

Agenda
Board of Supervisors
Isle of Wight County
June 4, 2026

1. Call to Order (6:00 PM)
2. Approval of Agenda
3. Invocation - Supervisor David Garner
4. County Administrator's Report
 - A. Public Works and Solid Waste Update
Staff Presentation re: Public Works
 - B. Bradby Park
Staff Update on the Bradby Park Project
 - C. Sail250
Smailthfield Martime Rendezous June 12-14
 - D. An Ordinance to Amend and Reenact Appendix B. - Zoning, Article V. – Supplementary Use Regulations, Section 5-5003.M. Utility services, Major of the Isle of Wight County Zoning Ordinance for the Purposes of Adding Regulations for Battery Energy Storage Systems
5. Adjournment

ISSUE SUMMARY

Issue:

Public Works and Solid Waste Update
Staff Presentation re: Public Works

Background:**Budgetary Impact:****Recommended Action:**

No Action Requested

Attachments:

1. Work Session PW Project update
2. Solid Waste Update 2025 2026 (002)

Public Works Project Update

TONY WILSON- DIRECTOR OF PUBLIC WORKS

6/4/2026



Capital projects in progress



RVFD Expansion

Project Scope

- Addition of 2 bays, Storage room, Chief's Office, Bunkroom, Locker room, and restroom with shower.

Status

- Completed



CVFD Bunkroom Addition



CVFD Bunkroom Addition & Repairs

Project Scope

- 14 bunkroom addition with bath/showers, new epoxy paint in apparatus bays, HVAC replacement, parking area overlay
- Preliminary Budget 2.3 M

Status

- Met with stakeholders
- Survey complete
- Conceptual layout finalized
- Currently in 35% design phase
- Applied for two Federal grants







New Windsor library

Project Scope

- 5000sqft pre-engineered building, 48 Additional Parking Spaces
- Preliminary Budget- Library 2.1M, Parking and Detention pond 400k

Status

- Currently in design phase.
- Met with stakeholders on Jan 22,2026.
- Site survey complete.
- Presented proposed library to School Board on March 12, 2026.
- 2 Concept drawings under review



PDCCC HVAC Replacement

Project Scope

- Remove 16 existing rooftop units, install new units and roof curbing's

Status

- Contract awarded to Hobbs& Associates
- Work to commence mid June and completed by September 1, 2026
- Phase 2 of project will replace existing membrane roof



Old Clerk Office Renovation

Project Scope

- Renovation of entire interior to facilitate boardroom overflow, training initiatives and additional meeting space.
- 2 spaces dedicated for the use of Isle of Wight Historical Society.
- ADA compliant restrooms

Status

- Finalizing all construction phases.



Lowes Grant Opportunities

Applied for the following

- PW- CVFD- Station 20 apparatus bay doors replacement.
- PW- Attendant buildings replacement.
- Ms. England applied for museum floor coating and exhibit lighting.
- Vol- CVFD – Station 10 interior floor replacement.
- Forwarded information to Dr. Coleman with the schools.

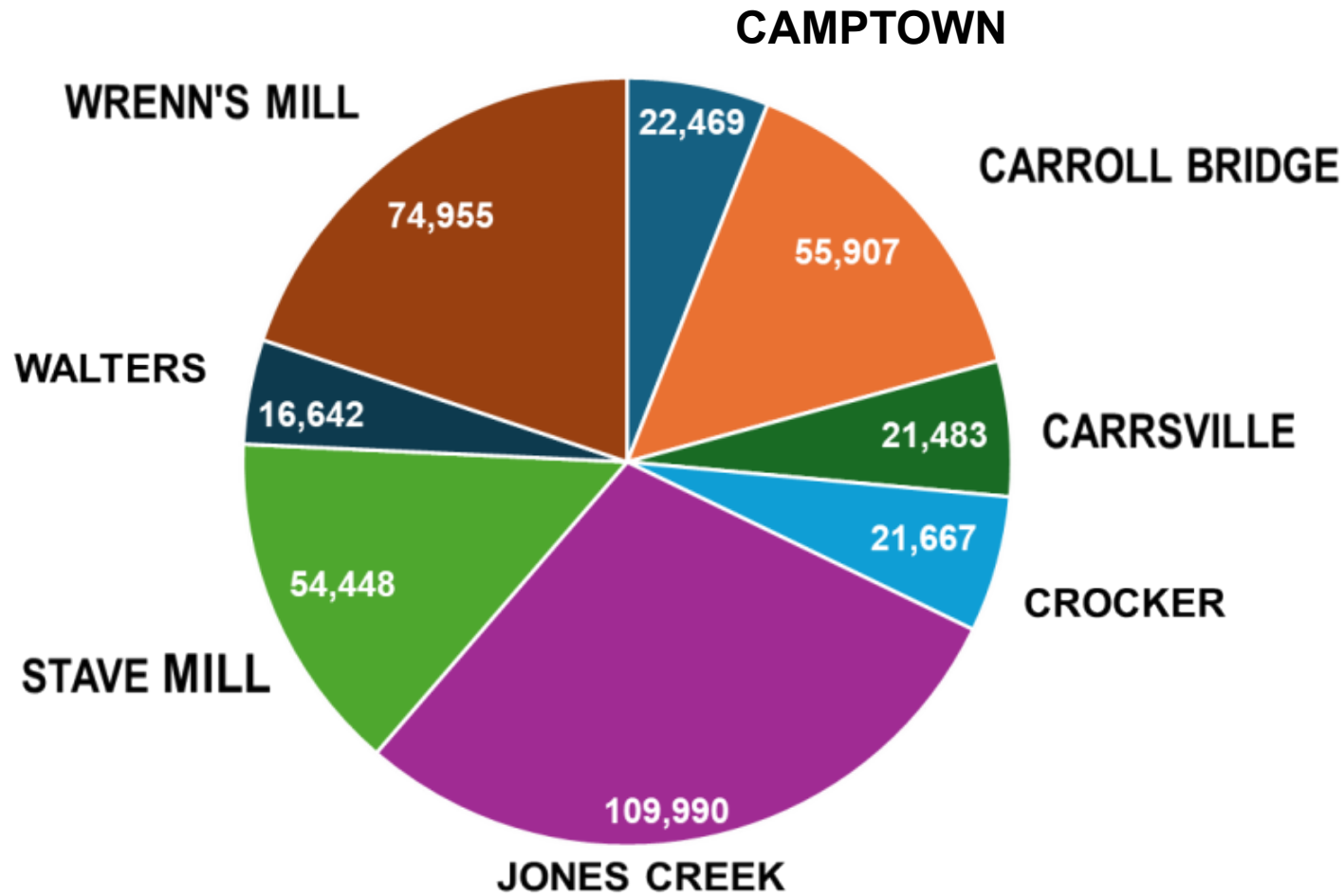


Isle of Wight County Solid Waste Update

MICHAEL ETHERIDGE

04/16/2026





CAMPTOWN	22,469	6%
CARROLL BRIDGE	55,907	15%
CARRSVILLE	21,483	6%
CROCKER	21,667	6%
JONES CREEK	109,990	29%
STAVE MILL	54,448	14%
WALTERS	16,642	4%
WRENN'S MILL	74,955	20%
TOTAL	377,561	100%

**377,561
PATRONS**

Refuse and Recycling Center Patrons October 2024 to September 2025



2022/2023	338,279
2023/2024	371,007
2024/2025	377,561

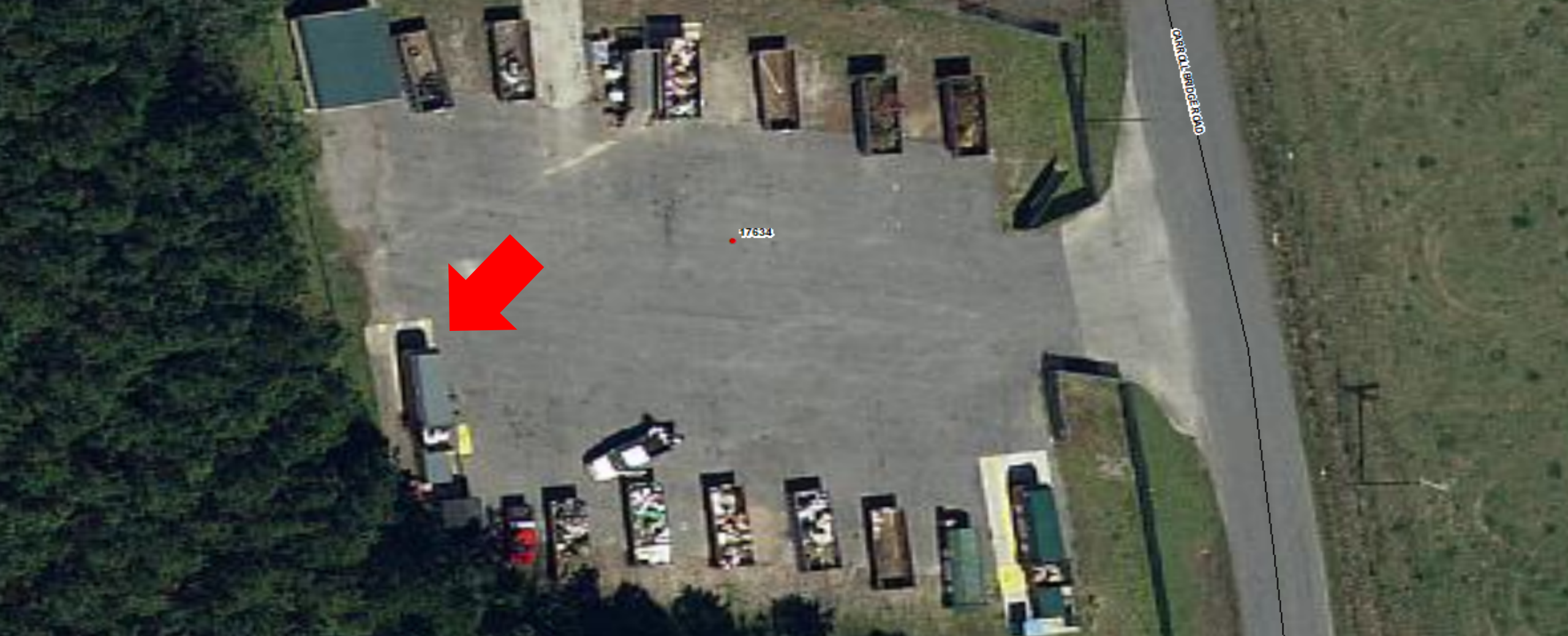
Refuse and Recycling Center Patrons October to September





