



# Town of Barnstable Planning Board



[www.town.barnstable.ma.us/PlanningBoard](http://www.town.barnstable.ma.us/PlanningBoard)

Board Members

Steven Costello – Chair    Stephen Robichaud – Vice Chair    Mary Barry - Clerk    Robert Twiss    Michael Mecenas    Raymond Sexton    Tim O’Neill

Mathew Levesque – Town Council Liaison

Planning & Development Dept. Staff Support

Elizabeth Jenkins, AICP, Director

Kaitlyn Maldonado, Assistant Director

James Kupfer, AICP, Senior Planner

Karen Herrand – Principal Assistant - [karen.herrand@town.barnstable.ma.us](mailto:karen.herrand@town.barnstable.ma.us)

## Town of Barnstable PLANNING BOARD Minutes March 14, 2022

Steven Costello – Chairman	Present
Stephen Robichaud – Vice Chairman	Present
Mary Barry – Clerk	Absent
Robert Twiss	Present
Michael Mecenas	Absent
Raymond Sexton	Present
Tim O’Neill	Present

*Also in attendance via remote participation were Planning & Development Staff; Elizabeth Jenkins, Director, Kaitlyn Maldonado, Assistant Director, James Kupfer, Senior Planner, and Karen Herrand, Principal Assistant.*

The Planning Board’s Public Hearing will be held at 7:00 p.m. by remote participation methods. Alternative public access to this meeting shall be provided in the following manner:

1. The meeting will be televised via Channel 18 and may be viewed via the Channel 18 website at <http://streaming85.townofbarnstable.us/CablecastPublicSite/>
2. Real-time access to the Planning Board meeting is available utilizing the Zoom link or telephone number and Meeting ID provided below. Public comment can be addressed to the Planning Board by utilizing the Zoom link or telephone number and Meeting ID provided below:

Link: <https://zoom.us/j/98611934799>

Phone: 888 475 4499 US Toll-free

Meeting ID: 986 1193 4799

3. Applicants, their representatives and individuals required or entitled to appear before the Planning Board may appear remotely and may participate through the link or telephone number provided above. Documentary exhibits and/or visual presentations should be submitted in advance of the meeting so that they may be displayed for remote public access viewing.

Application materials may be accessed by contacting [Karen.herrand@town.barnstable.ma.us](mailto:Karen.herrand@town.barnstable.ma.us) or calling 508-862-4064.

**Call to Order**

Introduction of Board Members and Staff Members

**Attendance Roll Call**

**Notice of Recording** This meeting is being recorded and broadcast on Channel 18 and in accordance with MGL Chapter 30A §20. The Chair must inquire whether anyone else is taping this meeting and to please make their presence known.

**Attendance**

**Tim O’Neill**

**Ray Sexton**

**Bob Twiss**

**Stephen Robichaud**

**Steven Costello**

**Public Comment**

**Chair Steven Costello asks for any general public comment. None.**

**Approval Not Required:**

Holian Family Realty Trust have submitted an Approval Not Required plan entitled: “Plan Showing Lot Division at 250 Windswept Way Barnstable (Oyster Harbors) MA” dated March 7, 2022, prepared and stamped by Richard R. L’Heureux of CapeSurv. (Majority of Full Board)

Attorney Michael Ford, for applicant, in attendance. Previously endorsed a different version. After endorsed it was determined that there is a lot shape factor for the two parcels . No portion of Sunset point can be used for the two lots in question. The plan has been redone. Now shown as unbuildable portions. Now comply with zoning ordinance, no portion be dissected by a street. Lots meet frontage. Parcel B with the home has a shape of 22.9, this parcel will need to obtain a variance with shape factor issuance.

Chair Steven Costello confirms cannot meet the shape factor that’s why coming back.

Attorney Ford, yes, has an irregular shape. Oyster Harbors did not take into consideration the shape of the parcels. Now one does meet shape factor.

**Chair Steven Costello entertains a motion to endorse/approve, moved by Tim O’Neill to endorse the plan entitled “Plan Showing Lot Division at 250 Windswept Way, Barnstable (Oyster Harbors) MA” prepared for Holian Family Realty Trust, drawn and stamped by Richard R. L’Heurex, P.L.S. of CapeSurv dated March 7, 2022, as an Approval Not Required Plan, seconded by Stephen Robichaud,**

**Roll Call Vote:**

**Steven Costello - aye**

**Stephen Robichaud - aye**

**Bob Twiss - aye**

**Ray Sexton - aye**

**Tim O’Neill - aye**

**Zoning Amendments:**

Zoning Amendment TC Item No. 2022-034 - Proposal to amend the Town of Barnstable Zoning Ordinance by amending the code of the Town of Barnstable, Part I, General Ordinances, Chapter 240 Zoning by expanding the Ground-Mounted Solar Photovoltaic Overlay District to include the property located at 810 Wakeby Road, Marstons Mills (Assessors’ Map 013 Parcels 004, 005, 052) and by

requiring a Special Permit for large-scale ground-mounted solar photovoltaic installations located within any residential district located within the overlay district. – continued from November 8, 2021, December 13, 2021, January 10, 2022, February 14, 2022, and February 28, 2022  
(Public Hearing) (Majority of members present and voting for recommendation to Town Council)

Senior Planner Jim Kupfer gives an update. Have amendment with additions, enhancements for health and safety. Battery storage concerns. Refers to the redlined version, Exhibit A. Including enhanced setbacks and screening. Presentation done for the town of Medway that has some information.

