

**NORTHFIELD SITE PLAN REVIEW / SPECIAL PERMIT PETITION
PROPOSED PINE MEADOW ROAD SOLAR ARRAY "B"**

**Project Location:
Pine Meadow Road Array "B"
Pine Meadow Road
Parcels 55-B1 & 54-B5
Northfield, Massachusetts**

**Prepared for:
BWC Pine Meadow Brook LLC
c/o BlueWave Solar
111 Huntington Ave, Suite 650
Boston, Massachusetts 02199**

11D Industrial Drive
P.O. Box 1178
Mattapoisett, MA 02739
Tel. (508) 758-2749
Fax (508) 758-2849

**Project No. 2312
December 28, 2020**

TABLE OF CONTENTS

Application for Special Permit..... Section 1

Application for Site Plan Approval Section 2

Abutters List Section 3

Proof of Site Control Section 4

Narrative to Accompany Planning Board Petition Section 5

Map References of Project Site Section 6

Preliminary Decommissioning Plan and Form of Surety..... Section 7

Proof of Utility Notification and Preliminary One-Line Electrical Diagram Section 8

Documentation of Major System Components Section 9

Solar Facility Operation and Maintenance Plan..... Section 10

Proof of Liability Insurance Section 11

Proposed Signage Detail Plans Section 12

ENF Certificate and Supplemental Data for Agricultural Covenant Removal..... Section 13

Stormwater Management System Report (Separate Cover) Section 14

Proposed Site Development Plans (Separate Cover)..... Section 15

Section 1 – Application for Special Permit



PLANNING BOARD TOWN OF NORTHFIELD

www.northfieldma.gov
69 MAIN STREET
NORTHFIELD, MASSACHUSETTS 01360-1017

P: (413) 498-2901
F: (413) 498-5103

APPLICATION TO THE PLANNING BOARD FOR SPECIAL PERMIT, VARIANCE OR APPEAL

Application is hereby made for a Special Permit, Variance Determination or Appeal in accordance with Section 3.5&10.3.C of the Northfield Protective Regulations By-laws

Date: 12/28/2020

Applicant: BWC Pine Meadow Brook LLC 914-815-7248 jfirsty@bluewavesolar.com
Name Phone Email

Address: 111 Huntington Ave, Suite 650 Boston MA 02199
Street City State Zip

Property Owner: Hopping Ahead LLC 413-498-2968 gene@fourstarfarms.com
Name Phone Email

Address: 496 Pine Meadow Road Northfield MA 01360
Street City State Zip

Premises Affected: 0 Pine Meadow Road 54-B5 and 55-B1 6479/201
Street Assessor Map/Lot# Book & Page #

DESCRIPTION OF PROPOSED BUILDING OR BUSINESS <small>(SEE APPLICATION GUIDE)</small>			
1. Map & scale drawing of lot, structures and setbacks from all property lines must be attached to application.			
2. Dimension of structure in feet:	<u>N/A</u> <small>FRONT</small>	<u>N/A</u> <small>DEPTH</small>	<u>15' (max)</u> <small>HEIGHT</small>
3. Occupancy Use (of each floor):	<u>N/A</u>		
4. Zoning District:	<u>RA</u>		
5. Type of Structure:	<u>Proposed Single Axis Tracker Solar Array on Steel Posts</u>		
6. Has there been a previous appeal, under zoning, on these premises?	<u>No appeals have been previously filed on these premises.</u>		



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<p>7. Description of proposed work or use: The applicant proposes to construct "Pine Meadow Road Array B" consisting of a 4.3 MW+/- dual use solar array consisting of approximately 10,500 single axis tracker solar modules set on posts within an existing farm/field area. Proposed array will be accessed via a gravel access drive off of Pine Meadow Road and completely enclosed with fencing.</p>
<p>8. The principal reasons upon which I base my application are as follows: See attached Project Narrative.</p> <p>The proposed array requires a Special Permit under Section 3.4 and Site Plan Approval under Section 3.5 and 10.3 of the Town of Northfield Zoning By-Law.</p>
<p>Applicant Signature: _____ Title: _____</p>
<p>Owner/Agent Signature: _____ Title: _____ [Tenant must have owner or authorized agent co-sign this application]</p>
<p>[PLEASE REVIEW AND BECOME FAMILIAR WITH ATTACHED INSTRUCTIONS]</p>

FILING FEE: \$150.00 DATE PAID: _____ PAYMENT RECEIVED BY: _____

Additional application review fees may be charged if the Planning Board determines the assistance of outside consultants is warranted due to the size, scale or complexity of a proposed project per the Board of Appeals Regulation on Application-Special Municipal Accounts approved on August 17, 1992

Applicant must include all of the following information or the Town Clerk will not accept the application:

- Scale Drawing
- Payment
- Completed Application
- Lease or rental agreement, if applicable



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PETITION FOR A VARIANCE (NOT APPLICABLE)
Please consider your proposal must not be a substantial detriment to the public good and it must not nullify or substantially derogate the intent and purpose of the zoning ordinance bylaw
Why/how does your petition qualify for a variance in relation to the criteria specified on page 4 of this application? Respond to each criterion.
1. Soil conditions, lot shape, topography? Not applicable-No Variance Requested.
2. Hardship? Not applicable-No Variance Requested.
3. Public Good? Not applicable-No Variance Requested.
In your opinion, is it physically possible to accomplish your proposal on any other location on the property where it would comply with the zoning bylaw? [Please explain your answer] Not applicable-No Variance Requested.



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INSTRUCTIONS FOR COMPLETING THE PETITION

1. Complete this form and review it with the Building Inspector.
2. For assistance contact Planning Board
3. Submit completed form to the Town Clerk with the required application fee
4. It is required the petitioner or his representative be present at the public hearing for case discussion.
5. To be granted a variance, a petitioner must establish due to circumstances relating to the soil conditions, shape or topography of the land or structures, and especially affecting the land or structures, but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of the bylaw would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating the intent or purpose of such bylaw
6. If your petition is for a special permit rather than a variance, be prepared to present information that shows your use is in harmony with the intent and purpose of the zoning bylaw, and it complies with the special provisions outlined in the zoning bylaw.
7. A Decision may be appealed to the appropriate court by bringing an action within twenty (20) days after the decision has been filed in the office of the Town clerk. In order to stay the Decision, notice of a court action, with a copy of the complaint, must be given to the Town Clerk within twenty (20) days of the Notice of Decision being filed.
8. A variance or special permit shall not take effect until:
 - a. A copy of the decision of the Planning Board is obtained from the Town Clerk by the applicant. This copy must bear the certification of the Town clerk that twenty (20) days have elapsed after the decision has been field, and no appeal has been filed.
 - b. The decision must be taken to the Registry of Deeds by the applicant where it is recorded in the Registry of Deeds for the county and district in which the land is located, and is indexed in the grantor index under the name of the owner of record; or is recorded and noted on the Owner's Certificate of Title.
 - c. A copy of the "recorded" document must be filed by the applicant with the Town Clerk and Planning Board.
 - d. All publishing and mailing fees have been paid by the applicant

Section 2 – Application for Site Plan Approval

PLANNING BOARD
TOWN OF NORTHFIELD

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NORTHFIELD, MASSACHUSETTS 01360-1017

APPLICATION FOR SITE PLAN APPROVAL **Fee: \$30.00**

If the Planning Board determines that professional consultations are necessary to review the application before the Board, due to the complexity of the application, the cost and expense of the consultations will be billed to the applicant. All amounts owed must be paid before any permits will be issued.

The undersigned submits original and 4 accompanying site plans of property located in the Town of Northfield for study, discussion, and approval under Protective Regulations By-law Article X. All requirements of this by-law must be complied with before a planning board review can be scheduled. Copies of Northfield's Protective Regulations may be purchased from the town secretary. It is strongly recommended that the applicant come before the Planning Board with preliminary plans before submitting the official site plan review application.

