

Town of Amherst
Zoning Board of Appeals

PROJECT APPLICATION REPORT

Applicant:	Dave Wasenda 191 West Pomeroy Lane Amherst, MA 01002
Project Address:	191 West Pomeroy Lane
Property Owner:	Applied Golf Hickory LLC Dave Wasenda, Manager 191 West Pomeroy Lane Amherst, MA 01002
Nature of request:	Special Permit to construct a solar energy system on 27.3± acres of a 150± acre parcel with the panels and racking equipment being divided into a western array and an eastern array as a way to maintain buffers to wetland resource areas at the site, and producing 5.24± MW (AC), as identified under Section 3.22; 3.340.0; and 10.38 of the Zoning Bylaw.
Map/parcel:	19D/10
Zoning:	Flood Prone Conservancy (FPC); Neighborhood Residence (R-N); and Outlying Residence (R-O) Zoning Districts
Board members:	Steve Judge, Keith Langsdale; Tom Simpson; and Joan O'Meara
Staff members:	Rob Morra, Building Commissioner; Maureen Pollock, Associate Planner, Brandon Toponce, Senior Planner

PROPOSED DEVELOPMENT

Direct Energy Solar LLC has selected a property for the construction of a solar array and associated utility connections located on property located at 191 West Pomeroy Lane that is owned by Applied Golf Hickory LLC. The property is occupied by the existing 18-hole Hickory Ridge Golf Club and associated buildings, cart paths, and asphalt parking lot. The applicant proposes to construct a 5.24± MW ground mounted photovoltaic (PV) solar facility. To avoid wetlands at the site, the facility has been divided into a western array and an eastern array. Proposed electrical equipment will include 115 inverters, 17 new utility poles, and an equipment pad that will hold the transformer and main electrical gear. A seven-foot high chain link fence will surround the solar arrays with a minimum clearance of ten feet between the fence and the panels to allow for interior access. The 15,026± solar modules proposed will occupy a footprint of approximately 16.4 acres within the approximately 22.7 acre fenced area. The limits of disturbance, including site access, utility poles, and laydown areas, covers 27.3± acres. Access to the western array will be provided via a 15 foot wide, 1,170± foot long gravel driveway from West Pomeroy Lane. Access to the eastern array will

be provided via a 15 foot wide, 1,570± foot long gravel driveway from the existing facility parking lot on West Pomeroy Lane. Both access driveways will cross the Fort River via existing bridges. No new crossings or improvements or modifications to existing crossings are needed to accommodate the vehicles and equipment needed for facility installation.

The operation will be found on approximately 27.3± acres of a 150± acre parcel. The work would be located within the Flood Prone Conservancy (FPC); Neighborhood Residence (R-N); and Outlying Residence (R-O) Zoning Districts, which allows a solar array to be constructed with a Special Permit.

The existing bridges are currently under evaluation to determine whether they can hold the load for construction vehicles for construction and for fire apparatus for post-construction. The evaluation and proposed bridge designs have not yet been submitted.

ENVIRONMENTAL CONDITIONS

The Fort River enters the site in its northeastern corner and flows in a generally east to west direction across the center of the golf course. Muddy Brook joins the Fort River near the southeastern corner of the site and two intermittent streams flow through the golf course in a north-south direction and connect to the Fort River. Bordering Vegetated Wetlands (BVWs), Land Under Water (LUW) and Inland Bank associated with the river and streams are located throughout the site. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM), most of the site is located in the 100-year floodplain with a Base Flood Elevation (BFE) of 141 to 144 feet.

On January 25, 2019, Planning staff observed flooding at the property, including areas where both proposed access roadways are located. See enclosed photographs. Planning staff recommends the Board to ask the Applicant how they plan to access the solar array and associated equipment if the access roadways are flooded. What will the Applicant do if the access roadway, electrical poles, and associated equipment are washed away? Does the Applicant plan to re-build/repair? How will emergency vehicles access the arrays, in an emergency, if the roadways are flooded?

Large portions of the site, including areas within the footprint of the arrays and access roads, are located in Priority and Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP).

The Applicant submitted an Environmental Notification Form (ENF) for review and approval by the Massachusetts Secretary of Energy and Environmental Affairs because it requires a State Agency Action and will disturb greater than 2 acres of designated Priority Habitat that results in a Take of state-listed species, and will alter one half or more acres of any other wetlands (BLSF and Riverfront Area). It was submitted in November 2018. The Massachusetts Secretary of Energy and Environmental Affairs granted a Certificate on December 21, 2018.

