

APPLICATION FOR SPECIAL PERMIT

Solar Energy Facility

Location:

0 Shutesbury Road, Amherst, MA

Parcel IDs:

9B_11, 9B_12, 9D_27

Town:

Town of Amherst

4 Boltwood Ave

Amherst, MA 01002

Applicant:

ASD Shutesbury MA Solar LLC

c/o Amp Solar Development, Inc.

518 17th St., Suite 950 Denver, CO 80202

August 31, 2022

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1.0 Project Narrative

1.1 Introduction

ASD Shutesbury MA Solar LLC (the “Applicant”) is applying for a special permit for a Solar Energy Facility (the “Project”) on three contiguous parcels off Shutesbury Road in Amherst. The Applicant is a project company of Amp Solar Development, Inc., which is the development branch of Amp Energy (collectively, “Amp”). Amp is an owner, operator, and developer of clean energy assets and has significant experience with, and a market focus on, Massachusetts community scale solar arrays – such as the proposed Project. Amp is currently successfully working with the town of Amherst on the Hickory Ridge solar project (which Amp will own and operate), including consistent communication and coordination with Town officials.

WD Cows, Inc., Land Company (“Cows”) is a 9th generation family business that has been sustainably managing tree farms and improving real estate since 1741 from its North Amherst Home Farm. Cows has owned the project parcels dating back to the mid-19th century. The frontage lots to the northwest of the site were sold for housing purposes in the 1970’s and 1980’s. A national conservation leader, Cows accomplished the largest private conservation project in MA history in 2011 and has since conserved 5,500 total acres in Leverett, Shutesbury, Pelham and Amherst. Cows is committed to fighting climate change by both conserving managed forest and farmland and by generating renewable energy from the sun to replace fossil fuel power sources. Cows strives to commit three percent of its land base to hosting solar farms and, furthermore, conserving 10 times the acreage of what is committed to solar.

The Applicant hosted abutter Zoom meetings for the site on March 23, 2021 and on March 25, 2021 as well as carried out a site walk of the property with Amherst’s Director of Conservation and Development, project abutters, and Cows on June 7, 2021 to solicit initial feedback. Following these outreach efforts, the Applicant submitted a Special Permit application to the Zoning Board of Appeals on September 30, 2021 and appeared before the Conservation Commission on October 27, 2021 and November 11, 2021.

The Applicant withdrew its application on November 24, 2021 in order to conduct additional environmental due diligence as requested by the Conservation Commission. Among other items, the Conservation Commission expressed concern about the location of the original access road, which would have widened the existing logging road into the site, but is located within a 100’ wetland buffer zone (“buffers”), as well as stating a need for soil and infiltration surveys on the parcel.

The Applicant conducted due diligence efforts after withdrawing its application, including commissioning a geotechnical soil and infiltration report as well as a wetland and road delineation performed by a wetland scientist. The Soil and Infiltration Report can be found in **Exhibit 1.1** and was used to inform the stormwater management design for the project. The

Applicant has moved the access road entirely out of the buffer zone in question and proposes no disturbance in any resource area buffer zones elsewhere on site. Applicant carried out a site walk with the Conservation Commission Wetlands Administrator, Water Supply Protection Committee Chair, Hughes Environmental Consulting, and Cowls on March 24, 2022 to validate select site wetland details.

The Applicant is proud to report on the environmental benefits of this project. According to information and calculators provided by the United States Environmental Protection Agency, and after comparing the project's projected electricity output against publicly available ISO-NE energy consumption data, this project is expected to result in a total CO₂ reduction benefit of about 4,660¹ tons in its first year of operation, which is equivalent to taking over 910² cars off the road. Over the 20-year contracted lifetime of the Project it is estimated to result in approximately 47,900³ tons of net CO₂ reduction and produce enough energy to power around 1,520⁴ Massachusetts homes annually, on average⁵. The Project is expected to produce power for between 35-40 years, which will see additional positive benefits not captured above.

1.2 Site and Array Description

The Applicant is proposing an approximately 9.35MW_{DC} (4.4 MW_{AC}) ground-mounted solar photovoltaic installation with a battery energy storage system (the "Project"). The total area of project disturbance will be 41.4 acres to be located on an approximate 102.48-acre site covering three parcels of land owned by W.D. Cowls, Inc., identified as assessor's parcels 9B_11, 9B_12 and 9D_27 (the "Site"). Within these 41.4 acres, the array footprint itself will be about 19.95 acres – including about 10.3 acres of panels, 0.82 acres of gravel road, 0.28 acres of existing gravel path, and an equipment pad occupying 0.22 acres. Total lot coverage on site totals to 11.81 acres or about 11.52% of the parcel.