BWC Pine Meadow Brook LLC, c/o BlueWave Solar
Name of Applicant

111 Huntington Ave., Suite 650, Boston, MA 02199
Address

(914) 815-7248
Phone

Hopping Ahead LLC (Lot 54-B5 and Lot 55-B1)
Name of Landowner (if not applicant):

496 Pine Meadow Road, Northfield, MA 01360
Address:

(413) 498-2968
Phone:

DGT Associates Surveying & Engineering
Name of Surveyor:
255 Park Avenue, Suite 500
Worcester, MA 01609

Address:
857-524-1419

Phone:

Field Engineering Co. Inc.-Richard R. Riccio III, P.E.
Name of Engineer:
11D Industrial Drive, P.O. Box 1178
Mattapoisett MA 02739

Address:
508-758-2749

Phone:

What authority referred you to the Planning Board for site plan review? Section 3.5 of the Northfield Zoning By-Laws

Deeds of Property recorded in Franklin County Registry of Deeds:

Book 6479 Page 201 (Both Lots)

Book _____ Page _____

Zone property is located RA

List liens or restrictions, if any on the property, and/or state, county, or town protective zones in which the property is located:

Both parcels of land are under Chapter 61A and also subject to a Farm Viability Plan Restriction, which will be removed upon successful permitting of this project. (See Section 13 of Site Plan Review/Special Permit Application Package.)

Signature of Owner

Signature of Applicant

Brief description of Project and what action in by-laws triggered a site plan approval

The applicant proposes to construct "Pine Meadow Road Array B" consisting of a 4.3 MW+/- dual use solar array consisting of approximately 10,500 single axis tracker solar modules set on posts within an existing farm/field area. Proposed array will be accessed via a gravel access drive off of Pine Meadow Road and completely enclosed with fencing. The proposed array requires a Special Permit under Section 3.4 and Site Plan Approval under Section 3.5 and 10.3 of the Town of Northfield Zoning By-Law.

How will the flowing be addressed: preservation of landscape, open space, circulation, surface water drainage, and compliance with other by-laws?

See attached Project Narrative

OWNER RESPONSIBILITY:

Copy of Site Plan or notification of submission where required to:

Date Delivered

Building Inspector _____

Board of Health _____

Town Clerk Notification _____

Conservation Commission _____
(if wetlands involved)

Required advertising costs, including notice to abutters \$ _____
To be determined

Costs for any necessary review costs \$ _____
To be determined

Date received by Planning Board _____

65 days from receipt _____

PLANNING BOARD RECORD

Application, Site plan (original & _____
4 copies) Date received

Acknowledgement of receipt by _____
Town Clerk Date received

Reviews made by town officials and /or consultants if required or recommended (comments attached)

Building Inspector _____
Date Action

Board of Health _____
Date Action

Fire Department _____
Date Action

Conservation Commission _____
Date Action

Engineering Consultant _____
Date Action

Other _____
Date Action

Planning Board Action _____
(meeting minutes attached) Date

- Approved
- Modified & Approved
- Disapproved

Reproducible plan signed & returned to applicant _____
Date

Section 3 – Abutters List



TOWN OF NORTHFIELD

www.northfield.ma.us

69 Main Street

Northfield, Massachusetts 01360-1017

Bethany Walker, Clerk
Board of Assessors

413-498-2901 x118

**ABUTTERS LIST
FOR:
PINE MEADOW RD**

PARCEL ID: 54-B5 ZONE: RA BOOK: 6479 PAGE 201 DATE: 12/19/2013

OWNER ON RECORD: HOPPING AHEAD LLC

APPLICANT: REBECCA CARVALHO
PHONE: 508-758-2749
BOARD: PLANNING BOARD 300'

DATE RECEIVED: 1/19/2017
REASON: PROPOSED SOLAR ARRAY PROJECT

MAP/PARCEL ID:	LOCATION:	OWNER/MAILING ADDRESS: <i>ALL NORTHFIELD MA 01360 UNLESS SPECIFIED</i>
54-B4	PINE MEADOW RD	WALTER C JAWORSKI 87 OLD WENDELL RD
54-B6	PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
54-A14.1	PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-A1	496 PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-B1	PINE MEADOW RD	HOPPING AHEAD LLC 496 PINE MEADOW RD
54-B7	PINE MEADOW RD	HOPPING AHEAD LLC 496 PINE MEADOW RD
54-B3	PINE MEADOW RD	WALTER C JAWORSKI 87 OLD WENDELL RD

CERTIFIED ABUTTERS LIST PREPARED BY: *Bethany Walker*



TOWN OF NORTHFIELD

www.northfield.ma.us

69 Main Street

Northfield, Massachusetts 01360-1017

Bethany Walker, Clerk
Board of Assessors

413-498-2901 x118

**ABUTTERS LIST
FOR:
PINE MEADOW RD**

PARCEL ID: 55-B1 ZONE: RA BOOK: 6479 PAGE 201 DATE: 12/19/2013

OWNER ON RECORD: HOPPING AHEAD LLC

APPLICANT: REBECCA CARVALHO
PHONE: 508-758-2749
BOARD: PLANNING BOARD 300'

DATE RECEIVED: 7/7/2020
REASON: PROPOSED SOLAR ARRAY PROJECT

MAP/PARCEL ID:	LOCATION:	OWNER/MAILING ADDRESS: <i>ALL NORTHFIELD MA 01360 UNLESS SPECIFIED</i>
55-B2.1	PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-B2	PINE MEADOW RD	THOMAS R SHEARER & PATRICIA E SHEARER, TRUSTEES OF THE TRS INVEST TRUST & THE PES INVEST TRUST 101 CROSS RD
55-A4		THOMAS R SHEARER & PATRICIA E SHEARER, TRUSTEES OF THE TRS INVEST TRUST & THE PES INVEST TRUST 101 CROSS RD
55-C1	PINE MEADOW RD	THOMAS R SHEARER & PATRICIA E SHEARER, TRUSTEES OF THE TRS INVEST TRUST & THE PES INVEST TRUST 496 PINE MEADOW RD
55-D2	436 MILLERS FALLS RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-A1	496 PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-A1.1	488 PINE MEADOW RD	NATHAN & ELIZABETH L'ETOILE 488 PINE MEADOW RD

<u>MAP/PARCEL ID:</u>	<u>LOCATION:</u>	<u>OWNER/MAILING ADDRESS:</u>
55-D4	MILLERS FALLS RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
55-D5	MILLERS FALLS RD	PETER B ZSCHAU TRUSTEE & MELANIE Y. ZSCHAU TRUSTEE OF THE PBZ FAMILY TRUST & THE MYZ FAMILY TRUST PO BOX 96 MILLERS FALLS MA 01329
55-D12	63 CROSS RD	SUSAN SPACE TRUSTEE OF THE SUSAN S SPACE REVOC TRUST 63 CROSS RD
55-D13	61 CROSS RD	WILLIAM R. & ALISON D. WAHLSTROM 61 CROSS RD
54-A14.1	PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
54-B5	PINE MEADOW RD	HOPPING AHEAD LLC 496 PINE MEADOW RD
54-B6	PINE MEADOW RD	BONNIE TUCKER L'ETOILE & EUGENE L'ETOILE 496 PINE MEADOW RD
54-B4	PINE MEADOW RD	WALTER C JAWORSKI 87 OLD WENDELL RD
72-C1	68 CROSS RD	J.S DEMBEK & A.E DEMBEK TRUSTEES OF THE JOHN S & ALICE R DEMBEK TRUST 68 CROSS RD

CERTIFIED ABUTTERS LIST PREPARED BY: *Bethany Walker*

Section 4 – Proof of Site Control



OPTION AGREEMENT

THIS OPTION AGREEMENT (“Option”) is entered into as of the date of signature of BWC Pine Meadow Brook (the “Effective Date”) by:

Hopping Ahead, LLC a limited liability company of 496 Pine Meadow Road, Northfield, MA 01360;

Bonnie Tucker L’Etoile, an individual, of 496 Pine Meadow Road, Northfield, MA 01360; hereinafter referred to as the “Owner,” and

BWC Pine Meadow Brook, LLC, a Delaware limited liability company with offices at 111 Huntington Avenue, Suite 650, Boston, MA 02199,

hereinafter referred to as “BlueWave.” Owner and BlueWave are at times collectively referred to hereinafter as the “Parties” or individually as the “Party”.