REFUSE AND RECYCLING CENTER IMPROVEMENT PROJECTS COMPLETED 2025/2026 BUDGET YEAR





Carroll Bridge Before



Carroll Bridge After



Crocker Before



Crocker After



Walters Before



Walters After



Camptown Before



Camptown After



Camera, Internet, and Lighting Project Improve Safety and Security



Truck Shelter

FUTURE

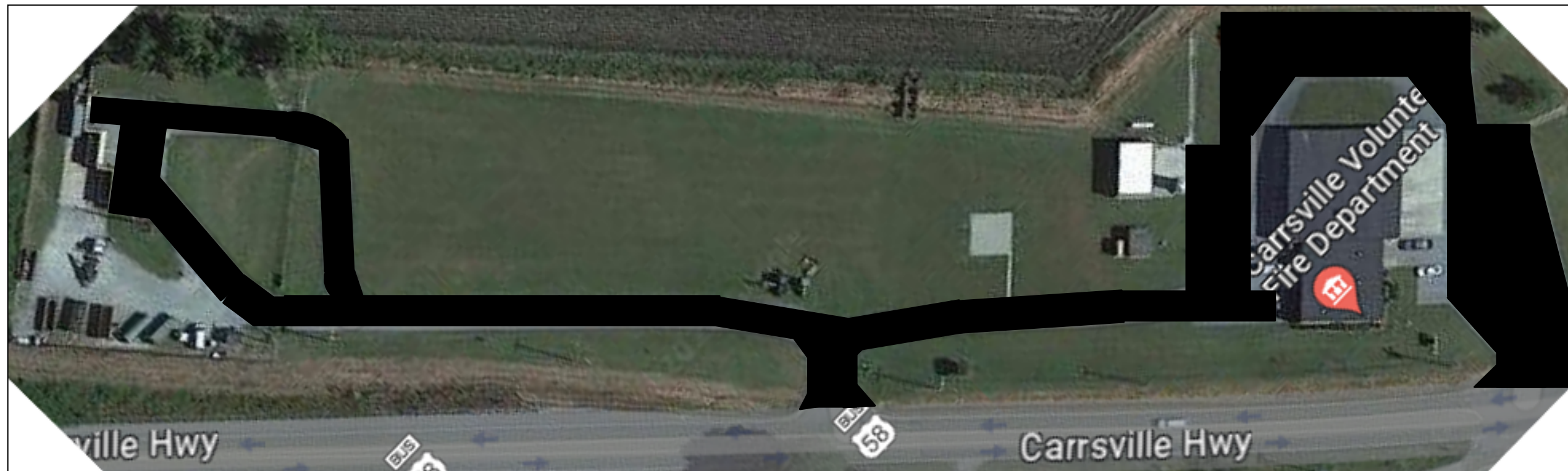


REFUSE AND RECYCLING CENTER FUTURE IMPROVEMENT PROJECTS

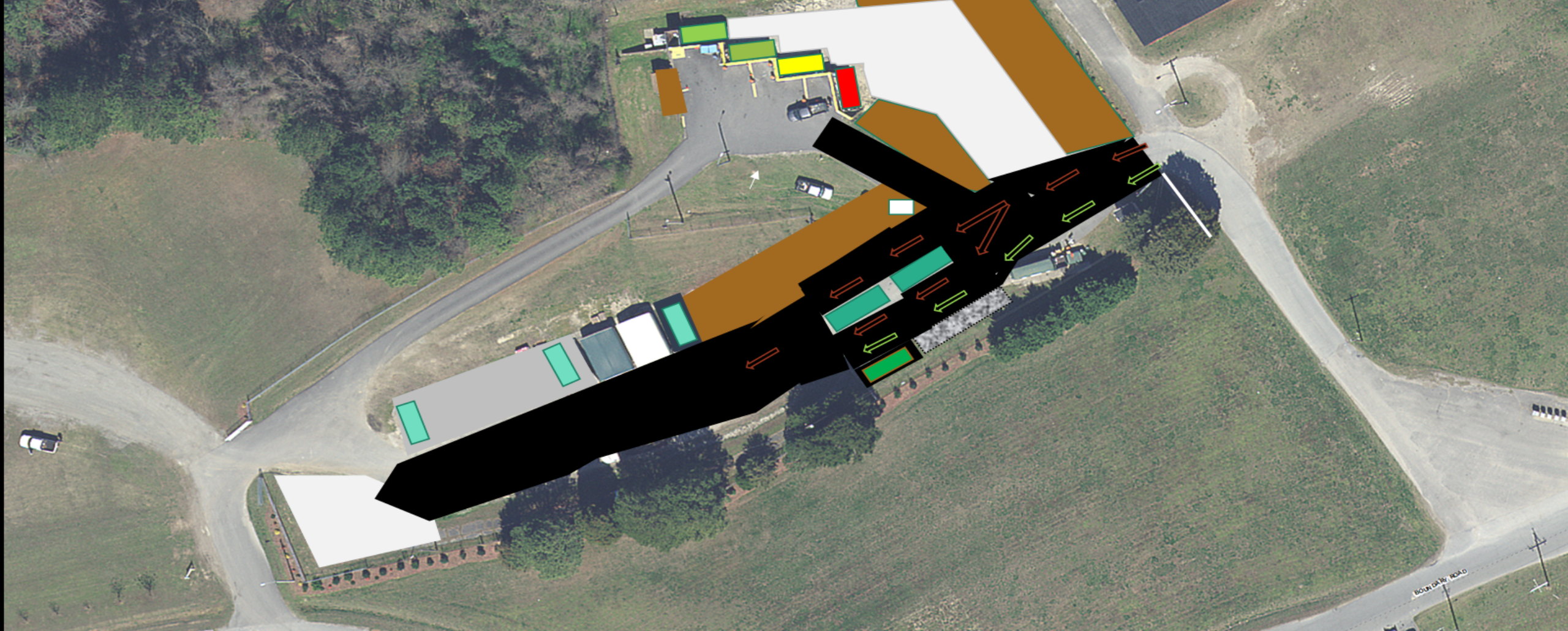




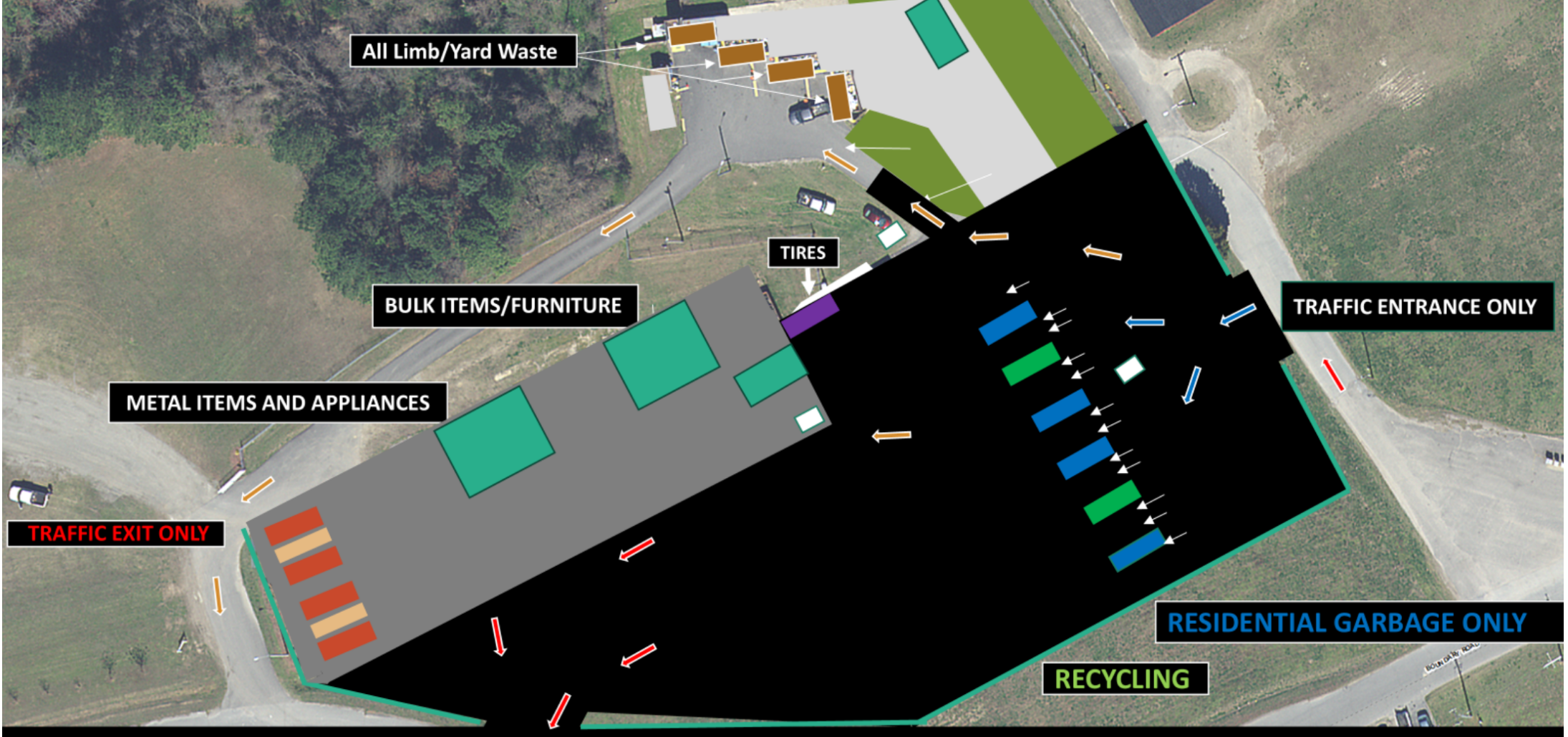
Carrsville VFD and R&R Center Improvements



Carrsville VFD and R&R Center Improvements



Jones Creek Current



Jones Creek Expansion

ANY QUESTIONS?



ISSUE SUMMARY

Issue:

Bradby Park
Staff Update on the Bradby Park Project

Background:

Staff will provide an update regarding the development of Bradby Park.

Budgetary Impact:

None.

Recommended Action:

For the Board's information.

Attachments:

1. Henry H. Bradby Park and TB Update 5.26.26

PARKS AND REC PROJECT UPDATES MAY 26, 2026

1. Henry H. Bradby Park
 - a. Preliminary Site Development Plan Review (PREL-24-10)
 - i. All County, VDOT and DEQ comments have been addressed
 - ii. Stormwater Management Plan approved by DEQ
 - iii. VDOT conditional use approval letter received
 - iv. Final site plan sent to Planning for approval
 - b. Land and Water Conservation Fund (LWCF) Grant
 - i. Approved by DCR
 - ii. Sent to National Park Service for approval
 - iii. Anticipate grant awards in August and NLT September 30, 2026
 - iv. Can't start construction until October (after NLEB roosting season)
2. Tyler's Beach Boat Ramp/Marina
 - a. Preliminary Site Development Plan Review (PREL-26-6)
 - i. 100% site plan submitted to Planning & Zoning for review/approval
 - ii. JPA submitted for approval: VMRC reports-No Permit Necessary
 - b. HUD-CPD Grant
 - i. Some design vouchers have been submitted for reimbursement
 - ii. Waiting for HUD approval

ISSUE SUMMARY

Issue:

Sail250
Smithfield Maritime Rendezvous June 12-14

Background:

Smithfield was named as an affiliate harbor for the Sail250 Program, which will take place June 12–14, 2026.

Budgetary Impact:

No impact

Recommended Action:

No Action Required

Attachments:

1. Smithfield Maritime Rendezvous



June 12-14, 2026

Smithfield & Isle of Wight Tourism

319 Main Street, Smithfield, VA 23430

757.357.5182 www.genuinesmithfieldva.com Facebook: Visit Smithfield VA

We are honored that Smithfield has been named an affiliate harbor of the Sail250 program in Hampton Roads. Book your trip now for the Smithfield Maritime Rendezvous weekend in Smithfield to discover our charming historic town and be part of this epic celebration!

Planned activities:

- **Tours of three special guest boats** - the 72' Chesapeake Bay Skipjack *Sigsbee* (built in 1901 and one of only a handful of skipjacks still around) and the buy boats *Mildred Belle* (built in 1948) and *FD Crockett* (the last existing log buy boat in Virginia). Also check out a local favorite, Rainbow Chaser, and meet Captain Shannon Gay.
- **Hands-on, full family educational elements** such as knot tying and touch tanks
- **Children's Story Trail** along Hayden's Lane featuring the book "Ahoy"
- **Summer Concert** on Friday at 7:30 pm - enjoy a live kid friendly sea shanties concert with Bob Zentz & Friends at the Main Street Stage at 228 Main Street

Saturday, June 13, 2026

- **Tour historic boats** for free at Smithfield Station
- **Maritime Art Show** at the Smithfield Station boardwalk including live music on Saturday from 10 am to 4 pm
- **Water Safety, demonstrations and kids activities** by the Sea Scouts Troop 37 and the Coastguard Auxiliary Flotilla 59
- Hop aboard the **Smithfield Police Boat** and meet local officers

- Take a **free guided walking tour** of South Church Street and discover the true history of Capt. John Sinclair (who resided on South Church Street and was accused of piracy). You may just catch a glimpse of Capt. Sinclair! Offered by the Isle of Wight County Museum at 11 am, 12, 1, and 2 pm. Wear comfortable shoes
- **Activities and demos at the 1750 Courthouse** lawn including ham curing, sailing, coopering and more
- **Free presentations and lectures** at the Isle of Wight Museum
- **Live Music by Old Goats** on the Fiddlin' Pig patio from 2 to 5 pm
- A **specialty Farmers Market** at 115 Main Street with locally grown and produced products from 9 am to 12 noon
- A **Pickers Market** at 315 Main Street where you can find vintage and antique items for sale from 9 am to 1 pm
- A showcase of **Isle of Wight County School K–12 student artwork** inspired by the Sail250 theme, highlighting maritime history, exploration, and the role of waterways in our local and national story. In addition, sample projects from our gifted students, such as inquiry-based work, creative pieces, and interdisciplinary projects connected to historical research and innovation
- Meet **Miss Virginia** and hear her sing at the Smithfield Inn on the patio at 5 pm
- **Plein Air Painters** will showcase their works from the day with a wet paint sale at the Arts Center @319. Check out the new **Maritime Exhibit reception** celebration for “*Two if By Sea*” from 6 to 7:30 and bid on the auction of the **collaborative art** while enjoying live acoustic **music by Zach Davis** at 319 Main Street. Free admission
- Skeeter & Co. Handmade **Jewelry Trunk Show** at Beyond Main at 224 Main Street
- **Meet Boo the Cockatoo** at the Art Show and see Boo and handler Amy's art (Boo was the Winner of Therapy Pet of the YEAR!)
- Saturday, June 13, **Otis Brooks will play live music** at SummerWind Winery from 4:30–7:30 pm
- **Drone air show** at Windsor Castle Park at 9 pm, arrive at 8 pm to park and secure space. Bring a chair or blanket
- **Cure Coffee will offer two special beverages** from June 12 to June 14 at 113 N. Church Street
 - *The Letter of Marque*: an espresso-based latte with spiced maple caramel syrup with cinnamon

- *Smuggler's Spiced Chai*: a chai latte with banana bread syrup and extra cinnamon. Make this dirty by adding extra espresso

- **Christ Episcopal Church will host tours** and hands-on programming highlighting the extensive history of the congregation. Representatives from St. Luke's Historic Church & Museum will be present to explore the patriotic roots of the Episcopal Church at 111 S. Church Street, Smithfield

- Visit **Perfectly Natural Soap** at 202 Main St. to purchase their **limited edition 250th** anniversary candle and bar soap

- **Meet the Artists** at Riverbend Gifts at 207 Main St. (Jimbo Ceramics and Shiloh Cotton). Check out the fun bar of items you can customize

- Boutique on the Creek **Hat & Jewelry Bar at Hamtown Mercantile**. Guests can customize hats with patches and choose unique, tarnish-proof jewelry

- Hamtown Mercantile and Main Gourmet will offer a **Wine & Cheese Tasting**: sample Raeburn Chardonnay paired with selections from Main Gourmet

Sunday, June 14

- Sunday, June 14, **Mercy Creek will perform live music** at SummerWind Winery from 1–4 pm, just 5 miles drive from downtown

and more coming!

