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August 16, 2021

Secretary Kathleen A. Theoharides
Attn: MEPA Office
Executive Office of Energy and
Environmental Affairs 100
Cambridge Street, Suite 900
Boston, MA 02114

RE: Cranberry Point Energy Storage Project
Expanded Environmental Notification Form

Dear Secretary Theoharides,

On behalf of Cranberry Point Energy Storage, LLC (Cranberry Point or the Company), AECOM is herein submitting an Expanded Environmental Notification Form (EENF) for the proposed Cranberry Point Energy Storage Project (Project) located at 31R Main Street (Route 58) in Carver, Massachusetts.

Cranberry Point proposes to construct a 150-MW battery energy storage system (BESS), with ancillary structures (*i.e.,* transformers, substation, and low voltage/medium voltage equipment) using lithium-ion battery enclosures (the "Project") that will connect to the 115kV SEMASS transmission line, which is adjacent to the Eversource Substation No. 726. The Project will be constructed on an approximately 6-acre parcel of undeveloped land that is being developed by Cranberry Point.

The Project will benefit the reliability and efficiency of the electric grid by storing electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system.

Cranberry Point is formally requesting that a Single Environmental Impact Report (EIR) be prepared in lieu of the usual two-stage Draft and Final EIR process pursuant to 301 CMR 11.06(8). Accordingly, the EENF describes all aspects of the Project and all feasible alternatives; provides a detailed discussion of potential environmental impacts and mitigation measures; and demonstrates that the siting, planning, and design of the Project used all feasible means to ensure that the Project is safe and will avoid, minimize and mitigate for potential environmental impacts.

Please do not hesitate to call Tom Keough at (978) 496-6547 if you have any questions with respect to this submittal or require additional information to facilitate your review. Thank you for your attention to this matter.

Yours sincerely,
AECOM

Thomas J. Keough
Project Manager
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Matt Devlin
Sr. Wetland Scientist
Matt.Devlin@aecom.com

Cc: Cranberry Point, Circulation List (Attachment E)

AECOM

Cranberry Point Energy Storage Project

Expanded Environmental Notification Form

Cranberry Point Energy Storage, LLC

Project number: 60659634

August 16, 2021

Cranberry Point Energy Storage, LLC
1237 9th Ave
San Francisco, CA 94122

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
			
Audrey Hunt Wetland Scientist	Matt Devlin Sr. Wetland Scientist	Thomas J. Keough Project Manager	Thomas J. Keough Project Manager

Revision History

Revision	Revision date	Details	Authorized	Name	Position

Distribution List

# Hard Copies	PDF Required	Association / Company Name

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Figures

List of Acronyms

ACEC	Areas of Critical Environmental Concern
ACOE	Army Corps of Engineers
AUL	Activity and Use Limitation
BESS	Battery Energy Storage System
BLSF	Bordering Land Subject to Flooding
BVW	Bordering Vegetatied Wetland
EEA	Executive Office of Energy and Environmental Affairs
EIR	Environmental Impact Report
EJ	Environmental Justice
ENF	Environmnetal Notification Form
EPA	Environmental Protection Agency
FCA	Forward Capacity Market Auction
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHG	Greenhouse Gas
MassDEP	Massachusetts Department of Environmental Protection
MEPA	Massachusetts Environmental Policy Act
MHC	Massachusetts Historical Commission
MW	Megawatt
NFPA	National Fire Protection Association
NHESP	Natural Heritage Endangered Species Program
ORW	Outstanding Resource Water
PEM	Palustrine Emergent
PFO	Palustrine Forested
PILOT	Payment In Lieu of Taxes
PNF	Project Notification Form
PSS	Palustrine Scrub-Shrub
ROW	Right-of-way
RPA	Regional Planning Agency
RTN	Release Tracking Number
SENE	Southeast New England
SRPEED	Southeastern Regional Planning and Economic Development District
SF_6	Sulfur Hexafluoride
USGS	United States Geological Survey
WPA	Wetlands Protection Act

EENF Form

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Cranberry Point Energy Storage Project		
Street Address: 31R Main Street		
Municipality: Carver	Watershed: Buzzards Bay	
Universal Transverse Mercator Coordinates: 351810.44, 4639683.09 (Zone 19T)	Latitude: 41.895197 Longitude: -70.786388	
Estimated commencement date: 2/1/2023	Estimated completion date: 3/1/2024	
Project Type: Energy	Status of project design: 75 %complete	
Proponent: Cranberry Point Energy Storage, LLC		
Street Address: 1237 9th Avenue		
Municipality: San Francisco	State: CA	Zip Code: 94112
Name of Contact Person: Thomas Keough		
Firm/Agency: AECOM	Street Address: 250 Apollo Drive	
Municipality: Chelmsford	State: MA	Zip Code: 01824
Phone: 978.905.2270	Fax:978.905.2101	E-mail: Thomas.keough@aecom.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☒Yes ☐No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	☒Yes ☐No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes ☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes ☒No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?
309 CMR 11.03(7)(1) *Construction of a New electric generating facility with a Capacity of 100 or more MW.*

Which State Agency Permits will the project require?
Department of Public Utilities/Energy Facilities Siting Board: Approval under MGL c. 164 Sections 69J and 72

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres: The Project does not require financial assistance or land transfer from an Agency of the Commonwealth

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	5.85 acres		
New acres of land altered		4.80 acres	
Acres of impervious area	0	0.911 acre	0.1 acre
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		0	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	0	.39,683	.39,683[1]
Number of housing units	NA	NA	NA
Maximum height (feet)	NA	9 Ft +/-	9 ft/ +/-[2]
TRANSPORTATION			
Vehicle trips per day	0	<1	<1[3]
Parking spaces	0	<1	<1[4]
WASTEWATER			
Water Use (Gallons per day)	NA	NA	NA
Water withdrawal (GPD)	NA	NA	NA
Wastewater generation/treatment (GPD)	NA	NA	NA
Length of water mains (miles)	NA	NA	NA
Length of sewer mains (miles)	NA	NA	NA

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

1. Battery enclosure slab foundations & estimated impervious coverage in substation area
2. Height of the proposed Tesla Megapack Units/Enclosures
3. Project requires no on-site employees. Vehicle trips per day excludes construction traffic.
4. No designated parking on site, but vehicles will occasionally park within gravel areas inside of the perimeter fence.

Introduction

Cranberry Point Energy Storage. LLC ("Cranberry Point" or the "Company") proposes to construct a 150-MW energy storage system, with ancillary structures (*i.e.,* transformers, control enclosures, and utility electrical substation equipment including switchgear, high voltage transformer, circuit breakers and other miscellaneous electrical equipment to allow for connection to the Eversource electrical system) in Carver, Massachusetts, using lithium-ion batteries (the "Project"). The Project will be constructed on an approximately 6-acre parcel of undeveloped land (Project Site) that is being developed by Cranberry Point. The Project Site will also include a substation that will be built and owned by Eversource to support integration into their electric system. All of this equipment would be supported on standalone concrete pads. The existing gravel access driveway from Main Street in Carver, Massachusetts, which is approximately 530 feet in length, will be upgraded to be approximately 20 feet in width.

Existing Conditions

The Project Site is located on two undeveloped properties (Map 61, Lots 7 and 10) at 31R Main Street in Carver, Massachusetts. The approximate 6-acre area of the Project Site that will be leased from the current landowner is part of two larger parcels, one at 21.5 acres and the other at 12.5 acres. The Project Site is currently undeveloped and located primarily in a wooded portion of the properties. Additionally, the Project Site includes existing unimproved roads to access a cell tower and cranberry bogs to the south. That road will be utilized to access the Project. Residential properties are not located within 400 feet of the proposed Project Site's fenced area .

An Eversource Substation (Station No. 726) and electrical transmission/distribution lines within a right-of-way (ROW) are located just north of the property. Electrical transmission and distribution lines are also located to the west within an additional ROW. Wetlands and commercial cranberry bogs are located to the south and east. This project will not impact this existing Eversource facility to the North.

The Project Site is currently wooded and dominated by softwoods (Pines) and mixed hardwoods (maples and oaks). Understory species consist of a mix of saplings, shrubs, and herbaceous species. Topography slopes gently in a southerly direction towards the wetland and cranberry bogs.

A large Palustrine Forested (PFO) wetland was delineated south of the Project Site. A Palustrine Emergent (PEM)/Scrub-Shrub (PSS) wetland is located within the electrical transmission line ROW to the west of the site. All these areas of PFO and PEM/PSS wetland are all contiguous and considered one large wetland area.

Vegetation within the Bordering Vegetated Wetland (BVW) include an overstory of trees consisting of red maple (*Acer rubrum*) and yellow birch (*Betula alleghaniensis*), a shrub understory dominated by pepperbush (*Clethra alnifolia*), spicebush (*Lindera benzoin*) and highbush blueberry (*Vaccinium corymbosum*) with an herbaceous understory of cinnamon fern (*Osmundastrum cinnemomea*), skunk cabbage (*Symplocarpus foetidus*), Massachusetts fern (*Parathelypteris simulate*) and sphagnum moss.

Hydric soil containing both shallow and deep organic soil and hydrologic indicators including soil saturation at the surface and a water table less than 12 inches below the surface were encountered.

WPA regulations (310 CMR 10.02(2)(b) establish a 100-foot buffer zone that extends from BVW. The buffer zone itself is not a jurisdictional resource area under the WPA; however, it is a resource area under the Carver Wetlands Protection Bylaw (Chapter 9). In addition, the Town of Carver Wetlands Protection Bylaw provides a 65-foot setback that restricts the construction of any structure or impervious surface within 65 feet of a wetland. The Project will not result in any direct wetland impacts, and no Project elements are proposed to be located within the 65-foot setback.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel No. 25023C0343J (July 17, 2012), the Project site is located outside of the flood hazard areas subject to the 100-year

flood/inundation by the 1% annual chance flood. Therefore, the Site does not contain any areas of Bordering Land Subject to Flooding (BLSF).

According to Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas (August 1, 2017, 14th Edition), the site is not located within an area of Estimated Habitats of Rare Wildlife or an area of Priority Habitats of Rare Species. There are no certified vernal pools located on or near the site.

Agricultural Land

Two cranberry bogs are located to the south of the Project Site, within the remaining southern portion of the eastern parcel (parcel 61/7) and within an off-site parcel (parcel 61/8) to the south (see Figures 1.1-17 and 1.1-19 in Attachment A).

Based on review of United States Geological Survey (USGS) historical topographical maps from 1893 to the present and historic aerial photographs from 1960 to the present, it appears the northern portion of the bog located within the southern extent of the remaining portion of the Project area parcel (parcel 61/7) is an "upland bog" since there has historically been an upland area (upland lobe) that is surrounded by wetland to the south, east and west. The upland bog area is depicted on Figure 1.1-17 in Attachment A. The far southern bog (the southernmost bog) located off-site on parcel 61/8 appears to have potentially been former wetland; however, the far northernmost portion of bog (the "upland bog" area) located on the site of the Project area appears to have been mostly upland. The proposed Project Site is not located within a current or former bog.

Purpose and Need

The Project is necessary to meet the capacity needs of ISO-NE's Southeast New England ("SENE") region, which is comprised of Northeastern Massachusetts, Greater Boston, Southeastern Massachusetts, and Rhode Island. On February 8, 2021, ISO-NE selected Cranberry Point in part to ensure there are adequate power system resources available to provide New England with sufficient capacity to meet peak demand need in 2024-2025. Pertinent to this matter, Cranberry Point bid into ISO-NE's most recent Forward Capacity Market Auction ("FCA 15") to serve the SENE region.

The projects selected by ISO-NE align with power system transmission constraints and signal areas of the system with a potential shortfall. The clearing prices in FCA 15 reveal the different values across the region based on the individual capacity needs for each zone.

The Project will benefit the reliability and efficiency of the electric grid by storing electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system.

The Project will: (1) benefit the ISO-NE system during peak load times; (2) facilitate the storage of electricity, including from expanding sources of intermittent solar and wind generation; and (3) potentially defer future generation and transmission additions in the region. These three features can be achieved in accordance with the state's energy goals, without creating emissions of pollutants, and in an environmentally-benign manner.

Project Description

The Project involves the construction of a 150 megawatt (MW) lithium-ion battery storage facility that will contain approximately 128 standalone enclosures of batteries used for the storage of energy These enclosures, along with the additional supporting electrical equipment, will be supported by concrete slab and pier foundations that are surrounded by crushed stone.

The proposed Project has two separate areas of development within the leased area, including an east and west battery storage area. The eastern storage area is the larger of the two areas and is connected to the western side via a proposed vehicle access path at the northern edge of the Project Site.

The Project will consist of approximately 217,800 square feet (5 acres), of which approximately 4,217 square feet includes impervious surfaces such as concrete slabs and drilled piers. The remaining 213,583 square feet within the

proposed fenced-in area will be surfaced with an approximate 12-inch-thick layer of crushed stone and approximately 13,051 square feet of crushed stone within the driveways.

Each of the battery enclosures will be grouped and installed onto a single poured concrete pad in multiples of 4x units, following the manufacturer's guidelines. These pads will be approximately 65-feet long, by 12-feet wide. These dimensions include open space on each pad for the installation of additional battery units to support augmentation of the site at specific intervals over its 20-year projected life. The developer proposes to utilize Tesla Megapack units for the battery enclosures.

In addition to the 128 battery enclosures. there will be a total of 56 outdoor step-up transformers that are 4-feet by 5-feet and approximately 4-feet high, which will also be installed on concrete pads adjacent to the battery enclosures.

In addition to the batteries and transformers, the Project will include a small internal substation, which will allow for the battery system to electrically interconnect to the Eversource transmission system at the 115kV transmission line to the West of the project area. This substation will include medium voltage switchgear in an electrical enclosure, a 115kV/35kV Power Transformer, and associated transmission structures to allow for the appropriate and safe electrical connection to the Eversource equipment. All of the equipment within this facility will be supported by concrete pads. This substation equipment will be secured by the installation of a chain link fence and will be monitored by security cameras. Within the fenced-in area, the area in between the concrete pads will be covered with gravel.

The Cranberry Point Energy Storage Project will interconnect to Eversource's existing Line #127 via a new 115- kV three-breaker ring-bus which will be designed and installed by Eversource s and located on the western portion of the Project Site ("Substation"). It is anticipated this interconnection will be effectuated via an approximately 100-foot, aboveground 115-kV bus structure directly from the Cranberry Point Project substation to the Eversource ring-bus. The interconnecting line will not cross any public ways and will be entirely located on the Project's properties.

Two access gates– points of ingress/egress – are proposed as part of this Project, with one additionally proposed emergency entrance within Eversource's existing transmission ROW to the north of the Project Site. A new approximate 16- to 20-foot-wide gravel access driveway that is approximately 530 feet in length is proposed to extend off an existing unimproved drive-way from Main Street that is currently used to access the cranberry bogs located to the south of the Project area. A second new 20-foot wide gravel access driveway that is approximately 25 feet in length is proposed to extend from the existing access road directly to the east storage area. A third new 20-foot wide gravel access driveway that is approximately 90 feet in length is proposed to extend from the Substation to the northern portion of the site to provide ingress/egress to the west storage area from the electrical substation. This driveway is proposed solely for emergency access purposes.

Permanent structural stormwater management control devices are proposed including two infiltration basins. These stormwater management control devices will collect and treat stormwater before discharge to the surrounding wetlands.

Alternatives Analysis

Cranberry Point conducted a comprehensive analysis to determine a suitable Massachusetts location for its 150-MW Battery Energy Storage System ("BESS").

The locations evaluated met specific requirements for a project of the size and scope under consideration. For example, the BESS had to be located (1) adjacent to infrastructure with available transmission capacity, (2) on a parcel of land greater than 1 acre and available for lease or sale, (3) in an area where construction and operation of the project would have minimal environmental impact or would not closely abut residences, (4) in ISO-NE's "SENE" region, and (5) near interconnection ties to offshore wind projects under development and other market initiatives that will enhance the BESS' economic viability.

As such, Cranberry Point evaluated several alternative sites as well as a 'no-build' alternative.

No Build Alternative

Under the No-Build alternative, the Project would not be constructed. Failure to develop the Project would be inconsistent with ISO-NE's capacity requirements in the SENE region. Moreover, because the Project is likely to defer and/or alleviate the need for additional electric transmission infrastructure in the area, the environmental benefits from the Project would not be realized. Therefore, the No-Build alternative was not considered further.