WITNESSETH:

WHEREAS, Owner is the owner of certain real estate located at the Site Addresses listed in column “1. Site Address” of Table 1 below, referred to on the **Northfield Assessor’s Database** as the Parcel ID’s listed below in column “2. Parcel ID” of Table 1 below, and being further described in the **Franklin County Registry of Deeds**, in the Deed Books as listed below in column “3. Deed Book and Page” of Table 1 below, and comprised of the approximate acreage for each parcel specified in column “4. Parcel Size” of Table 1 below, totaling approximately 124.61 acres,

Table 1				
1. Site Address	2. Parcel ID	3. Deed Book and Page	4. Parcel Size	5. Owner
0 Pine Meadow Road, Northfield MA, 01360	55 B1 1	Book 6479 Page 201	73.61 acres	Hopping Ahead, LLC
0 Pine Meadow Road, Northfield MA, 01360	54 B7 1	Book 6981 Page 97	7.00 acres	Hopping Ahead, LLC
0 Pine Meadow Road, Northfield MA, 01360	53 E1 1	Book 2948 Page 194	44.00 acres	Bonnie Tucker Letoile
0 Pine Meadow Road, Northfield, MA 01360	54 B5 1	Book 6479 Page 201	6.50 acres	Hopping Ahead, LLC

(the “Property” as shown in Exhibit A); and

BLUE WAVE

WHEREAS, BlueWave is investigating the development of a portion of the Property comprised of approximately **20.0 – 100.0** acres of land and improvements (the “Project Site”) for electricity generation (the “Project”); and

WHEREAS, BlueWave desires to obtain from the Owner an option to lease the Project Site, the location and size as generally depicted on Exhibit B; and

WHEREAS, the parties wish to reduce the terms and conditions of their agreement to writing.

NOW THEREFORE, in consideration of the promises set forth herein and other good and valuable consideration and the mutual benefits accruing to each party, the receipt and value of which is hereby acknowledged, the parties hereby covenant and agree as follows:

1. In consideration of the sum of [REDACTED] (the “First Option Deposit”) paid by BlueWave to Owner upon the Effective Date of this Option, Owner hereby grants to BlueWave for a [REDACTED] [REDACTED] in connection with the Project and subject to the terms and conditions contained herein, the exclusive right to explore the development of any portion of the Property for electricity generation and to lease the Project Site, for the purpose of installation, maintenance and operation of a solar energy electric generating facility (“Facility”) comprised of solar panels, utility wires, poles, cables, conduits and pipes, and related ground mounted equipment subject to terms and conditions of a Land Lease Agreement, the terms and conditions of which shall include, but shall not be limited to, the matters set forth in Paragraph 11 below.
2. The First Option Period shall terminate, and the First Option Deposit shall be refundable to BlueWave for any reason at the written request of BlueWave received by Owner within the first 30 days following the Effective Date of this Option. In the event Owner does not receive BlueWave’s termination of the Option as above described or in the event Owner receives BlueWave’s request for a Second Option Period as below described, the First Option Deposit shall become nonrefundable.

BLUE WAVE

3. Prior to the expiration of the First Option Period BlueWave may extend the Option for an additional [REDACTED] (the “Second Option Period”) upon written notice to Owner, given not less than two weeks prior to the expiration date, and payment by BlueWave [REDACTED] [REDACTED] (“Second Option Deposit”). Prior to the expiration of the Second Option Period BlueWave may extend the Option for an additional [REDACTED] [REDACTED] (the “Third Option Period”) upon written notice to Owner, given not less than two weeks prior to the expiration date, and payment by BlueWave [REDACTED] [REDACTED] (“Third Option Deposit”). Prior to the expiration of the Third Option Period BlueWave may extend the Option for an additional [REDACTED] (the “Fourth Option Period”) upon written notice to Owner, given not less than two weeks prior to the expiration date, and payment by BlueWave of an [REDACTED] [REDACTED] (“Fourth Option Deposit”). Together, the First Option Deposit, Second Option Deposit, Third Option Deposit and Fourth Option Deposit are referred to herein as “Deposits”. Together, the First Option Period, Second Option Period, Third Option Period and Fourth Option Period are called “Option Periods”. BlueWave shall have the right to terminate the Option, as to all or any part of the Property, at any time and for any reason, with immediate effect during the Second, Third and Fourth Option Periods.
4. The Option may be further extended beyond the Option Periods by mutual agreement in writing, with time being of the essence. Should BlueWave fail to exercise the Option during the Option Periods or any extension thereof, except for matters that specifically survive, all rights and privileges granted hereunder shall be deemed completely surrendered, this Option terminated, and no additional money shall be payable by either Party to the other. The Deposits shall be deemed refundable at any point during the Option Periods in the event that BlueWave relies on a specific representation by Owner that is negligently or deliberately misleading.

BLUE WAVE

5. If applicable, during the Option Period(s), Owner, at BlueWave's sole expense, agrees to undertake the necessary steps for the release of the Project Site from the provisions of M.G.L. c. 61, c. 61A and c. 61B, including service of notice of the Town of **Northfield's** right to purchase the Project Site as provided in c. 61, c. 61A and c. 61B and preparation of plans as may be necessary to delineate the Project Site for purposes of assessment, including an ANR plan and Form A for submission to the Planning Board. In the event the Town notifies Owner of the Town's exercise of its right to purchase the Project Site, Owner shall promptly notify BlueWave, and the Deposits shall be returned in full to BlueWave and this Option shall be null and void nunc pro tunc, and the Owner shall withdraw its request to the Town of **Northfield** for the release of the Project Site from c. 61, c. 61A and c. 61B. BlueWave shall be responsible to pay for all rollback taxes and any other fees and taxes assessed to effectuate the release of the Project Site from the provisions of c. 61, c. 61A and c. 61B.
6. During the Option Period(s) and subject to the terms of the Option, BlueWave has the right to make all necessary governmental and utility company filings, survey, identify and flag wetlands, undertake geotechnical and environmental studies and investigations, and design the Facility at the Project Site. BlueWave agrees to keep Owner reasonably informed, in a timely manner and in writing, of all material events and activities associated with BlueWave's efforts, including the efforts necessary to secure all permits, negotiate agreements with third parties to purchase the output of the generating facility, file an interconnection application, survey, design, undertake subsurface geotechnical and environmental testing, financing activities and otherwise to advance the approvals necessary to proceed with the development, all at no monetary cost to Owner ("Due Diligence"). Owner shall provide BlueWave or its agents with information about the Property and in all other ways cooperate to the extent commercially reasonable in BlueWave's Due Diligence activities at no monetary cost to Owner, including the provision of access to the Property to BlueWave or its agents with twenty-four (24) hour advance notice. BlueWave agrees not to submit any applications or plans to any authority

BLUE WAVE

having jurisdiction over land-use and/or the issuance of permits without first obtaining the approval of same by Owner, which approval Owner agrees not to unreasonably withhold or delay. The final size and configuration of the Project Site, including access and utility easements, shall be approved in advance by Owner in its reasonable discretion.