The Site is located in the Outlying Residence "R-O" zoning district where the Project is allowed by a Special Permit from the Amherst Zoning Board of Appeals pursuant to its Zoning Bylaw and within the context of MGL c. 40A, § 3. The closest neighboring residential property line (which is to the north and west) is 274 feet in distance to the closest point of the solar array and 211 feet from the limit of disturbance. In all other directions the neighboring properties are

¹ Solar CO₂ Reduction (First Year) = [Production in the First year (MWh)] x [Annual Average Marginal Emission Factor (lbCO₂e/MWh)] / 2000. Source for Marginal Emission Factor: [EPA eGrid Summary Tables 2020 \(https://www.epa.gov/system/files/documents/2022-01/egrid2020_summary_tables.pdf\)](https://www.epa.gov/system/files/documents/2022-01/egrid2020_summary_tables.pdf) (this is the latest data published by EPA). The eGrid subregion acronym: NEWE (this project falls in this jurisdiction). The marginal (non-baseload) emission factor was used as advised by the [GHG protocol \(https://ghgprotocol.org/scope_2_guidance\)](https://ghgprotocol.org/scope_2_guidance).

² According to [EPA Greenhouse Gas Equivalencies Calculator \(https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator\)](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator), a gasoline-powered passenger vehicle emits 5.1 tons of CO₂ a year

³ Calculated by totaling the Solar CO₂ Reduction for each year. Assuming a 5% reduction in the marginal emission factor every year.

⁴ According to [EIA 2019 Average Monthly Bill- Residential \(https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf\)](https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf), a home in Massachusetts, on average, consumes 6,888 kWh of electricity every year.

either farms, vacant woodland with a perennial stream (in Pelham to the east), or other W.D. Cowls property.

Currently, the Site is an industrial working forest, active in part since 1844. The Project has been specifically designed to minimize project visibility from neighboring residences in all seasons. This is accomplished primarily by leaving over 200 feet of existing forest between the property lines of adjacent residential neighbors and the solar array while establishing a dedicated visual buffer zone to further mitigate any potential visual impact.

Please see the submitted Site Plans for a visual representation of the siting of the Project and the surrounding areas. The ASD Shutesbury MA Solar LLC Site Plan can be found in **Exhibit 1.2**.

1.3 Site Conditions

The Site gently slopes north to south away from abutting residences and sits approximately between 300 and 435 feet above sea level. The terrain at the site entrance slopes downhill to the southwest. As you move east into the array footprint the slope turns downhill to the southeast. The remainder of the array footprint as you head south generally slopes downhill to the southeast.

The Site contains several intermittent streams and bordering vegetated wetlands. These features drain into Adams Brook, a perennial stream that runs outside the Project to the east and south. Very small portions of the 200-foot riverfront for Adams Brook overlap the eastern and very southeastern portions of the Project's parcel property line. The 200-foot riverfront setback will not be disturbed.

A WPA Form 4B, Order of Resource Area Delineation, was approved by the Amherst Conservation Commission in August 2020. Those confirmed wetland delineations can be found on the plan set. The site does not contain any FEMA Special Flood Hazard Areas.

The entire Site is a working forest with a logging road running through the property. The medium growth industrially managed forest consists of a mix of both deciduous and coniferous tree species. It contains two potential vernal pools that are currently uncertified, both of which are provided a 100-foot no-touch buffer along with additional construction period stormwater installations for safe measure. The property is not in any NHESP overlays.

The Order of Resource Area Delineation can be found in **Exhibit 1.3A**, the Wetland Delineation Survey can be found in **Exhibit 1.3B**, and the Natural Resources Inventory can be found in **Exhibit 1.3C**.

1.4 Site Access

Access for the Project will occur via the north parcel's (9B-11) frontage between 187 and 201 Shutesbury Road. When the project parcels were sold, two points of access were maintained for future use by Cows. The Applicant has chosen the proposed access to minimize overall environmental and neighbor impact. Access to and around the Project has been designed to the standards provided by the Amherst Fire Prevention Officer.