This event is free to attend, but if you want to make your trip even more special, get limited availability tickets to additional exclusive events: [Smithfield Maritime Rendezvous](#)

There is also free parking next to the Manor House at Windsor Castle Park and a shuttle that will make stops along key areas in town (Farmers Mkt/Museum area and the Pickers Mkt in the 300 block of Main near the Visitor Center). **Shuttle runs 10 am to 6 pm, Saturday only.**

-Please note all cars parked next to the Manor house must be moved by 6 pm to make way for the drone show!

PLANNING REPORT

Application:

An Ordinance to Amend and Reenact Appendix B. - Zoning, Article V. – Supplementary Use Regulations, Section 5-5003.M. Utility services, Major of the Isle of Wight County Zoning Ordinance for the Purposes of Adding Regulations for Battery Energy Storage Systems

Background:

In February 2023, the Board of Supervisors established the Energy Task Force (ETF) to assess Isle of Wight County's current energy infrastructure, the remaining capacity of high-voltage transmission lines, potential future energy generation projects, emerging energy technologies, and other related items. The ETF made several key recommendations for the County's next steps. Implementation steps with the highest priority include consideration of location requirements for battery storage and data center facilities as well as a review of emergency management protocols for emerging energy technologies.

Staff developed a draft ordinance based on models from several other jurisdictions as well including performance criteria from the County's existing utility scale solar requirements. A copy of the first draft Ordinance was discussed by the Planning Commission at their June 24, 2025, regular meeting.

Staff subsequently revised the draft ordinance to reflect the feedback and to apply the County's current utility scale solar energy requirements to BESS facilities. Staff then distributed the revised draft ordinance to the county Fire EMS department, Building Inspections, and Dominion Energy for feedback. Community Development, Fire Rescue, and Dominion Energy staff met on September 25, 2025, to discuss the proposed Ordinance where further changes were suggested. The Planning Commission also toured the Drybridge Battery Energy Storage facility in Chesterfield County at its annual retreat on October 30, 2025.

The Planning Commission continued their discussion of the proposed Ordinance and held a public hearing on the draft BESS Ordinance at their February 24, 2026, regular meeting. The Planning Commission voted to recommend approval of the proposed Ordinance by a vote of ten in favor and zero voting against (10-0) at their March 24, 2026, regular meeting.

The Board of Supervisors held a public hearing on the proposed Ordinance at their April 16, 2026, regular meeting. Following the public hearing, the Board agreed to continue their discussion to their April 30, 2026, work session when they requested staff to make several changes to the draft Ordinance. The most recent version of the draft Ordinance is attached to this staff report.

Description:

The County's draft ordinance is based on models from several other jurisdictions, including the City of Chesapeake, Hanover County, and Amelia County as well as on feedback received from the County's Fire Rescue staff, the County Building Official, and Dominion Energy. A copy of the draft

Ordinance is attached to this staff report.

Comprehensive Land Use Plan:

Ordinance Review:

Agency Review:

Fire Rescue and Building Inspections reviewed and commented on the draft ordinance.

Staff Conclusions:

Staff Recommendation:

The Planning Commission voted to recommend approval of the proposed Ordinance by a vote of ten in favor and zero voting against (10-0).

Staff also recommends approval of the proposed BESS Ordinance.

Attachments:

1. ZO Amendment Ordinance BOS BESS redline rev 051126
2. ZO Amendment Adopt Ordinance BOS BESS rev 051126
3. BESS Ordinance BOS Worksession 043026
4. BESS Adoption Ordinance April 16, 2026
5. BESS Ordinance BOS PPT 041626

ISSUE SUMMARY

Issue:

An Ordinance to Amend and Reenact Appendix B. - Zoning, Article V. – Supplementary Use Regulations, Section 5-5003.M. Utility services, Major of the Isle of Wight County Zoning Ordinance for the Purposes of Adding Regulations for Battery Energy Storage Systems

Background:

In February 2023, the Board of Supervisors established the Energy Task Force (ETF) to assess Isle of Wight County's current energy infrastructure, the remaining capacity of high-voltage transmission lines, potential future energy generation projects, emerging energy technologies, and other related items. The ETF made several key recommendations for the County's next steps. Implementation steps with the highest priority include consideration of location requirements for battery storage and data center facilities as well as a review of emergency management protocols for emerging energy technologies.

Staff developed a draft ordinance based on models from several other jurisdictions as well including performance criteria from the County's existing utility scale solar requirements. A copy of the first draft Ordinance was discussed by the Planning Commission at their June 24, 2025, regular meeting.

Staff subsequently revised the draft ordinance to reflect the feedback and to apply the County's current utility scale solar energy requirements to BESS facilities. Staff then distributed the revised draft ordinance to the county Fire EMS department, Building Inspections, and Dominion Energy for feedback. Community Development, Fire Rescue, and Dominion Energy staff met on September 25, 2025, to discuss the proposed Ordinance where further changes were suggested. The Planning Commission also toured the Drybridge Battery Energy Storage facility in Chesterfield County at its annual retreat on October 30, 2025.

The Planning Commission continued their discussion of the proposed Ordinance and held a public hearing on the draft BESS Ordinance at their February 24, 2026, regular meeting. The Planning Commission voted to recommend approval of the proposed Ordinance by a vote of ten in favor and zero voting against (10-0) at their March 24, 2026, regular meeting.

The Board of Supervisors held a public hearing on the proposed Ordinance at their April 16, 2026, regular meeting. Following the public hearing, the Board agreed to continue their discussion to their April 30, 2026, work session when they requested staff to make several changes to the draft Ordinance. The most recent version of the draft Ordinance is attached to this staff report.

Budgetary Impact:

Recommended Action:

The Planning Commission voted to recommend approval of the proposed Ordinance by a vote of

ten in favor and zero voting against (10-0).

Staff also recommends approval of the proposed Ordinance.

Attachments:

1. ZO Amendment Ordinance BOS BESS redline rev 051126
2. ZO Amendment Adopt Ordinance BOS BESS rev 051126
3. BESS Ordinance BOS Worksession 043026
4. BESS Adoption Ordinance April 16, 2026
5. BESS Ordinance BOS PPT 041626

BOS Redline Version rev. May 11, 2026

All proposed new text included since April 30, 2026, is in red, underlined font. All text proposed to be removed is in ~~red, strike-through~~ font.

Article V. - Supplementary Use Regulations

5-5003.M. Utility services, major.

M. Utility services, major

4. Utility Scale Solar Energy Facilities. (INCLUDED FOR REFERENCE ONLY – NO CHANGES PROPOSED FOR ITEM 4)

- a. In addition to any conditional use permit application requirements, the applicant shall provide the following at the time of application:
 - i. A conceptual plan showing the proposed layout of all structures, adjacent properties, screening, landscaping, internal roadways, easements, environmentally sensitive features including proposed wildlife corridors;
 - ii. A visual impact analysis demonstrating through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on the visual character of a scenic landscape, vista, or scenic corridor;
 - iii. A transportation plan showing vehicular access to the site, proposed construction traffic route to the site, parking areas, and laydown yards;
 - iv. An estimated time frame and proposed hours of operation for construction activity;
 - v. Economic impact analysis of the project including projected net new tax revenue as well as loss of active agricultural and silvicultural lands and its indirect impact to associated local businesses;
 - vi. An environmental resource impact analysis discussing any proposed activities within designation resource conservation areas;
 - vii. A historical and cultural resources impact analysis; and
 - viii. Written comments from the relevant electric company regarding the capacity of the transmission lines as part of any use permit application. An applicant may meet this requirement by submitting a third-party report that provides relevant transmission capacity information.
- b. Ground-mounted systems shall not exceed fifteen (15) feet in height when oriented at maximum tilt, except when temporarily stowed in a vertical position for vegetation management or for inspection, maintenance and/or repair.
- c. Audible sound from a solar energy system shall not exceed sixty (60) dBA (A-weighted decibels), as measured at any adjacent non-participating landowner's property line. The level, however, may be exceeded during short-term exceptional circumstances, such as severe weather.

- d. All equipment, accessory structures and operations associated with a large solar energy system shall be setback at least seventy-five (75) feet from all property lines and at least one hundred, one hundred and twenty-five (125) feet from any residential parcels, and two hundred and fifty (250) feet from any structure with documented historical significance, a cemetery, a cultural resource, or a school. New substations, connector stations, inverters and transformers shall be set back at least two hundred and fifty (250) feet from the property line of any non-participating property. Final setbacks shall be determined by equipment decibel level specifications. In addition, these facilities are subject to the following:
 - i. Setbacks shall be kept free of all structures and parking lots; and
 - ii. Setbacks shall not be required along property lines adjacent to other parcels which are part of the solar energy system with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks shall be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- e. The following landscaping standards shall apply:
 - i. Along public roadways, a minimum fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of trees and shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - ii. Where solar facility properties abut residential parcels, a fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of large and small canopy trees and medium shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - iv. Existing vegetation that meets the minimum landscaping specifications may be used to meet required landscaping;
 - v. No silvicultural activities or removal of required landscaping materials shall occur in the required bufferyards except as approved by the Zoning Administrator; and
 - vi. If the land area being leased was under crop cultivation prior to lease, it shall be maintained and cut annually during the growing season prior to August 1 until site construction begins.
- f. Provide soil testing for any contaminants directly attributable to the solar panels before and after construction and every five (5) years during the interim until the facility is decommissioned. Owner/operator must provide copies of initial baseline report and subsequent reports to the zoning administrator. Should a negative finding indicating contamination from the solar panels occur, contamination must be remedied by the owner/operator to applicable state and federal standards.
- g. Prior to final site plan approval, an owner, lessee, or developer of real property shall enter the following agreement and provide them to the zoning administrator for review and approval:

- i. A written agreement to decommission solar energy equipment, facilities, or devices upon the following terms and conditions:
 - a) If the party that enters into such written agreement with the county defaults in the obligation to decommission such equipment, facilities, or devices in the timeframe set out in such agreement, the locality has the right to enter the real property of the record title owner of such property without further consent of such owner and to engage in decommissioning; and
 - b) Such owner, lessee, or developer shall provide financial assurance of such performance to the county in the form of certified funds, cash escrow, bond, letter of credit, or parent guarantee, based upon an estimate of a professional engineer licensed in the commonwealth, who is engaged by the applicant, with experience in preparing decommissioning estimates and approved by the county; such estimate shall not exceed the total of the projected cost of decommissioning, plus a reasonable allowance for estimated administrative costs related to a default of the owner, lessee, or developer, and an annual inflation factor.
 - c) Decommissioning of discontinued or abandoned large solar energy systems shall include the following:
 - i. Physical removal of all solar energy equipment and above-ground appurtenant structures from the subject property including, but not limited to, buildings, machinery, equipment, cabling and connections to transmission lines, equipment shelters, security barriers, electrical components, roads, unless such roads need to remain to access buildings retrofitted for another purpose, or the landowner submits a request to the board of supervisors that such roads remain.
 - ii. Below-grade structures, such as foundations, underground collection cabling, mounting beams, footers, and all other equipment installed with the system shall be completely removed: however, these structures may be allowed to remain if a written request is submitted by the landowners and a waiver is granted by the Board of Supervisors.
 - iii. Compacted soils shall be decompacted as agreed to by the landowner.
 - iv. Restoration of the topography of the project site to is pre-existing condition, except that any landscaping or grading may remain in the after-condition if a written request is submitted by the landowner and a waiver is granted by the board of supervisors.
 - v. Proper disposal of all solid or hazardous materials and wastes from the site in accordance with local, state, and federal solid waste disposal regulations.
- h. During and at the end of project construction, any damage done to public roads by solar farm construction equipment shall be repaired in accordance with VDOT standards and specifications. Post construction damage shall be identified based on inspections by

VDOT with the developer or their agent, prior to construction and upon completion, identifying the items for repair. Additionally, at the request of YDOT, in order to ensure the safety of the traveling public, some damages may need to be addressed immediately.