7. If BlueWave does not exercise its Option as herein provided, it will immediately return all disturbed areas of the Property and Project Site to their former condition. This provision shall survive expiration or termination of this Option.
8. All notices required or permitted to be given under this Option shall be given in writing to the addresses above, by certified mail, return receipt requested or by overnight mail via a qualified commercial courier. Notice is effective on the date posted.
9. BlueWave shall provide notice of Commencement of Construction to Owner adherent to the dates indicated in Table 2. Owner may withdraw requirement of notice at their discretion and at no risk or incurred cost to BlueWave. In the event BlueWave is unable to provide enough notice and Commencement of Construction results in a crop loss for Owner or lessee of Owner, BlueWave shall reimburse the Owner or lessee of Owner at the greater of either the current market value or the contracted value of the lost crop. The Owner and BlueWave shall work in good faith to maintain communication as to adhere to the requirement of notice schedule.

Date of Construction	Months' Notice
October 1 – March 31	1
April 1 – July 31	5
August 1 – September 30	3

10. The parties acknowledge this agreement grants BlueWave an irrevocable and exclusive option to lease the Property. In the event BlueWave exercises its option to lease the Property as above provided, the Owner shall be required to enter into a Lease Agreement, the terms and conditions of which shall include, but shall not be limited to, the matters set forth in Paragraph 11 which shall remain non-negotiable whereas all additional terms of the Lease not specifically identified in Paragraph 11 shall be negotiated in good faith. Notwithstanding any condition to the contrary that may be contained in this Agreement, no clause shall be interpreted or deemed to be interpreted to render the Option

BLUE WAVE

conditional. Once exercised by BlueWave in accord with the terms of this Option Agreement, the parties shall execute the lease that includes, at a minimum all the terms set forth in Paragraph 11. The parties shall proceed in good faith to enter into a mutually agreeable Land Lease Agreement [REDACTED] from the Effective Date of this Option, failing which, except for matters that specifically survive, all rights and privileges granted and obligations required under this Option shall be deemed completely surrendered and each party releases the other from any and all further obligations hereunder.

11. The Land Lease Agreement shall include the following terms and conditions:

a. Initial term shall be for twenty (20) years (“Initial Term”) commencing on the date of Commercial Operation as defined below. Prior to the end of the Initial Term, BlueWave shall have the right, in its sole discretion, to elect to extend the Initial Term for up to three (3) five (5) year extensions (each such extension referred to as a “Renewal Terms”). BlueWave shall provide Owner written notice of its election to exercise the Renewal Term option on or before the commencement of the final year of the Initial Term, or the end of the then-current Renewal Term, whichever is later.

b. Commencing upon the earlier of the date that BlueWave commences construction of the Project or installation of any component of the Facility (“Construction Phase”) [REDACTED]

[REDACTED], rent is payable to Owner, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] The Lease Area shall include any areas of the Property granted by Owner to BlueWave in the form of an easement, including but not limited to a shading easement, access easement or temporary construction lay down area easement for the benefit of the Facility.

c. Commencing on the date that is the earlier of the date of commencement of Commercial Operation or one (1) year from the date of commencement of the

BLUE WAVE

Construction Phase, the rent is payable to Owner [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

1. [REDACTED]	2. [REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

- d. The parties agree to execute a Commencement Agreement to memorialize the commencement dates of the Construction Phase and Commercial Operation.
- e. The parties recognize that one Megawatt of installed capacity will require approximately four to six acres of useable land on the Property. The parties recognize they have a common interest in maximizing the amount of solar installed on the property and will work cooperatively over the period of this Option to make an informed estimate of the potential commercially viable installed capacity acceptable to Owner and BlueWave. The final size of the project shall be subject to certain criteria, including the available capacity on the local feeder, local and regional land-use regulations, engineering considerations related to the site and project design, state regulations pertaining to the sizing and registration of renewable energy projects, and the availability of financing at acceptable terms, and in all instances BlueWave will make every effort to maximize the amount of installed capacity on the Property. Based on these criteria, the final project size shall be described and included in the terms of the Lease.

BLUE WAVE

- f. [REDACTED]
[REDACTED]
[REDACTED]
- g. BlueWave shall have the responsibility to pay any personal and real property tax, assessments, fines, penalties charges owed on the Project Site which result from and are associated with the installation, maintenance, and operation of the solar photovoltaic system. Owner shall remain responsible for paying any underlying real estate tax.
- h. The Lease may contain other terms and conditions if agreed upon by both parties and which are mutually satisfactory to both parties.
- i. The Lease shall provide that BlueWave shall require all contractors who come on the Project Site to maintain commercial general liability insurance and statutory workers' compensation insurance. All construction, alterations and other work performed by BlueWave, its agents and subcontractors at the Project Site and Property are to be performed in a workmanlike manner and done so that no liens for the benefit of contractors, materials providers or trades providing labor or materials to the project are filed against the Project Site or Property. Owner shall be listed as additionally insured on all contractors' insurance policies. Further, the Lease will provide that BlueWave indemnifies, holds the Owner harmless and releases the Owner from any and all liability of BlueWave's actions. BlueWave and Owner shall provide mutual provisions regarding release of liability and indemnification regarding the activities conducted by each of them during the Lease term.
- j. BlueWave and Owner acknowledge a mutual interest in developing the Facility as a dual land use agriculture and solar canopy system ("Dual-Use Facility"). Owner shall grant BlueWave any commercially reasonable rights and privileges required for a Dual-Use Facility in the Land Lease Agreement. If the Facility is successfully developed as a dual-use Facility, then Owner shall serve as the active farmer for any agricultural activity in or around the rows of the Facility for the duration of the Initial Term. If Owner is unable to serve as the active farmer for any duration of the Initial Term or any applicable extension period, Owner agrees to work with BlueWave in identifying a mutually-agreeable replacement to continue farming activity for the remainder of the Initial Term and any applicable extension period,

BLUE WAVE

provided that BlueWave consents and that consent shall not be unreasonably conditioned, withheld, or delayed.

12. During the Option Period, BlueWave shall require all contractors who come on the Project Site to maintain commercial general liability insurance and statutory workers' compensation insurance. All construction, alterations and other work performed by BlueWave, its agents and subcontractors at the Project Site and Property are to be performed in a workmanlike manner and done so that no liens for the benefit of contractors, materials providers or trades providing labor or materials to the project are filed against the Project Site or Property. Owner shall be listed as additionally insured on all contractors' insurance policies. Further, BlueWave hereby indemnifies, holds the Owner harmless and releases the Owner from any and all liability of BlueWave's actions during the Option Periods and Construction. BlueWave and Owner shall be mutually insulated from the actions of the other during Commercial Operation.
13. The monetary terms of this Option will be held in strict confidence by the Owner and not shared with any third parties including other developers, investors or brokers unless Owner receives authorization from BlueWave, except for where it shall be required by law, or with an agent of the Owner as required to conduct reasonable business including attorneys, financial advisors, accountants, and lenders of the Properties.
14. This Option shall be binding upon the parties hereto and the respective heirs, successors and assigns of each. Without limiting the foregoing, provided that BlueWave provides Owner with two weeks advance written notice, and provided that Owner consents, this agreement may be assigned to BlueWave's affiliates, subsidiaries and to qualified development and investment partners. Owner's consent to such assignment shall be made to BlueWave within two weeks and shall not be unreasonably conditioned, withheld or delayed.
15. Owner owns fee simple title to the Land and has good, merchantable and insurable title to the Property, free and clear of all liens, encumbrances, claims, options, leases, rights of first refusals, or judgements, except as set forth in Exhibit C.
16. Exhibit C includes information regarding Owner's outstanding mortgages on the Property. The Parties acknowledge that Exhibit C is a disclosure of encumbrances and

BLUE WAVE

does not modify the parcels subject to this agreement and in Table 1. This Agreement is contingent upon Owner's obtaining consent to enter into this Agreement from any mortgage holder on the Property.