Alternative 1 – Carver (Preferred Alternative)

The proposed Carver BESS site is an approximately 6-acre site (250,000+ square foot) area located adjacent to and just south of the existing Eversource Carver Substation off Main Street in Carver, Massachusetts. This location was identified as the optimal solution for multiple reasons. First, the size of the lot, at approximately 6-acres, meets the requisite land area needed for a project of the size proposed. Second, as the lot is more than 400 feet from the nearest residence, there is minimal, if any, economic or environmental impact on the surrounding community. Third, the lot of land is readily available for lease. Fourth, the parcel is adjacent to infrastructure with available transmission capacity. Fifth, the location of the Project is in an area where the Company could readily obtain a Site Plan & Special Permit and Site Control, with minimal impact on the environment. Sixth, the location is in close proximity to potential offshore wind interconnection points onshore which, combined with significant market advantages including but not limited to, energy price volatility, compensation mechanisms available for providing ancillary services, proximity to potential offshore wind interconnection points, etc., enhance the viability of a project of this size and scope.

Alternative 2 – Wakefield

The Wakefield BESS site is an approximately 2.24-acre (97,700+ square foot) area located adjacent to and just east of the existing Wakefield Substation off of Old Colony Drive in Wakefield, Massachusetts. The location within the Boston load center made the Wakefield site attractive, however, as compared to the Preferred Alternative, this location was not considered further. First, the site is densely forested and surrounded by Isolated and Bordering Vegetated Wetlands. Second, the site is located within 300 feet of the nearest residence. Third, this site was not known to be located near future offshore wind interconnection points. As such, the economics to develop a project at this location were not viable. Access to the site would have required significant tree clearing and filling an Isolated Wetland in order to construct the roadway. Given the constraints that this site would have on the project's development and economic viability, Wakefield was not considered further.

Alternative 3 – Falmouth

The proposed Falmouth BESS site is an approximately 2.42-acre (105,600+ square foot) area located adjacent to and northwest of the existing Falmouth Substation off of Stephens Lane in Falmouth, Massachusetts. The Falmouth site is on a lower-voltage network near Cape Cod, which presented deliverability difficulties to the Boston load center when compared to the location and transmission network of the Preferred Site. From an interconnection perspective, a generation tie-line would have been required in order to connect to the nearest point of interconnection. Moreover, the site is located within 200 feet of the nearest residence, as well as within 200 feet of the Oak Grove cemetery. While the site is an active sand and gravel pit, and any tree removal required to construct the BESS project would be minimal, construction would result in impacts to an Isolated Wetland. When Falmouth was under consideration, it was not known to be located in an area where offshore wind projects were thought to tie into the existing onshore electrical grid. Thus, given these issues, the Falmouth site was not considered further.

Conclusion

Of all the BESS sites considered, Alternatives 2 and 3 were excluded because of the significant environmental impacts (e.g., close proximity to Isolated Wetlands and residential neighborhoods. Additionally, Alternative 2 would result in significant tree clearing. The Preferred Alternative location was selected because of its proximity to a crucial inter-tie point for the 115-kV transmission systems, has no impact on wetlands, minimal tree-clearing needs, and is greater than 400 feet of the nearest residence. Given the cost, siting constraints, land area requirements, environmental considerations and transmission analysis performed, the Preferred Alternative is ideally-located for a large, grid-improving standalone BESS project in Massachusetts.

Mitigation Measures

Environmental Justice

The Massachusetts Environmental Policy Act (MEPA) developed interim protocols concerning climate change adaptation and environmental justice (EJ) outreach to address the new public involvement requirements for MEPA projects under Chapter 8 of the Acts of 2021: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (the "Climate Roadmap Act" or "the Act"), as well as the on-going public involvement requirements under the 2017 Executive Office of Energy and Environmental Affairs (EEA) Environmental Justice Policy (the "2017 EJ Policy")

The interim protocols require applicants to identify all EJ Populations within a 1-mile and 5-mile radius of a project and indicate whether the project is "reasonably likely" to negatively affect EJ populations within a 1-mile or 5-mile (if affecting air quality) radius of the project site.

As depicted on Figure 1.1-18 in Attachment A, The Project Site is not located within one mile of an EJ community, with the nearest EJ community being located approximately 1.45 miles to the southeast of the Project Site. The impacts of the proposed Project do not exceed MEPA review thresholds for air emissions found at 301 CMR 11.03(8)(a)-(b). The Cranberry Point Energy Storage Project will not create any air emissions as the proposed Project will store energy, not create energy, therefore will not affect air quality and/is not reasonably likely to negatively affect EJ populations within a 5-mile radius around the Project Site.

A large volume of construction-related diesel trucks or equipment may be regarded as affecting air quality up to a 5-mile radius, depending on the specific routes of travel for the trucks or equipment. Construction traffic to and from the Project Site is anticipated to be limited to several vehicles per day (material deliveries and staff) and will occur over a period of approximately six to twelve months. As the volume of construction vehicles that will travel public roadways within close proximity to the nearest EJ community are considered to be minimal, the Project will not affect air quality and is not reasonably likely to negatively affect EJ populations within a 5-mile radius around the Project Site.

Greenhouse Gas Emissions

A Greenhouse Gas Emissions analysis is required to accompany the submittal of an Expanded ENF under the *MEPA* Greenhouse Gas Emissions Policy and Protocol (GHG Protocol). Per the GHG Protocol, a project is subject to this Policy if an EIR is required for the Project, and if it falls into one or more of the following three categories:

1. Where MEPA has full scope jurisdiction as defined at 301 CMR 11.01(2)(a)(2) or equivalent full scope jurisdiction over the project as defined at 11.01(2)(a)(3)~
2. The Project is privately funded, but requires an Air Quality Permit from the Department of Environmental Protection
3. The Project is privately funded, but requires a Vehicular Access Permit from the Massachusetts Highway Department

The proposed project does not fall into any of the above stated categories. The BESS will not generate air emissions once construction is complete, as the project will store energy rather than generate energy. Eversource will be responsible for the design of the proposed Substation, and currently the only potential release of *Sulfur Hexafluoride* (SF_6) from the Project would be from circuit breakers within the Substation. It is anticipated that new equipment installed within the Substation will be specified for an annual emission rate of 0. 1%, which is in compliance with the Massachusetts standard of 1.0% per year (310 C.M.R. 7.72). Accordingly, the Proponent is requesting that MEPA grant a *de minimis* exception to the requirement to analyze and quantify the potential annual GHG emissions from the proposed Project.

Noise

Cranberry Point is conducting a study to monitor background noise levels near the BESS. Noise levels will be monitored continuously for a five day period, and upon completion of the study a noise model will be prepared to determine the maximum predicted residential property line sound levels. In the event that predicted noise levels

from the BESS are greater than 10 dBA of the minimum measured background levels at the closest residential property and exceed the MADEP noise regulation limits outlined in 310 CMR 7.10, Cranberry Point will develop noise attenuation measures to bring the site into compliance.

Thermal Safety

Cranberry Point has designed its Project in strict conformance with the Massachusetts Fire Code and associated National Fire Protection Association ("NFPA") standards to ensure that the Project is constructed and operated in a manner that remains safe to the public, emergency responders and the Company's employees.

There are numerous and redundant safeguards built into the hardware and management systems of lithium-ion battery systems to help mitigate the risk of a thermal event. The Project will adhere to the national standards for stationary battery energy storage installation (i.e., the NFPA 855 code) (the "Code").

Moreover, the design and operation of the Project will comply with international, national and state safety requirements and standards, including but not limited to:

- Battery design requirements, driven by safety standards from organizations such as UL or International Electrotechnical Commission ("IEC")
  - UL 1642 Standard for Lithium Batteries
  - UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources
  - UL 1973 Standard for Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications
  - UL 9540 Standard for Energy Storage Systems and Equipment Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
  - IEC 62619 Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial application
- Fire codes and NFPA standards, including:
  - The Massachusetts Comprehensive Fire Safety Code (527 CMR 1.00);
  - NFPA 1 National Fire Code;
  - NFPA 855 Energy Storage Systems Standard

Tree Removal

In November 2018, Beals and Thomas, Inc., the Project's surveyor, conducted a survey of the Project Site to determine the number of trees greater than 10 inches in caliper. An estimated 426 trees greater than 10 inches will need to be cleared during construction of the Project. Given the remote location of the Project, the lack of residential dwellings, the proximity to the Eversource substation, and the forested area surrounding the Project Site, an off-site tree mitigation plan was proposed to the Town of Carver in 2019. Cranberry Point has agreed to replace 10% of the trees greater than 10 inches in caliper with a combination of 1-1.5-inch diameter maple or oak trees. Cranberry Point proposed to provide monetary compensation to the Town of Carver in an amount equal to the cost for purchasing and planting up to 50 trees at locations of the Town's choosing.

Erosion and Sediment Controls

An erosion and sedimentation control program will be implemented to minimize potential temporary impacts to BVW and 100-foot Buffer Zone during the construction of the Project. The program incorporates BMPs specified in guidelines developed by the DEP and presented in the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials (1997), River & Stream Crossing Standards (2011), U.S. Army Corps of Engineers (ACOE) document, Stream Crossing Best Management Practices (2015) and U.S. Environmental Protection Agency (EPA) document, Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites (Office of Water Report EPA 833-B-09-002, February 2009).

Proper implementation of the erosion and sedimentation control program will:

1. Minimize exposed soil areas through sequencing and temporary stabilization
2. Place structures to manage stormwater runoff and erosion.

Non-Structural Practices

Non-structural practices to be used during construction include temporary stabilization, pavement sweeping along Main Street (if necessary), and dust control. These practices will be initiated as practicable in appropriate areas at the site.

Temporary Stabilization

Any areas of exposed sediment or stockpiles that will remain inactive for more than 14 days will be covered with a layer of straw mulch or plastic sheeting.

Structural Practices

Structural erosion and sedimentation controls to be used on the site include erosion control barriers including silt fence, haybales, and/or wattles or a combination of these materials.

Erosion Control Barriers

Prior to any ground disturbance, an erosion control barrier will be installed at the downgradient limit of work. As construction progresses, additional barriers will be installed around the base of stockpiles and other erosion prone areas.

If sediment has accumulated to a depth which impairs proper functioning of the barrier, it will be removed by hand or by machinery operating upslope of the barriers. This material will be reused at the Site and spread accordingly. Any damaged sections of erosion controls will be repaired or replaced immediately upon discovery

Infiltration Basin

To accommodate the change in runoff at the site by this Project, two infiltration basins with sediment forebays are proposed at both the eastern and western portions of the Project Site to collect and treat stormwater before discharge to the surrounding wetlands. Each infiltration basin was sized to store the amount of runoff associated with the 10-year, 24-hour storm. The structures were developed in accordance with Volume 2, Chapter 2 of the Massachusetts Stormwater Handbook. Both infiltration basins are proposed just outside of the fence lines to the battery storage areas, but outside of the 65-foot wetland setback area. Please refer to Stormwater Management Report located in Attachment C for further detail.

To protect infiltration basins from failing during a large storm, emergency spillways will be installed. The spillways will be designed to discharge just enough water so that the infiltration basin will not overflow. In addition, riprap will be used to prevent erosion at the weir discharge locations.

In conclusion, the installation of two infiltration basins with sediment forebays are designed to prevent a net increase in runoff from the site for the 10-year, 24-hour storm. The basins have also been designed to withstand larger rainfall events.

If the project is proposed to be constructed in phases, please describe each phase:

The following includes the key design and operation procedures for the Project in the approximate order of their implementation.

- Installation of soil erosion and siltation controls;
- Vegetation clearing and grubbing;
- New access driveway construction;
- Installation of concrete slab and pier foundations;
- Installation of battery storage system components and equipment; and
- Installation of security fencing.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:
Is the project within or adjacent to an Area of Critical Environmental Concern?
☐Yes (Specify_____)
☒No
if yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan.
_____
Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes ___ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.
_____

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☐Yes (Specify_____) ☒No
If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐Yes (Specify_____) ☐No

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? ☐Yes ☒No; if yes, identify the ORW and its location. _____

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? ☐Yes ☒No; if yes, identify the water body and pollutant(s) causing the impairment:

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ☐Yes ☒No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

To accommodate the change in runoff at the site by this Project, two infiltration basins were selected to collect stormwater from the site during rain events. Each basin is sized to store the amount of runoff associated with the 10-year, 24-hour storm. The structures were developed in accordance with Volume 2, Chapter 2 of the Massachusetts Stormwater Handbook. Both infiltration basins were placed just outside of the fence lines for the battery storage areas, and outside of the 65-foot wetland buffer.

To protect the basins during a larger storm, emergency spillways have been installed. The spillways have been designed to discharge just enough water so that the infiltration basin will not overflow. In addition, riprap will be used to prevent erosion at the weir discharge locations.

The installation of two infiltration basins with sediment forebays is designed so that there is no net increase in runoff from the site from pre-development to post-development for the 10-year, 24-hour storm. The basins have also been designed to withstand larger rainfall events. Please refer to Stormwater Management Report located in Attachment C for further detail.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? ☐Yes ☒No ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):_____

Is there an Activity and Use Limitation (AUL) on any portion of the project site? ☐Yes ☒No; if yes, describe which portion of the site and how the project will be consistent with the AUL: _____.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? ☐Yes ☒No; if yes, please describe:_____

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:_____

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? ☐Yes ☒No;
if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment:

Cranberry Point will require the contractor to turn off construction vehicles when they are not actively in use. Typical methods of reducing idling will be used including driver training, periodic inspections by site supervisors, and posting signage.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? ☐Yes ☒No;
if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? Yes ___ No ___ ; if yes, specify name of river and designation: _____;
if yes, will the project will result in any impacts to any of the designated "outstandingly remarkable" resources of the Wild and Scenic River or the stated purposes of a Scenic River.
Yes ___ No ___ ;
if yes ,describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.

Attachment A	Figures
Attachment B	Project Plans
Attachment C	Stormwater Management Report
Attachment D	Massachusetts Historical Commission Correspondence
Attachment E	Circulation List
Attachment F	List of Required and Obtained Permits

2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries.

See Figures in Attachment A.

3. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.

See Plans in Attachment B.

4 Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts.

See Figures in Attachment A and Plans in Attachment B.

5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).

See Plans in Attachment B.

6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).

See Attachment E.

7. List of municipal and federal permits and reviews required by the project, as applicable.

See Attachment F.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1) __ Yes _**X**_ No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	0	+0.911 acres[1]	0.911 acres
Internal roadways	0	+3.265 acres	3.265 acres
Parking and other paved areas	0	0	0
Other altered areas	0	+0.624 acres[2]	0.624 acres
Undeveloped areas	5.85 acres	4.80 acres	5.85 acres
Total: Project Site Acreage	5.85 acres	4.80 acres	5.85 acres

1. Structure to house switchgear and controls.
2. Grading and grass areas for stormwater basins.

The Project Site consists of approximately 5.85 acres of undeveloped uplands, of which 4.80 acres will be altered to accommodate the proposed BESS.

B. Has any part of the project site been in active agricultural use in the last five years? ___ Yes _**X**_ No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

The Project Site consists of an approximately 5.85-acre portion of a larger parcel. While portions of the larger parcel are occupied by cranberry bogs, the proposed location of the BESS is not, and has not, been used for agricultural purposes.

C. Is any part of the project site currently or proposed to be in active forestry use? ___ Yes _**X**__ No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes _**X**_ No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? ___ Yes _**X**_ No; if yes, does the project involve the release or modification of such restriction? ___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes _**X**_ No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No _**X**_; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan

Title: Town of Carver Master Plan Date: 2001

B. Describe the project's consistency with that plan with regard to:

1) economic development

The Cranberry Point Energy Storage Project will provide an opportunity to store electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system. The Project will improve the overall utilization and economics of resources supplying electric service to the grid. Additionally, the Project will increase the local tax base via a to-be-negotiated Payment In Lieu of Taxes (PILOT) Agreement with the Town of Carver.

2) adequacy of infrastructure

Carver lacks certain infrastructure due to its geographic location. Carver is well known for its reliance on cranberry agriculture. This Project will not have an impact on these agricultural lands. The Land Use Strategy section of Section 1 of the Town of Carver Master Plan discusses the encouragement of cluster development. Developmental densities that offer benefits to the community can provide incentives for the use of cluster development. This project may potentially defer further generation and transmission infrastructure additions in the region.