Also, we now have informational links for the public. Shows where LaseFiche program and materials are now located on the webpage.

Bob Twiss points out where red line changes are made in the document – Exhibit A:

§ 240-44.2 Ground-Mounted Solar Photovoltaic Overlay District.  
[Added 10-7-2010 by Order No. 2011-006]

A. Purpose.

- (1) This section promotes the creation of new large-scale, ground-mounted solar photovoltaic installations and associated accessory uses by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and for providing adequate financial assurance for the eventual decommissioning of such installations. This section ordinance is adopted pursuant to the Commonwealth of Massachusetts Green Communities Act.
- (2) The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale, ground-mounted solar photovoltaic installations and associated accessory uses.

B. Applicability. This section applies to large-scale (250 kW), ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

C. District established. A Ground-Mounted Solar Photovoltaic Overlay District (GMSPOD) is hereby established, and shall be considered as superimposed over any other districts established by this chapter, and is shown as an overlay on the Official Zoning Map established pursuant to § 240-6, Zoning Map

D. Definitions. These definitions shall apply to § 240-44.2 exclusively:

#### AS-OF-RIGHT SITING

The ground-mounted solar photovoltaic installation may proceed without the need for a special permit, variance, amendment, waiver or other local discretionary approval, except that a special permit shall be required when located in a underlying residential zoning district ~~as well as all ground-mounted solar photovoltaic installation that include battery storage~~. As-of-right development is subject to Article IX, Site Plan Review. As-of-right solar photovoltaic installations

that are consistent with the Zoning Ordinance and applicable state and federal law can be reasonably regulated and approved by the Building Commissioner.

#### 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 bylaw, batteries utilized in consumer products are excluded from these requirements.

#### BATTERY ENERGY STORAGE MANAGEMENT SYSTEM

An electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.

#### BATTERY ENERGY STORAGE SYSTEM

A battery energy storage system (BESS) is an electrochemical device that charges (or collects energy) from the electrical grid or an electricity generating facility, such as a Large-Scale Ground-Mounted Solar Photovoltaic Installation, and then discharges that energy at a later time to provide electricity or other grid services when needed.

#### GROUND-MOUNTED SOLAR PHOTOVOLTAIC INSTALLATION

A large-scale solar photovoltaic (PV) system that is structurally mounted on the ground, not roof-mounted, and has a nameplate capacity of at least 250 kW DC.

#### HAZARDOUS PRODUCT

Any chemical or combination of chemicals which, in any form, is listed by trade name, chemical name, formula or otherwise as a product which is a hazard to public drinking water supplies if concentrations beyond a certain level are achieved therein. 'Hazardous product' shall also include any product for which there is any listing, declaration, or announcement in any form issued by the United States Environmental Agency, the Massachusetts Department of Environmental Protection, or by any other government agency having direct or indirect jurisdiction over public water supplies that such product is such a hazard or is a product known as an "emerging contaminant" suspected as being capable of being a carcinogen.

#### OFF-GRID SYSTEM

A solar photovoltaic installation where all energy generated on the installation site is consumed on that site and does not send any energy into the electrical grid for distribution.

#### RATED NAMEPLATE CAPACITY

The maximum rated output of electric power production of the photovoltaic system in direct current (DC).

#### E. Site Plan Application and review.

1. Ground-mounted, large-scale solar photovoltaic installations with 250 kW or larger of rated nameplate capacity shall undergo site plan review pursuant to Article IX, Site Plan Review, prior to construction, installation or modification as provided in this section. All plans and maps shall be prepared, stamped and signed by a professional engineer licensed to practice in Massachusetts. Any ground-mounted, large-scale solar photovoltaic installation with 250 kW

or larger of rated nameplate capacity located in an underlining residential zoning district shall also be required to obtain a special permit from the Planning Board in accordance with Subsection (3). Batteries and Battery Energy Storage Systems ~~as a primary use~~ are prohibited. ~~Battery Energy Storage Systems as a primary use or accessory use are prohibited in a Zone I.~~

2. Required documents. In addition to the requirements of § 240-102, Contents of site plan, the project proponent shall provide the following documents:

A site plan showing:

- a. Existing conditions, including property lines and physical features, abutting land uses and location of structures within 100 feet of the project site, topography and roads, characteristics of vegetation (mature trees, shrubs, etc.), wetlands, vernal pools, and floodplains. The existing plans should also identify designated Scenic Roads and Local or National Register Historic Districts, wellhead protection areas, Natural Heritage & Endangered Species Program (NHESP) Estimated and Priority Habitats, BioMap2 Critical Natural Landscape and Core Habitat.
- b. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures. The square footage of each disturbed area shall be identified on a plan, and details of any site alteration, including number and species of trees to be removed, shall be provided. [Amended 8-17-2017 by Order No. 2018-04]
- c. Stormwater Management Plan including the following standards:
  - i. Selection of Massachusetts Department of Environmental Protection Best Management Practices. To the maximum extent practicable, low impact development vegetated best management practices shall be used in accordance with the guidance for BMP selection and installation found in the Massachusetts Stormwater Manual Handbook, latest edition.
  - ii. A Stormwater Management Plan with the stamp and signature of a registered Professional Engineer (PE) who is licensed in the Commonwealth of Massachusetts, conforming to the conditions and standards of the Massachusetts Department of Environmental Protection's Stormwater Handbook, latest edition, is required and as required in 4h.
  - iii. To ensure proper containment and stabilization of the site during the construction phase, a Stormwater Pollution Prevention Plan to control construction-related impacts, including erosion, sedimentation, and other pollutant sources during construction and land disturbance activities, shall be developed and implemented. Such plan shall be developed to document compliance with the Massachusetts Stormwater Handbook, latest edition.
  - iv. A Long-Term Stormwater Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed. Such plan shall be developed to document compliance with the Massachusetts Stormwater Handbook, latest edition.

- d. Blueprints or drawings of the solar photovoltaic installation signed by a professional engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures or vegetation, the distance between the system and all property lines, existing on-site buildings and structures, and the tallest finished height of the solar array;
- e. One- or three-line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;
- f. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter(s) and any storage batteries;
- g. Name, address, and contact information for proposed system installer;
- h. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;
- i. The name, contact information and signature of any agents representing the project proponent; and
- j. Documentation of actual or prospective access and control of the project .Site control. The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.
- k. An operation and maintenance plan. The project proponent shall submit a plan for the operation and maintenance of the ground-mounted solar photovoltaic installation, which shall include specific measures for maintaining safe access to the installation, a stormwater management plan, , and general procedures for and frequency of operational maintenance of the installation. The Operation and Maintenance Plan shall include measures for maintaining year-round safe access for emergency vehicles, snow plowing, storm water controls, and general procedures, and a yearly schedule for the operation and maintenance of the facilities including fencing, and maintenance of landscaping.
- l. Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a Zoning Map with the parcel(s) identified is suitable for this purpose);
- m. Description of financial surety that satisfies Subsection 5(C) below.
- n. Utility notification. No ground-mounted solar photovoltaic installation shall receive a building permit until an executed interconnect agreement with the utility company operating the electrical grid, has been submitted to the Building Commissioner. Off-grid systems are exempt from this requirement. [Amended 8-17-2017 by Order No. 2018-04]
- o. Federal Aviation Administration (FAA) approval of Solar Glare Study is required, if such a

Study is deemed necessary by the FAA.

- p. The project proponent shall provide full disclosure of all hazardous products proposed to be used at any time at a project site shall be provided in writing to the Building Commissioner with the Site Plan Review application; no application for Site Plan Review shall be considered complete until such disclosure is submitted to the Building Commissioner. No such hazardous materials shall be deployed or used at any time at a project site without Site Plan approval. Use, storage and containment of hazardous materials shall comply with all Federal, State, Regional, and local codes and regulations, including building, fire, and health codes. The Applicant shall require all manufacturers to attest and certify that all solar panels, solar sheets, batteries and all other materials used on the proposed site shall not contain Per- and Polyfluoroalkyl Substances (PFAS).
3. Dimensional requirements. Ground-mounted solar photovoltaic installations are subject to the front, side and rear yard setbacks as set forth in the underlying zoning district(s), except that any ground-mounted, large-scale solar photovoltaic installation with 250 kw or larger of rated nameplate capacity located in a residential zoning district shall maintain a minimum 100 foot setback from all abutting residential property lines to contain noise.
4. Design standards.
  - a. Lighting. Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as accessory structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded so not to trespass on to abutting properties.
  - b. Signage. Signs on large-scale, ground-mounted solar photovoltaic installations shall comply with Article VII, Sign Regulations. A sign shall be required to identify the owner and provide a twenty-four-hour emergency contact phone number. Solar photovoltaic installations shall not be used for displaying any advertising.
  - c. Accessory structures. All structures accessory to ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. To avoid adverse visual impacts, all such accessory structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other, multiple accessory structures shall be clustered to the greatest extent feasible and views of such structures to residential properties and roadways shall be screened with landscaping.
  - d. Screening. The Ground-Mounted Solar Photovoltaic Installation shall be screened year-round from all adjacent residential lots. Natural vegetation should be preserved to the extent possible; where existing vegetation is insufficient to achieve year-round screening, additional screening shall be provided including, but not limited to, planting of dense vegetative screening, fencing, berms, use of natural ground elevations, and/or land contouring **so that the year round screening exceeds that of the height of the proposed panels it is screening**. Plantings shall be of varying heights and shall be staggered to effectively screen the installation from view. Plant material should be diverse and native to Cape Cod or New England. Screening shall be completed prior to