17. The person executing this Option on behalf of the Owner has the full power and authority to bind Owner to the obligations of Owner set forth herein. The entry into and performance of Owner's obligations under this Option will not violate or result in a breach of any contract, agreement or any law, administrative regulation, or court decree by which Owner or the Property is bound. If Owner is not a natural person, Owner is duly formed and validly existing entity and is qualified to do business in and in good standing under the laws of the State of Massachusetts.
18. Notwithstanding anything appearing to the contrary in this Agreement, no direct or indirect partner, member or shareholder of either party (or any manager, director, officer, principal, trustee, employee or agent of any such direct or indirect partner, member or shareholder), disclosed or undisclosed, shall be personally liable for any debts, liabilities or obligations of the party, or for any claims against the party, arising out of or resulting from this Agreement. Any such debts, obligations, liabilities or claims shall be satisfied solely out of the assets of the obligated party. In no event shall any personal judgment be sought or obtained against any partner, member, manager, shareholder, director, officer, principal, employee, agent, or owner of either party, direct or indirect, disclosed or undisclosed.

BLUEWAVE

Executed as an instrument under seal on 12/21, 2018.

Hopping Ahead, LLC

By: Bonnie Tucker L'Etoile

Name: Bonnie Tucker L'Etoile

Title: President Hopping Ahead LLC

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF Franklin, ss.

On this 21 day of December, 2018, before me, the undersigned notary public, personally appeared Bonnie Tucker L'Etoile, proved to me through satisfactory evidence of identification, which was MA ID Lic, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that s/he signed it voluntarily for its stated purpose on behalf of Hopping Ahead, LLC.

Printed Name: Shawn F. Streeter
My Commission Expires March 27, 2020



BLUE WAVE

Executed as an instrument under seal on 12-21-18, 2018.

Bonnie Tucker L'Etoile

By: Bonnie Tucker L'Etoile

Name: Bonnie Tucker L'Etoile

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF Franklin, ss.

On this 21 day of December, 2018, before me, the undersigned notary public, personally appeared Bonnie Tucker L'Etoile, proved to me through satisfactory evidence of identification, which was MA Dr Lic, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that s/he signed it voluntarily for its stated purpose on behalf of himself/herself individually.

Shawn F. Streeper
Printed Name: Shawn F. Streeper
My Commission Expires: March 27, 2020



BLUE WAVE

Executed as an instrument under seal on December 21st, 2018.

BWC Pine Meadow Brook, LLC

By: BlueWave MA, LLC
Its: Sole Member

By: BWC Holdings, LLC
Its: Sole Member

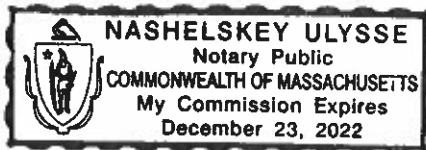
By: [Signature]
Name: Jonathan Mancini

Title: Sr. Vice President

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF SUFFOLK, ss.

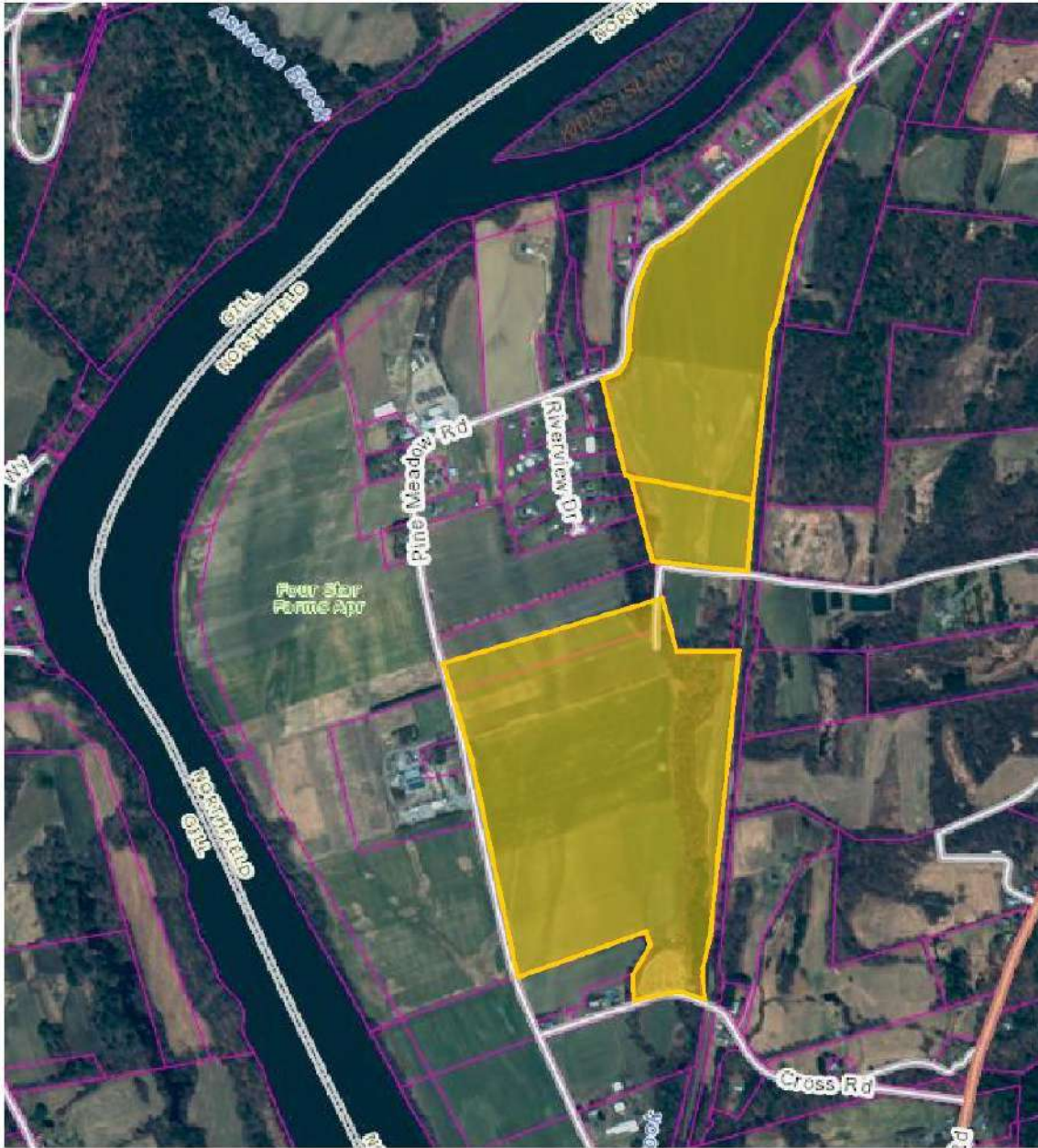
On this 21st day of DECEMBER, 2018, before me, the undersigned notary public, personally appeared JONATHAN MANCINI, proved to me through satisfactory evidence of identification, which was DRIVERS LICENSE, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that s/he signed it voluntarily for its stated purpose on behalf of

[Signature]
Printed Name: NASHELSKEY ULYSSE
My Commission Expires:



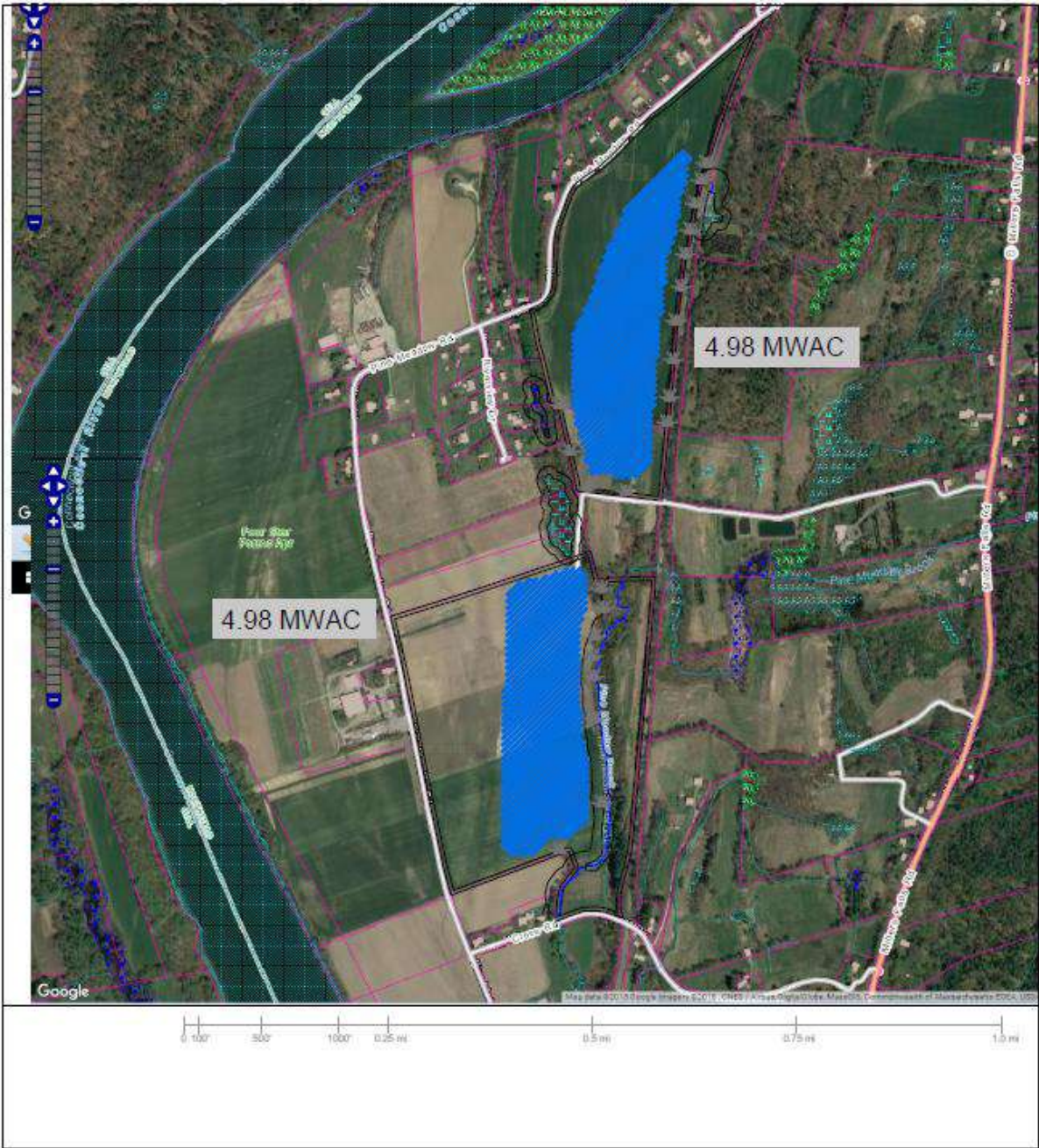
BLUE WAVE

EXHIBIT A: The Property



BLUE WAVE

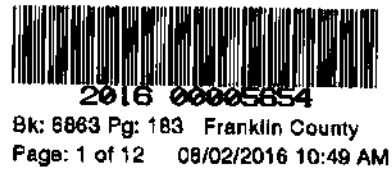
EXHIBIT B: The Project Site
(note: exact usable acreage of the Project Site is to be determined)



1
P1

PROPOSED GROUND MOUNT PV ARRAY 13.94 MWDC ; 9.96 MWAC





COMMONWEALTH OF MASSACHUSETTS
AGRICULTURAL COVENANT

Grantor: Hopping Ahead, LLC
Massachusetts Limited Liability Company

Premises:
Pine Meadow Road
Northfield, MA

Hopping Ahead, LLC, Massachusetts Limited Liability Company, with a business address of 496 Pine Meadow Road, Town of Northfield, Franklin County, Massachusetts, 01360, (the Grantor), for good and valuable consideration paid, receipt of which is hereby acknowledged, **grant to the Commonwealth of Massachusetts**, acting through the Commissioner of the Department of Agricultural Resources (the Grantee or Commissioner), with an address at 251 Causeway Street, Suite 500, Boston, Massachusetts, 02114-2151, its successors and assigns, an Agricultural Covenant for a period of Ten (10) Years commencing upon the execution of this document (Agricultural Covenant or Covenant) by the Grantee on the Premises as defined herein, in accordance with the following terms and conditions.

I. STATEMENT OF PURPOSE

By obtaining this Agricultural Covenant, it is the intent of the Commonwealth to protect and preserve agricultural lands, encourage sound soil management practices, preserve natural resources, and maintain land in active agricultural use through improving the agricultural economic viability of the Premises. No activity detrimental to the actual or potential Agricultural

Use of the Premises, or detrimental to water conservation, soil conservation, or to good agricultural and/or forestry management practices or which is otherwise wasteful of the natural resources of the Commonwealth of Massachusetts shall be permitted.

II. DEFINITIONS

When used throughout this entire Covenant, the following words or phrases shall have the following meaning:

1. **Abandoned:** land that has not been actively utilized for agricultural uses for a period exceeding two years unless the non-activity is recommended in a current United States Department of Agriculture (USDA)/Natural Resource Conservation Service or successor USDA entity (USDA/NRCS) plan.
2. **Agricultural Use:** the raising of animals, including but not limited to, dairy cattle, beef cattle, poultry, sheep, swine, horses, ponies, mules, goats, bees and fur-bearing animals, for the purpose of selling such animals or a product derived from such animals in the regular course of business; or when primarily and directly used in a related manner which is incidental thereto and represents a customary and necessary use in raising such animals and preparing them or the products derived there from for market, as defined in M.G.L. c. 61A, §1, as amended. Also horticultural uses, the raising of fruits, vegetables, berries, nuts and other foods for human consumption, feed for animals, tobacco, flowers, sod, trees, nursery, or greenhouse products, and ornamental plants and shrubs for the purpose of selling such products in the regular course of business; or when primarily and directly used in raising forest products under a program certified by the state forester to be a planned program to improve the quantity and quality of a continuous crop for the purpose of selling such products in the regular course of business; or when primarily, directly used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products and preparing them for market, as defined in General Laws, Chapter 61A, §2, as amended.
3. **Farm Viability Plan:** a business plan prepared by the Grantee, with the cooperation of the Grantor, that contains a course of action for managing and improving agricultural operations on the Premises.
4. **Premises:** Approximately 130.24+/- acres of land including any buildings thereon located at or near Pine Meadow Road, the Town of Northfield, Franklin County, Massachusetts, as more fully described in Exhibit A, attached hereto and incorporated by reference into this document. **Reference is made to the deed recorded at the Franklin District Registry of Deeds in Book 6479 Page 201.**

5. **Permanent Structure:** any structure that requires the grading of soil, or the excavation for footings or foundations or which substantially alters or otherwise affect the soil profile.

6. **Temporary Structure:** a structure that does not have a permanent foundation, or does not substantially alter or otherwise affect the soil profile.

III. TERMS AND CONDITIONS

A. RETAINED RIGHTS

Notwithstanding any provision of this instrument to the contrary, the Grantor(s) hereby reserves to and for themselves the customary rights and privileges of ownership not inconsistent with the Statement of Purpose herein, including but not limited to, the right to:

- (1) Privacy and to carry out normal agricultural activities.
- (2) The maintenance and use of existing trails and farm and wood roads on the Premises substantially in their present condition or as reasonably necessary for their continued use for agricultural uses or other uses as designated in a Farm Viability Plan prepared by the Grantee.
- (3) The construction or placement of Temporary Structures for Agricultural Uses or other uses as designated in a Farm Viability Plan prepared by the Grantee.