The access road will be a gravel road 15 feet in width. At the site entrance the access road will be below 5% grade across the first 90 feet, and no more than 8.25% grade throughout the rest of the site. The access road will allow for full weight vehicles to drive to the equipment pad location. Grass access lanes of approximately 25 feet in width serve the perimeter of the array between the modules and the perimeter fence. Temporary access roads will be established for the phased clearing and construction: a similar process to the normal course of action for the site, where every 20 years such temporary access roads are established to facilitate logging activity on-site. The temporary access roads will be compacted soil supplemented with swamp mats and other temporary stabilization features.

The entrance apron at Shutesbury Road will be paved to a depth required by the Department of Public Works based on final approved designs. Details for the access road can be found in the ASD Shutesbury MA Solar LLC Site Plan in **Exhibit 1.2**.

2.0 Performance Standards

2.1 Visibility and Screening

The Project is fully surrounded by woodland which serves as an effective visual buffer. The closest public way is Shutesbury Road, which is also where the access road for the Project originates. Between Shutesbury Road and the array is the access road, wooded residential lots, and wooded array buffer.

The Project access driveway and public utility poles will be visible from Shutesbury Road. All other elements of the Project will not likely be visible from Shutesbury Road after vegetative screening is installed. The road turns upon entering the property, which will break up the sight line when viewed from the entrance, and trees will properly screen the Project. The Applicant has conducted a Glare Study to assess if this would have impact on abutters, which can be referenced in **Exhibit 2.1**. No issues of potential glare were identified.

To be as courteous as possible for the neighbors to the north, who have less wooded buffer than those to the west, the north boundary of the array is screened by 154 Arborvitae "Green Giant" evergreens. The proposed landscape plan is two rows of staggered plantings, spaced 10 feet apart. This additional screening will ensure that the Project is not visible during the winter months when tree cover is at a minimum. Newly planted evergreens will be 5 feet in height at

the time of planting and are expected to reach 25-30 feet tall at maturity. More detail regarding the landscaping plan can be found on page C2.02 of **Exhibit 1.2**, the Site Plan.

2.2 Lot Coverage

The design is compliant with the Dimensional Regulations for Lot Coverage and Building Coverage per section 3.257 of the Zoning Bylaw. Maximum Lot Coverage is below the 15% limit and Maximum Building Coverage is below the 25% limit. Lot Coverage Calculations can be found in **Exhibit 2.2**.

2.3 Vegetation Management

The entirety of the array footprint will be pollinator meadow comprised of native plant species suitable for the ground conditions and location. Fertilizer will only be necessary to establish the pollinator meadow in areas that require seeding. No long-term use of fertilizer is needed to maintain the vegetation.

Mowing will be generally limited to once a year, although mowing in the earlier years post-construction is more frequent as the pollinator meadow becomes established. The pollinator species mix does not achieve the bulk and height of grasses, and therefore can be mowed in a reduced frequency, or ideally not at all, while not reaching a height that interferes with the array.

Among other permanent and temporary stormwater features, a temporary seed mix will be used to help stabilize the disturbed surface in the interim as the Project is being constructed before the establishment of the pollinator meadow.

2.4 Wildlife

The solar array, equipment pad, and energy storage systems are surrounded by a 7-foot tall chain link fence, as is required per electrical code. This fence will include a 6-inch gap underneath that will permit the passage of small animals to allow their traverse of the array and wildflower meadow area.

The intent of the pollinator meadow is to provide a variety of pollinating plants to sustain the local bee population. Therefore, a more resilient local bee population can help increase the effectiveness of the bee's pollinating role in the natural vegetation of the surrounding ecosystem.

There are no NHESP inventoried areas of Estimated Habitat of Rare Wildlife, Priority Habitat of Rare Species, or Area of Critical Environmental Concern on the Site. More details regarding the plant species that exist on site can be found in the Natural Resources Inventory in **Exhibit 1.3C**.

2.5 Land Clearing and Soil Erosion

The area hosting the array will be cleared of the existing trees, stumped, and transitioned to pollinator meadow. That area is enclosed inside the fence and includes most of the access road, the equipment pad, and energy storage system.

