

Warrant Article #__ : Data Centers

To see if the Town will amend the Town of Shutesbury Zoning Bylaw by amending Section 3.1-1: Use Table; Section 8.13; and Section 13.2: Definitions; or take any other action related thereto.

3.1-1 Use Table

Amend Use table by Adding Data Centers to Industrial Uses Category

Industrial Uses	RR	FC	TC	LW
Data Centers - Micro	SPR – P	SPR – P	SPR – P	SPR – P
Data Centers – Small	SP-P	SP-P	N	N

13.2 Definitions

Amend Definitions section by adding the following

Data Center: A facility housing computers/servers, data storage systems, networking systems, electrical backup systems, computing resources, cooling systems, and/or security systems that is used to process, store, and/or disseminate large amounts of data and applications, and that the aforementioned data processing and management is the principal use. Data Center design and performance shall comply with Sections 3.1-1 and 8.13-3 of this bylaw.

8.13: Data Centers

Amend existing 8.13 with the following

8.13-1 Purpose

The purpose of this bylaw is to provide reasonable regulation that strikes a balance between protecting the public health, safety, or welfare of Shutesbury residents and reasonable development that supports the vitality of the community.

8.13-2 Applicability

- A. This Section 8.13 applies to all Data Centers defined in 3.1-1 Use Table, whether newly constructed or modified.
- B. To the extent necessary to protect public health, safety and welfare, and to the extent permitted by law, the regulations set forth in this section, shall apply to uses protected under MGL Ch 40a Sec 3.
- C. Upon written request by the applicant, the Planning Board may waive or modify any site plan review or special permit requirement of this Section 8.13 by the same majority vote required for the permit itself upon written findings included in the permit if:
 1. Special circumstances of the site, its surroundings, or the proposal negate the need for imposition of the requirement, or the objectives of this section 8.13 may be met in alternative manner; AND
 2. Such a waiver or modification will not derogate from the public purposes and intent of this zoning bylaw; AND

3. Such a waiver does not negate the provisions of Section 8.13-4(A)(1) below.

In the case of a special permit, such waiver requests must be made by the applicant prior to the close of the public hearing. An affirmative or negative vote under this paragraph 8.13 2C shall not be construed as an approval or disapproval of the permit sought.

8.13-3 Design and Performance Standards

A. Size/Floor Area

Permitted data centers shall be:

- A Micro Data Center which is 150 square feet or less in Floor Area, inclusive of principal and accessory structures
- A Small Data Center which is greater than 150 square feet and no greater than 5,000 square feet in Floor Area, inclusive of principal and accessory structures

Data centers over 5,000 square feet in Floor Area are prohibited.

B. Cooling

A data center shall not:

1. Withdraw onsite groundwater or surface water for cooling purposes.
2. Use toxic or hazardous cooling liquids in quantities that would pose a risk to groundwater or surface water if released to the environment.
3. Use refrigerants or heat-transfer liquids that contain PFAS chemicals.
4. Cause air temperature at the property line to be warmer than the anticipated average ambient air temperature such that it creates negative impacts for abutter or the natural environment

C. Backup or Emergency Power Generator Systems

1. Backup or emergency power generator systems shall avoid or minimize direct negative impacts to people or the natural environment. These direct negative effects include but are not limited to noise, air pollution, water contamination, and fire.
2. Diesel- and gasoline-powered generators are prohibited.
3. Backup or emergency power generator systems shall comply with the Massachusetts Fire Code, Wiring Code, and all other relevant regulations.
4. Backup or emergency power generator systems shall comply with noise restrictions as established in subsection 8.13-4C(1) of this bylaw.
5. Backup or emergency power generator systems using other fuels (eg. propane or natural gas) shall comply with air quality restrictions as established in section 8.13-4C(2) of this bylaw.

The Board retains the authority to review and approve technologies that are not anticipated by the Board or in this Bylaw.