- i. Facilities shall not be located within the limits of the County's Development Service Districts.
- j. The facilities themselves must be wholly located within a two-mile radius of existing substations and/or high voltage transmission lines.
- k. The total acres of prime farm soils and soils of statewide importance that may be within the fence of a utility scale solar facility pursuant to issued and active CUPs shall be limited to a maximum of two percent (2%) of the County's total number of prime farm soils and soils of statewide importance, or two thousand four hundred forty-six (2,446) acres.
- l. For projects that are connected to transmission lines, the applicant shall provide detailed capacity information to the Planning Commission for each project which shall include at a minimum, but not limited to, available capacity in MW on the effected distribution lines and any details that may impact future energy generation projects, such as scheduled power generation facility decommissionings, transmission system capital improvements or other events impacting transmission line capacity.
- m. The facility operator shall prepare and submit an annual activity report to the Zoning Administrator to be shared with the Planning Commission and Board of Supervisors.
- n. The applicant shall provide documentation demonstrating the selected panels and all power generating equipment initially installed and replaced qualify, for disposal purposes, as nonhazardous waste under applicable US EPA regulation using a Toxicity Characteristics Leaching Procedure or equivalent laboratory analysis.
- o. The applicant shall submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- p. The operator shall post a notification sign at each site entrance that states (a) the rated nameplate capacity, (b) the name of the project owner, and operator (if different from the owner), (c) the street address of the site, and (d) a 24-hour emergency contact phone number for the operator.
- q. On-site energy storage shall require a separate conditional use permit.
- r. The applicant shall be responsible for any costs incurred by the County for additional staff and/or third-party inspectors for inspection services.
- s. Topsoil is not permitted to be removed from the property.
- t. The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type that is harmonious with the rural, agricultural, and historical character

of the County while meeting federal and state regulations for solar electric generating facility fencing as determined by the Zoning Administrator adjacent to all public rights-of-way, residential property, properties eligible for listing on the National Register of Historic Places, and civic uses prior to final site plan approval.

- u. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site in order to provide wildlife corridors.
- v. The applicant shall provide an appraisal report from an independent appraiser approved by the Zoning Administrator on the impact of the facility on nearby property values.

5. Battery Energy Storage Systems.

The following supplementary use regulations are additional, modified, or more stringent standards contained in Section 5-5003.M.4, Utility Scale Solar Energy Facilities, that apply to Battery Energy Storage Systems (BESS) as set out in item b of this section. The standards set forth in the supplementary use regulations shall be met regardless of the form of action required for approval. BESS which qualify as major utility use type shall be prohibited outside of the existing approved limits of Utility Scale Solar Energy Facilities and within any DSD.

- a. As used in this section, the following terms shall have the meanings indicated:

Battery(ies): A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this article, batteries utilized in consumer products are excluded from these requirements.

Battery energy storage system (BESS): One (1) or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle. A battery energy storage system is classified as a Tier 1 or Tier 2 battery energy storage system as follows:

- i. Tier 1 battery energy storage systems have an aggregate energy capacity less than or equal to six hundred (600) kWh for onsite use only and, if in a room or enclosed area, consist of only a single energy storage system technology.
- ii. Tier 2 battery energy storage systems have an aggregate energy capacity greater than six hundred (600) kWh or are comprised of more than one (1) storage battery technology in a room or enclosed area.

Cell: The basic electrochemical unit, characterized by an anode and cathode, used to receive, store, and deliver electrical energy.

Dedicated-use building: A building that is built for the primary intention of housing battery energy storage system equipment, as defined in the latest adopted editions of the Virginia Uniform Statewide Building Code ("Uniform Code") and the International Building Code, and complies with the following:

- i. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
- ii. No other occupancy types are permitted in the building.
- iii. Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test, and repair the battery energy storage system and other energy systems.
- iv. Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage system, provided the following:
 - a) The areas do not occupy more than ten (10) percent of the building area of the story in which they are located.
 - b) A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

Energy Code: The Virginia Energy Conservation Code, as amended.

Uniform Code: The Virginia Uniform Statewide Building Code adopted pursuant to § 36-98 of the Code of Virginia, as amended.

- b. BESS shall meet all the ordinance requirements for utility scale solar energy facilities listed above unless otherwise noted to include such items as, but not limited to, siting criteria, application requirements, soil testing, topsoil removal, landscaping, decommissioning plan, surety agreement, decommissioning required actions, and any surety in accordance with the ordinance requirements.
- c. The facility operation shall notify the County within thirty (30) days of any change in ownership of the facility owner and/or operator.
- d. In addition to the conditional use permit application requirements and site plan application requirements for utility scale solar energy facilities listed above, the applicant shall provide the following at the time of application:
 - i. Before application submittal, a preapplication meeting and neighborhood meeting are required.
 - ii. An inventory of all solar facilities existing or proposed, within a four-mile radius.
 - iii. Pre-construction Noise Study. The applicant shall be required to provide a pre-construction noise study that includes equipment and component manufacturers' noise ratings and site conditions which are used to develop a model of the noise levels generated at the BESS site and predicted noise levels at the perimeter of the battery energy storage system and at the boundaries of the property. If the noise study indicates that the requirements will not be met, noise mitigation measures are to be included with the application. The pre-construction noise study shall be prepared by a Commonwealth of Virginia Licensed Professional Engineer (PE).
 - iv. An Emergency Response Plan (ERP) containing the information listed in sections ix and x under item e below.
 - v. Fiscal Analysis Report. The Fiscal Analysis Report is a document that will identify how the County and community benefit from the facility. The fiscal analysis report shall include an analysis of the potential financial impact of the project in the County

including the project's direct, indirect, and induced effects in the County economy with the following sections:

- a. The financial impact of the project on the economy of IOW County, including direct, indirect, and induced effects and earnings in various sectors of the local economy, such as housing needs analysis, impacts on roads and services, and County spending.
 - b. Economic impact analysis that includes output as in the total value of goods and services produced within the County by the project, job creation per year of operation, labor earnings per year during both the construction and operations periods.
 - c. Local Government annual Tax Revenue
 - d. Potential utilization of local labor and contractors, including local apprenticeship labor, options of materials, parts, and components whether existing or proposed, local equipment manufacturing, local operations and maintenance, and local parts assembling and distribution, maintenance materials, site management services, and facility management.
 - e. Economic Impact Methodology (i.e., Jobs and Economic Development Impacts [JEDI] PV Model from the National Renewable Energy Laboratory [NREL]). Assumptions developed to complete the analysis and to adapt the models to expected local conditions.
 - f. Economic Impact Results per development phase.
 - g. A real estate value impact study of nearby properties.
 - h. Risks and uncertainties.
 - i. Methods to improve the projected financial and employment impacts.
 - j. Local distribution of energy efforts and reduction rates to local energy consumption as a result of the project.
 - k. An executive summary of the Report.
- e. If, prior to site plan approval, but subsequent to approval of the concept development plan by the Board of Supervisors, modifications to the concept development plan and/or associated permit conditions are required to be in compliance with noise standards, the zoning administrator shall have the authority to permit minor structural additions or modifications to the concept development plan so long as such additions or modifications are limited to addressing noise levels.
- f. In addition to any conditions of approval, the following requirements shall apply to all BESS facilities:
- i. The BESS energy storage system shall be placed on an appropriate foundation outside of environmentally sensitive areas, such as, but not limited to, wetlands and special flood hazard areas.
 - ii. BESS facilities shall be constructed, maintained, and operated in accordance with national industry standards and regulations including the most current adopted edition of the National Electrical Code, International Fire Code of the International Code Council, and the

National Fire Protection Association Fire Code. The batteries will be NFPA (National Fire Protection Association) compliant. In the event of a conflict between the national industry standards and these conditions, the national industry standards shall control so that, as technology advances, updated technology may be used.

- iii. All battery storage equipment, including generators, transformers, utility cabinets, etc., shall maintain a minimum 100 fifty (50) foot setback from the perimeter security fence with an additional 250 300 foot setback from all public roads and property lines, for a total of 350 feet. Fences shall meet the required minimum 250 foot setback from all public roads and property lines. All equipment shall be setback at least 500 feet from any existing dwelling at the time of CUP approval and a ¼ mile setback from any designated County emergency shelter. The Board of Supervisors may approve through the conditional use permit process conditions that allow a battery storage facility to locate closer than 350 feet, but no closer than 100 feet from public roads and property lines, if the specific site conditions, the nature of the project and the permit conditions adequately address public safety concerns and appropriately mitigate impacts of the facility on the surrounding community.
 - a) Setbacks shall be kept free of all structures and parking lots; and
 - b) Setbacks shall not be required along property lines adjacent to other parcels which are part of the BESS facility with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks shall be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- iv. All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles, with new easements and right-of-way.
- v. Access to all batteries and electrical switchgear shall be from the exterior for normal operation.
- vi. The latest applicable product certifications shall be provided.
- vii. Battery cells shall be placed in a BESS with a battery management system ("BMS"). The BESS shall provide a secondary layer of physical containment to the batteries and be equipped with cooling, ventilation, and fire suppression systems for indoor facilities only. The BMS shall monitor individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access and be able to shut down the system before thermal runaway takes place.
- viii. BESS shall be developed in collaboration with technical experts and first responders to utilize technology-appropriate best practices for safe energy storage systems including, but not limited to, the following:
 - a) Adequate access/egress for the first responders;

- b) Adequate facility signage (on battery chemistry and person to contact);
 - c) Accessible safety data sheets;
 - d) System-specific emergency response plans;
 - e) Training for first responders on the type of system, potential hazards and risks, and system-specific emergency response plans;
 - f) Adequate water sources and fire suppression appliances ~~for indoor installations~~ for the firefighters if required in the emergency response plans;
 - g) Signage on hazardous materials present in the vicinity;
 - h) Emergency lighting;
 - i) Separate battery modules to make it easier to isolate a failed battery from the rest;
 - j) Sufficient disconnect and shutdown capability including a master kill switch to disable and discharge batteries;
 - k) System-appropriate sensors and alarms;
 - l) Air ventilation and fire suppression systems for indoor installations; and
 - m) Drainage for water runoff.
- ix. The applicant shall submit an Emergency Response Plan (ERP) containing the information listed in the section above at the time of ~~site plan~~ application for review and approval by the County, as well as detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. Each BESS shall install and maintain fire safety systems such as an automatic fire alarm/detection system and/or extinguishing technology built in based on specific hazards, as approved by the County Fire Rescue Chief, under the direction of NFPA 855 standards, as amended, and the Virginia Statewide Fire Prevention Code. Active fire extinguishing technology may not be required if it can be shown that the battery energy storage system meets all applicable code requirements including NFPA 855 and subject to the approval of the County Chief of Fire Rescue.
- x. In addition, the ERP shall include:
- a) Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;
 - b) Procedures for inspection and testing of associated alarms, interlocks, and controls;
 - c) Procedures to be followed in response to notifications from the battery energy storage system, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure;
 - d) Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures may include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire;
 - e) Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required;
 - f) Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel

qualified to safely remove damaged battery energy storage system equipment from the facility;