Area outside the fence, but before the limit of clearing, will be cleared of tall vegetation but not stumped or transitioned to grass. It will return to a successional vegetation mix and woodland habitat over time, although it may be managed to limit tree height. Limited clearing occurs outside all portions of the 100-foot wetland buffer across the site. Applicant has proposed to offer a portion of the cleared lumber to serve as wood stove feedstock for those most in need during winter months. It plans to investigate this option with the town further if this use for certain residents or groups would be desirable.

The Site will be cleared and stabilized in 5 phases to prevent sediment runoff and impacts to the abutting wetlands. The phased clearing will start at the northwestern part of the site near the access road entrance and work towards the southeast. As each phasing section is cleared, temporary stabilization features will be installed such as straw bales, silt fences, compost filter socks, diversion berms, and detention ponds. The stormwater design implementations of detention ponds and swales will be constructed in each section after completion of clearing in a timely manner. This will minimize the amount of time between the surface disturbance and the installation of permanent stormwater features. Details of the project phasing plan can be found on page C-1.04 of the Site Plan in **Exhibit 1.2** and the Phasing Narrative.

There will be no topsoil or subsoil removed from the Site. Soils and woody debris stockpiled during construction will be redistributed entirely on the Site. The site will also have designated snow stockpiling locations outside of 100-foot wetland buffers should the site require snow removal.

The maximum slope of the access road is just above an approximate 8% grade. The access road will require grading in a few locations to achieve the maximum slope threshold.

A portion of the northwestern section of the array will require grading to efficiently utilize the parcel. This grading is necessary to minimize any stormwater runoff from the existing hillside that closely borders the access road. Grading will take place in various areas of the site to bring the natural topography to a more suitable grade for the solar racking system. Please refer to page C3.01 and C3.02 of ASD Shutesbury MA Solar LLC Site Plan in **Exhibit 1.2** for the detailed grading plan.

The Applicant has consulted with a hydrogeologist to address the Project's impact on groundwater other nearby water resources. The results state that the Stormwater Management Plan for the Project will properly manage runoff from the site in accordance with MassDEP stormwater policy. Additionally, it validates that maintaining 100-foot undisturbed buffer zones

around wetland resource areas and surface water bodies will provide shade as well as evaporative cooling to these areas, stating that there will be no significant temperature change to Adams Brook on the adjacent parcel. Results further conclude that the Project will not significantly or negatively alter rates of groundwater recharge or quality in the local area or for private wells. For the full Water Quality Memo please see **Exhibit 2.5**.

2.6 Roads and Emergency Access

The Project's primary access will also serve as its emergency access. The access road has been designed within the standards provided by the Amherst Fire Prevention Officer. The proposed 15-foot access road will provide site access for project construction and long-term operations. It will consist of a geotextile fabric, 8 inches of gravel sub-base M1.03.1, and 4 inches of gravel base M1.03.0.

There is a 15' wide compacted and vegetated maintenance access path proposed from the end of the gravel access drive to Infiltration Basin 3. It will be approximately 545' long. This is typically more than sufficient for solar array construction and use, and the road depth will be increased if ground conditions require it to bear the weight of tri-axle vehicles.

The Project gate will be locked with a Knox box, or similar design, and keys or a combination will be provided to various Amherst departments as needed. The end of the access road, which connects to the equipment pad and battery storage systems, will feature a hammerhead turnaround with a turning radius sufficient for fire trucks.

At the direction of the Fire Prevention Officer, the battery storage system and its associated concrete pad will include FDC dry pipe access. The dry standpipe connection can flood the segment with water at a rate of 250 gallons per minute. This dry pipe access will be connected to the containers' sprinkler heads and will let the fire department respond while maintaining safe distance to the compromised container.

USP hazard permanent signage shall be displayed at the site entrance gate and will be 3' x 3' in size. Amp will coordinate with the Amherst Chief Fire Prevention Officer, to host a first responder training that is specific to this Project.

2.7 Utility Connections

Utility connections at the street will be above ground on utility poles as required by the electric utility, Eversource. Eversource will be installing utility owned and operated public utility poles from Shutesbury Road into the Site along the access road. Eversource will be provided an easement for those public utility poles by the property owner. The point of interconnection is along the existing 17K7 Eversource feeder, 2.6 miles from the Amherst 17K substation. From those poles at the point of common coupling, the electrical connection will run underground to the equipment pad, along the access road.

Interconnection details can be found on page C2.01 of the ASD Shutesbury MA Solar LLC Site Plan in **Exhibit 1.2**.