The project requires the following permits:

- CMP from Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP). It is currently under review.
- MEPA Review – received certification on December 21, 2018 (see enclosure)
- Order of Condition from the Amherst Conservation Commission - It is currently under review.

- National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the EPA. – It is currently under review.

MAINTENANCE

Ground Cover -

According to the revised Operations & Maintenance Plan (submittal date: January 9, 2019), areas inside the fence and around the solar array will be seeded with slow growth grass ground cover. The ground cover will be a mixture of sheep and hard fescue with inoculated Dutch white clover. These areas will re-seeded annually. Mowing needs will be determined by growth not to exceed 12 inches in height.

The Maintenance of ground cover located outside of the fenced area is TBD.

Fence -

Visual inspections are scheduled to be performed annually, including walking the perimeter to inspect both sides of the fence. Repairs to the fence will be performed, as needed.

Safety and Fire –

Inspections of gates, the fire knock box, and lock box for access will be performed annually.

Access Roadway –

A visual inspection of the access roadways will be performed annually. Clearing of debris will be performed, as needed.

DIMENSIONAL REGULATIONS, TABLE 3

This project meets the required dimensional regulations.

See end of report.

SECTION 10.38 SPECIFIC FINDINGS REQUIRED

The Board shall under Section 10.38 of the Zoning Bylaw, Specific Findings, make the findings required of all Special Permits, such that:

10.380 & 10.381 - The proposal is suitably located in the neighborhood in which it is proposed and/or the total Town, as deemed appropriate by the Special Permit Granting Authority; The proposal is compatible with existing Uses and other Uses permitted by right in the same District.

- **Staff Review:** The proposed solar array is located in an area that is currently used as a golf course. A residential neighborhood is located north and east of the property and south of the property, across West Pomeroy Lane. The property to the west of the property includes a farm and adjacent wetlands.

10.382, 10.383 & 10.385 & 10.387 - The proposal would not constitute a nuisance due to air and water pollution, flood, noise, odor, dust, vibration, lights, or visually offensive structures or site features; The proposal would not be a substantial inconvenience or hazard to abutters, vehicles or pedestrians; The proposal reasonably protects the adjoining premises against detrimental or offensive uses on the site, including air and water pollution, flood, noise, odor, dust, vibration, lights or visually offensive structures or site features; The proposal provides convenient and safe

vehicular pedestrian movement within the site, and in relation to adjacent streets, property or improvements.

- **Staff Review:** The solar array does not produce any noise, or other offensive nuisance or disturbance. The solar panels take in the power from the sun without causing harm to any adjoining property. Some may be concerned about glare from coming off of the panels, however the panels are dark in color and produce a very low glare. Each section will be properly fenced and secured to prevent vehicles from going near the solar arrays. The ground cover located within the fenced in area will be mowed as determined by growth not to exceed 12 inches in height.

10.384 - Adequate and appropriate facilities would be provided for the proper operation of the proposed use.

- **Staff Review:** No water or sewer connections are needed and any other needed utilities will be provided or produced on site. The solar racking layout the eastern array has been revised to avoid an existing sewer line which passes through the property. Gates have been added to the western and eastern fence lines of the eastern array to provide DPW access to the existing sewer line.

One concern that is unclear is that of fire protection and accessing the solar array system in times of flooding. If the access roadways, bridges, utility poles, or associated equipment are washed away due to flooding, how will be the applicant and fire department access the project site in times of maintenance or fire protection? Will the applicant repair damaged infrastructure?

10.386 - The proposal ensures that it is in conformance with the Parking and Sign regulations (Articles 7 and 8, respectively) of this Bylaw.

- **Staff Review:** No parking is necessary and the following signage will be installed along the fence and gates.
- Danger Signs will be installed every 300-feet along the fence line. See Detail 3/14
- Emergency Contact Signs with 24-hour emergency contact information will be installed on each gate. See Detail 4/14
- No Trespassing Signs will be installed every 100-feet along the fence line. See Detail 5/14

10.387 - The proposal provides convenient and safe vehicular and pedestrian movement within the site, and in relation to adjacent streets, property or improvements. If the Special Permit Granting Authority deems the proposal likely to have a significantly adverse impact on traffic patterns, it shall be permitted to require a traffic impact report, and the proposal shall comply with Section 11.2437 of this Bylaw.