- g) A water containment plan;
 - h) Other procedures as determined necessary by the ~~city~~ County to provide for the safety of occupants, neighboring properties, and emergency responders;
 - i) Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures;
 - j) The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Fire Rescue and the facility operator; and
 - k) The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- xi. To the extent required by NFPA 855, the 24/7 monitoring shall include individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access.
- xii. The battery management system shall be capable of shutting down and issuing an alarm in response to an unsafe condition.
- xiii. No burning of debris shall be permitted during site clearing. Any timber that cannot be logged and removed from the site may be chipped on site during permitted construction hours only.
- g. The BESS facility operator or owner shall be solely liable for the costs and implementation of any environmental remediation necessitated by site operations, as required by the County or the state. All remediation efforts shall commence and conclude within a reasonable timeframe dictated by the County or state.
- h. A Root Cause Analysis with Corrective Actions shall be required prior to the restart after a partial or full facility emergency shut down which shall identify the cause of system or facility failure and corrective actions to be taken to prevent recurrence.
- i. The Operator shall complete a Root Cause Analysis that includes a review of all system components, sub-components, design, manufacturer, maintenance, and operations at the affected facility.
 - ii. The analysis shall indicate whether any affected components or subcomponents are in use elsewhere in the County.
 - iii. The Operator shall perform corrective actions based on the analysis.
 - iv. A report shall be submitted to the County describing actions taken to prevent reoccurrence of the incident.
 - v. A copy of the Root Cause Analysis report shall be given to the Board of Supervisors.
- i. A Post-construction noise study of existing conditions after completion and when in full operation shall be provided within three (3) months after initial operations begin after the issuance of the Certificate of Occupancy. The post-construction noise study shall include sound pressure level measurements from a reasonable number of sampled locations at the

perimeter of the battery energy storage system and at the boundaries of the property in order to demonstrate that the average noise generated from the BESS, components, and associated ancillary equipment at any time shall not exceed a noise level of 50 dBA as measured from the property line of an adjoining parcel and shall not exceed 50 dBA at the outer wall of any occupied structure. The post-construction noise study shall be prepared by ~~Commonwealth of Virginia Licensed Professional Engineer (PE)~~ Certified Technicians using Calibrated ISO Test Instrumentation. If the post-construction noise levels do not meet the maximum noise level requirements, noise mitigation measures are required and shall be implemented to achieve compliance. The BESS owner shall determine noise mitigation measures which are certified by a Commonwealth of Virginia Licensed Professional Engineer (PE). After noise mitigation measures are approved by the Zoning Administrator, the measures shall be provided and installed by the BESS owner and then verified by noise level measurements within six (6) months.

**AN ORDINANCE TO AMEND THE FOLLOWING SECTION OF APPENDIX B. ZONING:
ARTICLE V. - SUPPLEMENTARY USE REGULATIONS,
SECTION 5-5003.M. UTILITY SERVICES, MAJOR TO INCLUDE REQUIREMENTS
FOR BATTERY ENERGY STORAGE SYSTEMS**

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has the legislative authority to make reasonable changes to the ordinances that govern the orderly growth and development of Isle of Wight County; and

WHEREAS, the Isle of Wight County Board of Supervisors is also concerned about the compatibility of uses on public and private lands within Isle of Wight County and seeks to allow flexibility in the administration of the ordinance regulations while protecting the health, safety, and general welfare of present and future residents and businesses of the County.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that the following section of Appendix B. Zoning: Article V (Supplemental Use Regulations), Section 5-5003.M (Utility Services, Major) of the Isle of Wight County Code be amended and reenacted as follows:

Article V. - Supplementary Use Regulations

5-5003.M. Utility services, major.

M. Utility services, major.

1. Public utility buildings in any permitted residential zone shall have the exterior appearance of residential building. Landscaping shall be provided in accordance with article VIII.
2. Nothing herein shall require a conditional use permit for repair of a water well so long as the design capacity of the repaired well is not increased; nor shall a conditional use permit be required for replacement of a well which is worn out or has become less productive, so long as:
 - a. The replacement well is no more than one-fourth ($\frac{1}{4}$) of a mile in distance from the well being replaced;
 - b. The replaced well is abandoned in accordance with regulations administered and enforced by Virginia Department of Environmental Quality or other applicable agency;
 - c. The replacement well shall draw water from the lower cretaceous aquifer (Potomac Group) only;
 - d. The owner of the well demonstrate to the zoning administrator that the replacement well will provide no more water than the well being replaced by providing the zoning administrator board with the initial production tests of the well being replaced and the initial production tests of the replacement well; and
 - e. The average static water level of the lower cretaceous aquifer, as determined from the average of all monitoring and observation wells of the Virginia Department of Environmental Quality, has not dropped more than fifty percent (50%) from the most recent average static water level. (Measured from the most recent average static water level to the top of the aquifer.)

Provided, further, that if the owner has more than one (1) well designed or capable of producing fifty thousand (50,000) gallons or more per day located in Isle of Wight County, Virginia, the owner shall provide the zoning administrator with the name, location and initial production tests of such other wells of said design or capacity.

3. The dissolution or abandonment of a public water system previously approved by the Virginia Department of Health and/or the county shall require obtaining a conditional use permit from the board of supervisors, after recommendation from the planning commission. (7-7-05; 5-27-10; Ord. No. 2012-2-C, 2-16-12, 3-20-14; 12-18-14; 7-19-18.)
4. Utility Scale Solar Energy Facilities.
 - a. In addition to any conditional use permit application requirements, the applicant shall provide the following at the time of application:
 - i. A conceptual plan showing the proposed layout of all structures, adjacent properties, screening, landscaping, internal roadways, easements, environmentally sensitive features including proposed wildlife corridors;
 - ii. A visual impact analysis demonstrating through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on the visual character of a scenic landscape, vista, or scenic corridor;
 - iii. A transportation plan showing vehicular access to the site, proposed construction traffic route to the site, parking areas, and laydown yards;
 - iv. An estimated time frame and proposed hours of operation for construction activity;
 - v. Economic impact analysis of the project including projected net new tax revenue as well as loss of active agricultural and silvicultural lands and its indirect impact to associated local businesses;
 - vi. An environmental resource impact analysis discussing any proposed activities within designation resource conservation areas;
 - vii. A historical and cultural resources impact analysis; and
 - viii. Written comments from the relevant electric company regarding the capacity of the transmission lines as part of any use permit application. An applicant may meet this requirement by submitting a third-party report that provides relevant transmission capacity information.
 - b. Ground-mounted systems shall not exceed fifteen (15) feet in height when oriented at maximum tilt, except when temporarily stowed in a vertical position for vegetation management or for inspection, maintenance and/or repair.
 - c. Audible sound from a solar energy system shall not exceed sixty (60) dBA (A-weighted decibels), as measured at any adjacent non-participating landowner's property line. The level, however, may be exceeded during short-term exceptional circumstances, such as severe weather.
 - d. All equipment, accessory structures and operations associated with a large solar energy system shall be setback at least seventy-five (75) feet from all property lines and at least one hundred, one hundred and twenty-five (125) feet from any residential parcels, and two

hundred and fifty (250) feet from any structure with documented historical significance, a cemetery, a cultural resource, or a school. New substations, connector stations, inverters and transformers shall be set back at least two hundred and fifty (250) feet from the property line of any non-participating property. Final setbacks for shall be determined by equipment decibel level specifications. In addition, these facilities are subject to the following:

- i. Setbacks shall be kept free of all structures and parking lots; and
 - ii. Setbacks shall not be required along property lines adjacent to other parcels which are part of the solar energy system with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks must be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- e. The following landscaping standards shall apply:
- i. Along public roadways, a minimum fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of trees and shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - ii. Where solar facility properties abut residential parcels, a fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of large and small canopy trees and medium shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - iv. Existing vegetation that meets the minimum landscaping specifications may be used to meet required landscaping;
 - v. No silvicultural activities or removal of required landscaping materials shall occur in the required bufferyards except as approved by the Zoning Administrator; and
 - vi. If the land area being leased was under crop cultivation prior to lease, it shall be maintained and cut annually during the growing season prior to August 1 until site construction begins.
- f. Provide soil testing for any contaminants directly attributable to the solar panels before and after construction and every five (5) years during the interim until the facility is decommissioned. Owner/operator must provide copies of initial baseline report and subsequent reports to the zoning administrator. Should a negative finding indicating contamination from the solar panels occur, contamination must be remedied by the owner/operator to applicable state and federal standards.
- g. Prior to final site plan approval, an owner, lessee, or developer of real property shall enter the following agreement and provide them to the zoning administrator for review and approval:
- i. A written agreement to decommission solar energy equipment, facilities, or devices upon the following terms and conditions:
 - a) If the party that enters into such written agreement with the county defaults in

the obligation to decommission such equipment, facilities, or devices in the timeframe set out in such agreement, the locality has the right to enter the real property of the record title owner of such property without further consent of such owner and to engage in decommissioning; and

- b) Such owner, lessee, or developer shall provide financial assurance of such performance to the county in the form of certified funds, cash escrow, bond, letter of credit, or parent guarantee, based upon an estimate of a professional engineer licensed in the commonwealth, who is engaged by the applicant, with experience in preparing decommissioning estimates and approved by the county; such estimate shall not exceed the total of the projected cost of decommissioning, plus a reasonable allowance for estimated administrative costs related to a default of the owner, lessee, or developer, and an annual inflation factor.
- c) Decommissioning of discontinued or abandoned large solar energy systems shall include the following:
 - i. Physical removal of all solar energy equipment and above-ground appurtenant structures from the subject property including, but not limited to, buildings, machinery, equipment, cabling and connections to transmission lines, equipment shelters, security barriers, electrical components, roads, unless such roads need to remain to access buildings retrofitted for another purpose, or the landowner submits a request to the board of supervisors that such roads remain.
 - ii. Below-grade structures, such as foundations, underground collection cabling, mounting beams, footers, and all other equipment installed with the system shall be completely removed: however, these structures may be allowed to remain if a written request is submitted by the landowners and a waiver is granted by the Board of Supervisors.
 - iii. Compacted soils shall be decompacted as agreed to by the landowner.
 - iv. Restoration of the topography of the project site to is pre-existing condition, except that any landscaping or grading may remain in the after-condition if a written request is submitted by the landowner and a waiver is granted by the board of supervisors.
 - v. Proper disposal of all solid or hazardous materials and wastes from the site in accordance with local, state, and federal solid waste disposal regulations.
- h. During and at the end of project construction, any damage done to public roads by solar farm construction equipment shall be repaired in accordance with YDOT standards and specifications. Post construction damage shall be identified based on inspections by VDOT with the developer or their agent, prior to construction and upon completion, identifying the items for repair. Additionally, at the request of YDOT, in order to ensure the safety of the traveling public, some damages may need to be addressed immediately.

- i. Facilities shall not be located within the limits of the County's Development Service Districts.
- j. The facilities themselves must be wholly located within a two-mile radius of existing substations and/or high voltage transmission lines.
- k. The total acres of prime farm soils and soils of statewide importance that may be within the fence of a utility scale solar facility pursuant to issued and active CUPs shall be limited to a maximum of two percent (2%) of the County's total number of prime farm soils and soils of statewide importance, or two thousand four hundred forty-six (2,446) acres.
- l. For projects that are connected to transmission lines, the applicant shall provide detailed capacity information to the Planning Commission for each project which shall include at a minimum, but not limited to, available capacity in MW on the effected distribution lines and any details that may impact future energy generation projects, such as scheduled power generation facility decommissionings, transmission system capital improvements or other events impacting transmission line capacity.
- m. The facility operator shall prepare and submit an annual activity report to the Zoning Administrator to be shared with the Planning Commission and Board of Supervisors.
- n. The applicant shall provide documentation demonstrating the selected panels and all power generating equipment initially installed and replaced qualify, for disposal purposes, as nonhazardous waste under applicable US EPA regulation using a Toxicity Characteristics Leaching Procedure or equivalent laboratory analysis.
- o. The applicant shall submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- p. The operator shall post a notification sign at each site entrance that states (a) the rated nameplate capacity, (b) the name of the project owner, and operator (if different from the owner), (c) the street address of the site, and (d) a 24-hour emergency contact phone number for the operator.
- q. On-site energy storage shall require a separate conditional use permit.
- r. The applicant shall be responsible for any costs incurred by the County for additional staff and/or third-party inspectors for inspection services.
- s. Topsoil is not permitted to be removed from the property.
- t. The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type that is harmonious with the rural, agricultural, and historical character of the County while meeting federal and state regulations for solar electric generating facility fencing as determined by the Zoning Administrator adjacent to all public rights-of-way, residential property, properties eligible for listing on the National Register of Historic Places, and civic uses prior to final site plan approval.

- u. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site in order to provide wildlife corridors.
- v. The applicant shall provide an appraisal report from an independent appraiser approved by the Zoning Administrator on the impact of the facility on nearby property values.

5. Battery Energy Storage Systems.

The following supplementary use regulations are additional, modified, or more stringent standards contained in Section 5-5003.M.4, Utility Scale Solar Energy Facilities, that apply to Battery Energy Storage Systems (BESS) as set out in item b of this section. The standards set forth in the supplementary use regulations shall be met regardless of the form of action required for approval. BESS which qualify as major utility use type shall be prohibited outside of the existing approved limits of Utility Scale Solar Energy Facilities and within any DSD.