3) open space impacts

The Project Site location was selected because it is a crucial intertie point for the 345-kV, 230-kV and 115-kV transmission systems associated with adjacent electrical systems. This selected location is consistent with the efforts preferred in the Section 1.3 Land Use Strategies of the Town Master Plan. This location reduces the negative impacts as best as possible to open space.

4) compatibility with adjacent land uses

The Project Site location was selected because it is a crucial intertie point for the 345-kV, 230-kV and 115-kV transmission systems associated with adjacent electrical systems. It is also a key electrical integration point between Eversource and National Grid, as one of the 345kV lines entering the substation is from National Grid's electric system. Additionally, the Cranberry Point Energy Storage Project may help defer the need for a transformer replacement at the Carver substation, which was outlined in Eversource's Local System Plan from 2020. Eversource's Carver Substation, and 115kV lines, are located just north and west of the Project Site, so the development of this facility will tie into and appear consistent with the existing infrastructure.

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)

RPA: Southeastern Regional Planning and Economic Development District (SRPEDD)

Title: Regional Land Use: Roles, Policies, and Plan Outline for Southeastern Massachusetts

Date: June 1996

Overall Economic Development Program (1996) supplements the policy plan

D. Describe the project's consistency with that plan with regard to:

1) economic development

The SRPEDD holds a responsibility for the region is enhancing the quality of life including economic opportunity and environmental quality. This refers to both pastoral open land and low unemployment rate. The Project will contribute to construction jobs for people of the region, enhancing additional economic development. The SRPEDD also has the responsibility as part of Massachusetts to uphold state goals for BESS, which the Project will contribute to. The Cranberry Point Energy Storage Project will deliver electric services to the grid, enhancing the overall economic growth and capabilities of the region. There are several offshore wind projects that intend to make landfall in Massachusetts currently under consideration, and the ability to store electricity by charging and discharging batteries could potentially allow for the future integration of the energy generated by these offshore wind projects.

2) adequacy of infrastructure

The SRPEDD prefers development in areas that contain underutilized infrastructures (land, buildings, and other facilities). The Project Site is currently undeveloped wooded areas; however, infrastructure will be centrally located to an intertie for existing transmission systems. The infrastructure of the BESS will be supported by concrete pads with a small internal substation (add label) which includes low/medium voltage equipment, and an adjacent Substation constructed by Eversource. A small gravel access road will be constructed off an existing access road. This infrastructure will be necessary to support the ability to store and supply electricity efficiently to the grid.

3) open space impacts

The SRPEDD prefers development to occur in lands of High Priority Development Area. These lands should be developed first based upon their location, physical characteristics, and amenities. The existing Project Site is currently undeveloped, however, its close proximity to the intertie point for the 345-kV, 230-kV and 115-kV transmission systems creates a connection between developed sites and a more-dense rather than dispersed facility infrastructure layout, leaving open space surrounding the site.

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes **X** No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes _**X**_ No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? ___ Yes __**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? _**X**_ Yes ___ No; if yes, specify which permit:

Carver Conservation Commission - WPA Order of Conditions SE# 126-579

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? _**X**_ Yes ___ No; if yes, has a Notice of Intent been filed? _**X**_ Yes ___ No; if yes, list the date and MassDEP file number: January 18, 2019, SE# 126-579; if yes, has a local Order of Conditions been issued? _**X**__ Yes ___ No; Was the Order of Conditions appealed? ___ Yes _**X**_ No. Will the project require a Variance from the Wetlands regulations? ___ Yes _**X**__ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

The proposed Project will not result in any temporary or permanent impacts to wetland resources. A constructed related activities are confined to the one at a distance greater than 65 feet from the edge of BVW.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact
Designated Port Areas	NA	NA
Coastal Beaches	NA	NA
Coastal Dunes	NA	NA
Barrier Beaches	NA	NA
Coastal Banks	NA	NA
Rocky Intertidal Shores	NA	NA
Salt Marshes	NA	NA
Land Under Salt Ponds	NA	NA
Land Containing Shellfish	NA	NA
Fish Runs	NA	NA
Land Subject to Coastal Storm Flowage	NA	NA
Inland Wetlands		
Bordering Vegetated Wetlands	0	NA
Isolated Vegetated Wetlands	NA	NA
Land under Water	NA	NA
Isolated Land Subject to Flooding	NA	NA

Bordering Land Subject to Flooding	NA	NA
Riverfront Area	NA	NA

D. Is any part of the project:
1. proposed as a **limited project**? ___ Yes _**X**_ No; if yes, what is the area (in sf)?____
2. the construction or alteration of a **dam**? ___ Yes _**X**_ No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes _**X**_ No
4. dredging or disposal of dredged material? ___ Yes _**X**_ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? ___ Yes _**X**_ No
6. subject to a wetlands restriction order? ___ Yes _**X**_ No; if yes, identify the area (in sf):
7. located in buffer zones? _**X**_Yes ___No; if yes, how much (in sf) _26,185 +/- sf_____

E. Will the project:
1. be subject to a local wetlands ordinance or bylaw? _**X**_ Yes ___ No
2. alter any federally-protected wetlands not regulated under state law? ___ Yes _**X**_ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ___ Yes _**X**_ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

D. Does the project require a new or modified license or permit under M.G.L.c.91? ___ Yes _**X**_ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use?
Current ___ Change ___ Total ___
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:_____
Area of filled tidelands covered by buildings:_____
For portions of site on filled tidelands, list ground floor uses and area of each use:
_____
Does the project include new non-water-dependent uses located over flowed tidelands?
Yes ___ No ___
Height of building on filled tidelands_____

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes _**X**_ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes _**X**_ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes _**X**_ No;
(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ___ Yes _**X**_ No; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both ____
What is the proposed dredge volume, in cubic yards (cys) _____
What is the proposed dredge footprint ____length (ft) ___width (ft)____depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No__; if yes, ___ sq ft
Outstanding Resource Waters Yes__ No__; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes__ No__; if yes __ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?
If no to any of the above, what information or documentation was used to support this determination?
Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.
Sediment Characterization
Existing gradation analysis results? __Yes ___No: if yes, provide results.
Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___Yes ____No; if yes, provide results.
Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___
Unconfined Ocean Disposal ___
Confined Disposal:
Confined Aquatic Disposal (CAD) ___
Confined Disposal Facility (CDF) ___
Landfill Reuse in accordance with COMM-97-001 ___
Shoreline Placement ___
Upland Material Reuse____
In-State landfill disposal____
Out-of-state landfill disposal ____
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:
A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes _**X**_ No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes _**X**_ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply			
Withdrawal from groundwater			
Withdrawal from surface water			
Interbasin transfer			

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? Will the project require an increase in that withdrawal? ___Yes ___No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___No. If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)				
Capacity of water treatment plant (gpd)				

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No

2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?

3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))?
___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____

	Existing	Change	Total
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes
___ No; if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the

direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____
ITE Land Use Code(s):	_____	_____	_____

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3._____	_____	_____	_____

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

E. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ____ Yes ____ No; if yes, describe if and how well the project will participate in the TMA:

F. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes ____ No; if yes, generally describe:

G. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____
2. Cutting of living public shade trees (number)? _____
3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? _
X_ Yes ___ No; if yes, specify, in quantitative terms:

Although the Project will not generate energy, it has been assumed that the Project will exceed the threshold established at 309 CMR 11.03(7)(1) *Construction of a New electric generating facility with a Capacity of 100 or more MW*.

B. Does the project require any state permits related to **energy**? _**X**_ Yes ___ No; if yes, specify which permit:

Energy Facilities Siting Board under MGL c. 164 Sections 69 and 72.

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	0	150	150[1]
Length of fuel line (in miles)	NA	NA	NA
Length of transmission lines (in miles)	0	0.15	0.15[2]
Capacity of transmission lines (in kilovolts)	0	115-kV	115-kV

1. Project will not generate energy. 150 MW depicts the amount of power that the system can operate up to, to allow it to charge or discharge up to 300 MWh of energy.
2. Less than 100 foot, overhead 115-kV bus structure directly from the Cranberry Point BESS to the proposed Substation.

B. If the project involves construction or expansion of an electric generating facility, what are:
1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

The Project does not involve the construction or expansion of an electric generating facility.

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes _**X** _No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

The Project will help ISO-NE meet the capacity needs for its SENE region, in part by ensuring that there is adequate power system resources available to provide New England with sufficient capacity to meet peak demand need in 2024-2025. The Project will allow the ability to store electricity by charging and discharging batteries, which enables a more efficient and reliable regional grid. Additionally, the Project is likely to defer and/or alleviate the need for additional electric transmission infrastructure in the area.

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

Until recently, the ability to store electricity across the grid was limited. With recent advances in technology, however, battery storage has become a viable, flexible, and economic option in the marketplace. BESS take energy (charge) generated during lower cost off-peak periods to serve load (discharge) during more expensive peak periods, thereby improving the overall utilization and economics of resources supplying electric service to the grid.

The Cranberry Point Energy Storage Project will serve as a flexible capacity product delivering quick response capacity into the SENE capacity zone and will provide additional energy and grid services to the New England grid. The Project will increase reliability and efficiency of Massachusetts' electric grid by storing electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system.

The Project Site location was selected because it is a crucial intertie point for the 345-kV, 230-kV and 115-kV transmission systems associated with the adjacent electrical transmission lines.

The Project will: (1) benefit the system during peak load times; (2) facilitate the storage of electricity, including from expanding sources of intermittent solar and wind generation; (3) potentially defer future generation and transmission additions in the region; and (4) meet the capacity needs of the region. The Project is consistent with the state's energy and environmental goals.

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes _**X**_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes _**X**_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage			
Treatment, processing			
Combustion			
Disposal			

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage			
Recycling			
Treatment			
Disposal			

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ___ Yes _**X**__ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ____Yes ____ No; if yes, attach correspondence.

A Project Notification Form (PNF) was submitted to the Massachusetts Historical Commission (MHC) on July 2, 2021. MHC provided a response on July 2, 2021 indicating that the Project Site is in proximity to several ancient Native American archaeological sites (l 9-PL-767; 19-PL-768). The MHC requested that an intensive (locational) archaeological survey (950 CMR 70) be conducted within archaeologically sensitive portions of the project impact area.

Cranberry Point Energy Storage, LLC is currently working with MHC to determine the limits of the archaeological survey. A copy of PNF, as well as the MHC response letter, can be found in Attachment D.

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes _**X**_ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes ___ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes _**X**_ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

Potential Project impacts (if any) will be determined upon completion of the archeological survey.

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

To be determined upon completion of the archeological survey.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

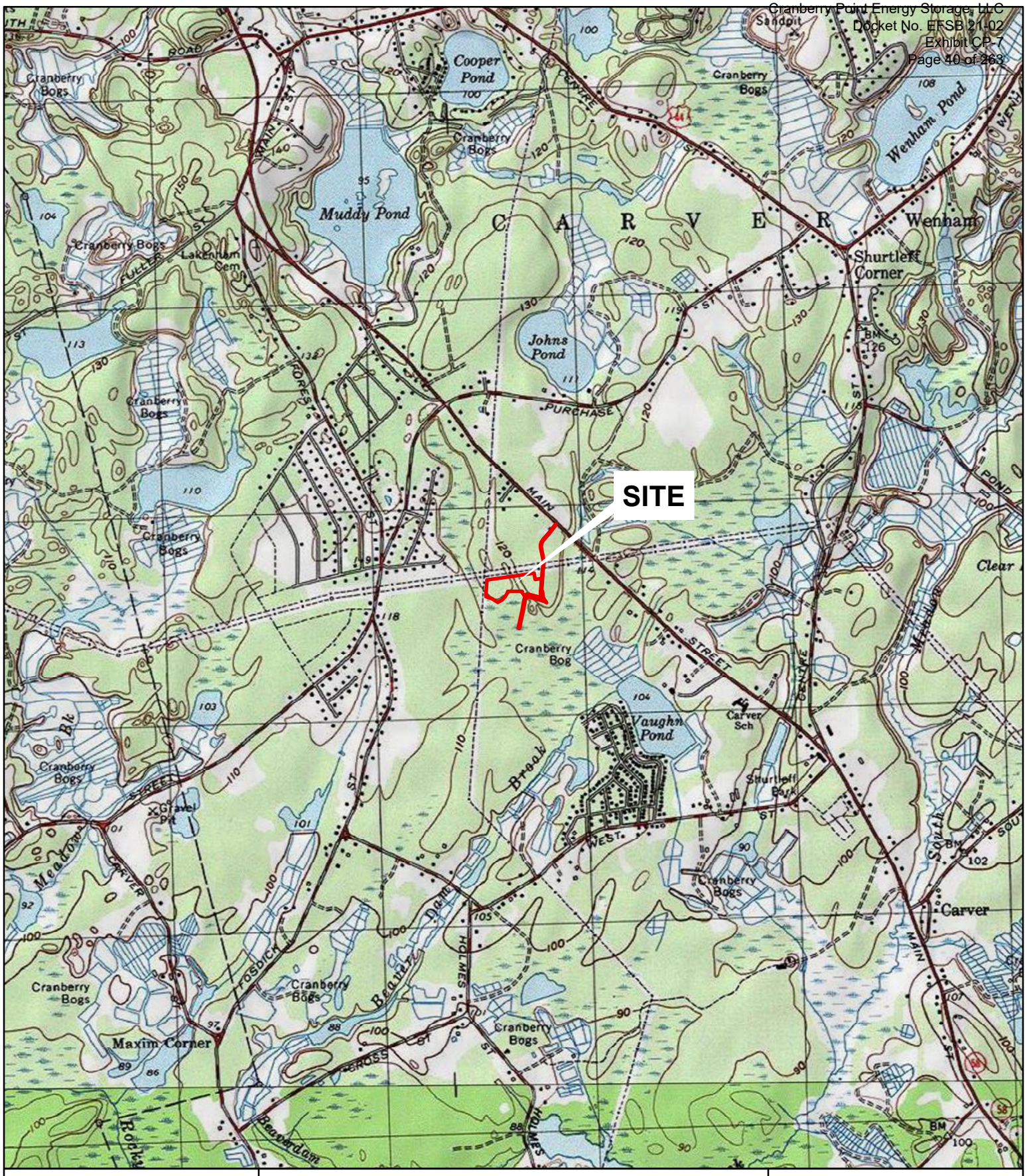
(Name)__Carver Reporter_____(Date)____8/13/2021_____

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

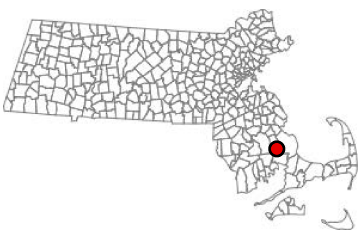
Signatures:

Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)
8/16/21		8/16/21	
Allyson Sand		Thomas J. Keough	
Name (print or type)		Name (print or type)	
Cranberry Point Energy Storage, LLC		AECOM Technical Service, Inc.	
Firm/Agency		Firm/Agency	
1237 9th Avenue		25 Apollo Drive	
Street		Street	
San Francisco, CA 94112		Chelmsford, MA 01834	
Municipality/State/Zip		Municipality/State/Zip	
469.323.6700		978.905.2270	
Phone		Phone	