D. Electrical Storage and Uninterruptable Power Supply (UPS) Systems

1. Electrical Storage and uninterruptable power supply (UPS) systems used within data centers shall avoid or minimize direct negative impacts to people or the natural

environment. These direct negative effects include but are not limited to noise, air or water pollution, fire, and other disruptions to the surrounding environment

2. Electrical Storage systems and UPS shall comply with the Massachusetts Fire Code, Wiring Code, NFPA 855, and all other relevant regulations
3. Lithium Nickel Manganese Cobalt Oxide (NMC) based battery systems are prohibited. Applicants must consider battery technologies, including emerging technologies, that minimize the risk of fire, environmental contamination, or other negative effects.
4. If Lithium-ion batteries are used in a data center:
 - a. They shall be located in a separate, self-contained space that is either internal or external to the primary facility, and that provides for a firefighting and heat suppression response consistent with NFPA 855 and other relevant codes.
 - b. If a battery energy storage system is located external to a data center, the Planning Board may require a buffer that exceeds the requirements of NFPA 855. The buffer shall be between the battery(ies) and any combustible materials, including vegetation.
 - c. External electrical storage systems shall be located at least 100 feet from any drinking water sources, streams, lakes, ponds, wetlands or similar water bodies.
5. The total storage capacity of an electrical storage system for a data center shall not exceed the Tier 1 level established by the Department of Energy Resources or 250 kWh, whichever is less.
6. Electrical storage and battery systems shall comply with noise restrictions established in subsection 8.13-4C(1) of this bylaw.
7. The Board retains the authority to review and approve technologies that are not anticipated by the Board or in the Bylaw.

F. Lighting

During construction and operation, a Data Center shall comply with the requirements laid out in Section 8.12 (Lighting) of this bylaw.

F. Signage

Sufficient signage shall be provided to identify the owner of the data center and provide a 24-hour contact phone number. Signage at the perimeter, warning pedestrians is allowable. All other signage must comply with Section 8.4 of this bylaw.

H. Noise

Noise shall be minimized during construction and operation to protect public health, welfare, and quality of life of residents and businesses, and to minimize disturbance of wildlife. Noise, either episodic or continual, during both construction and operation, shall comply with Massachusetts DEP noise regulations, 310 CMR 7.10 and the Shutesbury Excessive Noise bylaw.

I. Visual Impacts

A Data Center shall minimize visual impacts including preserving natural vegetation to the maximum extent possible, blending in any external equipment with the surroundings, and adding vegetative buffers to provide an effective visual barrier from adjacent roads and driveways, and

to screen abutting residential dwellings. If deemed necessary by the Planning Board, the depth of the vegetative screen shall be 30 feet and will be composed of native trees and shrubs staggered for height and density that shall be properly maintained.

The owner/operator shall not remove any naturally occurring vegetation such as trees and shrubs unless it adversely affects the performance and operation of the Data Center. When possible, a diversity of plant species shall be used, with a preference for species native to New England. Use of exotic plants, as identified by the most recent copy of the “Massachusetts Prohibited Plant List” maintained by the Massachusetts Department of Agricultural Resources, is prohibited. Landscaping shall be maintained and replaced as necessary by the owner/ operator to comply with this bylaw.

J. Data and Utility Connections.

Electrical transformers, wires, or other utilities, backup, or data-related interconnections shall be constructed as required by the utility provider or to achieve the intended data services. Buried wires and connections are preferred unless either 1) required by the utility or contracted vendor, or 2) it is the Planning Board’s determination that burying wires will result in too great a disruption to the existing site, soils, water systems, etc.; in either case above ground installation shall be considered.

K. Access Driveways

Driveways shall be constructed to minimize finished width, grading, removal of stone walls or roadside trees, incompatible appearance from the roadway, and impacts to environmental or historic resources.

L. Hours of Operation

Construction or maintenance activities shall be limited to Monday to Friday and shall not occur between the times of 5:00 p.m. and 7:00 a.m., except for an emergency that would affect public safety or the integrity of the installation, following notification to designated Town officials.

8.13-4 Requirements

A. General Requirements

1. The construction and operation of Data Centers shall be consistent with all applicable local, state, and federal requirements, including but not be limited to:
 - a. Mass. Wetlands Protection Act (WPA)
 - b. Shutesbury General Wetlands Protection Bylaw and Regulations
 - c. Mass. Environmental Policy Act (MEPA)
 - d. Mass. Forest Cutting Practices Regulations
 - e. Mass. Endangered Species Act (MESA)
 - f. U.S. Endangered Species Act
 - g. National Historic Preservation Protection Act (NHPA)

Data Centers shall not go into construction until all local, state, and federal requirements have been met, all required approvals are issued, and documentation submitted to the satisfaction of the Planning Board.