- a. As used in this section, the following terms shall have the meanings indicated:

Battery(ies): A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this article, batteries utilized in consumer products are excluded from these requirements.

Battery energy storage system (BESS): One (1) or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle. A battery energy storage system is classified as a Tier 1 or Tier 2 battery energy storage system as follows:

- i. Tier 1 battery energy storage systems have an aggregate energy capacity less than or equal to six hundred (600) kWh for onsite use only and, if in a room or enclosed area, consist of only a single energy storage system technology.
- ii. Tier 2 battery energy storage systems have an aggregate energy capacity greater than six hundred (600) kWh or are comprised of more than one (1) storage battery technology in a room or enclosed area.

Cell: The basic electrochemical unit, characterized by an anode and cathode, used to receive, store, and deliver electrical energy.

Dedicated-use building: A building that is built for the primary intention of housing battery energy storage system equipment, as defined in the latest adopted editions of the Virginia Uniform Statewide Building Code ("Uniform Code") and the International Building Code, and complies with the following:

- i. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
- ii. No other occupancy types are permitted in the building.

- iii. Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test, and repair the battery energy storage system and other energy systems.
- iv. Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage system, provided the following:
 - a) The areas do not occupy more than ten (10) percent of the building area of the story in which they are located.
 - b) A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

Energy Code: The Virginia Energy Conservation Code, as amended.

Uniform Code: The Virginia Uniform Statewide Building Code adopted pursuant to § 36-98 of the Code of Virginia, as amended.

- b. BESS shall meet all the ordinance requirements for utility scale solar energy facilities listed above unless otherwise noted to include such items as, but not limited to, siting criteria, application requirements, soil testing, topsoil removal, landscaping, decommissioning plan, surety agreement, decommissioning required actions, and any surety in accordance with the ordinance requirements.
- c. The facility operation shall notify the County within thirty (30) days of any change in ownership of the facility owner and/or operator.
- d. In addition to the conditional use permit application requirements and site plan application requirements for utility scale solar energy facilities listed above, the applicant shall provide the following at the time of application:
 - i. Before application submittal, a preapplication meeting and neighborhood meeting are required.
 - ii. An inventory of all solar facilities existing or proposed, within a four-mile radius.
 - iii. Pre-construction Noise Study. The applicant shall be required to provide a pre-construction noise study that includes equipment and component manufacturers' noise ratings and site conditions which are used to develop a model of the noise levels generated at the BESS site and predicted noise levels at the perimeter of the battery energy storage system and at the boundaries of the property. If the noise study indicates that the requirements will not be met, noise mitigation measures are to be included with the application. The pre-construction noise study shall be prepared by a Commonwealth of Virginia Licensed Professional Engineer (PE).
 - iv. An Emergency Response Plan (ERP) containing the information listed in sections ix and x under item e below.
 - v. Fiscal Analysis Report. The Fiscal Analysis Report is a document that will identify how the County and community benefit from the facility. The fiscal analysis report shall include an analysis of the potential financial impact of the project in the County including the project's direct, indirect, and induced effects in the County economy with the following sections:
 - a. The financial impact of the project on the economy of IOW County, including

- direct, indirect, and induced effects and earnings in various sectors of the local economy, such as housing needs analysis, impacts on roads and services, and County spending.
- b. Economic impact analysis that includes output as in the total value of goods and services produced within the County by the project, job creation per year of operation, labor earnings per year during both the construction and operations periods.
 - c. Local Government annual tax revenue.
 - d. Potential utilization of local labor and contractors, including local apprenticeship labor, options of materials, parts, and components whether existing or proposed, local equipment manufacturing, local operations and maintenance, and local parts assembling and distribution, maintenance materials, site management services, and facility management.
 - e. Economic Impact Methodology (i.e., Jobs and Economic Development Impacts [JEDI] PV Model from the National Renewable Energy Laboratory [NREL]). Assumptions developed to complete the analysis and to adapt the models to expected local conditions.
 - f. Economic Impact Results per development phase.
 - g. A real estate value impact study of nearby properties.
 - h. Risks and uncertainties.
 - i. Methods to improve the projected financial and employment impacts.
 - j. Local distribution of energy efforts and reduction rates to local energy consumption as a result of the project.
 - k. An executive summary of the Report.
- e. If, prior to site plan approval, but subsequent to approval of the concept development plan by the Board of Supervisors, modifications to the concept development plan and/or associated permit conditions are required to be in compliance with noise standards, the zoning administrator shall have the authority to permit minor structural additions or modifications to the concept development plan so long as such additions or modifications are limited to addressing noise levels.
 - f. In addition to any conditions of approval, the following requirements shall apply to all BESS facilities:
 - i. The BESS energy storage system shall be placed on an appropriate foundation outside of environmentally sensitive areas, such as, but not limited to, wetlands and special flood hazard areas.
 - ii. BESS facilities shall be constructed, maintained, and operated in accordance with national industry standards and regulations including the most current adopted edition of the National Electrical Code, International Fire Code of the International Code Council, and the National Fire Protection Association Fire Code. The batteries will be NFPA (National Fire Protection Association) compliant. In the event of a conflict between the national industry

standards and these conditions, the national industry standards shall control so that, as technology advances, updated technology may be used.

- iii. All battery storage equipment, including generators, transformers, utility cabinets, etc., shall maintain a minimum 100 foot setback from the perimeter security fence with an additional 250 foot setback from all public roads and property lines, for a total of 350 feet. Fences shall meet the required minimum 250 foot setback from all public roads and property lines. All equipment shall be setback at least 500 feet from any existing dwelling at the time of CUP approval and a ¼ mile setback from any designated County emergency shelter. The Board of Supervisors may approve through the conditional use permit process conditions that allow a battery storage facility to locate closer than 350 feet, but no closer than 100 feet from public roads and property lines, if the specific site conditions, the nature of the project and the permit conditions adequately address public safety concerns and appropriately mitigate impacts of the facility on the surrounding community.
 - a) Setbacks shall be kept free of all structures and parking lots; and
 - b) Setbacks shall not be required along property lines adjacent to other parcels which are part of the BESS facility with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks shall be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- iv. All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles, with new easements and right-of-way.
- v. Access to all batteries and electrical switchgear shall be from the exterior for normal operation.
- vi. The latest applicable product certifications shall be provided.
- vii. Battery cells shall be placed in a BESS with a battery management system ("BMS"). The BESS shall provide a secondary layer of physical containment to the batteries and be equipped with cooling, ventilation, and fire suppression systems for indoor facilities only. The BMS shall monitor individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access and be able to shut down the system before thermal runaway takes place.
- viii. BESS shall be developed in collaboration with technical experts and first responders to utilize technology-appropriate best practices for safe energy storage systems including, but not limited to, the following:
 - a) Adequate access/egress for the first responders;
 - b) Adequate facility signage (on battery chemistry and person to contact);
 - c) Accessible safety data sheets;

- d) System-specific emergency response plans;
 - e) Training for first responders on the type of system, potential hazards and risks, and system-specific emergency response plans;
 - f) Adequate water sources and fire suppression appliances for the firefighters if required in the emergency response plans;
 - g) Signage on hazardous materials present in the vicinity;
 - h) Emergency lighting;
 - i) Separate battery modules to make it easier to isolate a failed battery from the rest;
 - j) Sufficient disconnect and shutdown capability including a master kill switch to disable and discharge batteries;
 - k) System-appropriate sensors and alarms;
 - l) Air ventilation and fire suppression systems for indoor installations; and
 - m) Drainage for water runoff.
- ix. The applicant shall submit an Emergency Response Plan (ERP) containing the information listed in the section above at the time of application for review and approval by the County, as well as detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. Each BESS shall install and maintain fire safety systems such as an automatic fire alarm/detection system and/or extinguishing technology built in based on specific hazards, as approved by the County Fire Rescue Chief, under the direction of NFPA 855 standards, as amended, and the Virginia Statewide Fire Prevention Code. Active fire extinguishing technology may not be required if it can be shown that the battery energy storage system meets all applicable code requirements including NFPA 855 and subject to the approval of the County Chief of Fire Rescue.
- x. In addition, the ERP shall include:
- a) Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;
 - b) Procedures for inspection and testing of associated alarms, interlocks, and controls;
 - c) Procedures to be followed in response to notifications from the battery energy storage system, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure;
 - d) Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures may include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire;
 - e) Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required;
 - f) Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility;
 - g) A water containment plan;

- h) Other procedures as determined necessary by the County to provide for the safety of occupants, neighboring properties, and emergency responders;
 - i) Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures;
 - j) The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Fire Rescue and the facility operator; and
 - k) The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- xi. To the extent required by NFPA 855, the 24/7 monitoring shall include individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access.
 - xii. The battery management system shall be capable of shutting down and issuing an alarm in response to an unsafe condition.
 - xiii. No burning of debris shall be permitted during site clearing. Any timber that cannot be logged and removed from the site may be chipped on site during permitted construction hours only.
- g. The BESS facility operator or owner shall be solely liable for the costs and implementation of any environmental remediation necessitated by site operations as required by the County or the state. All remediation efforts shall commence and conclude within a reasonable timeframe dictated by the County or state.
- h. A Root Cause Analysis with Corrective Actions shall be required prior to the restart after a partial or full facility emergency shut down which shall identify the cause of system or facility failure and corrective actions to be taken to prevent recurrence.
 - i. The Operator shall complete a Root Cause Analysis that includes a review of all system components, sub-components, design, manufacturer, maintenance, and operations at the affected facility.
 - ii. The analysis shall indicate whether any affected components or subcomponents are in use elsewhere in the County.
 - iii. The Operator shall perform corrective actions based on the analysis.
 - iv. A report shall be submitted to the County describing actions taken to prevent reoccurrence of the incident.
 - v. A copy of the Root Cause Analysis report shall be given to the Board of Supervisors.
 - i. A Post-construction noise study of existing conditions after completion and when in full operation shall be provided within three (3) months after initial operations begin. The post-construction noise study shall include sound pressure level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system and at the boundaries of the property in order to demonstrate that the average noise generated from the BESS, components, and associated ancillary equipment at any time shall not exceed a noise

level of 50 dBA as measured from the property line of an adjoining parcel and shall not exceed 50 dBA at the outer wall of any occupied structure. The post-construction noise study shall be prepared by Certified Technicians using Calibrated ISO Test Instrumentation. If the post-construction noise levels do not meet the maximum noise level requirements, noise mitigation measures are required and shall be implemented to achieve compliance. The BESS owner shall determine noise mitigation measures which are certified by a Commonwealth of Virginia Licensed Professional Engineer (PE). After noise mitigation measures are approved by the Zoning Administrator, the measures shall be provided and installed by the BESS owner and then verified by noise level measurements within six (6) months.

DATE: _____

READ AND PASSED: _____
Chairman

TESTE: _____
Clerk

Approved as to Form:

Robert W. Jones, Jr., County Attorney

Proposed Battery Energy Storage System (BESS) Ordinance Worksession

AMY RING, AICP

BOARD OF SUPERVISORS MEETING

APRIL 30, 2026



Draft Ordinance Development - Current Status

- March 24, 2026 – Planning Commission votes to recommend approval of draft Ordinance
 - Based on continued discussions since June 2025
 - Draft developed with feedback from Fire Safety, Building Official and Dominion Energy
 - Used other local ordinances as models (Middlesex, Surry, Sussex, etc.)
- April 16, 2026 – Board of Supervisors held public hearing on draft Ordinance
- Board discusses the Ordinance and decides to hold a worksession on the draft Ordinance
- Received additional review comments from Supervisors Rountree and Garner as well as citizen comments



Battery Energy Storage Systems – Common Concerns

- Applicability and Terms Used
- Review and Approval Authority
- Public Safety
- Environmental Impacts
- Noise
- Traffic and roads
- Adjacent property impacts – noise, visual, safety



Battery Energy Storage Systems – Applicability & Terms

- Defined as major utility service civic use type listed in Section 3-4000 (***does not include accessory BESS serving principal use on site that qualify as a minor utility service***)
- Required to follow Utility Scale Solar Energy Generation facility criteria in Section 5-5003.M.4 “Utility Scale Solar Energy Facilities” in addition to new requirements – includes decommissioning, siting requirements, etc.
- Requires conditional use permit in every zoning district, however, also must be 1) located outside of DSD, 2) be wholly located within a two-mile radius of existing substations and/or high voltage transmission lines, and 3) shall be limited to a maximum of 2% of the total number of prime farm soils and soils of statewide importance
- Defined terms are only ones used in ordinance – does not include items not specifically used in the regulations such as front of the meter, behind the meter, etc.