connection of the installation. Plants shall be maintained and replaced if unhealthy by the owner/operator of the installation for the life of the installation. The Building Commissioner may alter screening requirements if such screening would have a detrimental impact on the health and safety of the neighborhood.

- e. Utility connections. Reasonable efforts, as determined by site plan review, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.
- f. **Battery Storage Siting - Batteries and Battery Energy Storage Systems are prohibited.**
  - ~~i. There shall be no solar battery storage units or their housing (trailers, buildings, etc.) located within the Zone I.~~
  - ~~ii. All battery storage shall be covered within a structure. A smoke detection system must be installed and operating in the battery storage housing.~~
  - ~~iii. Each battery chamber must have its own heat sensor and detection alarm system.~~
  - ~~iv. The battery storage housing must be located above the 100 year floodplain.~~
  - ~~v. High pressure fire extinguishers containing Novec 1230 or equivalent must be located on site.~~
  - ~~vi. The battery system must be stored in a self containment area so that in the event of a fire, fire extinguishing chemicals will be completely contained; including but not limited to a steel containment pad below the building sump for additional protection. The steel containment pad shall be installed on the concrete slab and then the building shall be installed on top of the containment pad.~~
  - ~~vii. Battery storage units must number only those needed to support the solar installation at the site.~~
  - ~~viii. Spent or expired battery units must be immediately removed from the site. There must be no stockpiling of battery units.~~
  - ~~ix. Applicants may be required to increase water quality monitoring.~~
  - ~~x. Stormwater from proposed impervious sources must be directed away from drinking water sources.~~
  - ~~xi. The battery storage housing must not interfere with the operation of the public water system or access to the water distribution system.~~
- g. Emergency services. The large-scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local Fire Chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan as part of the operation and maintenance plan stated above. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.
- h. Land clearing, soil erosion and habitat impacts. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large-scale, ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws. [Amended 8-17-2017 by Order No. 2018-04]
  - i. Land clearing is prohibited within 800 feet from the outer boundary of any Zone I protective radius around a public water supply well or wellfield established by 310 CMR 22.
  - ii. Land clearing in excess of two contiguous acres in connection with any single installation is prohibited.



- iii. No such installation shall be segmented or broken into separate ownerships so as to avoid the prohibitions of Subsection L(2)(a) and (b) above.
  - iv. Existing vegetative cover, root structures, flat field or gravel areas, and topsoil shall be maintained to the maximum extent practicable to prevent soil erosion.
  - v. Ground surface areas beneath solar arrays and setback areas, open areas within the solar array and between the array, and vegetated buffers, including stormwater management areas shall be seeded with a native seed mix, with a preference for native groundcovers and deep-rooted native grasses suitable for site stabilization and erosion control and that are low maintenance (requiring no fertilizers, pesticides, or herbicides or irrigation except as may be necessary for initial establishment, and minimal to no mowing). Existing gravel areas that are well drained and stable may remain.
- i. Stormwater Management. Effective storm water and erosion controls shall be maintained at all times. All storm water control measures shall either maintain or reduce preexisting runoff.
- i. As stated above, a Stormwater Management Plan must be submitted with the stamp and signature of a Registered Professional Engineer (PE) who is licensed in the Commonwealth of Massachusetts. The Stormwater Management Plan shall conform to the more stringent of any conditions or standards of this subsection and the Massachusetts Department of Environmental Protection's Stormwater Handbook<sup>[1]</sup>, as amended. The Stormwater Management Plan shall contain sufficient information for the Planning Board to evaluate the environmental impact and effectiveness of the measures proposed for retaining stormwater on the parcel site and shall fully describe the project in drawings, narrative, and calculations. It shall include:
1. The site's existing and proposed topography;
  2. All areas of the site designated as open space;
  3. A description and delineation of existing stormwater conveyances, impoundments, environmental resources on or adjacent to the site into which stormwater flows;
  4. A delineation of 100-year flood plains, if applicable;
  5. Estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention, or infiltration;
  6. Existing and proposed vegetation and ground surfaces with runoff coefficients for each;
  7. Calculations for the 2-, 10-, 25- and 100-year, as outlined in the Massachusetts Stormwater Handbook, latest edition. Pipe sizes, depth of flow, capacities and velocities shall be included;
  8. A drainage area map showing pre- and post-construction water shed boundaries, drainage area and stormwater flow paths, including municipal drainage system flows, at a scale that enables verification of supporting calculations;