2. All buildings, fixtures, and energy storage or backup systems associated with a Data Center shall be constructed in accordance with the Massachusetts State Building Code, the Massachusetts Fire Code, and the Massachusetts Electrical Code.

3. All plans and maps shall be prepared, stamped, and signed by a Professional Civil Engineer licensed to practice in the Commonwealth of Massachusetts.

B. Dimensional Requirements

1. Lot size

The size of a lot used for a Data Center, regardless of district shall be 90,000 square feet.

2. Minimum setbacks for Data Centers shall be:

- a. Front street setback: 75 feet
- b. Side and Rear Property line setbacks: 75 feet

3. Maximum Floor Area- Data Centers shall be no greater than 5,000 square feet in Floor Area, inclusive of all principal and accessory structures.

4. Maximum Height – the maximum allowable height for a data center in all districts shall be comply with section 4.2-1 of this bylaw, the Dimensional Table.

5. Frontage - Lots used for Data Centers shall have the required frontage on a public way stated in Section 4.2-1 and defined in this zoning bylaw.

C. Project Specific Requirements

1. Requirements regarding Air Pollution

All Data Centers must comply with Department of Environmental Protection regulations 710 CMR 7:00 and regulations established by the Shutesbury Board of Health.

2. Requirements regarding Noise

Measures shall be taken to ensure that noise, either episodic or continual, during both construction and operation, shall comply with Massachusetts DEP noise regulations, 310 CMR 7.10 and the Shutesbury Excessive Noise bylaw. The Planning Board may require a noise assessment to be conducted at the applicant's expense.

3. Requirements regarding Stormwater

Stormwater runoff from the property during construction and during operation shall not significantly increase from the volume or frequency prior to development, nor shall the pattern of stormwater distribution be significantly altered from patterns prior to development to protect water recharge, existing wells and to prevent flooding or erosion. Stormwater management systems should use natural designs including Low Impact Design (LID) and Best Management Practices (BMPs) as outlined in the Massachusetts Stormwater Handbook, whenever possible. Stormwater management systems shall be designed to

manage anticipated increased rain, extreme precipitation events, and changing ground conditions using estimates provided by the National Oceanic and Atmospheric Administration (NOAA).

Stormwater management systems shall be designed to prevent any potential contaminated water or runoff from entering onsite or adjacent drinking water sources including aquifers, streams, ponds, etc.

4. Requirements regarding Land Clearing, Soil Erosion, and Land Impacts

Prior to any site disturbance and construction, the limits of the work shown on the approved site plan shall be surveyed and clearly marked by a Professional Land Surveyor. Upon completion of the survey, the Professional Land Surveyor shall verify to the Planning Board, in writing, that the limit of work, as shown on the approved site plans, has been established on site.

During construction, an environmental monitor may be designated by the Planning Board, at the applicant's or owner's expense, to inspect the site during construction and after significant weather events; the monitor shall provide reports to the operator and Planning Board regarding erosion and stormwater impacts.

Clearing of natural vegetation shall be limited to what is necessary for the construction, operation, and maintenance of the Data Center. Grading that substantially disturbs the existing soil profile and structure beyond the footprint of the Data Center is prohibited.

The design shall minimize the use of concrete and other impervious materials to the maximum extent possible.

Locating Data Centers, including access driveways and any associated drainage infrastructure on original, pre-development grades in excess of 15% is prohibited.

5. Requirements regarding Land of Environmental Importance

Data Centers shall not be located on Land of Environmental Importance, which shall consist of:

- a. Permanently protected land subject to MGL. Ch. 184, §s 31-33
- b. Land designated as Core Habitat and Critical Natural Landscapes by the Natural Heritage and Endangered Species Program BioMap or its successor programs.
- c. Habitat of Potential Regional and Statewide Importance located on Massachusetts Ecological Integrity Maps by the Department of Environmental Protection.
- d. Priority Habitat as codified by the Massachusetts Endangered Species Act (MESA) that includes all state listed species of both plants and animals.

6. Requirements regarding Wetlands

- a. The applicant, if applicable, will prepare an Abbreviated Notice of Resource Area Delineation (ANRAD) that includes a wetland evaluation and map of the site for

submission to the Conservation Commission. A copy will be submitted to the Planning Board.