- **Staff Review:** Any vehicles entering or exiting the site for maintenance will occur from West Pomeroy Lane. There will be eastern and western access driveway entrances, both located off of West Pomeroy Lane. A portion of the western access driveway which passes through an area where periodic ponding has been observed has been raised to avoid overtopping. Planning Staff observed significant flooding on January 25, 2019 and it is unclear whether the western access driveway and eastern access driveways are proposed to be raised enough to avoid overtopping. The paved apron on the western access driveway has been extended where the slope is steeper than 5%. The alignment of the eastern access driveway has been revised to be co-located with an existing access driveway in the southeastern portion of the property, in the vicinity of the existing maintenance building.

The applicant is currently evaluating the bridges to see if they will be able to handle the load of construction vehicles and fire protection vehicles.

10.388 - The proposal ensures adequate space for the off-street loading and unloading of vehicles, goods, products, materials and equipment incidental to the normal operation of the establishment or use.

- **Staff Review:** This finding is not applicable to the project.

10.389 - The proposal provides adequate methods of disposal and/or storage for sewage, refuse, recyclables, and other wastes resulting from the uses permitted or permissible on the site, and methods of drainage for surface water.

- **Staff Review:** According the January 9, 2019 submittal, “the calculations demonstrate that the existing and proposed condition Curve Numbers are equal since the proposed ground cover change is minimal. Therefore, the proposed project will not result in an increase in runoff.” **Waiting for memo from DPW.** The Conservation Commission is currently reviewing the proposal.

10.390 - The proposal ensures protection from flood hazards as stated in Section 3.228, considering such factors as: elevation of buildings; drainage; adequacy of sewage disposal; erosion and sedimentation control; equipment location; refuse disposal; storage of buoyant materials; extent of paving; effect of fill, roadways or other encroachments on flood runoff and flow; storage of chemicals and other hazardous substances.

- **Staff Review:** This project is found within a designated flood zone. **Waiting for memo from DPW.** The Conservation Commission is currently reviewing the proposal..

10.391 - The proposal protects, to the extent feasible, unique or important natural, historic or scenic features.

- **Staff Review:** There are important natural features on the property, including the Fort River and its associated wetlands and streams. The Conservation Commission is currently reviewing the impacts to these wetland resources. There are unique scenic features on the property, featuring large expansive views of the open space/golf course, Fort Rivers, and its associated wetlands and streams.

10.392 - The proposal provides adequate landscaping, including the screening of adjacent residential uses, provision of street trees, landscape islands in the parking lot and a landscape buffer along the street frontage. When a non-residential use adjoins a residential district, an uninterrupted vegetated buffer shall, to the extent feasible, be established and maintained between buildings associated with uses under this section and the nearest residential property boundaries. Where natural, undisturbed vegetation already exists on-site prior to site preparation and clearing, the majority of that vegetation may be retained and included as part of the buffer, along with the addition of such new plantings, selective removals, and other management of site plantings as are determined to be necessary to maintaining an effective year-round visual screen. See Section 11.3.

- **Staff Review:** The applicant proposes to remove 198 trees in order to allow for more solar panels to be located on the site. The 15,026± solar modules proposed will occupy a footprint of approximately 16.4 acres within the approximately 22.7 acre fenced area. Any portion of the property that has been disturbed will be reseeded, as needed. As stated earlier, the property will be mowed, as determined by growth to not exceed 12 inches in height.

10.393 - The proposal provides protection of adjacent properties by minimizing the intrusion of lighting, including parking lot and exterior lighting, through use of cut-off luminaires, light shields, lowered height of light poles, screening, or similar solutions. Except for architectural and interior-lit signs, all exterior site lighting shall be downcast and shall be directed or shielded to eliminate light trespass onto any street or abutting property and to eliminate direct or reflected glare perceptible to persons on any street or abutting property and sufficient to reduce a viewer's ability to see. All site lighting, including architectural, sign, and parking lot lighting, shall be kept extinguished outside of those business hours established under an approved site management plan, except for lighting determined to be necessary for site security and the safety of employees and visitors.

- **Staff Review:** No site lighting will be found on site

10.394 - The proposal avoids, to the extent feasible, impact on steep slopes, floodplains, scenic views, grade changes, and wetlands.

- **Staff Review:** The proposal is under review by the Conservation Commission.