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<sup>[1]</sup> [Massachusetts Stormwater Handbook and Stormwater Standards | Mass.gov](https://www.mass.gov/info-details/massachusetts-stormwater-handbook-and-stormwater-standards)

9. A recharge analysis that calculates pre- and post-construction annual groundwater recharge rates on the parcel;
  10. A description and drawings of all components of the proposed stormwater management system;
  11. Hydrologic and hydraulic design calculations for the pre-development and post- development conditions for the design storms specified in the Massachusetts Stormwater Handbook;
  12. Soils information from test pits performed at the location of proposed stormwater management facilities, including soil descriptions, depth to seasonal high groundwater and depth to bedrock. Soils information will be based on site test pits logged by a Massachusetts Certified Soil Evaluator;
  13. Any construction phasing proposed to mitigate stormwater impacts.
- ii. All stormwater infrastructure shall be owned and maintained by the owner of the installation and shall be located on the same parcel as the solar installation.
  - iii. Stormwater management systems shall be designed so that post-development peak discharge rates and volumes, for the 2, 10, 25 and 100 year storm frequency, do not exceed pre-development peak discharge rates and volumes. To the maximum extent practicable, low impact development vegetated best management practices shall be used in accordance with the guidance for BMP selection and installation found in the Massachusetts Stormwater Handbook, latest edition.
  - iv. All pipes, catch basins and other materials utilized in the stormwater facilities shall be approved by the Town of Barnstable Department of Public Works, or designee.
  - v. To ensure proper containment and stabilization of the site during the construction phase, a Stormwater Pollution Prevention Plan, with the stamp and signature of a Registered Professional Engineer (PE) who is licensed in the Commonwealth of Massachusetts, to control construction-related impacts, including erosion, sedimentation, and other pollutant sources during construction and land disturbance activities, shall be submitted, approved by the Town of Barnstable and implemented. Such plan shall be developed to document compliance with the Massachusetts Stormwater Handbook, latest edition.
  - vi. A Long-Term Stormwater Operation and Maintenance Plan with the stamp and signature of a Registered Professional Engineer (PE) who is licensed in the Commonwealth of Massachusetts, shall be developed and implemented to ensure that stormwater management systems function as designed. Such plan shall be developed to document compliance with the Massachusetts Stormwater Handbook.

The Long-Term Stormwater Operation and Maintenance Plan shall at a minimum include:

1. Stormwater management system(s) owners;
2. The party or parties responsible for operation and maintenance of all aspects of the stormwater management system;

3. The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks;
4. A plan that is drawn to scale and shows the location of all stormwater control measures;
5. A schedule for routine inspections as well as a description of storms that would trigger immediate inspections following the storm;
6. An inspection and maintenance log form;
7. An estimated stormwater operations and maintenance budget;
8. Permission from the operator to allow agents of the Town of Barnstable to enter and inspect the premises to evaluate and ensure that the responsible party complies with the Long-Term Stormwater Operation and Maintenance Plan requirements for each measure.

During times of construction and post-construction where stormwater generated from the project area may inadvertently enter the public way, the owner shall be responsible for direct costs incurred by the town, including but not limited to stormwater related clean up, sanding, salting, street sweeping or other necessary management when required for the protection of public health and safety.

5. Abandonment or decommissioning of Large-Scale Ground Mounted Photovoltaic Installations.
  - a. Removal requirements. Any large-scale, ground-mounted solar photovoltaic installation which has reached the end of its useful life or has been abandoned consistent with this section shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Building Commissioner by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:
    - i. Physical removal of all large-scale, ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
    - ii. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
    - iii. Stabilization or revegetation of the site as necessary to minimize erosion. The Building Commissioner may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.
  - b. Abandonment. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the solar photovoltaic installation shall be considered abandoned when it fails to operate at less than 25% of its nameplate capacity for more than one year without the written consent of the Planning Board. If the owner or operator of the large-scale, ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town may enter the property and physically remove the installation.

- c. Financial surety. Proponents of large-scale, ground-mounted solar photovoltaic projects shall provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal and disposal in the event the Town must remove the installation and remediate the landscape, in an amount and in a form acceptable to the Town Attorney but in no event to exceed more than 125% of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project proponent. Such surety will not be required for municipally or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for pro rating removal costs as they may be affected by inflation or changes to disposal regulations. And shall not include the value of scrap materials that may be realized by a private enterprise.

(F) Special Permit Provisions.

A Special Permit shall be granted by the Planning Board if the Planning Board determines the following criteria have been met.