Attachment A Figures



Map Location



N

Site Locus

Cranberry Point Energy Storage

31R Main Street, Carver, MA

0 1,500 3,000 6,000 Feet

Map Projection: MA State Plane NAD 83 Feet
Data Source: ESRI, MassGIS

1 inch = 2,000 feet

AECOM

Figure 1.1-1

Date: 6/10/2021

Project #: 60659634

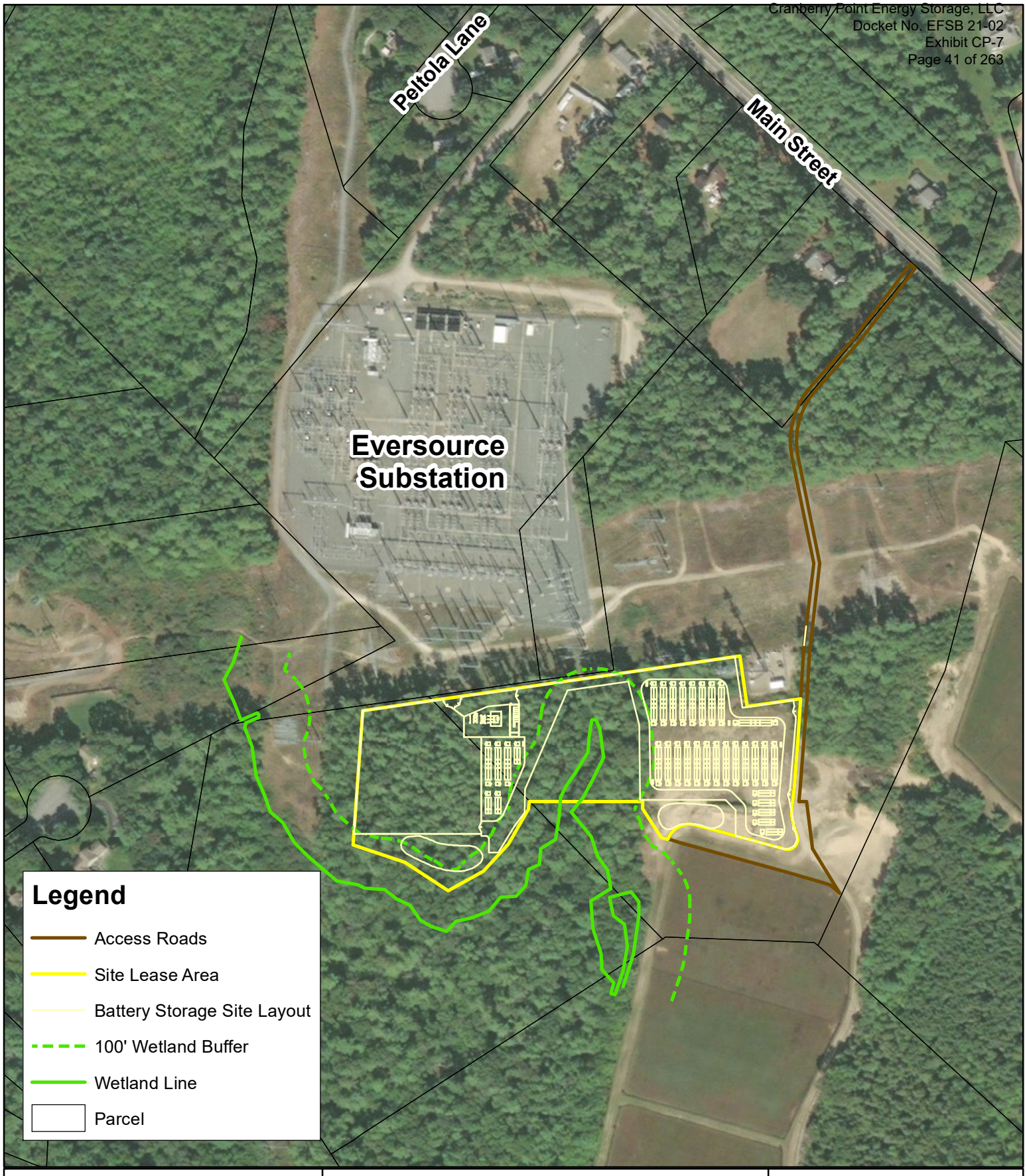


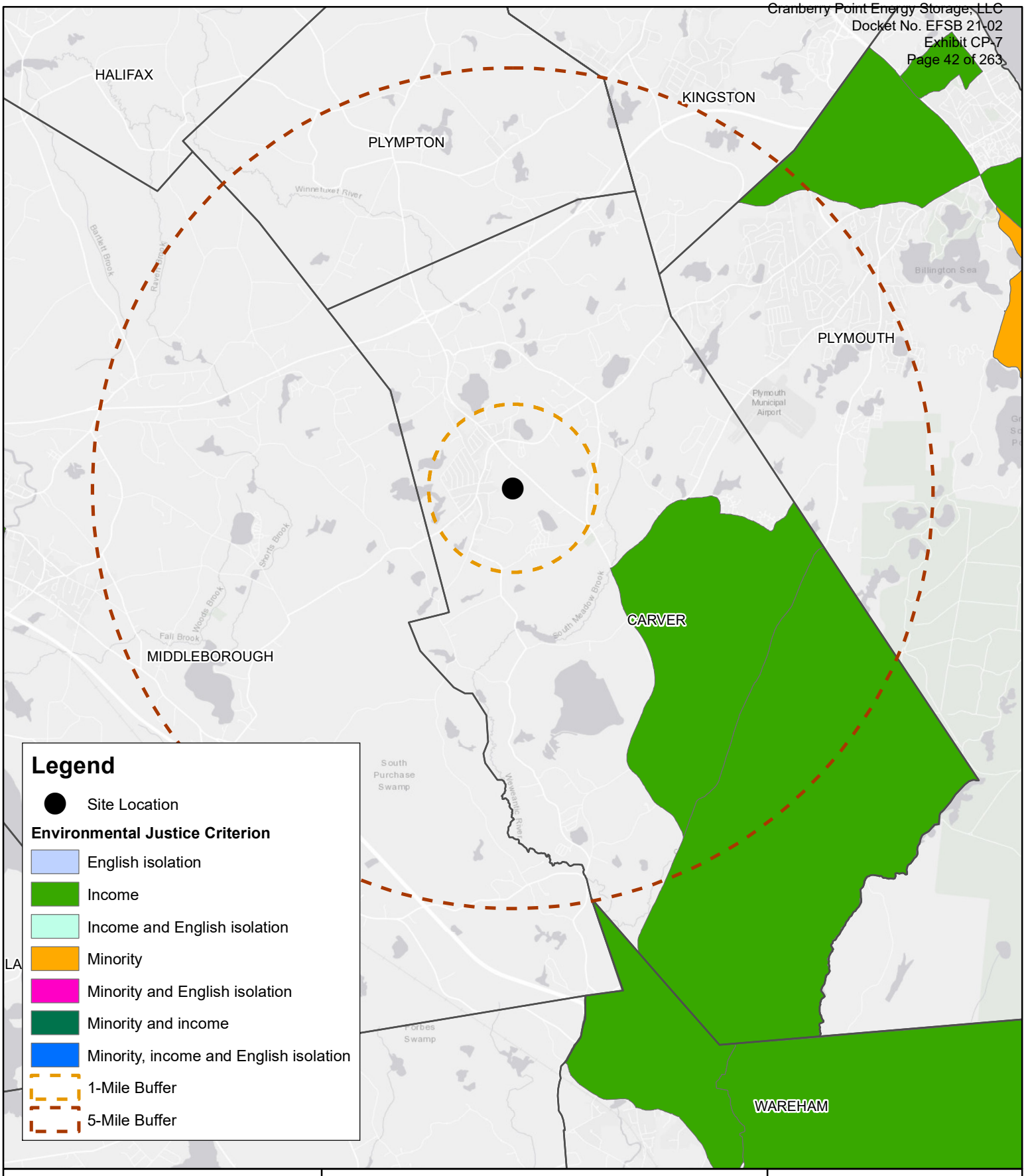
Figure 1.1-7
Site Layout Map

Cranberry Point Energy Storage
31R Main Street, Carver, MA

AECOM

Date: 7/26/2021

Project #: 60659634



N

0 4,050 8,100 16,200 Feet

Map Projection: MA State Plane NAD 83 Feet
Data Source: ESRI, MassGIS

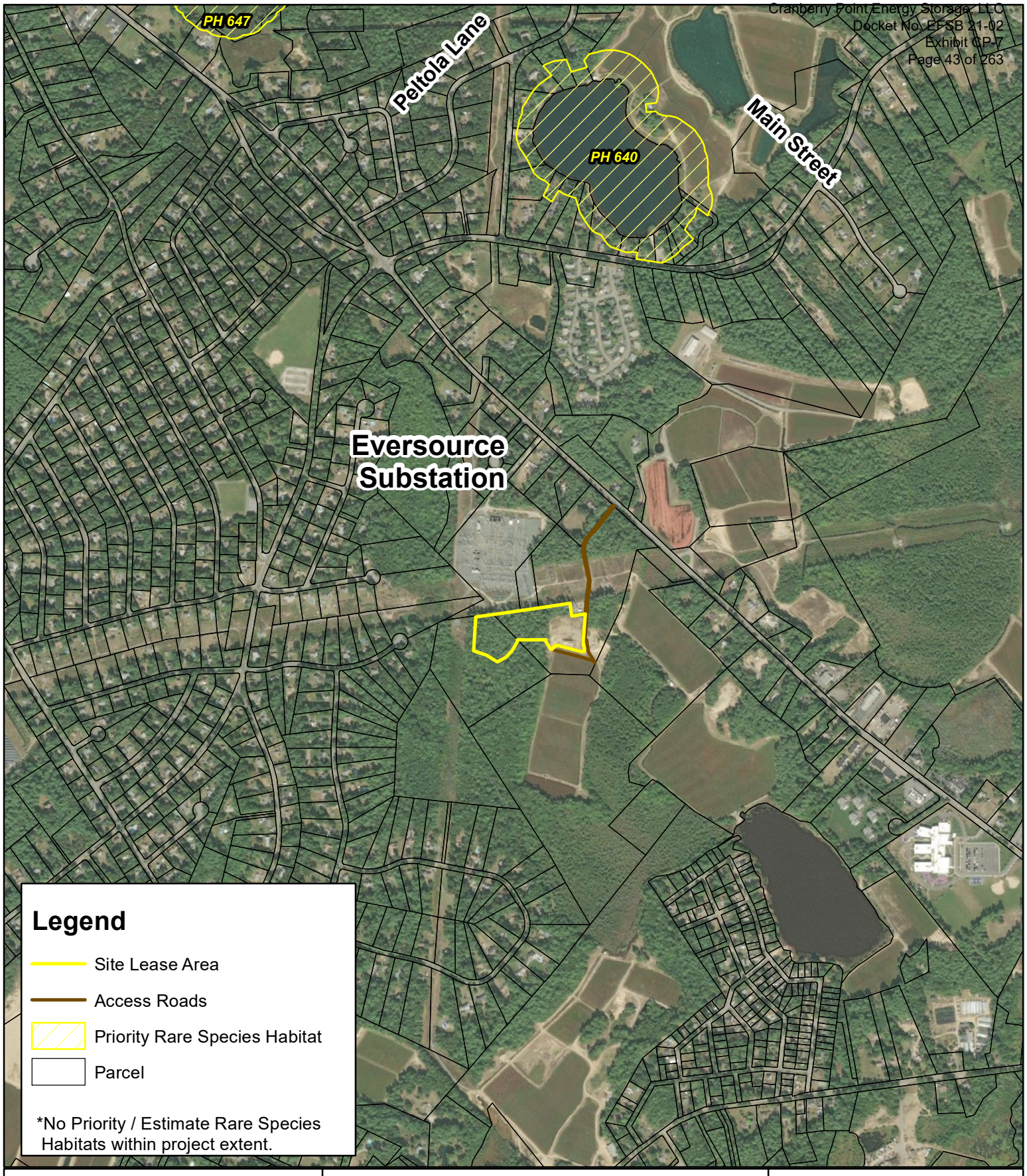
Figure 1.1-18
Environmental Justice Community Map

Cranberry Point Energy Storage
31R Main Street, Carver, MA

AECOM

Date: 7/26/2021

Project #: 60659634



N

0 500 1,000 2,000 Feet

Map Projection: MA State Plane NAD 83 Feet
Data Source: ESRI, MassGIS

Figure 1.1-19
Natural Heritage & Endangered Species Map

Cranberry Point Energy Storage
31R Main Street, Carver, MA

AECOM

Date: 7/26/2021

Project #: 60659634

Tax Map

Cranberry Point Energy Storage

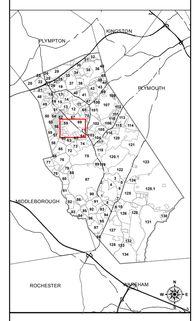
31R Main Street, Carver, MA

AECOM

N
W E
S

1 inch = 200 feet

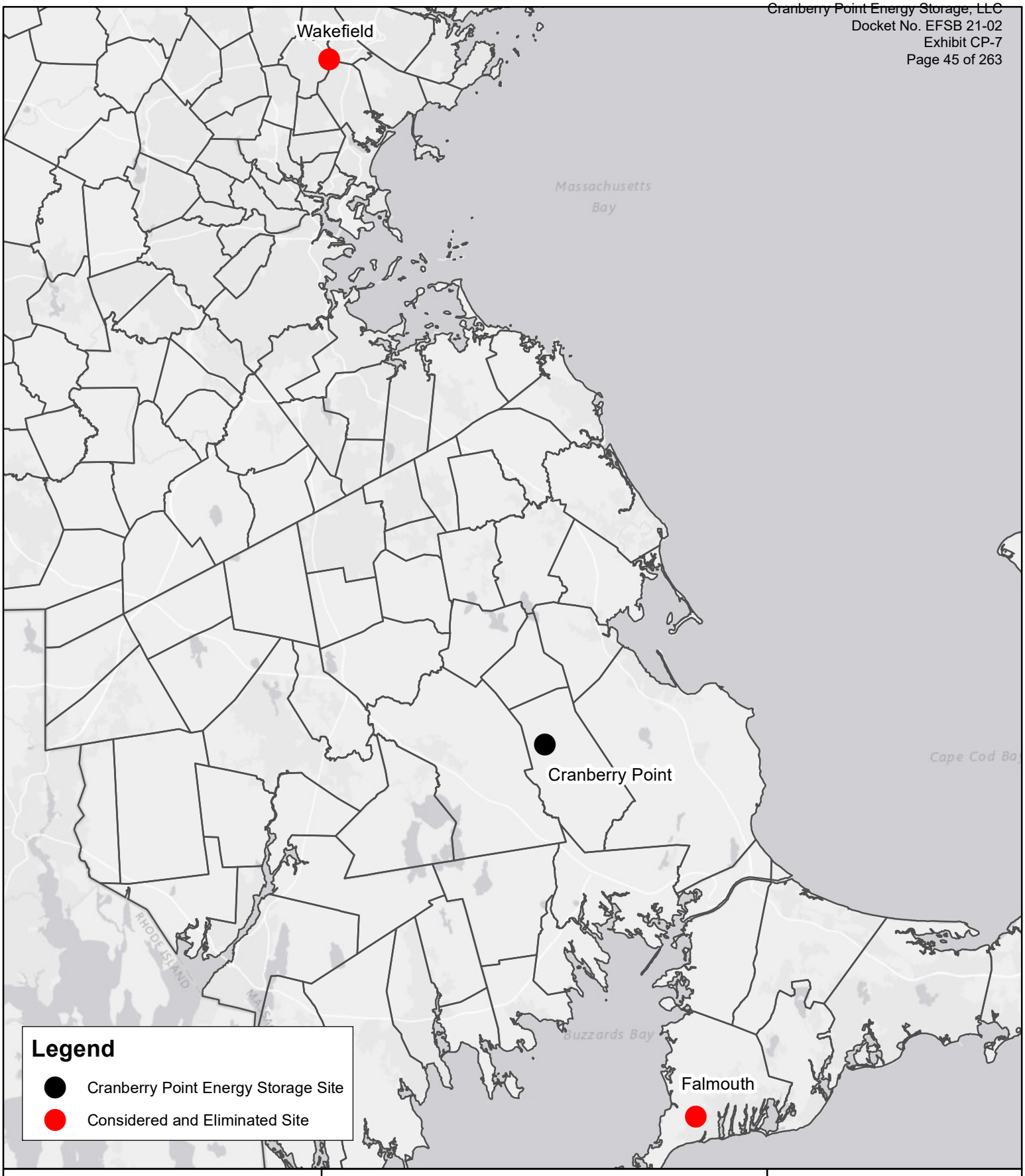
Feet
0 100 200



Map Legend

- Parcel
- Public Road
- Unpaved Road
- Building
- Easement
- Adjacent Map No.
- Pond, Lake
- Town Boundary