Battery Energy Storage Systems – Review & Approval

- **Review Authority**

Planning Commission and Board of Supervisors exclusive review and approval authority for all CUPs established in Section 1-1017

- Provisions for review of major changes to CUPs in Section 1-1017.M.3 – no need to restate
- Ability to retain third party review/oversight resources found in Sec. 7-2006.B and assigns financial responsibility to applicant

- **Environmental Impacts**

Environmental regulations such as floodplain and wetland restrictions, stormwater management, and hazardous material handling regulations found in multiple locations in Ordinance apply to all land uses



Battery Energy Storage Systems – Public Safety

Concerns

- Shall be constructed, maintained, and operated in accordance with national industry standards and regulations including the most current adopted edition of the National Electrical Code, International Fire Code of the International Code Council, and the National Fire Protection Association Fire Code. The batteries will be NFPA (National Fire Protection Association) compliant. The strictest requirements shall apply.
- Shall include a battery management system ("BMS") to monitor individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access and be able to shut down the system before thermal runaway takes place
- Shall be developed in collaboration with technical experts and first responders to utilize technology-appropriate best practices for safe energy storage systems - includes 13 criteria at minimum
- Emergency Response Plan that details fire suppression methods that will be immediately deployed during both construction and operation of the facility – includes 11 criteria at minimum, such as public notification, runoff containment, training and testing among others
- BMS shall be capable of shutting down and issuing an alarm in response to an unsafe condition.



Battery Energy Storage Systems – Noise Concerns

- Maximum decibel level of 50 DBA at property line
- Pre-construction Noise Study required at application – to include equipment and component manufacturers' noise ratings and site conditions which are used to develop a model of the noise levels generated at the BESS site and predicted noise levels at the perimeter of the battery energy storage system and at the boundaries of the property along with noise mitigation measures are to be included as needed
- Post-construction noise study of existing conditions after completion and when in full operation shall be provided within three (3) months after initial operations begin



Battery Energy Storage Systems – Traffic and Roads

- Road conditions and maintenance responsibilities fall to VDOT
- Heavy load and weight restrictions controlled by both VDOT and DMV
- Shall submit a Construction Traffic Management Plan with application
- Shall conduct same pre and post construction inspections and repairs found in utility solar energy facility requirements (Sec. 5-5003.M.4) –

During and at the end of project construction, any damage done to public roads by solar farm construction equipment shall be repaired in accordance with VDOT standards and specifications. Post construction damage shall be identified based on inspections by VDOT with the developer or their agent, prior to construction and upon completion, identifying the items for repair. Additionally, at the request of YDOT, in order to ensure the safety of the traveling public, some damages may need to be addressed immediately.



Battery Energy Storage Systems – Adjacent Property Impacts

- Before application submittal, a pre-application meeting and neighborhood meeting are required.
- All battery storage equipment -shall maintain a minimum of fifty (50) foot setback from the security fence with an additional 300 foot setback from all public roads and property lines.
- All equipment shall be setback at least 500 feet from any existing dwelling at the time of CUP approval.
- The Board of Supervisors may approve through the conditional use permit process conditions that allow a battery storage facility to locate closer than 350 feet, but no closer than 100 feet from public roads and property lines, if the specific site conditions, the nature of the project and the permit conditions adequately address public safety concerns and appropriately mitigate impacts of the facility on the surrounding community.
- Pre and post construction noise studies that demonstrate the facilities ability to meet the 50 DBA maximum level at the property line.
- Must meet solar facility landscaping and screening requirements.



**AN ORDINANCE TO AMEND THE FOLLOWING SECTION OF APPENDIX B. ZONING:
ARTICLE V. - SUPPLEMENTARY USE REGULATIONS,
SECTION 5-5003.M. UTILITY SERVICES, MAJOR TO INCLUDE REQUIREMENTS
FOR BATTERY ENERGY STORAGE SYSTEMS**

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has the legislative authority to make reasonable changes to the ordinances that govern the orderly growth and development of Isle of Wight County; and

WHEREAS, the Isle of Wight County Board of Supervisors is also concerned about the compatibility of uses on public and private lands within Isle of Wight County and seeks to allow flexibility in the administration of the ordinance regulations while protecting the health, safety, and general welfare of present and future residents and businesses of the County.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that the following section of Appendix B. Zoning: Article V (Supplemental Use Regulations), Section 5-5003.M (Utility Services, Major) of the Isle of Wight County Code be amended and reenacted as follows:

Article V. - Supplementary Use Regulations

5-5003.M. Utility services, major.

M. Utility services, major.

1. Public utility buildings in any permitted residential zone shall have the exterior appearance of residential building. Landscaping shall be provided in accordance with article VIII.
2. Nothing herein shall require a conditional use permit for repair of a water well so long as the design capacity of the repaired well is not increased; nor shall a conditional use permit be required for replacement of a well which is worn out or has become less productive, so long as:
 - a. The replacement well is no more than one-fourth ($\frac{1}{4}$) of a mile in distance from the well being replaced;
 - b. The replaced well is abandoned in accordance with regulations administered and enforced by Virginia Department of Environmental Quality or other applicable agency;
 - c. The replacement well shall draw water from the lower cretaceous aquifer (Potomac Group) only;
 - d. The owner of the well demonstrate to the zoning administrator that the replacement well will provide no more water than the well being replaced by providing the zoning administrator board with the initial production tests of the well being replaced and the initial production tests of the replacement well; and
 - e. The average static water level of the lower cretaceous aquifer, as determined from the average of all monitoring and observation wells of the Virginia Department of Environmental Quality, has not dropped more than fifty percent (50%) from the most recent average static water level. (Measured from the most recent average static water level to the top of the aquifer.)

Provided, further, that if the owner has more than one (1) well designed or capable of producing fifty thousand (50,000) gallons or more per day located in Isle of Wight County, Virginia, the owner shall provide the zoning administrator with the name, location and initial production tests of such other wells of said design or capacity.

3. The dissolution or abandonment of a public water system previously approved by the Virginia Department of Health and/or the county shall require obtaining a conditional use permit from the board of supervisors, after recommendation from the planning commission. (7-7-05; 5-27-10; Ord. No. 2012-2-C, 2-16-12, 3-20-14; 12-18-14; 7-19-18.)
4. Utility Scale Solar Energy Facilities.
 - a. In addition to any conditional use permit application requirements, the applicant shall provide the following at the time of application:
 - i. A conceptual plan showing the proposed layout of all structures, adjacent properties, screening, landscaping, internal roadways, easements, environmentally sensitive features including proposed wildlife corridors;
 - ii. A visual impact analysis demonstrating through project siting and proposed mitigation, if necessary, that the solar project minimizes impacts on the visual character of a scenic landscape, vista, or scenic corridor;
 - iii. A transportation plan showing vehicular access to the site, proposed construction traffic route to the site, parking areas, and laydown yards;
 - iv. An estimated time frame and proposed hours of operation for construction activity;
 - v. Economic impact analysis of the project including projected net new tax revenue as well as loss of active agricultural and silvicultural lands and its indirect impact to associated local businesses;
 - vi. An environmental resource impact analysis discussing any proposed activities within designation resource conservation areas;
 - vii. A historical and cultural resources impact analysis; and
 - viii. Written comments from the relevant electric company regarding the capacity of the transmission lines as part of any use permit application. An applicant may meet this requirement by submitting a third-party report that provides relevant transmission capacity information.
 - b. Ground-mounted systems shall not exceed fifteen (15) feet in height when oriented at maximum tilt, except when temporarily stowed in a vertical position for vegetation management or for inspection, maintenance and/or repair.
 - c. Audible sound from a solar energy system shall not exceed sixty (60) dBA (A-weighted decibels), as measured at any adjacent non-participating landowner's property line. The level, however, may be exceeded during short-term exceptional circumstances, such as severe weather.
 - d. All equipment, accessory structures and operations associated with a large solar energy system shall be setback at least seventy-five (75) feet from all property lines and at least one hundred, one hundred and twenty-five (125) feet from any residential parcels, and two

hundred and fifty (250) feet from any structure with documented historical significance, a cemetery, a cultural resource, or a school. New substations, connector stations, inverters and transformers shall be set back at least two hundred and fifty (250) feet from the property line of any non-participating property. Final setbacks for shall be determined by equipment decibel level specifications. In addition, these facilities are subject to the following:

- i. Setbacks shall be kept free of all structures and parking lots; and
 - ii. Setbacks shall not be required along property lines adjacent to other parcels which are part of the solar energy system with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks must be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- e. The following landscaping standards shall apply:
- i. Along public roadways, a minimum fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of trees and shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - ii. Where solar facility properties abut residential parcels, a fifty-foot wide bufferyard shall be installed or retained consisting of a three (3), staggered rows of large and small canopy trees and medium shrubs installed a maximum of eight (8) feet on center in order to create an effective visual screen as approved by the Zoning Administrator;
 - iv. Existing vegetation that meets the minimum landscaping specifications may be used to meet required landscaping;
 - v. No silvicultural activities or removal of required landscaping materials shall occur in the required bufferyards except as approved by the Zoning Administrator; and
 - vi. If the land area being leased was under crop cultivation prior to lease, it shall be maintained and cut annually during the growing season prior to August 1 until site construction begins.
- f. Provide soil testing for any contaminants directly attributable to the solar panels before and after construction and every five (5) years during the interim until the facility is decommissioned. Owner/operator must provide copies of initial baseline report and subsequent reports to the zoning administrator. Should a negative finding indicating contamination from the solar panels occur, contamination must be remedied by the owner/operator to applicable state and federal standards.
- g. Prior to final site plan approval, an owner, lessee, or developer of real property shall enter the following agreement and provide them to the zoning administrator for review and approval:
- i. A written agreement to decommission solar energy equipment, facilities, or devices upon the following terms and conditions:
 - a) If the party that enters into such written agreement with the county defaults in

the obligation to decommission such equipment, facilities, or devices in the timeframe set out in such agreement, the locality has the right to enter the real property of the record title owner of such property without further consent of such owner and to engage in decommissioning; and

- b) Such owner, lessee, or developer shall provide financial assurance of such performance to the county in the form of certified funds, cash escrow, bond, letter of credit, or parent guarantee, based upon an estimate of a professional engineer licensed in the commonwealth, who is engaged by the applicant, with experience in preparing decommissioning estimates and approved by the county; such estimate shall not exceed the total of the projected cost of decommissioning, plus a reasonable allowance for estimated administrative costs related to a default of the owner, lessee, or developer, and an annual inflation factor.
- c) Decommissioning of discontinued or abandoned large solar energy systems shall include the following:
 - i. Physical removal of all solar energy equipment and above-ground appurtenant structures from the subject property including, but not limited to, buildings, machinery, equipment, cabling and connections to transmission lines, equipment shelters, security barriers, electrical components, roads, unless such roads need to remain to access buildings retrofitted for another purpose, or the landowner submits a request to the board of supervisors that such roads remain.
 - ii. Below-grade structures, such as foundations, underground collection cabling, mounting beams, footers, and all other equipment installed with the system shall be completely removed: however, these structures may be allowed to remain if a written request is submitted by the landowners and a waiver is granted by the Board of Supervisors.
 - iii. Compacted soils shall be decompacted as agreed to by the landowner.
 - iv. Restoration of the topography of the project site to is pre-existing condition, except that any landscaping or grading may remain in the after-condition if a written request is submitted by the landowner and a waiver is granted by the board of supervisors.
 - v. Proper disposal of all solid or hazardous materials and wastes from the site in accordance with local, state, and federal solid waste disposal regulations.
- h. During and at the end of project construction, any damage done to public roads by solar farm construction equipment shall be repaired in accordance with YDOT standards and specifications. Post construction damage shall be identified based on inspections by VDOT with the developer or their agent, prior to construction and upon completion, identifying the items for repair. Additionally, at the request of YDOT, in order to ensure the safety of the traveling public, some damages may need to be addressed immediately.