- b. In order to provide an adequate infiltration of stormwater runoff from a Data Center, ground alterations, such as stump removal, excavation, filling, and grading, or the installation of drainage facilities, access driveways, or other equipment integral to a data center, are prohibited within 100 feet of any wetlands or hydrologic features and 200 feet from any stream subject to the jurisdiction of the Shutesbury Conservation Commission and must be in compliance with the Shutesbury Wetlands Bylaw and Regulations.
- c. Following consultation with the Board of Health and the Conservation Commission, the Planning Board may impose conditions to contain and control stormwater runoff that might negatively impact identified wetlands or other hydrologic features even if the proposed work area is outside the jurisdiction of the consulted entities.

7. Requirements regarding Installation of Perimeter Fencing

Any perimeter fencing within winter sight of a public roadway, driveway, or abutting property existing at the time of the special permit application shall be designed to blend in with the surrounding environment, unless otherwise agreed to by the Planning Board.

8. Requirements regarding Unpaved Roads

If construction access is from a gravel/unpaved Town road, the applicant shall post a bond sufficient to fund the maintenance, repair, and restoration to the satisfaction of the Highway Department and the Select Board, of an unpaved Town road and associated drainage facilities used for construction access.

D. Safety and Emergency Requirements

- 1. The owner or operator of a Data Center shall provide a copy of the project summary, electrical schematic, site plan, or any other information requested to the Shutesbury Fire Chief, Police Chief, and Emergency Management Director.

The owner or operator shall cooperate with local emergency services to develop a written emergency response plan that is approved by the Shutesbury Fire Chief and provided to the Shutesbury Fire Chief, Police Chief, and Emergency Management Director. This plan shall include provisions for 1) appropriate firefighting/heat suppression tactics compliant with NFPA and Mass Fire Code, 2) adequate firefighting/heat suppression resources that are either on-site or reasonably accessible, and 3) containment infrastructure of runoff resulting from firefighting or heat suppression activities. At the request of the Fire Chief, or the Emergency Management Director, an Incident Action Plan may be required.

- 2. The owner or operator shall identify a person responsible for public and governmental inquiries throughout the life of the Data Center. Updated contact information shall be provided to the Town Administrator, Fire Chief, Police Chief, and the Emergency Management Director annually or within 14 days of any contact personnel or information

changes. Contact information shall include the contact's name, role in relation to the Data Center, email and work phone number. At least one 24 hour/7 day phone number shall be provided for emergencies.

3. Firefighting and heat suppression activities shall comply with best practices established by the National Fire Protection Association, including but not limited to NFPA 855.
4. Emergency response plans shall include provisions for avoiding the risk of surface and groundwater contamination resulting from firefighting and heat suppression activities.
5. The application of PFAS-containing agents for firefighting and heat suppression is prohibited, unless waived by the Planning Board
6. All means of shutting down the Data Center shall be marked for reference during an emergency response.

8.13-5 Required Documents

A. Required Documents for Application Submission

1. General Documentation.

The following information shall be provided:

- a. The name and contact information of any agents representing the project applicant.
- b. The name, contact information, and signature of the landowner.
- c. The name, contact information, and signature of the Data Center operator, even if the same as the landowner.
- d. The name, address, and contact information for the lead construction contractor the Data Center.

2. Site Plan

A Site Plan of the Data Center showing:

- a. All built facilities and equipment within the footprint of the data center
- b. Locations of wetlands and surface water resources
- c. Location of Land of Environmental Importance as noted in Subsection D of the Mitigation Section.
- d. Locations of vegetative plantings.
- e. Locations of stormwater management elements.
- f. Locations of existing historical or cultural elements including stone walls.
- g. Slope in relation to the installed structures
- h. Driveways and appurtenances including any electrical, energy and data storage structures
- i. Locations of abutting uses
- j. Locations of roads and existing trail networks