Figure 2.1-3
Tax Map



N

0 21,000 42,000 84,000 Feet

Map Projection: MA State Plane NAD 83 Feet
Data Source: ESRI, MassGIS

Figure 3.1-7
Sites Considered and Eliminated

Cranberry Point Energy Storage
31R Main Street, Carver, MA

AECOM

Date: 7/26/2021

Project #: 60659634

Attachment B Project Plans

CRANBERRY POINT ENERGY STORAGE, LLC

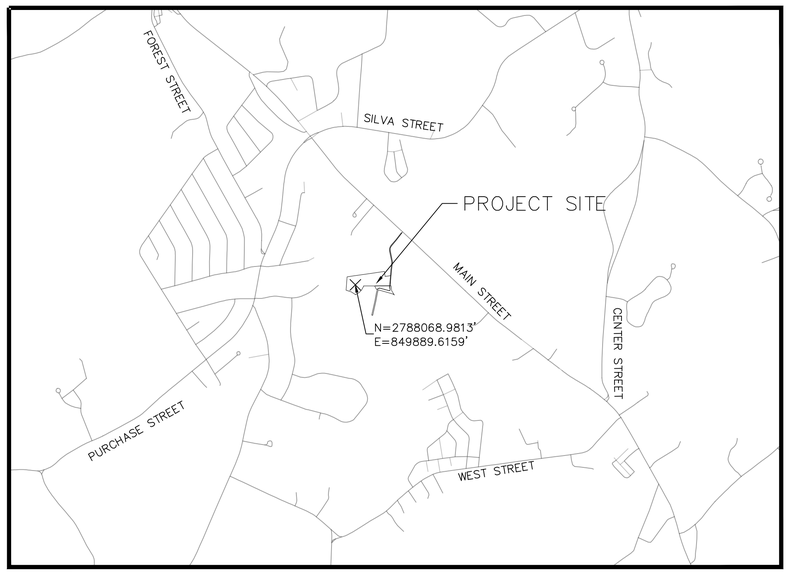
CRANBERRY POINT ENERGY STORAGE PROJECT

IN THE TOWN OF

CARVER

PLYMOUTH COUNTY, MA

INDEX



LOCATION MAP

JULY 26, 2021

AECOM

PROJECT

Cranberry Point Energy Storage Project
31 R Main Street
Carver, Massachusetts 02330

CLIENT

Cranberry Point Energy Storage, LLC

CONSULTANT

AECOM
250 Apollo Drive
Chelmsford, MA 01824
978.905.2100 tel 978.905.2101 fax
www.aecom.com

DRAFT

0 1500 3000
Feet

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	07/26/2021	ISSUE FOR PERMITTING

PROJECT NUMBER

60659634

SHEET TITLE

TITLE SHEET & INDEX

SHEET NUMBER

1

LEGEND (SHEETS 1–6)

OHW	OVERHEAD WIRE	■ P.C.H.B.	PLYMOUTH COUNTY HIGHWAY BOUND
CLF	CHAIN LINK FENCE	■ CB	CONCRETE BOUND
	TREE	25–13	ASSESSOR ID MAP/LOT
	LIMITS OF VEGETATION		TRANSMISSION EASEMENT
UP	UTILITY POLE		PROPERTY LINE
GW	GUY WIRE	124	MINOR CONTOUR: EXISTING
P	POST	130	MAJOR CONTOUR: EXISTING
BM	BENCH MARK	115	PROPOSED CONTOUR
BIT CONC / CONC	BITUMINOUS CONCRETE / CONCRETE		100' WETLAND BUFFER
T	TRANSFORMER		65' WETLAND SETBACK
WF	WOOD FENCE		DELINEATED WETLANDS
TP	TEST PIT		LIMIT OF WORK
W1–1	WETLAND FLAG		LIMIT OF GRADING
	BASIN GRASS MIX		LIMIT OF TREE CLEARING
	GRAVEL		EROSION CONTROL BARRIER

GENERAL NOTES

1) THIS PLAN WAS PREPARED FROM A SURVEY MADE ON THE GROUND USING TOTAL STATION METHODS ON OR BETWEEN OCTOBER 22, 2018 AND NOVEMBER 10, 2018 BY BEALS AND THOMAS, INC. TOPOGRAPHIC LIDAR INFORMATION TAKEN FROM NOAA DIGITAL COAST DATA VIEWER DATA SET ENTITLED "NEW ENGLAND CMGP SANDY LIDAR." THIS DATA WAS TESTED BY THE SURVEYOR TO MEET ASPRS POSITIONAL ACCURACY STANDARDS FOR DIGITIAL GEOSPATIAL DATA (2014) FOR A 18.13 CM (0.595') RMSEZ VERTICAL ACCURACY CLASS. ACTUAL NVA ACCURACY WAS FOUND TO BE RMSEZ 6.173 CM (0.203') EQUATING TO +/– 12.1 CM (0.397') AT 95% CONFIDENCE LEVEL. ACTUAL VVA ACCURACY WAS FOUND TO BE +\– 11.6 CM (0.381') AT THE 95 PERCENTILE.
2) UNDERGROUND UTILITIES SHOWN ARE BASED ON SURVEY. CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION, SIZE, AND ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK LIMIT AND TO CONTACT "DIG–SAFE" AT 1–888–344–7233 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION, OR CONSTRUCTION.
3) WETLAND RESOURCE AREA FLAGS DELINEATED BY AECOM.
4) VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
5) HORIZONTAL PROJECTION IS NAD83 HORIZONTAL COORDINATE SYSTEM ESTABLISHED BY GPS–VRS METHODS, NAD_83(2011)(EPOCH2010).
6) EASEMENTS OF RECORD ARE SHOWN IN SO FAR AS DISCLOSED BY THE CURRENT DEED.
7) THE PARCEL SHOWN IS LOCATED IN FEMA ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS SHOWN ON "FLOOD INSURANCE RATE MAP, PLYMOUTH COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 343 OF 650", MAP NUMBER 25023C0343J, EFFECTIVE DATE JULY 17, 2012.
8) ASSET ENGINEERING LOCATED AT 153 E CENTER ST, CANTON, MS 39046, PREPARED INITIAL SITE LAYOUT, MODIFICATIONS TO SITE LAYOUT WERE DEVELOPED BY AECOM IN JUNE AND JULY 2021.
9) AREA DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION AND SEEDED TO PREVENT EROSION.
10) CONSTRUCTION DELIVERIES ARE RESTRICTED TO THE HOURS OF 7:30 AM TO 4:30 PM.
11) PROPERTY LINE SEPARATING FORMER ASSESSORS PARCEL 61–7 AND FORMER ASSESSORS PARCEL 61–10 HAS BEEN REMOVED BASED ON ANTICIPATED ANR APPROVAL.

FIRE PROTECTION NOTES PER CARVER FIRE DEPARTMENT (CFD)

1) PROPER SIGNAGE PERTAINING TO PV INSTALLATIONS AS REQUIRED BY NEC, FEDERAL, STATE, AND LOCAL CODES SHALL BE INSTALLED.
2) ALL GATED ACCESS POINTS WILL HAVE THE ABILITY TO ACCOMMODATE A CFD – SUPPLIED PADLOCK OR BE EQUIPPED WITH A "SUPRA" KEY SAFE, WHICH MUST BE INSTALLED AT THE EXPENSE OF THE DEVELOPER. SPECIFICATIONS AND ORDERING INFORMATION FOR ORDERING THE "SUPRA" BOX WILL BE PROVIDED BY CFD UPON REQUEST.
3) THE OWNER SHALL SUBMIT AND MAINTAIN A GROUND FUELS MANICURING AND MAINTENANCE SCHEDULE. MANICURING OF GROUND FUELS SHOULD OCCUR TWICE PER YEAR, AT A MINIMUM, DURING THE "GROWING" SEASON.
4) THE PROPOSED LITHIUM–ION BATTERY STORAGE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MA 527 CMR 1.00, CHAPTER 52, STATIONARY STORAGE BATTERY SYSTEMS. THIS INCLUDES, BUT IS NOT LIMITED TO: 52.3.10, AN APPROVED, SUPERVISED SMOKE DETECTION/FIRE ALARM SYSTEM, 52.3.2, A THERMAL RUNAWAY SYSTEM, AND 52.3.7, A TEMPERATURE MAINTAINED OPERATING ENVIRONMENT.
5) THE DESIGN OF THE INTEGRATED FIRE SUPPRESSION AND DETECTION SYSTEMS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS, INCLUDING BUT NOT LIMITED TO NFPA 70, NFPA 72, NFPA 855, MA 527 CMR 1.00, AND UL 9540. THESE SYSTEMS SHALL BE APPROVED BY THE CFD.
6) A LOCAL DISCONNECT SHALL BE INSTALLED.
7) TRAINING SHALL BE PROVIDED TO CFD FOR MITIGATING ON SITE EMERGENCIES.
8) THE FINAL TECHNOLOGY HAS YET TO BE DETERMINED. WHEN THE TECHNOLOGY AND MANUFACTURER IS CHOSEN, CFD SHALL HAVE THE OPPORTUNITY TO PROVIDE FURTHER COMMENTS.
9) COMPONENTS OF CARVER'S PUBLIC SAFETY RADIO SYSTEM ARE LOCATED ADJACENT TO THE PROJECT. THE OWNER SHALL PROVIDE EVIDENCE THAT THE BESS WILL NOT CREATE RADIO INTERFERENCE WITH THIS MISSION CRITICAL INFRASTRUCTURE.

0 40 80 Feet

AECOM

PROJECT

Cranberry Point Energy Storage Project
31 R Main Street
Carver, Massachusetts 02330

CLIENT

Cranberry Point Energy Storage, LLC

CONSULTANT

AECOM
250 Apollo Drive
Chelmsford, MA 01824
978.905.2100 tel 978.905.2101 fax
www.aecom.com

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	07/26/2021	ISSUE FOR PERMITTING

PROJECT NUMBER

60659634

SHEET TITLE

EXISTING SITE PLAN/
TEST PIT LOCATION

SHEET NUMBER

2

KEY:

5Y 4/4 : MUNSELL COLOR DESIGNATION OLIVE

5Y 6/4 : MUNSELL COLOR DESIGNATION PALE OLIVE

GR: SOIL STRUCTURE GRANULAR

SGR: SOIL STRUCTURE SINGLE GRAIN

*: LAB SAMPLE FOR THIS HORIZON NOT COLLECTED

NOTE:

GEOSEARCH, INC. OF STERLING, MASSACHUSETTS PERFORMED 8 SOIL TEST BORINGS (B-1 THROUGH B-8) AT THE SITE BETWEEN JANUARY 4 AND JANUARY 6, 2021 WITH AN ALL-TERRAIN VEHICLE MOUNTED DRILL RIG. A MAP OF THE BORING LOCATIONS AND THE BORING LOGS ARE INCLUDED IN THE GEOTECHNICAL ENGINEERING REPORT APPENDIX OF THE STORMWATER REPORT.

TEST PIT NUMBER: TP1A
SURFACE ELEVATION: 119'
COORDINATES: N: 2788084.446, E: 850304.310
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-2'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2'-108'	B	5Y 6/4	-	-	-	SAND	5.2%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: NO
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

TEST PIT NUMBER: TP2
SURFACE ELEVATION: 108'
COORDINATES: N: 2787938.616, E: 850296.454
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-4'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2'-108'	B	5Y 6/4	-	-	-	SAND	3.7%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: SOIL MOIST AT BOTTOM OF PIT
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

TEST PIT NUMBER: TP3
SURFACE ELEVATION: 118'
COORDINATES: N: 2787972.022, E: 849933.154
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-2'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2'-108'	B	5Y 6/4	-	-	-	SAND	3.9%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: SOIL MOIST AT BOTTOM OF PIT
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

TEST PIT NUMBER: TP4
SURFACE ELEVATION: 118'
COORDINATES: N: 2787923.211, E: 849906.335
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-2.5'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2.5'-108'	B	5Y 6/4	-	-	-	SAND	1.0%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: NO
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

TEST PIT NUMBER: TP5
SURFACE ELEVATION: 117'
COORDINATES: N: 2787892.277, E: 849838.527
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-2'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2'-129.6'	B	5Y 6/4	-	-	-	SAND	5.5%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: NO
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

TEST PIT NUMBER: TP8
SURFACE ELEVATION: 119'
COORDINATES: N: 2788073.780, E: 850481.371
DATE 12/21/18

DEPTH (IN.)	SOIL HORIZON/ LAYER	SOIL MATRIX: COLOR-MOIST (MUNSELL)	REDOXIMORPHIC FEATURES (MOTTLES)			SOIL TEXTURE (USDA)	COARSE FRAGMENTS % BY VOLUME		SOIL STRUCTURE	SOIL CONSISTENCE (MOIST)
			DEPTH	COLOR	PERCENT		GRAVEL	COBBLES AND STONES		
0'-2'	A	5Y 4/4	-	-	-	SAND	-*	0%	GR	FRIABLE
2'-108'	B	5Y 6/4	-	-	-	SAND	3.5%	0%	SGR	LOOSE

GROUNDWATER OBSERVED: NO
DEPTH WEEPING FROM PIT: NOT OBSERVED
DEPTH STANDING WATER IN HOLE: NOT OBSERVED
ESTIMATED DEPTH TO HIGH GROUNDWATER: NOT OBSERVED

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ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	07/26/2021	ISSUE FOR PERMITTING

PROJECT NUMBER

60659634

SHEET TITLE

TEST PIT LOGS

SHEET NUMBER

3

DRAINAGE SYSTEM COORDINATES

ID	NORTHING (FT)	EASTING (FT)
CB-1	2788013.2527	850480.9382
CB-2	2788079.2943	850338.0367
CB-3	2788271.4637	850279.0283
CB-4	2788180.7777	850080.6323
CB-5	2788037.4313	850011.6743
D-1	2788018.9131	850447.8833
D-2	2788046.3842	850311.7387
D-3	2788041.8252	850300.7634
D-4	2787966.6724	849939.7883

PROFILE c-c' COORDINATES

STATION	NORTHING (FT)	EASTING (FT)
0+00	2787985.3796	849908.4945
0+50	2787944.6500	849928.9716
1+00	2787949.4262	849974.9571
1+27.99	2787959.4625	85001.0158

PROFILE g-g' COORDINATES

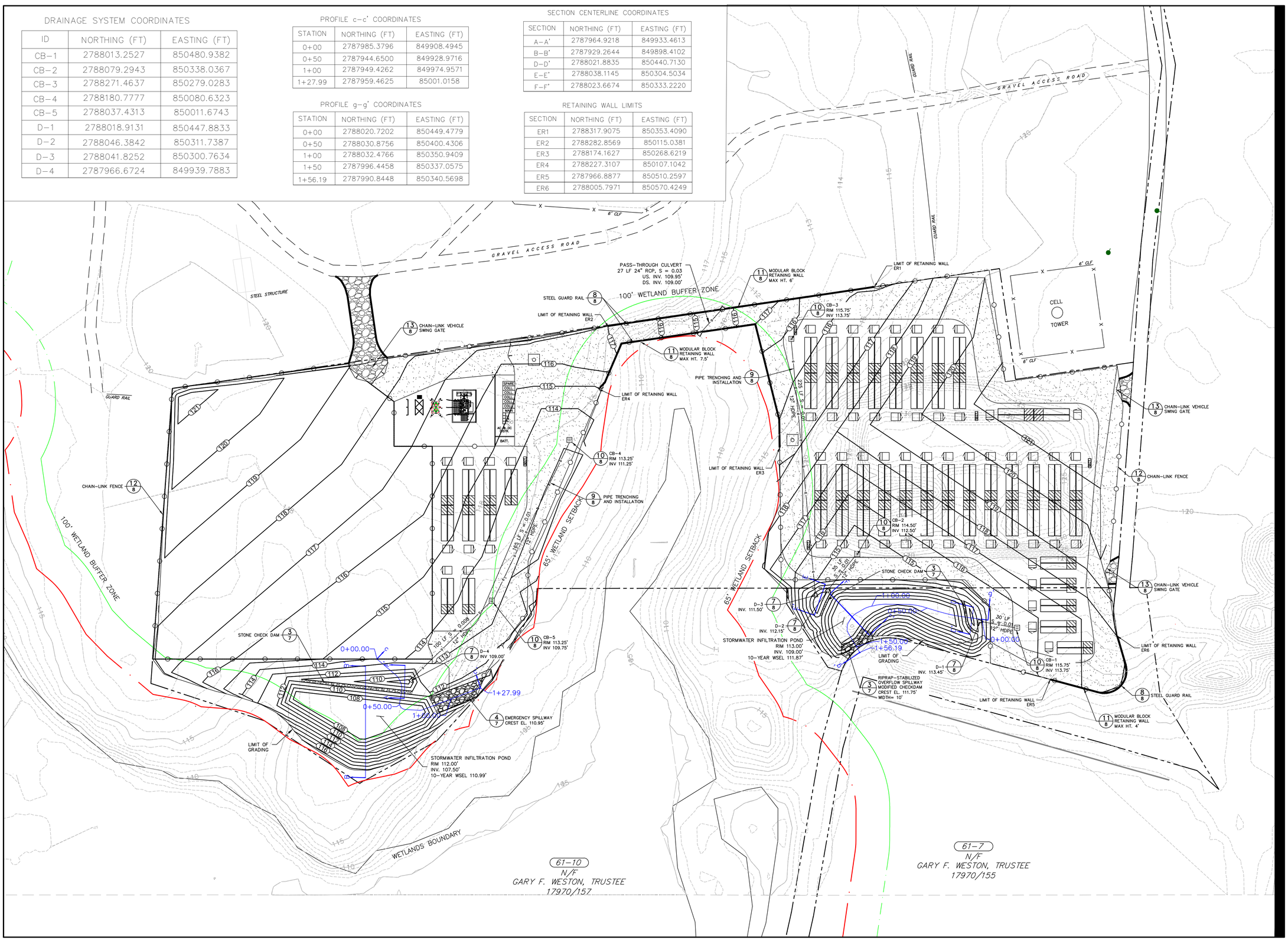
STATION	NORTHING (FT)	EASTING (FT)
0+00	2788020.7202	850449.4779
0+50	2788030.8756	850400.4306
1+00	2788032.4766	850350.9409
1+50	2787996.4458	850337.0575
1+56.19	2787990.8448	850340.5698