10.395 - The proposal does not create disharmony with respect to the terrain and to the use, scale and architecture of existing buildings in the vicinity which have functional or visual relationship thereto. Within the B-L, B-VC, B-N, COM, OP, LI and PRP Districts, and any residential zoning district where the project in question occurs within the boundaries of a National Historic Register District, the Special Permit Granting Authority shall, if it deems the proposal likely to have a significant impact on its surroundings, be permitted to use the design principles and standards set forth in Sections 3.2040 and 3.2041, 1) through 9) to evaluate the design of the proposed architecture and landscape alterations. Within the B-G and abutting B-L districts, and for any Town project within any district, the provisions of Section 3.20, Design Review, shall remain in effect.

- **Staff Review:** This finding is not applicable to the project.

10.396 - The proposal provides screening for storage areas, loading docks, dumpsters, rooftop equipment, utility buildings and similar features.

- **Staff Review:** This finding is not applicable to this development.

10.397 - The proposal provides adequate recreational facilities, open space and amenities for the proposed use.

- **Staff Review:** This finding is not applicable to this development.

10.398 - The proposal is in harmony with the general purpose and intent of this Bylaw, and the goals of the Master Plan.

- **Staff Review:** In Section 6, Natural and Cultural Resources, of the Amherst Master Plan it includes specific objectives to help support environmental awareness. In Objective NC.4 it states the following:

Sustainable environmental practices should be shared with the public and actively promoted to foster a sense of stewardship in the community.

Staff believes the proposed solar array is promoting a more sustainable community by constructing a renewable energy source, and therefore meets the intent of the Master Plan.

POSSIBLE CONDITIONS OF APPROVAL

1. Allow the construction of a solar array project located at 191 West Pomeroy Lane, map/parcel 19D/10, which consist of 15,026± solar modules, occupying a footprint of approximately 16.4 acres within the approximately 22.7 acre fenced area.
2. The applicant shall follow the approved plans, including:
3. Any substantial alteration or deviation from the approved plans shall require the applicant to return for additional review at a Public Meeting with the ZBA.
4. The site shall not be used for the storage of vehicles, equipment, product or any other unauthorized material that was not shown on the site plan.
5. All previous approvals and conditions authorized by the Conservation Commission on (OOC DEP #XXX-XXXX), shall be adhered to at all times.
6. All tree removal shall follow the approved site plan, dated ~~Month XX, 20XX~~.
7. All disturbed ground shall be reseeded as to allow natural grasses to grow within the project area.
8. The submitted maintenance plan shall be followed at all times.
- ~~9. The solar energy systems shall not be constructed until evidence has been given to the Inspection Services that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer owned generator.~~
10. All structures associated with the solar energy system shall be removed within one (1) year of cessation of said use. Prior to issuance of a building permit for the solar energy system, the petitioner shall post and submit a bond or other financial surety acceptable to the Building Commissioner in an amount sufficient to cover the cost of demolishing and/or removing the structures in the event the Building Commissioner condemns the applicant's structures or deems it to have been abandoned or vacant for more than one year. Said amount shall be certified by an engineer, architect or other qualified professional registered to practice in the Commonwealth of Massachusetts with appropriate adjustments for general conditions and other fees associated with municipal work. In the event the posted amount does not cover the cost of demolition and/or removal, the Town may place a lien upon the property covering the difference in cost.
11. The solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Amherst Fire Department. All means of shutting down the solar photovoltaic installation shall be clearly marked with reflective signage. The solar photovoltaic installation owner or operator shall hold a meeting with the Amherst Fire Department regarding the solar disconnect procedure for this project.
12. Change of solar photovoltaic installation owner or operator shall require a new management plan be submitted and reviewed by the Zoning Board of Appeals at a public meeting.

13. The existing access drive shall have a minimum width of XX feet. All ruts shall be filled in with gravel to make passable as necessary. The access drive shall be maintained to allow sheet flow to drain across the access drive.

Conditions recommended by Planning Board:

14. In the event that the solar energy facility ceases to function for its intended purpose, that the Decommissioning Plan be followed;
15. That the Decommissioning Plan include a requirement that trees be planted to replace the trees that are removed for this project (approximately 198 trees are proposed to be removed);
16. That a Construction Logistics Plan be submitted prior to the issuance of a Building Permit, including information about how construction equipment and vehicles will use West Pomeroy Lane.

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