1. Site Plan Approval in accordance with subsection E. and;
2. Adequate measures to contain and suppress noise and sound as deemed appropriate by the Planning Board, including, but not limited to, minimum **150 foot setback to residentially developed lots and** 100 foot setback from all other property lines to the Ground-Mounted Solar Photovoltaic Installation. The **above prescribed** setbacks shall be undisturbed in perpetuity.
3. Screening. The Ground-Mounted Solar Photovoltaic Installation shall be screened year-round from all adjacent residential lots. Natural vegetation should be preserved to the extent possible; where existing vegetation is insufficient to achieve year-round screening, additional screening shall be provided including, but not limited to, planting of dense vegetative screening, fencing, berms, use of natural ground elevations, and/or land contouring **so that the year round screening exceeds that of the height of the proposed panels it is screening**. Plantings shall be of varying heights and shall be staggered to effectively screen the installation from view. Plant material should be diverse and native to Cape Cod or New England. Screening shall be completed prior to connection of the installation. Plants shall be maintained and replaced if unhealthy by the owner/operator of the installation for the life of the installation.
4. Federal Aviation Administration (FAA) approval of Solar Glare Study, if such a study is deemed necessary by the FAA.
5. Cape Cod Commission approval as required and evidence to the Planning Board of said approval.
6. Full disclosure of all hazardous products, as defined by the Massachusetts Department of Environmental Protection pursuant to 310 CMR 30.000, proposed to be used at any time at a project site shall be provided in writing to the Planning Board with the Special Permit application; no application for a special permit shall be considered complete until such disclosure is submitted to the Planning Board. No such hazardous materials shall be deployed or used at any time at a project site without approval of the Special Permit by the Planning Board.

7. Use, storage and containment of hazardous materials shall comply with all Federal, State, Regional, and local codes and regulations, including building, fire, and health codes. Any equipment which includes hazardous materials shall provide design containment equal to a minimum of 110% of the hazardous material volume contained in the associated equipment plus an additional volume to include the 100-year storm event over a 24-hour period.

Hazardous materials stored, used, or generated on site shall not exceed the amount for a Very Small Quantity Generator of Hazardous Waste as defined by the Massachusetts Department of Environmental Protection pursuant to 310 CMR 30.000.

8. Expanded Operation and maintenance plan. The project proponent shall submit a plan for the operation and maintenance of the ground-mounted solar photovoltaic installation, which shall include specific measures for maintaining safe access to the installation, a stormwater management plan, , and general procedures for and frequency of operational maintenance of the installation. The Operation and Maintenance Plan shall include measures for maintaining year-round safe access for emergency vehicles, snow plowing, storm water controls, and general procedures, and a yearly schedule for the operation and maintenance of the facilities including fencing, and maintenance of landscaping. The Operation and Maintenance Plan shall include details on hazardous material containment maintenance and monitoring as well as the following:

- a. Commissioning Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in proper working condition in accordance with Massachusetts Building Code and Massachusetts Fire Code (herein known as Uniform Code). Where commissioning is required by the Uniform Code, ~~Battery energy storage system commissioning shall be conducted by a Licensed Professional Engineer after the installation is complete but prior to final inspection and approval.~~ A corrective action plan shall be developed for any open or continuing issues that are allowed to be continued after commissioning. A report describing the results of the system commissioning shall be provided to Building Commissioner prior to final inspection and approval and maintained at an approved on-site location.
- b. Fire Safety Compliance Plan. Such document shall document and verify that the system and its associated controls and safety systems are in compliance with the Uniform Code.
- c. Operation and Maintenance Manual. Such document shall describe continuing solar ~~and battery energy storage system~~ maintenance and property upkeep, as well as design, construction, installation, testing and commissioning information and shall meet all requirements set forth in the Uniform Code.
- d. Erosion and sediment control and storm water management plans prepared as detailed further above.
- e. Emergency Operations Plan. A copy of the approved Emergency Operations Plan shall be given to the system owner, the local fire department, and local fire code official. A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders. The emergency operations plan shall include the following information:
  - i. 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.

- ii. Procedures for inspection and testing of associated alarms, interlocks, and controls.
- iii. Procedures to be followed in response to notifications ~~from the Battery Energy Storage Management 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.
- iv. 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 can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.
- v. 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.
- vi. Other procedures as determined necessary by the Planning Board to provide for the safety of occupants, neighboring properties, and emergency responders.
- vii. 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.