B. PROHIBITED USES

The Grantor covenants that the Premises will at all times be held, used and conveyed subject to, and not in violation of, the following restrictions:

- (1) No use shall be made of the Premises, and no activity thereon shall be permitted, which is inconsistent with the Statement of Purpose, or that is not provided for in Section III hereof, Terms and Conditions.
- (2) No non-agriculturally related uses or Temporary or Permanent Structure shall be constructed, placed or permitted to remain on the Premises, except those uses or

structures existing on the Premises at the time of the execution of this Covenant, or other uses as designated in a Farm Viability Plan prepared by the Grantee or those structures permitted pursuant to Section C of this Covenant.

- (3) No refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, radio-active or hazardous waste or other substance or material whatsoever shall be placed, stored, dumped or permitted to remain on the Premises, except as required for the use of the Premises for normal agricultural activities.

C. USES WHICH REQUIRE PRIOR WRITTEN APPROVAL

The following uses are not permitted without the prior written approval of the Grantee, and said approval may be granted, with such conditions as the Grantee deems appropriate, provided that such uses do not defeat or derogate from the intent of this Covenant, as set forth in the Statement of Purpose above:

- (1) The construction or placing of a residential dwelling, including appurtenant improvements and amenities, such as driveway, septic system, or any other underground sanitary system, water system, or other utility, substantially for use by the Grantor, or a family member of Grantor who is actively and substantially engaged in agricultural operations on the Premises.
- (2) The construction or placing of Permanent Structures for agriculturally related uses, including related retail sales, unless such construction or placing is contained in an approved Farm Viability Plan.
- (3) The excavation, dredging, depositing or removal from the Premises of loam, peat, gravel, soil, sand, rock or other mineral resources, or natural deposits in accordance with a USDA/NRCS Plan.
- (4) The subdivision, recording of a subdivision plan, partition, or any other division of the Premises, or any portion thereof, into two or more parcels, even in the event that the Premises is comprised of one or more separate deeded parcels at the time of execution of this Covenant.
- (5) The performing of commercial non-Agricultural Uses and activities for which the Grantor receives payment, compensation, or any other type of monetary or non-monetary remuneration unless the Grantor:

- (a) provides the Grantee with adequate information, plans, agreements or other documents necessary to evaluate the requested activity or use;
- (b) the Premises is being actively utilized for commercial agriculture;
- (c) the activity or use is minor, ancillary and subordinate to the Agricultural Use of the Premises; and
- (d) such uses and activities are not inconsistent with the Statement of Purpose of this Agricultural Covenant.

D. ENFORCEMENT OF THE TERMS AND CONDITIONS

- (1) The Grantor grants to the Grantee, and its successors at law, the right to enter the Premises in a reasonable manner and at reasonable times, for the purposes of:
 - (a) inspecting the Premises to determine compliance with this Covenant and any approvals given hereunder, and
 - (b) enforcing this Covenant,
- (2) In the event of a violation of the terms of this Covenant, the Grantee may pursue any remedy available at law, in equity or otherwise, including injunctive relief.
- (3) The rights hereby granted shall be in addition to, and not in limitation of, any other rights and remedies available to the Grantee for enforcement of this Covenant.

IV. AFFIRMATIVE DUTY TO FARM

The Premises shall remain in active agricultural use and no part thereof shall be abandoned, except in accordance with a USDA/NRCS Farm Management Plan, approved by the conservation district for the locality in which the Premises is located.

V. AUTHORIZATION

The foregoing Covenant is authorized by Massachusetts General Laws, Chapter 20, Section 22, as amended, and otherwise by law, and is intended to ensure the protection and preservation of agricultural lands as expressed herein.

This Covenant shall be administered on behalf of the Grantee by the Commissioner and shall be enforced by the Commissioner in his/her sole discretion. Nothing herein shall impose upon the Grantee any duty to maintain the Premises in any particular state or condition, notwithstanding the Grantee's acceptance hereof.

Except as otherwise provided herein, this Covenant does not grant to the Grantee, the public, or any other person any right to enter upon the Premises.

This Covenant is in gross, exists for a period of years and is not for the benefit of or appurtenant to any particular land owned by the Grantee. Grantee may assign its rights under this Covenant to another governmental or charitable corporation or trust which has power to acquire interests in land and whose purposes include conservation of agricultural land and natural areas. The burdens and obligations of Grantor under this Covenant run with any transfer of the Premises and shall be binding upon all successors in title.

If any section or provision of the Covenant shall be held to be unenforceable by any court of competent jurisdiction, this Covenant shall be construed as though such section had not been included in it. If any section or provision of the Covenant shall be subject to two constructions, one of which would render such section or provision invalid, then such section or provision shall be given the construction that would render it valid. If any section or provision of this Covenant is ambiguous, it shall be interpreted in accordance with the rules, regulations, policy and provisions, as amended of Grantee and the provisions expressed in the General Laws, Chapter

20, Section 22, as amended, or in regulations adopted by Grantee pursuant thereto. This instrument is not a deed. It does not purport to transfer a fee interest to the Grantee. No Massachusetts deed excise stamps are affixed hereto as none are required by General Laws 64D, Section 1, as amended.

WITNESS the execution hereof under seal this 3 day of March, ²⁰¹⁶2015.

HOPPING AHEAD, LLC, by

Eugene A. L'Etoile

EUGENE A. L'ETOILE, Manager

COMMONWEALTH OF MASSACHUSETTS

Franklin, ss March 3, 2016

On this 3 day of March, 2016, before me, the undersigned Notary Public, personally appeared Eugene A. L'Etoile who proved to me through satisfactory evidence of identification, namely MA Dr. Lic (driver's license, personal knowledge etc.), to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Shawn F. Streeter

(print name) Shawn F. Streeter, Notary Public

My Commission Expires: March 27, 2020



WITNESS the execution hereof under seal this 3 day of March, 2016.

HOPPING AHEAD, LLC, by

Bonnie Tucker L'etoile
BONNIE TUCKER L'ETOILE, Manager

COMMONWEALTH OF MASSACHUSETTS

Franklin, ss March 3, 2016

On this 3 day of March, 2016, before me, the undersigned Notary Public, personally appeared Bonnie Tucker L'Etoile who proved to me through satisfactory evidence of identification, namely MA Dr. Lic (driver's license, personal knowledge etc.), to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.



Shawn F. Streeter

(print name) Shawn F. Streeter Notary Public

My Commission Expires: March 27, 2020

ACKNOWLEDGEMENT OF THE COMMONWEALTH OF MASSACHUSETTS

The undersigned Commissioner of Agricultural Resources of the Commonwealth of Massachusetts hereby certifies that the foregoing Agricultural Covenant for a Period of Ten (10) Years granted to the Commonwealth of Massachusetts with respect to parcels of land belonging to Hopping Ahead, LLC, located in Northfield, Franklin County, Massachusetts described therein, has been acquired pursuant to Massachusetts General Laws, Chapter 20, section 22.