2.8 Lighting

No lighting is proposed for the Project.

2.9 Signs

Signs alerting the public to the electrical hazard will be posted on the perimeter fence and electrical equipment. A sign containing contact information for the Amp, along with the Operations and Maintenance contact will be located at the Site access gate. The Proposed Signage Example can be found in **Exhibit 2.9**.

2.10 Noise

The only noise associated with the Project after construction is due to the operation of the battery and inverter equipment, each of which can be found in **Exhibit 3.10C** (BESS) and **Exhibit 3.10D** (inverter). These have extremely low sound profiles and are situated in the interior of the site, set back over 820 feet from the nearest residential structure. The approximate maximum expected noise level from the equipment at the nearest property line will be 30dB. This noise level is about that of a whisper, and it is less than the typical ambient noise levels of a forest. The ambient noise levels at abutters' property lines will not increase due to the operation of this equipment. Please reference the Applicant's Sound Map in **Exhibit 2.10**. An additional Sound Study was performed by Modeling Specialties, Inc. in November 2022, the findings of which can be reviewed in **Exhibit 2.11**.

During the construction period, noise levels will temporarily be elevated as racking posts are piled into the ground. Piling activities are expected to last 3 months.

2.11 Hazardous Materials

The array contains no hazardous materials as defined in 310 CMR 30.000. As a matter of further precaution, the electronic equipment and battery energy storage system are built with basins to internally capture any potential discharges.

2.12 Stormwater Management

The Project has been designed to control Project runoff and complies with Massachusetts Stormwater Management Standards. During construction Amp will incorporate structural stormwater best management practices designed to manage flow rate and quantity of surface water runoff from the Project.

The Project's stormwater design includes stone diaphragm Best Management Practices (BMPs); conveyance swales, and infiltration basins. Stormwater management will ensure post-development peak flow rate from major storm events will not increase compared to pre-development conditions. Locations of the proposed stormwater design features are shown in the Site Plan in **Exhibit 1.2**. The Stormwater Management Report can be found in **Exhibit 2.12A**. The Stormwater Pollution Prevention Plan (SWPPP) is located in **Exhibit 2.12B**.

2.13 Operation and Maintenance

During long term operation, the Project would be unattended with no permanent staff regularly on-site. Most monitoring is performed remotely, and only occasional maintenance visits are required for major electronics component inspections, vegetation management, and snow plowing.

The areas surrounding the inverters and switchgear, located centrally inside the Project, will have adequate space for transit and parking of all sizes of vehicles during and after construction.

Preventive maintenance would entail panel cleaning, inverter servicing, and general system inspection. Operations and maintenance efforts are primarily composed of vegetation maintenance, snow plowing and stockpiling after significant winter weather events, and equipment inspection. Chemicals are not used for module cleaning or long-term vegetation control.

3.0 Submission Documentation

3.1 Application Form and Fee

The Amherst Zoning Board of Appeals Application can be found in **Exhibit 3.1A** and the Management Plan Form in **Exhibit 3.1B**.

3.2 Dimensional Requirements

Setbacks: All Project components will comply with the 25-foot minimum setback from the parcel boundaries; as is customary, the access road will exist within the setback leading into the Site. The access road is not a structure, thus such a setback requirement as inapplicable. The applicant proposes placing the chain link fence no closer than 100 feet from delineated wetlands in certain locations. See the Site Plan in **Exhibit 1.2** for details.

Height: The height of all project components, including the racking system, solar modules at a tilted angle, energy storage containers, and electrical equipment will comply with the 35-foot height limit according to Table 3 Dimensional Regulations of the Zoning Bylaw for the R-O district. The high edge of the installed modules is approximately 16.5 feet from the ground and low edge is 3 feet from the ground. This height will vary slightly throughout the site depending on the racking table location relative to the site topography.

Floodplain: The project development is not located within a 100-year floodplain and will comply with section 3.13 of the Zoning Bylaw.

Fence: The fence height and siting are in compliance with the zoning bylaw.

Access Road Grade: The access road slope is in compliance with the Zoning Bylaw. The road's grade does not exceed 5% within the first 50 ft from the public right of way and at no point does the road exceed 10% grade.