SECTION CENTERLINE COORDINATES

SECTION	NORTHING (FT)	EASTING (FT)
A-A'	2787964.9218	849933.4613
B-B'	2787929.2644	849898.4102
D-D'	2788021.8835	850440.7130
E-E'	2788038.1145	850304.5034
F-F'	2788023.6674	850333.2220

RETAINING WALL LIMITS

SECTION	NORTHING (FT)	EASTING (FT)
ER1	2788317.9075	850353.4090
ER2	2788282.8569	850115.0381
ER3	2788174.1627	850268.6219
ER4	2788227.3107	850107.1042
ER5	2787966.8877	850510.2597
ER6	2788005.7971	850570.4249



0 40 80 Feet

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SHEET TITLE

PROPOSED GRADING AND STORMWATER MANAGEMENT

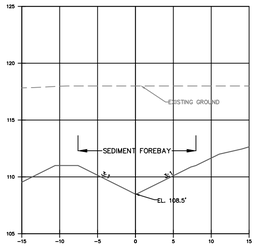
SHEET NUMBER

4

WEST STORAGE AREA

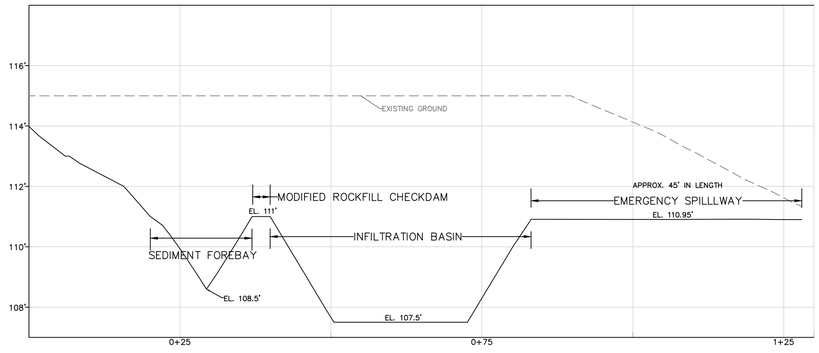
WEST SEDIMENT FOREBAY

SECTION A–A'



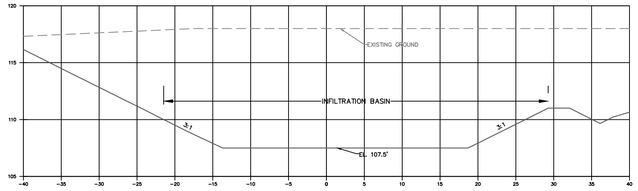
WEST STORMWATER BMP PROFILE

PROFILE c–c'



WEST INFILTRATION BASIN

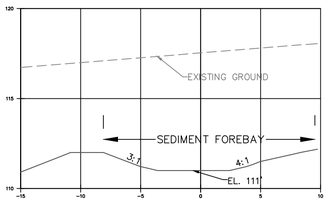
SECTION B–B'



EAST STORAGE AREA

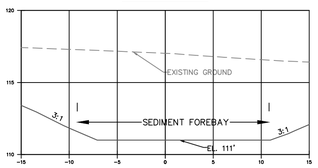
EAST SEDIMENT FOREBAY 1

SECTION D–D'



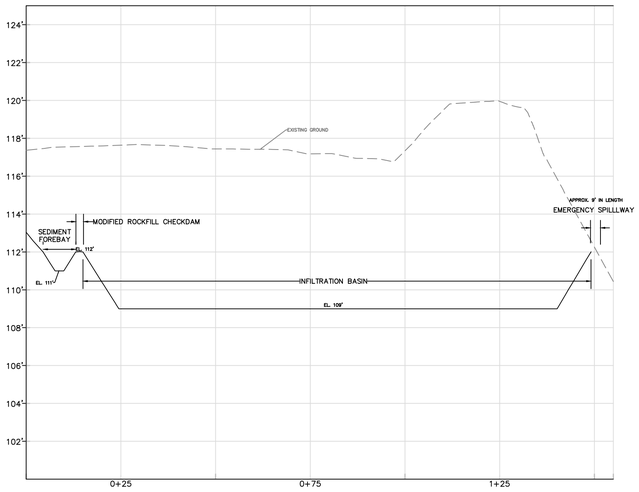
EASR SEDIMENT FOREBAY 2

SECTION E–E'



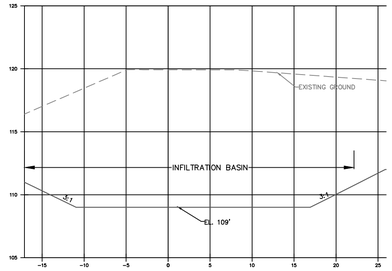
EAST STORMWATER BMP PROFILE

PROFILE g–g'



EAST INFILTRATION BASIN

SECTION F–F'



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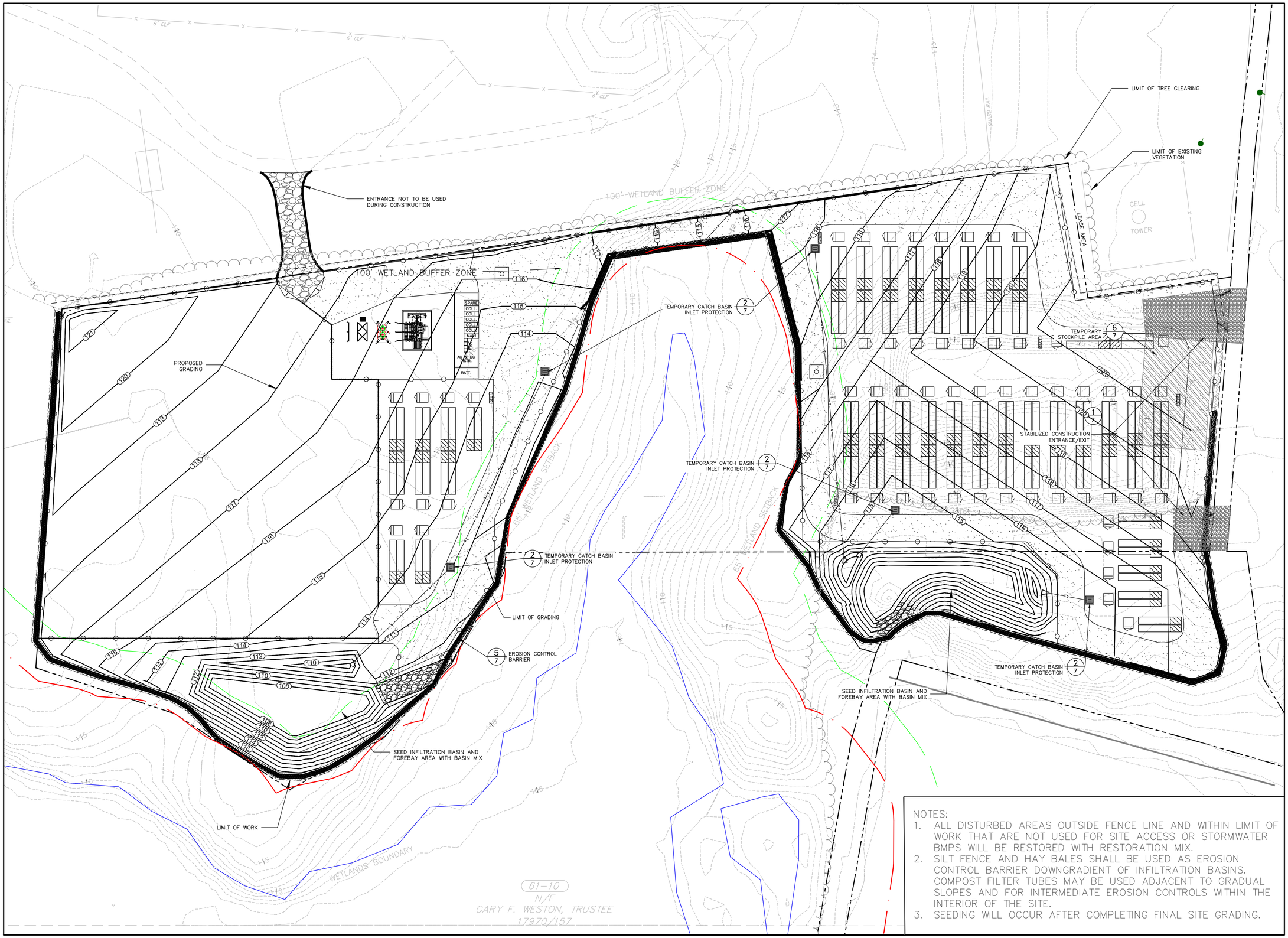
SHEET TITLE

SECTIONS AND PROFILES

SHEET NUMBER

5



NOTES:
1. ALL DISTURBED AREAS OUTSIDE FENCE LINE AND WITHIN LIMIT OF WORK THAT ARE NOT USED FOR SITE ACCESS OR STORMWATER BMPS WILL BE RESTORED WITH RESTORATION MIX.
2. SILT FENCE AND HAY BALES SHALL BE USED AS EROSION CONTROL BARRIER DOWNGRADIENT OF INFILTRATION BASINS. COMPOST FILTER TUBES MAY BE USED ADJACENT TO GRADUAL SLOPES AND FOR INTERMEDIATE EROSION CONTROLS WITHIN THE INTERIOR OF THE SITE.
3. SEEDING WILL OCCUR AFTER COMPLETING FINAL SITE GRADING.

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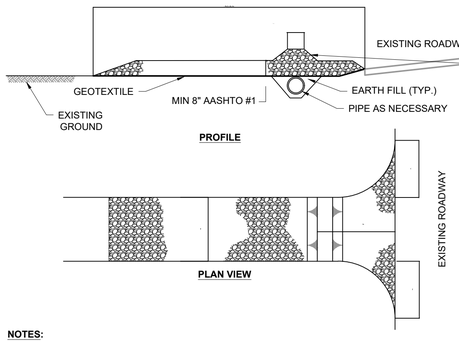
SHEET TITLE

EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER

6

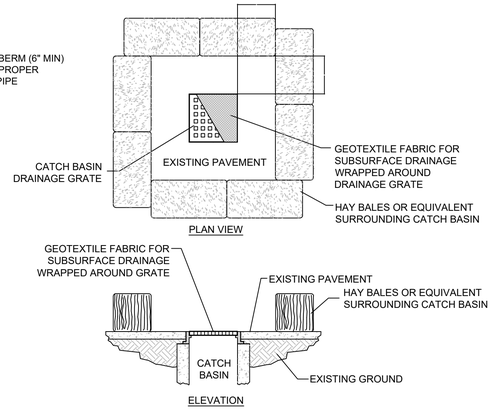


NOTES:

1. ENTRANCE TO BE AT LEAST 75' LONG AND USE STONE - 3"-5" OPEN GRADED ROCK.
2. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE SURFACE.
3. WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
4. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
5. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
6. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN STORM EVENT.

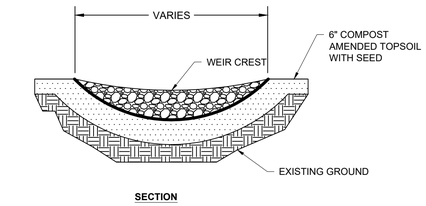
STABILIZED CONSTRUCTION ENTRANCE / EXIT 1/6

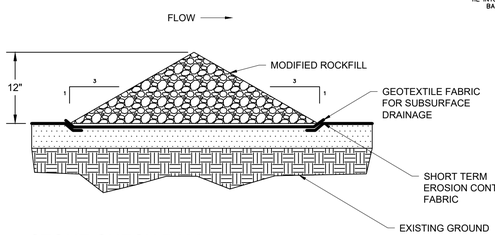
SCALE: NONE



TEMPORARY CATCH BASIN INLET PROTECTION 2/6

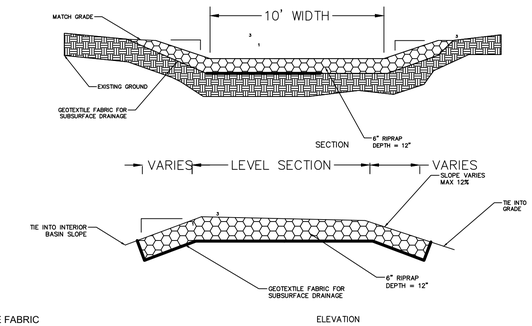
SCALE: NONE





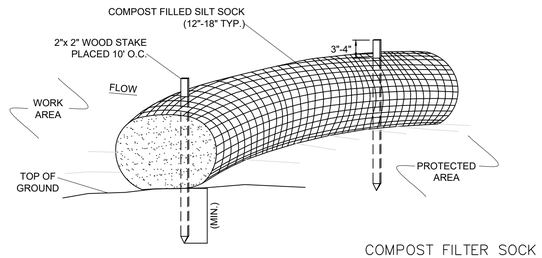
STONE CHECK DAM 3/4

SCALE: NONE



EMERGENCY SPILLWAY 4/4

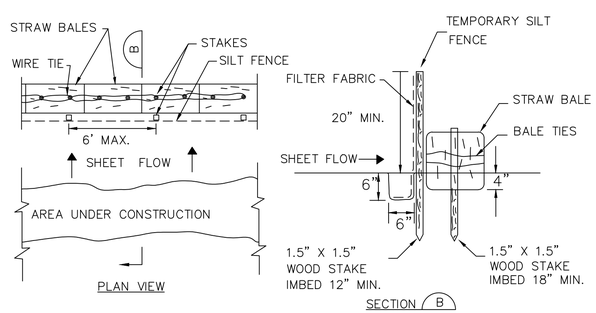
SCALE: NONE



COMPOST FILTER SOCK
NOT TO SCALE

NOTES:

1. SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
2. SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE QUALIFIED PROFESSIONAL.



EROSION CONTROL BARRIER 5/6

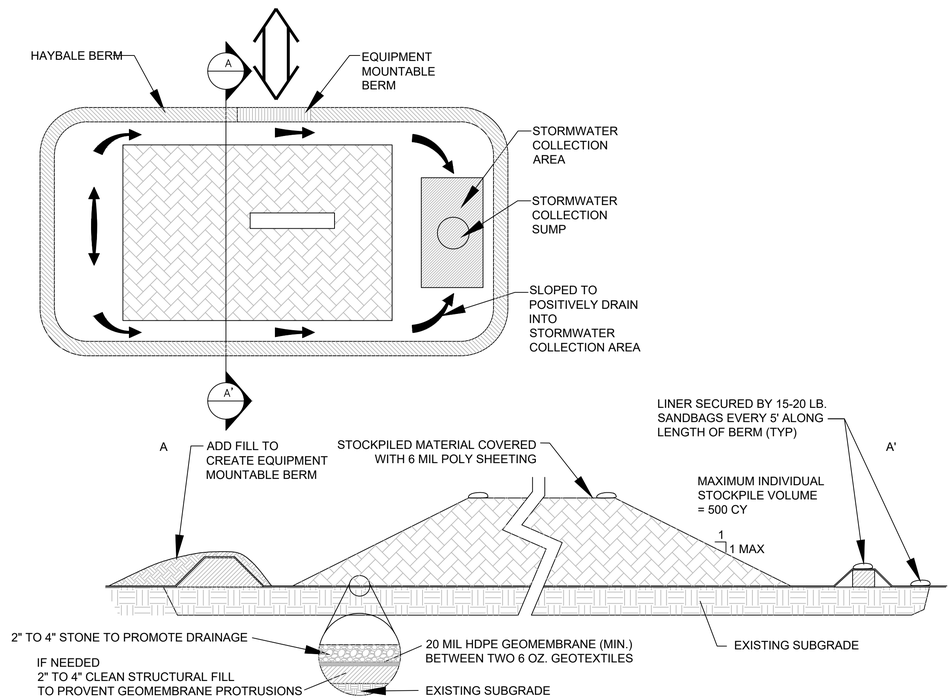
SCALE: NONE

SILT FENCE INSTALLATION NOTES:

1. SET POSTS AND EXCAVATE A 6" BY 6" TRENCH UPSLOPE ALONG THE LINE OF STAKES.
2. ATTACH FILTER FABRIC TO STAKES AND EXTEND IT INTO THE TRENCH.
3. BACKFILL AND COMPACT THE TRENCH USING THE EXCAVATED SOIL.