~~9.—Abandonment or decommissioning of Large Scale Ground Mounted Photovoltaic Battery Storage Systems, if applicable.~~

~~Decommissioning Plan.—The applicant shall submit a separate and distinct decommissioning plan for Battery Storage Systems, developed in accordance with the Uniform Code, to be implemented upon abandonment and/or in conjunction with removal from the facility.~~

~~The decommissioning plan shall include:~~

- ~~a.—A narrative description of the activities to be accomplished, including who will perform that activity and at what point in time, for complete physical removal of all battery energy storage system components, structures, equipment, security barriers, and transmission lines from the site;~~
- ~~b.—Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;~~
- ~~c.—The anticipated life of the battery energy storage system;~~
- ~~d.—The estimated decommissioning costs and how said estimate was determined;~~

~~e.—The method of ensuring that funds will be available for decommissioning and restoration;~~

~~f.—The method by which the decommissioning cost will be kept current;~~

~~g.—The manner in which the site will be restored, including a description of how any changes to the surrounding areas and other systems adjacent to the battery energy storage system, such as, but not limited to, structural elements, building penetrations, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed; and h. A listing of any contingencies for removing an intact operational energy storage system from service, and for removing an energy storage system from service that has been damaged by a fire or other event.~~

~~h.—Decommissioning Fund. The owner and/or operator of the energy storage system, shall continuously maintain a fund or bond payable to the Town of Barnstable, in a form approved by the Town Counsel for the removal of the battery energy storage system, in an amount to be determined by the Planning Board, for the period of the life of the facility. All costs of the financial security shall be borne by the applicant.~~

10. Compliance with any other criteria found by the Planning Board as necessary to protect the public health, safety or welfare, including, but not limited to, the revocation of any prior permits and previous uses that benefit the project site.

Chair Steven Costello confirms that this does speak to the battery and battery storage and is helpful for all to understand.

**Chair Steven Costello asks for any public comment.**

Gordon Starr in attendance. Clarifies/confirms the wording re the setback 150 ft. to be undisturbed in perpetuity. Is there vista pruning and allowable.

Chair Steven Costello replies that he assumes there will be some kind of clear path, some sort of space between.

Bob Twiss the by law only applies to ground mounted at 250 kilowatts or more. Any other homeowner will be within the scope.

Gordon Starr, you can't have trees growing close to the edges.

Chair Steven Costello, if it does happen, I would think would have within the zoning ordinance.

Attorney Mike Ford in attendance. Tree screening, talks about all that Zoning Board of Appeals (ZBA) is going to require within the set backs. Setbacks are going to have requirements, whatever ZBA comes up with. The setbacks will have to be approved with condition of the special permit, requirements of paragraph 3.

Assistant Town Attorney Charles McLaughlin in attendance. He agrees with Attorney Ford – maintenance, must be maintained, but pruning would have to be appropriate. Need some language for that, can note that to be into the amendment version tonight. ZBA should be able to rule accordingly.

Anne Salas in attendance. Thinks a great mistake to include any residential area for this scale and thinks Zone 2 should be exempt. Snow plow soils are not allowed to dump. All the susceptibility, not good to go into the water systems. This is a precedent situation. Numerous batteries scattered throughout and within the panels themselves. There are many dangers.

Tim O'Neill, glad to see the battery storage has been removed from draft ordinance. Good to see the information for the special permit part. Sun study when he puts solar on homes. Assuming that there will be an assessment when comes for approval and plants to be planted accordingly. 150 ft. buffer.

Ray Sexton, screening issue, provision for maintenance plan for vegetation. Planted vegetation that would not get so tall for blocking out sun rays. Important to note we are setting a precedent. The specific site, zoning overlay to be amended. Doesn't mean that we approve the project as is. Wants to be careful with residential area(s).

Bob Twiss clarifies that this is not an ordinance only for Wakeby Rd. but for all solar sites moving forward. Need to have a regulation in place to cover all. Need to move the ordinance forward, subject to any modifications. Hazardous chemicals other than the batteries and storage – a lot of changes addressing and prohibiting/notice – Applicant has to notify town before permit is granted.

Stephen Robichaud, Town will need to tackle battery storage at some point. This is a major item. Agrees with the screening.

Chair Steven Costello, appreciates all the time, energy and knowledge the public has made for this. Good information and listening to bring this amendment to where it is right now. This is a step in the process. Comfortable with the safety components added and getting the history of this particular site.

Attorney Charlies McLaughlin – many challenges with this and amendments made. Solar and battery storage, both addressed. Court has heard rights regarding solar, last Monday, go to Commonwealth website, you can hear both sides of the case. Placement of solar as of right. 120 day rule, sometime in July have a decision. Supreme Court will give recognition to the concept of solar as of right, question will be how to modify. Containment and cooling fluids and drinking water quality. There will be standards that will have to be met. There are a lot of questions re battery storage. Possibly turned over to the Board of Health and regulations for this.

Attorney Ford, the proposed ordinance originally had a 75 ft. setback, then 100 ft. discussion re 250 ft. now back to 150, can't unreasonably regulate solar. The 150 seems arbitrary now that no battery storage. Now enough room to not be seen from the abutting residences. Is there some evidence that would support that need for the 150 ft. now, not sure there is, the 150 may be bordering on an unreasonable association.

Char Steven Costello thinks the 150 ft, was from being at the site itself. Combination of the physical site and what seemed to make sense for this particular array.

Ray Sexton observation that 75 ft. wasn't enough, any residences. Don't think it's arbitrary for residential.