3.3 Project Proponents

Amp Solar Development, Inc is a global renewable energy developer with over 7 Gigawatts of assets in operation and development. The US branch of Amp is headquartered in Denver, CO. Amp currently owns and operates distributed scale solar projects in Massachusetts, New York, and Minnesota.

ASD Shutesbury MA Solar, LLC is the Applicant and project company for this specific development. The project company has executed site control, holds the interconnection rights, and is assigned the permits. Amp intends to own and operate this asset for the duration of the project's lifetime.

Applicant Contact:

Amp Solar Development, Inc.
ASD Shutesbury MA Solar, LLC
Contact Person: Cory McCandless
Telephone: (207) 522-5523
Email: cmccandless@amp.energy
Address: 518 17th Street, Suite 950, Denver CO 80202

W.D. Cows, Inc. Cows is a 9th generation Amherst-based family business that has sustainably managed timberland across Western Massachusetts since 1741.

Landowner Contact:

W.D. Cows, Inc.
Contact Person: Shane Bajnoci, Vice President of Forest Management
Telephone: 413-539-1741
Email: forestry@cowls.com
Address: 134 Montague Rd, Amherst, MA 01002

3.4 Project Representatives/Staff

Tom Reidy is a licensed attorney in Massachusetts for Bacon Wilson, P.C. and is based in Amherst. He is the legal representative of W.D. Cows and Amp.

Verdanterra, LLC. is an environmental, land survey, and engineering consulting firm, driven by innovative professionals. Verdanterra created the civil and stormwater designs as well as the decommissioning estimate and lot coverage calculations.

Hughes Environmental Consulting Hughes Environmental Consulting (HEC) provides environmental consulting services including wetland delineation, inland and coastal permitting, preparation of NPDES SWPPPs for construction projects, SWPPP inspections, and project planning.

LEC Environmental Consultants, Inc. LEC is a multidisciplinary ecology-based environmental consulting firm that provides an interface between natural sciences and land use management. LEC conducted the Natural Resources Inventory.

Northeast Geoscience, Inc. Northeast Geoscience is a firm that specializes in water supply and environmental consulting for both the public and private sector. Northeast Geoscience authored the Water Quality Memo.

Amp Team Representatives

Andrew Chabot – Director, Development
Cory McCandless – Associate, Development

3.5 Project Installer

Amp will undergo a bid process to select an engineering, procurement, and construction (EPC) firm to construct the project if permitted. The EPC firm will reach out directly to the building and electrical inspectors upon permit approval to coordinate the building and electrical permits.

3.6 Prior Development Examples

- Connecticut River LLC** - 5.5 MWac, 7.06 MWdc, Solar array located in Westport, MA
- Hamilton Brook LLC** - 4.5 MWac, 6.44 MWdc, Solar array located in Westport, MA
- Box Pond LLC** - 2.6 MWac, 3.24 MWdc, Solar array located in Mendon, MA
- Bass River LLC** - 2.0 MWac, 2.78 MWdc, Solar array located in Westport, MA
- Joe Jenny, LLC** - 1.5 MWac, 2.04 MWdc, Solar array located in Oxford, MA
- Buckmaster Pond LLC** - 1.0 MWac, 1.42 MWdc, Solar array located in Dover, MA

3.7 Certified Abutters List

See **Exhibit 3.7** for the Request for a Certified List of Abutters from the Amherst Board of Assessors.

3.8 Site Control

See **Exhibit 3.8** for the executed Landowner Authorization.

3.9 Site Plan

The Site Plan can be found in **Exhibit 1.2**.

3.10 Major System Components

Equipment manufacturers and models are subject to change due to product availability, procurement constraints, and utility interconnection study results. Current selections are detailed within the Single Line Diagram in **Exhibit 3.10A**, Panel Module Specification Sheet in **Exhibit 3.10B**, Battery Storage Specification Sheet in **Exhibit 3.10C**, Inverter Specification Sheet in **Exhibit 3.10D**, Racking System Specification Sheet in **Exhibit 3.10E**, and Converter Specification Sheet in **Exhibit 3.10F**.

3.11 Grading Plan

The grading plan sheet can be found within the Site Plan located in **Exhibit 1.2**.

3.12 Hours of Operation

The facility will be capable of discharging electricity 24 hours daily, although primary operations are expected to be during daylight hours and the several hours after sunset.