STRAW BALE INSTALLATION NOTES:

1. EXCAVATE A 4" DEEP TRENCH TO MATCH THE WIDTH OF THE STRAW BALES.
2. PLACE BALES IN TRENCH WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
3. ANCHOR BALES BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE SHOULD BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. ADJOINING BALES SHOULD BE SECURELY TIED TOGETHER TO PREVENT MOVEMENT.
5. STRAW WATTLES OR COMPOST FILTER TUBES MAY BE USED IN LIEU OF STRAW BALES. IF USED, WATTLES OR FILTER TUBES SHALL BE INSTALLED AND SECURED IN PLACE PER MANUFACTURER'S RECOMMENDATIONS.



TEMPORARY STOCKPILE AREA 6/6

SCALE: NONE

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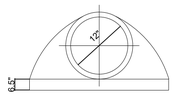
SHEET TITLE

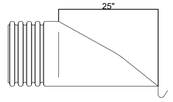
EROSION AND SEDIMENT CONTROL DETAILS

SHEET NUMBER

7

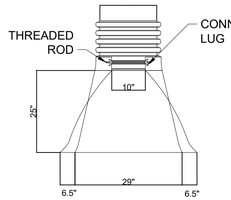


ELEVATION



END VIEW

TYPICAL CROSS-SECTION



PLAN

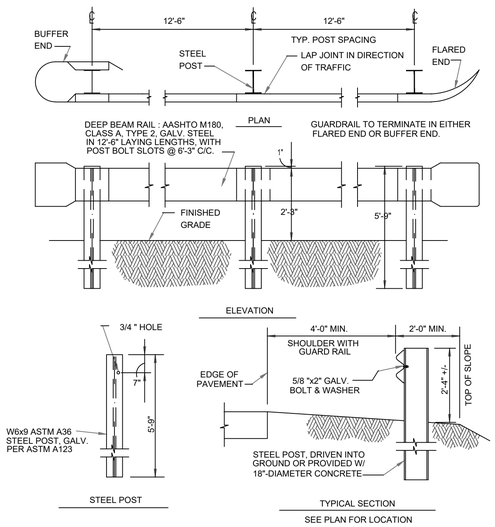
NOTES:

1. FLARED END SECTION SHALL BE HIGH DENSITY POLYETHYLENE MEETING ASTM D3350 MINIMUM CELL CLASSIFICATION 213320C.
2. METAL THREADED FASTENING ROD SHALL BE STAINLESS STEEL.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS

END SECTION FOR HDPE PIPE

SCALE: NONE

7/4

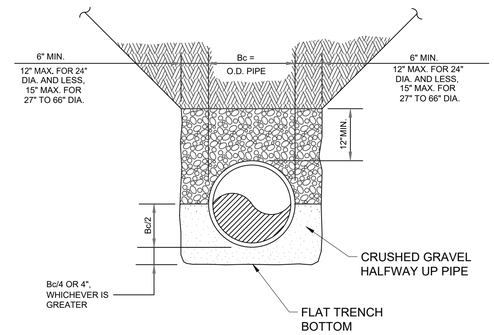


ALTERNATE POST: 6"x8" MIN, OR 8" DIA. WOOD POST, SOUTHERN PINE, GRADE No. 1, DENSE SR, PER AASHTO M 168. PRESSURE TREATED PER AASHTO M133.

STEEL GUARD RAIL

SCALE: NONE

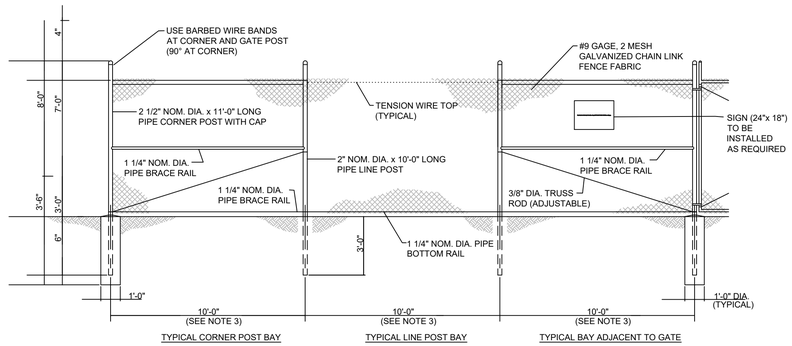
8/4



PIPE TRENCHING AND INSTALLATION

SCALE: NONE

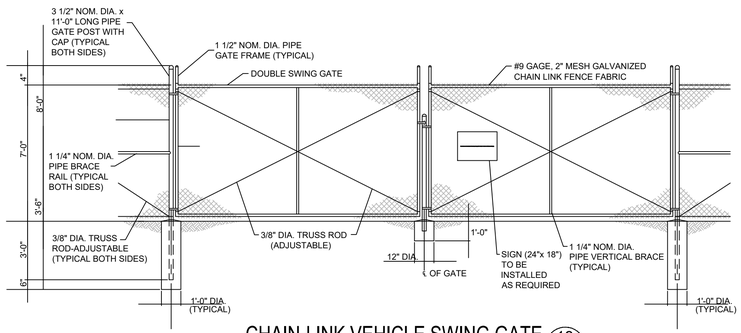
9/4



CHAIN-LINK FENCE

SCALE: NONE

12/4



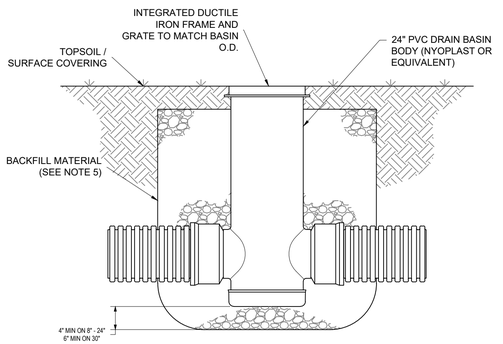
CHAIN-LINK VEHICLE SWING GATE

SCALE: NONE

13/4

CHAIN LINK FENCING AND GATE NOTES:

1. ALL PIVOT POST HOLES SHALL BE AUGURED, DO NOT FORM.
2. CONCRETE SHALL REACH A MINIMUM STENGTH OF 4,000 P.S.I. AT 28 DAYS
3. LINE POSTS SHALL BE DRIVEN AND INSTALLED EQUALLY SPACED ALONG FENCE LINE AT A MAXIMUM OF 10'-0" CENTER TO CENTER
4. ALL WIRE, FENCE FABRIC, POST, BRACE RAILS AND HARDWARE TO BE HOT DIPPED GALVANIZED
5. SWING GATES TO PROVIDE 20-FOOT CLEARANCE FOR VEHICLE PASSAGE.



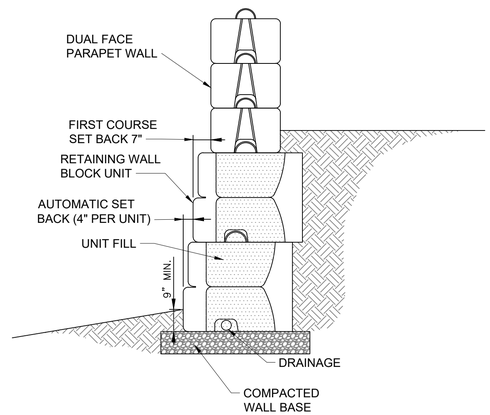
NOTES:

1. GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP & PVC SEWER.
5. THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

PVC DRAIN BASIN BODY

SCALE: NONE

10/4



NOTES:

1. MODULAR BLOCK GRAVITY RETAINING WALLS TO BE STONE STRONG, VERTIBLOCK, OR EQUIVALENT. TYPICAL DETAIL SHOWN HERE FOR INFORMATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR STRUCTURAL DESIGN OF RETAINING WALLS. DESIGNS APPROVED BY A LICENSED PROFESSIONAL ENGINEER TO BE PROVIDED TO CONTRACTING OFFICER FOR APPROVAL PRIOR TO THE COMMENCEMENT OF SITE GRADING WORK.
3. RETAINING WALLS TO BE INSTALLED AT THE LOCATIONS AND TO THE ELEVATIONS DEPICTED ON THE GRADING AND STORMWATER PLAN.

MODULAR BLOCK RETAINING WALL

SCALE: NONE

11/4

AECOM

PROJECT

Cranberry Point Energy Storage Project
31 R Main Street
Carver, Massachusetts 02330

CLIENT

Cranberry Point Energy Storage, LLC

CONSULTANT

AECOM
250 Apollo Drive
Chelmsford, MA 01824
978.905.2100 tel 978.905.2101 fax
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ISSUE/REVISION

A	07/26/2021	ISSUE FOR PERMITTING
I/R	DATE	DESCRIPTION

PROJECT NUMBER

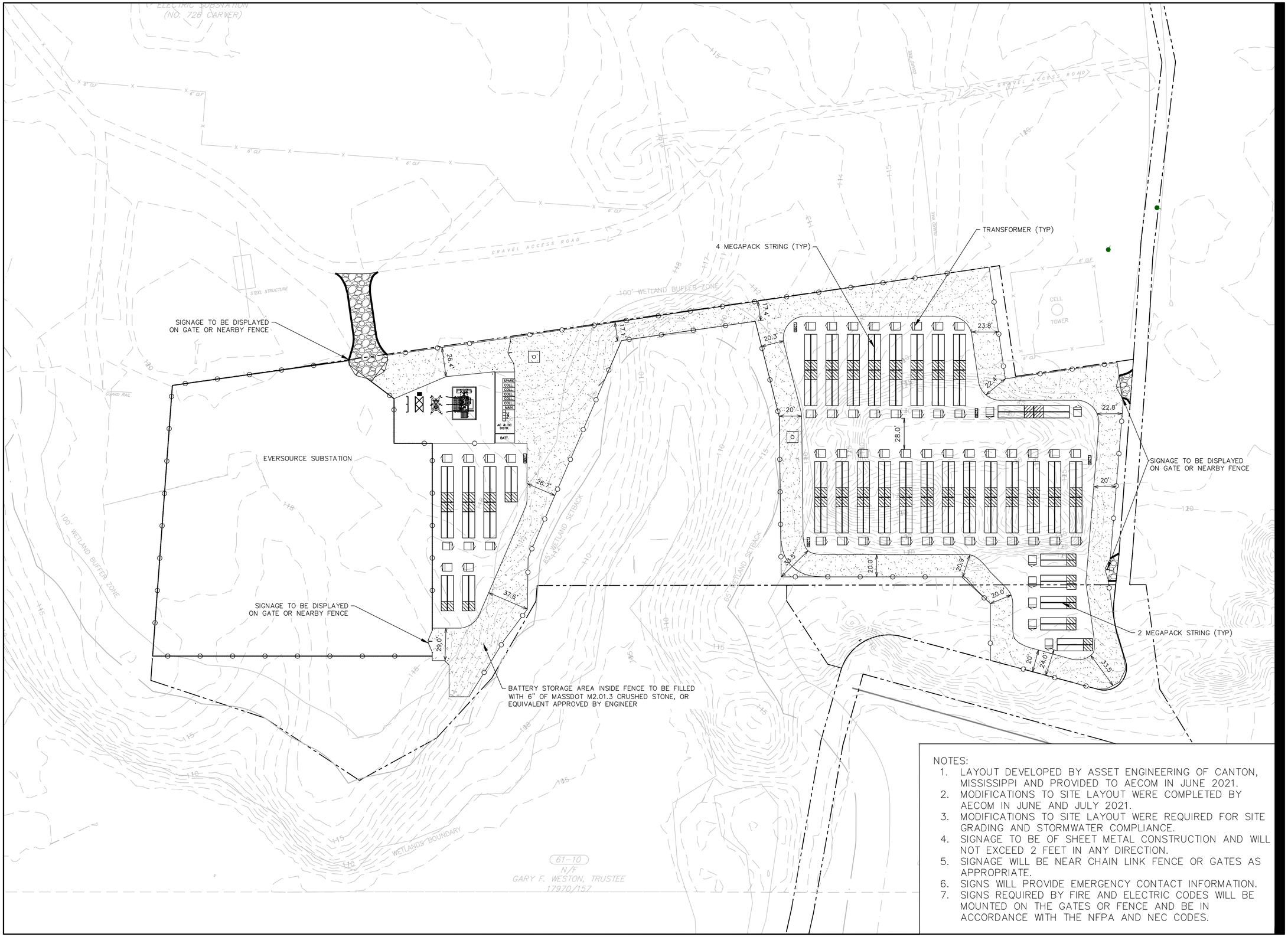
60659634

SHEET TITLE

SITE & STORMWATER DETAILS

SHEET NUMBER

8



NOTES:

1. LAYOUT DEVELOPED BY ASSET ENGINEERING OF CANTON, MISSISSIPPI AND PROVIDED TO AECOM IN JUNE 2021.
2. MODIFICATIONS TO SITE LAYOUT WERE COMPLETED BY AECOM IN JUNE AND JULY 2021.
3. MODIFICATIONS TO SITE LAYOUT WERE REQUIRED FOR SITE GRADING AND STORMWATER COMPLIANCE.
4. SIGNAGE TO BE OF SHEET METAL CONSTRUCTION AND WILL NOT EXCEED 2 FEET IN ANY DIRECTION.
5. SIGNAGE WILL BE NEAR CHAIN LINK FENCE OR GATES AS APPROPRIATE.
6. SIGNS WILL PROVIDE EMERGENCY CONTACT INFORMATION.
7. SIGNS REQUIRED BY FIRE AND ELECTRIC CODES WILL BE MOUNTED ON THE GATES OR FENCE AND BE IN ACCORDANCE WITH THE NFPA AND NEC CODES.

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PROJECT NUMBER

60659634

SHEET TITLE

PROPOSED LAYOUT

SHEET NUMBER

9

Attachment C Stormwater Report

AECOM Environment

Stormwater Report

Cranberry Point Energy Storage, LLC
Project: Cranberry Point Energy Storage Project
Developer: Plus Power, LLC
31 R Main Street, Carver, MA

August 05, 2021

Prepared by:
AECOM

Table of Contents

3. Conduit Sizing Calculations
4. Inlet Capacity Table
5. HydroCAD Reports- Existing & Proposed Conditions
6. Groundwater Mounding Analysis

Attachment D Other Documents

1. Operation & Maintenance Plan
2. Illicit Discharge Compliance Statement
3. Laboratory Soil Analysis Results
4. Geotechnical Engineering Report

6.0 References

1.0 Introduction

1.1 Project Description

The proposed Cranberry Point Energy Storage Project is located at 31 R Main Street in Carver, Massachusetts. The property is undeveloped and contains unimproved roads to access a cell tower and cranberry bogs to the South.

Cranberry Point Energy Storage, LLC is proposing to lease a portion of the property to house battery storage system enclosures, each having its own 5,000 kVA transformer. There will be two separate storage areas, a Western storage area and an Eastern storage area, connected by an access road. The battery storage system enclosures, transformers, and breakers will be supported by concrete slab foundations. Other associated electrical equipment will be supported by concrete slabs or pier foundations. Site plans currently assume the battery storage technology will be Tesla Megapack 2 units. In addition, the project area will include a transmission owner substation, a facility substation, and low voltage/medium voltage equipment which will be supported by concrete pads.

