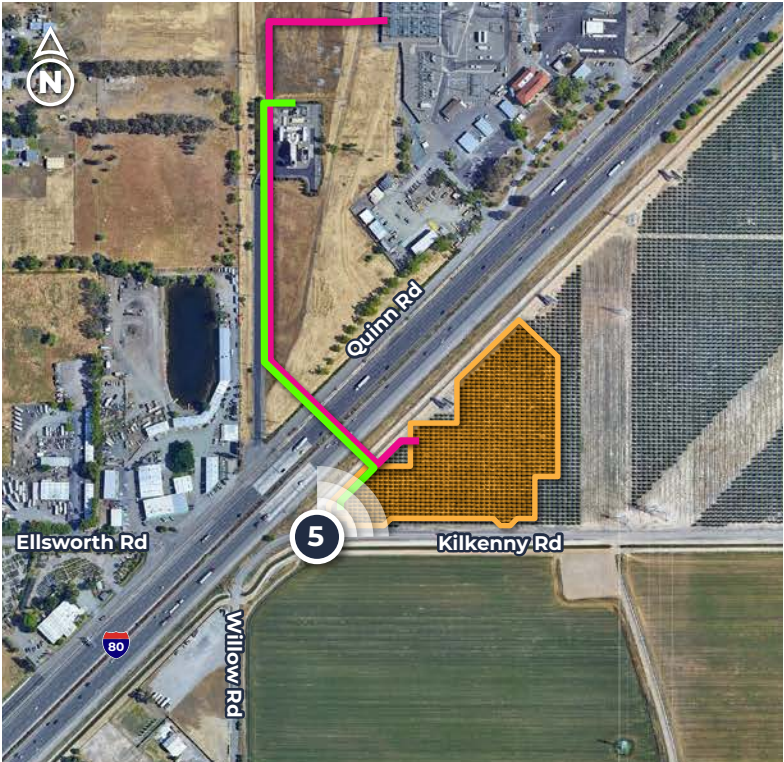
PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 5

3/12/2026 • 3:27 pm • Looking Northeast



- 5 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS



PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

VIEWPOINT 6

3/12/2026 • 3:09 pm • Looking East



- 6 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



EXISTING CONDITIONS

VACA DIXON

POWER CENTER PROJECT

AERIAL VIEWPOINT 7

3/20/2026 • 12:52 pm • Looking Northwest



- ⑦ Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



PROPOSED CONDITIONS 1 YEAR GROWTH

VACA DIXON

POWER CENTER PROJECT

AERIAL VIEWPOINT 7

3/20/2026 • 12:52 pm • Looking Northwest



- 7 Viewpoint Location
- Vaca Arges BESS Site
- Vaca Dixon Gen-Tie
- Arges Gen-Tie

Photo simulations are for discussion purposes only.
Final design is subject to change pending public,
engineering, and regulatory review.

Vaca Dixon BESS LLC
Arges BESS LLC



A



B



C



D