Construction operations are proposed to take place during permitted hours, and only as authorized by the building inspector in the unlikely event of an emergency. Deliveries will occur during the permitted hours and are subject to a traffic management plan that would prevent out of hours deliveries. No idling will occur on public roads. Deliveries and traffic movements will be more frequent at the start of the project and decline as the Project approaches completion.

Initial site work will last approximately 4-6 months while the site undergoes clearing, grubbing, stabilization and the installation of the access road, detention basins, and stormwater management features. Construction of the solar farm will take approximately 6-8 months with potential overlap in civil work and solar installation. Deliveries will take place primarily within the first 2-3 months.

During regular year-to-year operations there are no employees regularly on site. Periodic inspections and vegetation management will take place and might average one visit per month to the array at its peak.

3.13 Utility Notification

Applications were submitted to Eversource West (formerly WMECO) in July of 2019 for interconnection to the existing 13.8 kV Amherst 17K7 Feeder. This point of interconnection is

located at approximately 42°24'12.27"N, 72°29'29.42"W on Shutesbury Road at the site's entrance.

The project is undergoing a Dynamic Study with the utility, Eversource, which is the subsequent step to an executed Interconnection Services Agreement (ISA). The ISA will detail the +/- 15% system upgrade costs in addition to a preliminary design and construction schedule. Upon Amp's payment of the first 25% of the ISA costs, Eversource will begin the detailed engineering design. Construction of the utility upgrades will not commence until the ISA is paid in full.

For proof of active status with the utility, the executed Eversource Interconnection Service Agreement can be found in **Exhibit 4**.

3.14 Stormwater Management Plan

The Stormwater Management Report can be found in **Exhibit 2.12A**.

3.15 Operations and Maintenance Plan

The Operations and Maintenance Plan can be found in **Exhibit 3.15**.

3.16 Decommissioning Plan and Agreement

The Draft Decommissioning Fund Agreement document can be found in **Exhibit 3.16A**. Amp expects the document to evolve during the Town's review and suggests a final version's execution be a condition of receipt of the building permit. The associated decommissioning estimate was created by Verdanterra, who has based its estimate off other town-accepted estimates for solar decommissioning in Amherst. This Decommissioning Estimate can be found in **Exhibit 3.16B**.

3.17 Liability Insurance

The Certificate of Insurance can be found in **Exhibit 3.17**.

3.18 Historic Resources

No Massachusetts Historical Commission (MHC) Inventoried Properties were identified within the Site. The Project Notification Form (PNF), found in **Exhibit 3.18A**, was submitted to the MHC on April 26, 2021. The MHC responded to the PNF on May 10, 2021, found in **Exhibit 3.18B**, and requested plans of development. Upon receipt of plans of development, the MHC requested a reconnaissance survey on June 11, 2021, which can be found in **Exhibit 3.18C**. The requested archaeology survey began on September 8, 2021 and concluded on June 6, 2022. The survey confirmed that the potential for Historic period archaeological sites in the project area is low with the results accepted by MHC on August 18, 2022 and included in **Exhibit 3.18D**.

3.19 Recreation and Open Space Amenities

This Project will not feature any formal recreation or open space amenities.

3.20 Impact Analysis of the Natural and Built Environment

The Natural Resources Inventory can be found in **Exhibit 1.3C**.

3.21 Traffic Impact Report

Deliveries will primarily take place within a two-month period with the heaviest construction activities during a six-month period. Traffic and deliveries to the project site will take place during permitted hours only with no idling or overnight stays allowed. First delivery of the day usually takes place around 7:30am with the last delivery around 2:00-3:00pm.

Approximately 34 truckloads of solar modules are expected to be delivered overall for the project, which may average a rate of 3-4 truckloads per day. There will be 10 truckloads of racking material staggered over the first few weeks as foundation posts and hardware, and racking itself are delivered on flatbeds. Following the first 3 months of construction, traffic will consist of staff vehicle movements with fuel and consumables as needed.

The site is subject to a 5mph speed limit to prevent accidents and to ensure that engine noise is constrained. No waiting on the public roads will be allowed and parking will be made available on-site. The entrance to the site will be inspected regularly and swept clear of debris as needed. Amp will provide a traffic detail as required or as necessary for construction deliveries.

3.22 Specific Findings Required

The Specific Findings Required for a Special Permit according to Section 10.38 of the Zoning Bylaw can be found in **Exhibit 3.22**.