Tim O'Neill clarifies 150 ft. buffer to residential and 100 ft. in other areas. Needs to apply to many different areas. Higher concern for residential lots.



Stephen Robichaud thinks 150 ft. is appropriate for residential area, noises, and visuals.

**Chair Steven Costello entertains a motion to close the public hearing, moved by Bob Twiss, seconded by Ray Sexton,**

**Roll Call Vote:**

**Steven Costello - aye**

**Stephen Robichaud - aye**

**Bob Twiss - aye**

**Ray Sexton - aye**

**Tim O'Neill - aye**

**Chair Steven Costello entertains a motion, moved by Bob Twiss to recommend ZA TC Item No. 2022-034, as presented in the amendments submitted as of 7:00 p.m. to Town Council, seconded by Stephen Robichaud, for both map to include 810 Wakeby Road in the overlay, as well as the text,**

**Roll Call Vote:**

**Steven Costello - aye**

**Stephen Robichaud - aye**

**Bob Twiss - aye**

**Ray Sexton - aye**

**Tim O'Neill - aye**

### **Staff Updates**

#### **Barnstable Hazard Mitigation Plan Update Presentation**

Jim Kupfer explains. FEMA and MEMA – Town seeks to update plan, every 10 years. Workshop in November. Mary House, Consultant. To get questions tonight and hopefully a letter of support. This will go to Town Council and public input will be available up until the end of the month.

Mary House from Woodard and Curran in attendance. She shares Power Point presentation. "2021 Hazard Mitigation Plan Update" Exhibit B. This is a proposed update to existing plan. Local Mitigation Plan Review Guide, FEMA. Hazard Mitigation Goals, 1 – 5. Funding for improve. Hazards, coastal, hurricane, wildlife etc.

15 natural hazards, 20 core term members, critical facilities, 38 mitigation actions, 22 funding sources. Available for public comment. Questions can be submitted up until the end of the month, before going to State and FEMA for approval.

Ray Sexton, consider high impact and low probability events?

Mary House, yes, part of this was to identify these hazards and the likelihood. Evaluated and assessed what are most critical. Flooding, climate change, those were at the top as well as some extreme weather events. The plan has documented the risks.

Chair Steven Costello, does every town have to create their own plan?

Mary House replies that this particular plan enables access for specifics and for funding.

Jim Kupfer would like a letter of support from the Board.

**Chair Steven Costello entertains a motion to support the update as discussed and presented, moved by Ray Sexton, seconded by Stephen Robichaud,**

**Roll Call Vote:**

**Steven Costello - aye**  
**Stephen Robichaud - aye**  
**Bob Twiss - aye**  
**Ray Sexton - aye**  
**Tim O’Neill - aye**

**Local Comprehensive Plan**

Elizabeth Jenkins in attendance. Applications closed on March 1<sup>st</sup>. Total of 52 eligible applications for the Committee. All different towns. Now working with consultant on a process with Town manager to vet for recommendation to ratify. Good outreach for all.

**Downtown Hyannis Wayfinding Plan**

Jim Kupfer – grant received for Town. Look and evaluate downtown Hyannis and for signage. Looking at existing conditions. Engineering firm working with us. Looking for one from this Board to participate. Will be a couple months to get through. Signage program and look for possibilities to improve.

Stephen Robichaud volunteers.

Elizabeth Jenkins, it is a critical recommendation and the parking study, hoping to make work better as well as interventions done over the last two summers. Recommendations, maybe make some short term changes for this season.

**Matters Not Reasonably Anticipated by the Chair**

**Correspondence**

**Approval of Minutes**

February 28, 2022, draft minutes

**Chair Steven Costello entertains a motion to approve the minutes of February 28, 2022, moved by Tim O’Neill, seconded by Bob Twiss,**

**Roll Call Vote:**

**Steven Costello - aye**  
**Stephen Robichaud - aye**  
**Bob Twiss - aye**  
**Ray Sexton - aye**  
**Tim O’Neill - aye**

**Future Meetings: March 28, and April 11, 2022, @ 7:00 p.m.**

**Adjournment**

**Chair Steven Costello entertains a motion to adjourn moved by Bob Twiss, seconded by Ray Sexton,**

**Roll Call Vote:**

**Steven Costello - aye**  
**Stephen Robichaud - aye**  
**Bob Twiss - aye**  
**Ray Sexton - aye**  
**Tim O’Neill - aye**

The meeting adjourned at 8:26 p.m.

Respectfully Submitted  
Karen Herrand, Principal Assistant, Planning & Development

Further detail may be obtained by viewing the video via Channel 18 on demand at  
<http://www.town.barnstable.ma.us>

**List of Exhibit Documents**

**Exhibit A** – Redlined Draft Version of Ordinance - Zoning Amendment TC Item No. 2022-034

**Exhibit B** - Barnstable Hazard Mitigation Plan Update Presentation - presentation proposal

APPROVED