2.0 Existing Conditions

2.1 Existing Site Description

The project site mainly consists of forest, sandy mounds, open sandy areas, and wetlands just South. A cranberry bog is located directly South of the Eastern portion of the lease area. North of the site is an Eversource Substation. The project site is divided into two drainage areas, separated by wetlands. The drainage area for the West site is 2.6 acres, and the drainage area for the East site is 2.2 acres.

Topography of existing site range from approximately 135 feet to approximately 105 feet. A wetlands feature was delineated approximately in the middle and South of the site. Overall, the area to the North is at a higher elevation and slopes down to the wetlands and cranberry bog in the South. Currently, runoff at the site flows overland and discharges to the wetlands and cranberry bog in the South.

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel No. 25023C0343J (July 17, 2012), the project site is outside of the special flood hazard areas subject to inundation by the 0.2% annual chance flood.

According to the Massachusetts Geographic Information System (MassGIS) online mapping tool (OLIVER), based on the 14th Edition Heritage Atlas (August 2017), the Project Site is not located within any Natural Heritage and Endangered Species Program (NHESP) Estimated Habitats of Rare Wildlife or Priority Habitats of Rare Species. There are no Certified Vernal Pools or Potential Vernal Pools located on the Project Site.

The soil type was identified by a Test Pit Excavation effort on December 21, 2018[1]. Soil analysis from all six test pits throughout the site showed the presence of poorly graded sand. The NRCS hydrologic soil

[1] The Particle Size Analysis performed by GeoTesting Express references the Project “Carver Energy Storage.” The same project site is now known as “Cranberry Point Energy Storage Project.”

group, which governs the infiltration rate, is type “A,” representing sandy soil. The results of the laboratory sieve analysis are included in Attachment D.

Geosearch, Inc. advanced eight soil test borings at the site in January 2021. The general subsurface conditions observed at the boring locations consisted of shallow surficial forest mat, subsoil and isolated areas of succession by sand and silt deposits. Groundwater levels were measured over two days in the Southern portion of the lease area where the stormwater BMPs will be located. The Geosearch report is included in Attachment D. The Geosearch 2021 soil borings showed consistent soil properties with the 2018 Test Pits.

Figures are provided in Attachment A. Figures A-1 and A-2 show the site location and two drainage areas and the existing land use. A detailed breakdown of soil type, land cover, and curve number is provided in Attachment C.

3.0 Proposed Conditions

3.1 Proposed Site Description

As mentioned above, the Cranberry Point Energy Storage Project is proposing to modify the undeveloped area to installed enclosures for a battery energy storage system to store and release electricity. The approximate project site area is 5.85 acres, including 3.27 acres of proposed crushed stone coverage and 0.91 acres of impervious surfaces in the form of concrete foundations or pillars. The proposed layout is shown in Attachment B.

The project will result in a net increase in impervious area and runoff from the site. To address the increase in runoff created by the project, two infiltration basins with sediment forebays will be installed. One will be installed in the Western Storage area, and one will be installed in the Eastern Storage area. The basins are designed to provide water quality treatment and to control the peak discharge from 2-year and 10-year storms not to exceed the pre-project peak levels as required by the MA DEP and the Carver Conservation Commission, and to control the discharge from larger storm events. The addition of sediment forebays is designed to provide pretreatment to the infiltration basins to achieve the 80% TSS removal required for water quality treatment. The infiltration basins are sized to treat the water quality volume according to the site soil properties per the Massachusetts Stormwater Handbook. One foot of freeboard was included in the design of both basins. Pond routing and water quantity calculations are performed using HydroCAD computer model (Attachment C). The calculations are provided in Attachment C. As discussed in Section 4, these stormwater management practices are designed in accordance with the DEP Stormwater Management Standards as described in the Massachusetts Stormwater Handbook, as well as the Carver Conservation Commission’s wetland bylaws.

To direct stormwater runoff to the sediment forebays, a drainage collection system consisting of catch basins and 12” HDPE drainage pipes is included on the proposed grading plans. Conduit Sizing Calculations and an Inlet Capacity Table are included in Attachment C.

The drainage areas, as well as proposed land coverages, are shown in Figure A-2. A detailed breakdown of soil type, land cover, and curve number for the proposed conditions are provided in Attachment C.

The Proposed Design Plans, in Attachment B, show the locations of proposed infiltration basins with sediment forebays. The supporting calculations and HydroCAD model are attached in Attachment C. A Mounding Analysis was performed for both infiltration basins using the Hantush Method, included in

Attachment C. For both ponds, the analysis showed that the 10-year storm runoff volume will infiltrate within 72 hours, the groundwater mound under the recharge system will not break above the bottom of the basins, and that impacts to water levels in the nearby wetlands are negligible.

4.0 Stormwater Management Standards

The Stormwater Management System for the Cranberry Point Energy Storage Project has been designed in accordance with the Massachusetts Stormwater Handbook, as well as the Carver Conservation Commission's wetland bylaws. Compliance with these standards is demonstrated below.

4.1 Regulatory Standards

To protect the wetlands and waters of the Commonwealth from the adverse impacts of stormwater runoff, the DEP issued a Stormwater Management Policy in November 1996. In 1997, DEP published the Massachusetts Stormwater Handbook as guidance on the Stormwater Policy. Revisions to the 1997 Handbook and associated stormwater management standards, however, promulgated by DEP and became effective on January 2, 2008. The Standards address both water quality (pollutants) and water quantity (flood control) by establishing the level of required controls that can be achieved through site planning non-structural measures, and Best Management Practices (BMPs). Specific BMPs selection is based on soil investigations performed to date, which identified soil parameters such as soil classification. This project is classified as a new development area, because it will result in an increase in impervious coverage. The project is subject to compliance under the Wetlands Protection Act and all ten performance standards described in the Massachusetts Stormwater Handbook.

Methods for Demonstrating Compliance with Performance Standards

Calculations were performed to demonstrate compliance with the Performance Standards. The TR-55 methodology was used to demonstrate compliance with Standard 2. Based on the design points and existing topography, drainage catchment areas were determined for the project. Times of concentration (TCs) as well as land-cover types, hydrologic soil groups, and weighted curve numbers (CNs) were determined for these areas. Considering the proposed grading, catchment areas, CNs, and TCs were also developed for the proposed project and modeled in HydroCAD. Excel spreadsheets were used to calculate CN values for each land use in existing and proposed conditions. The CN values for each land use were then used as input in the HydroCAD software, which is based on the NRCS TR-55 methodology. TC calculations were performed in Excel and are shown in Appendix B. The TC values were used as inputs in the HydroCAD model. Peak flows, as modeled by HydroCAD, were analyzed for the 2-, 10-, and 100- year storm events and are shown in the HydroCAD reports in Attachment C. In support of Standard 3 and Standards 4, recharge, drawdown, and water quality calculations were performed and are included in are included in Attachment C.

4.2 Compliance with MA Stormwater Checklist Standards

Standard 1- No New Untreated Discharges

> *No new stormwater conveyances (e.g.) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

The project is designed to prevent erosion to the receiving wetlands. All proposed discharges will be designed with erosion control rip-rap for scour protection. The stormwater BMPs provide water quality treatment as required by Standard 4 and so stormwater runoff is treated and controlled prior to discharge to the wetlands.

Standard 2- Peak Rate Attenuation

Stormwater management systems will be designed so that proposed conditions peak discharge rates do not exceed pre-development discharge peak rates for the 2-year and the 10-year, 24-hour storms.

The proposed infiltration basins are designed to manage the peak discharge from the 2-year and 10-year, 24-hour storms not to exceed pre-development levels. The table below illustrates the pre-development peak discharges and post-development peak discharges from the Site. Attachment C contains the Hydrologic Analysis Diagram and Report generated by HydroCAD.

Peak Discharge Rates		
Design Storm	Pre-Development Peak Flow	Post-Development Peak Flow with BMPs
2-yr	0.69 cfs	0 cfs
10-yr	2.83 cfs	2.12 cfs

Standard 3- Recharge to Groundwater

Loss of annual recharge to groundwater should be eliminated or minimized through the use of infiltration measures including environmental sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the proposed conditions will approximate the annual recharge from pre-development conditions based on soil type.

This project will not result in a loss of recharge to groundwater. Recharge calculations that demonstrate compliance with Standard 3 are included in the water quality calculations in Attachment C.

Standard 4- Water Quality

Stormwater management systems will be designed to remove 80% of the average annual proposed conditions load of Total Suspended Solids (TSS). This Standard is met when: a) Suitable practices for source control and pollution prevention are identified in a long- term pollution prevention plan, and thereafter are implemented and maintained; b) Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and c) Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.

The stormwater management systems have been designed to remove 80% TSS load prior to discharging into any wetland. This is achieved by the use of infiltration basins with sediment forebays Water quality calculations have been provided in Attachment C demonstrating compliance with Standard 4.

Infiltration Basin: 80% TSS Removal Rate

Two infiltration basins with sediment forebays are proposed at the site. Each basin's detailed dimensions are provided on the Drainage Drawings.

Standard 5- Higher Potential Pollutant Loads

For land uses with higher potential pollutant loads, source control and pollution prevention will be implemented in accordance with the Massachusetts Stormwater Handbook to eliminates or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads

cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent will use the specific structural stormwater BMPs determined by the department to be suitable for uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads will also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L c. 21, ss26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The Cranberry Point Energy Storage Project is not within an area designated as an area that yields high pollutant loads and, consequently, this Standard does not directly apply to the project.

Standard 6- Critical Areas

Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply and stormwater discharges near or to any other critical area require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area, if there is a strong likelihood of a significant impact occurring to said area, taking into account site specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters will be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A stormwater discharge as defined in 314 CMR 3.04 (2)(a)1 or (b) to an Outstanding Resource Water of Special Resource Water will comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

The Cranberry Point Energy Storage Project and the downstream wetlands are not within any of these critical area categories. Therefore, this Standard does not directly apply to the project.

Standard 7- Redevelopment Standards

A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practices requirements of Standards 4, 5, and 6. Existing stormwater discharges will comply with Standard 1 only to the maximum extent practicable. A redevelopment project will also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

Not applicable.

Standard 8- Erosion and Sediment Control

A plan to control construction related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) will be developed and implemented.

The installation of soil erosion and sediment controls will comply with the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas (Massachusetts Executive Office of Environmental Affairs et. al.; 2003), and all aspects of Standard No. 8. These controls will be inspected daily and after each rainfall event, and maintained, as required, until such time that all disturbed areas associated with construction have been stabilized with vegetation.

A National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit for construction will be required. In conjunction with this permit, a project specific Stormwater Pollution Prevention Plan (SWPPP) will be generated for construction-related activities. The SWPPP, to be completed by the contractor prior to construction, will incorporate the soil erosion and sediment controls indicated on the project plans, and any other structural and non-structural controls that will or may be

used, as appropriate, to control erosion/sedimentation within the construction zone. These measures are anticipated to consist of straw/hay bales, compost filter tubes, check dams, catch basin/storm drain inlet protection, diversion berm(s), temporary sedimentation basins, and seeding/mulching, although not all of these BMPs necessarily will be implemented. The SWPPP also will document procedures associated with the inspection of erosion/sedimentation controls to ensure that all such controls are functioning properly. A copy of the SWPPP will be provided to the local Conservation Commission. To apply for coverage under the NPDES General Permit, a 'Notice of Intent for Stormwater Discharges Associated with Construction Activity under an NPDES Construction General Permit' will be filed with the U.S. Environmental Protection Agency (EPA) prior to the commencement of construction. As required, the SWPPP also will be kept at the construction site for review by regulatory agency staff. To facilitate potential reviews in this regard, the name, telephone/fax numbers and e-mail address of the contact person for SWPPP-related information will be provided to the local Conservation Commission.

The Erosion and Sediment Control Plan is included in the attached Proposed Design Plans. A more specific Construction Period Pollution Prevention and Erosion and Sediment Control plan will be developed before land disturbance begins.

Standard 9- Operation and Maintenance

> *A long-term operation and maintenance plan will be developed and implemented to ensure that stormwater management systems function as designed.*

Cranberry Point Energy Storage, LLC is responsible for the operation and maintenance of the proposed project. An Operation and Maintenance Plan (O&M) is provided in Attachment D.

Standard 10- Illicit Discharges

> *An illicit discharges to the stormwater management systems are prohibited.*

Cranberry Point Energy Storage, LLC will ensure that no illicit discharges to the stormwater management system associated with the project will occur. An Illicit Discharge Compliance Statement is included in Attachment D and will be filled out prior to the start of construction.

4.3 Compliance with Carver Conservation Commission Standards

Standard 1: A description of any alterations to the 100 year flood storage capacity of the site. If a change in flood storage capacity is proposed, demonstrate compensatory storage at every elevation in the flood plain.

According to FIRM panel No. 25023C0343J (July 17, 2012), the project site is outside the 100-year FEMA flood plain and therefore this Standard does not apply.

Standard 2: Maximum groundwater elevations must be given. The calendar dates of measurement, samplings and percolation tests shall be included.

In the geotechnical exploration performed in January 2021, stabilized groundwater readings were taken at two boring locations. The depths of groundwater correspond to Elevation 104± to 104.9± feet. More information is included in Attachment D.

Standard 3: Soil characteristics in representative portions of the site shall be provided.

Six test pits were dug throughout the site in December 2018. The result of laboratory soil texture analysis revealed poorly graded sand in all locations. The laboratory testing results are provided in Attachment D.

Eight soil borings were advanced by Geosearch, Inc. in January 2021. The geotechnical engineering report is included in Attachment D.

Standard 4: A stormwater management plan and calculations of runoff characteristics shall be provided.

The stormwater management plan was developed in accordance with the Massachusetts Stormwater Handbook. Therefore, calculations of runoff characteristics were based on the 10-year, 24-hour storm to satisfy the requirements for on-site drainage systems. In the post-development conditions, the infiltration basins are sized to attenuate the peak runoff associated from rain events up to the 10-year storm. For larger storm events, the basins will safely discharge through emergency spillways.

Standard 5: Runoff characteristics should be calculated for pre- and post-development conditions using the standard methods described in the U.S. Soil Conservation Service National Engineering Handbook– Fully Met

The Technical Release 55 (TR-55) method to calculate runoff and peak discharge was recommended by the USDA Natural Resources Conservation Service's National Engineering Handbook. Land Use Data (2005) was collected from Mass GIS and soil data was collected from the USDA's Web Soil Survey. TR-55 was used to calculate the inputs for the stormwater modeling software, HydroCAD. HydroCAD was used to calculate runoff and peak discharge using TR-55 methodology.

Standard 6: Hydrographs that illustrate runoff characteristics before and after the proposed activity– Fully Met

Hydrographs generated by HydroCAD are included in Attachment C.

Standard 7: An erosion control plan shall be submitted describing all methods to control erosion and siltation on site, temporarily and permanently.

Erosion and sediment control will be based off the sheet in the Proposed Design Plans, in Attachment B.

Standard 8: Hydrologists and engineers shall use the Cornell Atlas of Precipitation Extremes for rainfall quantities

The Cornell Atlas of Precipitation Extremes was used to identify the rainfall amount for the 2-year, 10-year, 25-year, and 100-year, 24-hour storm for the project site.

Standard 9: Existing and proposed location, rim elevation, and invert elevation of all catch basins, drains, culverts, and other drainage structures immediately upstream and downstream of the site, as well as those on-site must be shown.

Locations and elevations associated with catch basins, drains, culverts, and the stormwater BMPs are shown in the Proposed Design Plans in Attachment B.

5.0 Conclusion

To accommodate the change in runoff at the site by this project, two infiltration basins were selected to collect stormwater from the site during rain events. The structures were developed in accordance with Volume 2, Chapter 2 of the Massachusetts Stormwater Handbook. Both infiltration basins were placed just outside of the fence lines for the battery storage areas, and outside of the 65-foot wetland buffer.

The infiltration-based stormwater basins are designed to provide multi-level management of site stormwater runoff as required. With forebays, the basins are capable of achieving 80% TSS removal rates through infiltration. The basins are sized with adequate detention volumes to attenuate peak discharges from 2- and 10-year events not to exceed the pre-development levels.
To protect the basins during a larger storm, emergency spillways are designed to safely pass the discharge during a 100-year event.

Attachment A

Figures

1. Site Location Map
2. Land Use Map