3. Blueprints or drawings of the Data Center signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts, showing:

- a. The proposed layout of the Data Center.
 - b. One- or three-line electrical diagram detailing installation, associated components, and electrical interconnection methods, with all Massachusetts and National Electrical Code compliant disconnects and overcurrent devices.
4. Site Control. The project applicant shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed Data Center.
5. Financial Surety. Applicants shall provide a form of surety, either through an escrow account, bond or otherwise, accessible to the Town of Shutesbury, to cover the cost of removal in the event that the Town must remove the Data Center or remediate the site to its natural preexisting or a developable condition, in an amount and form determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein. The project applicant shall submit a fully inclusive estimate of the costs associated with removal, with a breakdown of large cost categories, prepared by a qualified professional. The amount shall include a mechanism for calculating increased removal costs due to inflation.
6. Proof of Liability Insurance. Proof of liability insurance shall be provided to the Planning Board. Liability Insurance shall be in an amount satisfactory to the Planning Board
7. Proof of Compliance. The applicant shall submit to the Planning Board evidence of compliance with local, state, and federal permitting and procedures, as applicable. Submission of evidence for compliance or exemption, as relevant, will be required before construction of the Data Center may begin.
8. Materials. The Applicant shall provide a plan for handling all hazardous chemicals proposed to be located at the site in excess of typical household amounts. This includes associated Material Safety Data Sheets (MSDSs) and storage, handling, and disposal provisions.

A document shall be submitted stating that no PFAS shall be used on-site for cooling or fire suppression purposes, and when known, what components of the facility contain PFAS.
9. Operation and Maintenance Plans. The project applicant shall submit a plan for the operation and maintenance of the Data Center.
10. Noise Assessment. The applicant shall submit a noise assessment of the noise levels projected to be generated during construction and operation of the facility, including for electrical and data storage and backup systems; the assessment shall be completed by a qualified professional. Based on the noise assessment, a noise mitigation plan shall be submitted for construction and operation consistent with Massachusetts DEP Noise Control Regulation, 310 CMR 7.10; and a noise monitoring plan as it relates to residents

and wildlife consistent with state or national best practices.

11. Hydrology Report. A report by a qualified professional with demonstrated knowledge in hydrogeology or a similar field that provides the Planning Board with information regarding drinking water sources and recharge areas on site and within 400 feet of property lines of the installation.

8.13-6 Maintenance

The Data Center owner or operator shall maintain the facility in good working condition. Maintenance shall include, but not be limited to, painting, structural repairs, visual barriers including vegetation, and the integrity of security systems and lighting. Site access shall be maintained to a level acceptable to the Shutesbury Fire Chief and Emergency Management Director. The owner or operator shall be responsible for the cost of maintaining the Data Center and any access driveways.

8.13-7 Discontinued Operations

Any Data Center which is no longer functioning as permitted shall remove structures, systems, and infrastructure that are specific to the permitted use. Removal shall consist of the physical removal of

- All external, above ground electrical, data transmission lines
- Heat transfer systems
- Security barrier and lighting
- All solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.

The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations and electric lines in order to minimize erosion and disruption to vegetation. If, as part of the removal process, restoration of the site is required, this shall include stabilization or re-vegetation of the site to minimize erosion.

The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and shall submit a written plan for removal with timeline for review by the Planning Board. Any transfer of ownership prior to removal shall include the removal requirements outlined in this section and will apply to a new owner.

If the owner or operator fails to remove a Data Center in accordance with the submitted Removal Plan or is abandoned by the owner, the Town may enter the property to take actions for Removal as outlined in this section, at the owner's expense, drawing from the escrow account or upon the bond or other financial surety provided by the applicant.

8.13-8 Abandonment

Unless authorized by written approval from the Planning Board, a Data Center shall be considered to be abandoned if it is not operated as intended for a period of two years, or if it is designated a safety hazard by the Building Inspector or other qualified municipal official or Board (collectively, the Town). If the Town determines that a Data Center is abandoned, the owner shall be required to physically remove the Data Center within 90 days of written notice

from the Town. The owner shall have the right to respond to the written notice of abandonment within 30 days of such notice. If the owner can provide information to demonstrate that the Data Center has not been abandoned, the Building Inspector may withdraw the notice of abandonment. If the property owner fails to remove the Data Center in accordance with the requirements of this Section after 90 days of such notice and the Town has not withdrawn said notice, the Town shall have the authority to enter the property and physically remove the facility as outlined in 8.13-8 at the owner's expense.

8.13-9 Severability and Conflicts

The invalidity of any section or provision of this bylaw shall not invalidate any other section or provision thereof. If any provisions of this bylaw are found to be in conflict with provisions of other town bylaws, the provisions of this bylaw shall supersede the other bylaws.