- i. Facilities shall not be located within the limits of the County's Development Service Districts.
- j. The facilities themselves must be wholly located within a two-mile radius of existing substations and/or high voltage transmission lines.
- k. The total acres of prime farm soils and soils of statewide importance that may be within the fence of a utility scale solar facility pursuant to issued and active CUPs shall be limited to a maximum of two percent (2%) of the County's total number of prime farm soils and soils of statewide importance, or two thousand four hundred forty-six (2,446) acres.
- l. For projects that are connected to transmission lines, the applicant shall provide detailed capacity information to the Planning Commission for each project which shall include at a minimum, but not limited to, available capacity in MW on the effected distribution lines and any details that may impact future energy generation projects, such as scheduled power generation facility decommissionings, transmission system capital improvements or other events impacting transmission line capacity.
- m. The facility operator shall prepare and submit an annual activity report to the Zoning Administrator to be shared with the Planning Commission and Board of Supervisors.
- n. The applicant shall provide documentation demonstrating the selected panels and all power generating equipment initially installed and replaced qualify, for disposal purposes, as nonhazardous waste under applicable US EPA regulation using a Toxicity Characteristics Leaching Procedure or equivalent laboratory analysis.
- o. The applicant shall submit an Emergency Response Plan at the time of site development plan application for review and approval by the County, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Emergency Services and the facility operator. The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- p. The operator shall post a notification sign at each site entrance that states (a) the rated nameplate capacity, (b) the name of the project owner, and operator (if different from the owner), (c) the street address of the site, and (d) a 24-hour emergency contact phone number for the operator.
- q. On-site energy storage shall require a separate conditional use permit.
- r. The applicant shall be responsible for any costs incurred by the County for additional staff and/or third-party inspectors for inspection services.
- s. Topsoil is not permitted to be removed from the property.
- t. The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type that is harmonious with the rural, agricultural, and historical character of the County while meeting federal and state regulations for solar electric generating facility fencing as determined by the Zoning Administrator adjacent to all public rights-of-way, residential property, properties eligible for listing on the National Register of Historic Places, and civic uses prior to final site plan approval.

- u. Fencing shall be placed around the solar arrays, inverters, and substation only and not the whole site in order to provide wildlife corridors.
- v. The applicant shall provide an appraisal report from an independent appraiser approved by the Zoning Administrator on the impact of the facility on nearby property values.

5. Battery Energy Storage Systems.

- a. As used in this section, the following terms shall have the meanings indicated:

Battery(ies): A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this article, batteries utilized in consumer products are excluded from these requirements.

Battery energy storage system (BESS): One (1) or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle. A battery energy storage system is classified as a Tier 1 or Tier 2 battery energy storage system as follows:

- i. Tier 1 battery energy storage systems have an aggregate energy capacity less than or equal to six hundred (600) kWh for onsite use only and, if in a room or enclosed area, consist of only a single energy storage system technology.
- ii. Tier 2 battery energy storage systems have an aggregate energy capacity greater than six hundred (600) kWh or are comprised of more than one (1) storage battery technology in a room or enclosed area.

Cell: The basic electrochemical unit, characterized by an anode and cathode, used to receive, store, and deliver electrical energy.

Dedicated-use building: A building that is built for the primary intention of housing battery energy storage system equipment, as defined in the latest adopted editions of the Virginia Uniform Statewide Building Code ("Uniform Code") and the International Building Code, and complies with the following:

- i. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
- ii. No other occupancy types are permitted in the building.
- iii. Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test, and repair the battery energy storage system and other energy systems.
- iv. Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage system, provided the following:
 - a) The areas do not occupy more than ten (10) percent of the building area of the story in which they are located.

- b) A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

Energy Code: The Virginia Energy Conservation Code, as amended.

Uniform Code: The Virginia Uniform Statewide Building Code adopted pursuant to § 36-98 of the Code of Virginia, as amended.

- b. BESS shall meet all the ordinance requirements for utility scale solar energy facilities listed above unless otherwise noted to include a decommissioning plan, surety agreement and surety in accordance with the ordinance requirements.
- c. In addition to the conditional use permit application requirements and application requirements for utility scale solar energy facilities listed above, the applicant shall provide the following at the time of application:
 - i. Before application submittal, a preapplication meeting and neighborhood meeting are required.
 - ii. An inventory of all solar facilities existing or proposed, within a four-mile radius.
 - iii. Pre-construction Noise Study. The applicant shall be required to provide a pre-construction noise study that includes equipment and component manufacturers' noise ratings and site conditions which are used to develop a model of the noise levels generated at the BESS site and predicted noise levels at the perimeter of the battery energy storage system and at the boundaries of the property. If the noise study indicates that the requirements will not be met, noise mitigation measures are to be included with the application. The pre-construction noise study shall be prepared by a Commonwealth of Virginia Licensed Professional Engineer (PE).
- d. If, prior to site plan approval, but subsequent to approval of the concept development plan by the Board of Supervisors, modifications to the concept development plan and/or associated permit conditions are required to be in compliance with noise standards, the zoning administrator shall have the authority to permit minor structural additions or modifications to the concept development plan so long as such additions or modifications are limited to addressing noise levels.
- e. In addition to any conditions of approval, the following requirements shall apply to all BESS facilities:
 - i. The BESS energy storage system shall be placed on an appropriate foundation outside of environmentally sensitive areas, such as, but not limited to, wetlands and special flood hazard areas.
 - ii. BESS facilities shall be constructed, maintained, and operated in accordance with national industry standards and regulations including the most current adopted edition of the National Electrical Code, International Fire Code of the International Code Council, and the National Fire Protection Association Fire Code. The batteries will be NFPA (National Fire

Protection Association) compliant. In the event of a conflict between the national industry standards and these conditions, the national industry standards shall control so that, as technology advances, updated technology may be used.

- iii. All battery storage equipment shall maintain a minimum of fifty (50) foot setback from the security fence with an additional 300 foot setback from all public roads and property lines. All equipment shall be setback at least 500 feet from any existing dwelling at the time of CUP approval. The Board of Supervisors may approve through the conditional use permit process conditions that allow a battery storage facility to locate closer than 350 feet, but no closer than 100 feet from public roads and property lines, if the specific site conditions, the nature of the project and the permit conditions adequately address public safety concerns and appropriately mitigate impacts of the facility on the surrounding community.
 - a) Setbacks shall be kept free of all structures and parking lots; and
 - b) Setbacks shall not be required along property lines adjacent to other parcels which are part of the BESS facility with the exception of structures with documented historical significance, a cemetery, a cultural resource, or a school, however, should properties be removed from the system, setbacks must be installed along all property lines of those properties remaining within the project and which are adjacent to a parcel which has been removed.
- iv. All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles, with new easements and right-of-way.
- v. Access to all batteries and electrical switchgear shall be from the exterior for normal operation.
- vi. The latest applicable product certifications shall be provided.
- vii. Battery cells shall be placed in a BESS with a battery management system ("BMS"). The BESS shall provide a secondary layer of physical containment to the batteries and be equipped with cooling, ventilation, and fire suppression systems for indoor facilities only. The BMS shall monitor individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access and be able to shut down the system before thermal runaway takes place.
- viii. BESS shall be developed in collaboration with technical experts and first responders to utilize technology-appropriate best practices for safe energy storage systems including, but not limited to, the following:
 - a) Adequate access/egress for the first responders;
 - b) Adequate facility signage (on battery chemistry and person to contact);
 - c) Accessible safety data sheets;
 - d) System-specific emergency response plans;

- e) Training for first responders on the type of system, potential hazards and risks, and system-specific emergency response plans;
 - f) Adequate water sources and fire suppression appliances for indoor installations for the firefighters if required in the emergency response plans;
 - g) Signage on hazardous materials present in the vicinity;
 - h) Emergency lighting;
 - i) Separate battery modules to make it easier to isolate a failed battery from the rest;
 - j) Sufficient disconnect and shutdown capability including a master kill switch to disable and discharge batteries;
 - k) System-appropriate sensors and alarms;
 - l) Air ventilation and fire suppression systems for indoor installations; and
 - m) Drainage for water runoff.
- ix. The applicant shall submit an Emergency Response Plan (ERP) containing the information listed in the section above at the time of site plan application for review and approval by the County, as well as detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. Each BESS shall install and maintain fire safety systems such as an automatic fire alarm/detection system and/or extinguishing technology built in based on specific hazards, as approved by the County Fire Rescue Chief, under the direction of NFPA 855 standards, as amended, and the Virginia Statewide Fire Prevention Code. Active fire extinguishing technology may not be required if it can be shown that the battery energy storage system meets all applicable code requirements including NFPA 855 and subject to the approval of the County Chief of Fire Rescue.
- x. In addition, the ERP shall include:
- a) Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions;
 - b) Procedures for inspection and testing of associated alarms, interlocks, and controls;
 - c) Procedures to be followed in response to notifications from the battery energy storage system, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure;
 - d) Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures may include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire;
 - e) Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required;
 - f) Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility;
 - g) A water containment plan;

- h) Other procedures as determined necessary by the city to provide for the safety of occupants, neighboring properties, and emergency responders; and
 - i) Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.
 - j) The plan shall include a training program to be provided to emergency responders about safety for on-site incident response. Initiation and frequency of training will be coordinated between the Department of Fire Rescue and the facility operator.
 - k) The applicant shall install a Knox Box or other remote access technology at the facility to ensure emergency responders have access to the facility should the need arise.
- xi. To the extent required by NFPA 855, the 24/7 monitoring shall include individual battery module voltages and temperatures, container temperature and humidity, off-gassing of combustible gas, fire, ground fault and DC surge, and door access.
- xii. The battery management system shall be capable of shutting down and issuing an alarm in response to an unsafe condition.
- f. The BESS facility operator or owner shall be responsible for any environmental remediation required by the County or the state as well as the costs of such remediation. All remediation shall be completed in a timely manner.
- g. A Post-construction noise study of existing conditions after completion and when in full operation shall be provided within three (3) months after the issuance of the Certificate of Occupancy. The post-construction noise study shall include sound pressure level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system and at the boundaries of the property in order to demonstrate that the average noise generated from the BESS, components, and associated ancillary equipment at any time shall not exceed a noise level of 50 dBA as measured from the property line of an adjoining parcel and shall not exceed 50 dBA at the outer wall of any occupied structure. The post-construction noise study shall be prepared by a Commonwealth of Virginia Licensed Professional Engineer (PE). If the post-construction noise levels do not meet the maximum noise level requirements, noise mitigation measures are required and must be implemented to achieve compliance. The BESS owner shall determine noise mitigation measures which are certified by Commonwealth of Virginia Licensed Professional Engineer (PE). After noise mitigation measures are approved by the Zoning Administrator, the measures shall be provided and installed by the BESS owner and then verified by noise level measurements within six (6) months.

DATE: _____

READ AND PASSED: _____
Chairman

TESTE: _____
Clerk

Approved as to Form:

Robert W. Jones, Jr., County Attorney

Proposed Battery Energy Storage System (BESS) Ordinance Public Hearing

AMY RING, AICP

BOARD OF SUPERVISORS MEETING

APRIL 16, 2026



Background

- February 2024 - Board of Supervisors established the Energy Task Force (ETF) to assess current energy infrastructure, remaining capacity of high-voltage transmission lines, potential future energy generation projects, emerging energy technologies, and other related items.
- ETF selected battery storage and data center facilities requirements as highest priorities.
- Staff developed draft ordinance based on models from several other jurisdictions as well including performance criteria from the County's existing utility scale solar requirements.
- June 2025 – January 2026 – Planning Commission discussed and refined ordinance requirements
- February 24, 2026 – Public Hearing
- March 24, 2026 – Recommended Approval to BOS

Draft Ordinance Description

- BESS required to follow Utility Scale Solar Energy Generation facility criteria in Section 5-5003.M.4 “Utility Scale Solar Energy Facilities”
- BESS defined as major utility service civic use type listed in Section 3-4000:
A service of a regional nature which normally entails the construction of new buildings or structures such as generating plants and sources, electrical switching facilities and stations or substations, community wastewater treatment plants, and water supply and production in excess of fifty thousand (50,000) gallons per day. Included in this definition are also electric, gas and other utility transmission lines of a regional nature that are not otherwise reviewed and approved by the Virginia State Corporation Commission.
- Require a conditional use permit in every zoning district, however, also must be 1) located outside of DSD, 2) be wholly located within a two-mile radius of existing substations and/or high voltage transmission lines, and 3) shall be limited to a maximum of 2% of the total number of prime farm soils and soils of statewide importance

Draft Ordinance Description

- Provisions of the Ordinance include the following:
 - ❖ Definitions – terms used in Ordinance
 - ❖ Application requirements – Solar facility criteria as well as BESS specific
 - ❖ Technical standards – Must meet national industry standards and regulations including National Electrical Code, International Fire Code of the International Code Council, the National Fire Protection Association Fire Code, BMS requirements
 - ❖ Public safety standards – Detailed EMP requirements
 - ❖ Setbacks, screening, and noise standards – Includes pre and post noise studies
 - ❖ Decommissioning requirements
- All public review processes shall apply to include Planning Commission and Board of Supervisors review and approval of all CUPs
- Environmental regulations such as floodplain and wetland protections would apply