Date: March 8, 2016

By: *John Lebeaux*
JOHN LEBEAUX, Commissioner
Department of Agricultural Resources

COMMONWEALTH OF MASSACHUSETTS

Seydall, ss March 8, 2016

On this 8th day of March, 2016, before me, the undersigned Notary Public, personally appeared the above-named John Lebeaux who proved to me through satisfactory evidence of identification, namely personal knowledge, to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Carol A. Szocik
Carol A. Szocik, Notary Public

My Commission Expires:



CAROL A. SZOCIK
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 20, 2020

EXHIBIT A (Page 1 of 2)

Parcel 1: BEGINNING at an iron pipe in the westerly line of the Central Vermont Railroad, said pipe being further N. 68° 51' 10" W. a distance of 82.56 feet from an iron pipe in the easterly line of Central Vermont Railroad marking the northwesterly corner of Parcel No. 1 described above;

THENCE S. 18° 57' 00" W. a distance of 357.82 feet to an iron pipe;

THENCE N. 71° 03' 00" W. a distance of 41.25 feet to an iron pipe;

THENCE S. 18° 57' 00" W. a distance of 169.95 feet to an iron pipe;

THENCE S. 71° 03' 00" E. a distance of 49.50 feet to an iron pipe, the last four courses being along said Central Vermont Railroad;

THENCE N. 76° 21' 00" W. a distance of 483.67 feet to a stone bound;

THENCE N. 00° 25' 40" E. a distance of 188.54 feet to a stone bound;

THENCE N. 00° 19' 30" E. a distance of 431.58 feet to a stone bound;

THENCE S. 68° 51' 10" E. a distance of 591.86 feet to the point of beginning.

Containing 6.164 acres.

Parcel 2: Bounded west by the road leading through Pine Meadow; north by land formerly of Charles Tenney, now by the third tract hereinafter described; east by land formerly of Raymond Nims; and south by land of Charles Tenney. Containing 6 1/2 acres.

Parcel 3: Beginning at a stone bound on Montague Avenue, so-called, in said Northfield, at the southeast corner of land of Michael Sytnyk; thence easterly along Montague Avenue, so-called, to the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad, thence northerly along the line of said Railroad location to land now or formerly of one Donahue; thence north 75° 30' west 390 feet, more or less, to a stone bound; thence north 0° 41' east 188.66 feet to a stone bound; thence south 83° 58' west 1,464.07 feet along land of Dymarsky to the Meadow Road, so-called; thence southerly along the Pine Meadow Road to a stone bound at land of Sytnyk; thence north 84° 22' east 425.33 feet to a stone bound; thence continuing in said direction 434.96 feet to a stone bound;

thence south 5° 13' east 127.91 feet to a stone bound; thence south 31° 52' west 170.15 feet to a stone bound; thence south 26° 37' west 102.84 feet to a stone bound; thence south 18° 37' west 128.1 feet to a stone bound at the place of beginning. Containing 73.61 acres, more or less.

EXHIBIT A (Page 2 of 2)

Parcel 4: Beginning at a corner of land of J. Podlinski on the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad location; thence northerly along said location to the Pine Meadow Road, so-called; thence southwesterly along the Pine Meadow Road, so-called, to land of Charles A. Parker; thence south $0^{\circ} 19'$ east 53.6 feet to an iron pin; thence south $4^{\circ} 40'$ west 168.30 feet to an iron pin along land of said Parker; thence south $1^{\circ} 39'$ east 144.84 feet to an iron pin along land of said Parker; thence south $0^{\circ} 49'$ west 130.12 feet along land of said Parker to an iron pin; thence south $0^{\circ} 56'$ east 186.78 feet to an iron pin along land of said Parker; thence south $64^{\circ} 23'$ east 40.28 feet along land of said Parker to an iron pin; thence south $64^{\circ} 43'$ east 781.8 feet along land of Podlinski to the place of beginning. Containing 43.98 acres, more or less.

For grantors title see Book 6489 Page 201.

ATTEST: FRANKLIN, Scott A. Cote Register

State Tax Form CL-3
Revised 9/2008

The Commonwealth of Massachusetts
NORTHFIELD

Name of City or Town

Office of the Board of Assessors



Bk: 6619 Pg: 79 Franklin County
Page: 1 of 1 12/03/2014 10:57 AM

Classified Forest-Agricultural or Horticultural-Recreational Land Tax Lien

The Board of Assessors in the city/town of NORTHFIELD hereby states it has accepted and approved the application of HOPPING AHEAD, LLC

owner(s) of the real property described below, for the valuation, assessment and taxation of that property as classified forest agricultural or horticultural recreational land under the provisions of General Laws Chapter 61 61A 61B . This classification is effective as of January 1, 2015 for the fiscal year beginning July 1, 2015 .

DESCRIPTION OF PROPERTY

(The description must be sufficiently accurate to identify the property. In the case of registered land, the Certificate of Title Number and the Registry Volume and Page must be given.)

Book 6479 Page 201	Map 55 Block B1	Location: Pine Meadow Rd	73.61 ac classified
Book 6479 Page 201	Map 54 Block B4	Location: Pine Meadow Rd	7.5 ac classified
Book 6479 Page 201	Map 54 Block B5	Location: Pine Meadow Rd	6.5 ac classified

This statement made on the 15th day of DECEMBER, 2014 constitutes a lien upon the property as provided in General Laws Chapter 61, § 2 61A, § 9 61B, § 6 .

Thomas O'Shea
Paul M. L...

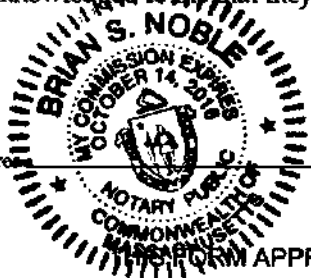
Board of Assessors

The Commonwealth of Massachusetts

FRANKLIN

ss.

On this 15th day of December, 2014 before me, the undersigned notary public, personally appeared THOMAS SAWARER, ROBERT MACEWELL as Board of Assessors for the city/town of NORTHFIELD, proved to me through satisfactory evidence of identification, which were personally known to be the persons whose names are signed on the preceding document in my presence, and acknowledged to me that they signed it voluntarily for its stated purpose.



Brian S. Noble

Notary Public

My commission expires _____

FORM APPROVED BY THE COMMISSIONER OF REVENUE

ATTEST: FRANKLIN, Scott A. Cote Register

MASSACHUSETTS C.D. Real Estate Mortgage 11335 1/99

RECORD AND RETURN TO:
 First Pioneer Farm Credit, ACA
 240 South Road
 Enfield, CT 06082

HOPPING AHEAD, LLC and
 Eugene A. and Bonnie Tucker L'Etoile
 TO
 First Pioneer Farm Credit, ACA



Bk: 6700 Pg: 332 Franklin County
 Page: 1 of 12 06/19/2015 09:23 AM

File No. 4436
 Valley Title Company
 413-774-6359

OPEN - END MORTGAGE

On this 18th day of June, 2015, Eugene A. L'Etoile and Bonnie Tucker L'Etoile and HOPPING AHEAD, LLC a Massachusetts Limited Liability Company, both of 496 Pine Meadow Road, Northfield, MA 01360 ("Borrower"), for consideration paid, grants to First Pioneer Farm Credit, ACA, a corporation organized and existing under the laws of the United States under the Farm Credit Act of 1971, as amended, having its usual place of business at 240 South Road, Enfield, CT 06082 County of Hartford, State of Connecticut ("Lender") the Mortgaged Premises described herein with **MORTGAGE COVENANTS** to secure payment of the Indebtedness advanced from time to time by Lender under an Open-end Credit Plan up to the Maximum Amount Secured.

1. MAXIMUM AMOUNT SECURED. It is understood and agreed that the maximum amount to be secured at any one time outstanding by this Mortgage is the principal sum of ONE MILLION ONE HUNDRED THOUSAND AND 00/100 DOLLARS (\$1,100,000.00), plus all interest, and plus all: taxes, insurance premiums, costs of collection (including reasonable attorneys fees), liability for environmental non-compliance and other amounts paid pursuant to the terms of this Mortgage, or of any Note, Loan Document or other obligation secured hereby, or amounts otherwise paid or incurred by Lender to preserve the mortgage lien. This Mortgage is subject to an Open-end Credit Plan ("Loan Agreement"), and all amendments thereto and renewals thereof.

2. PAYMENT OF INDEBTEDNESS. Borrower hereby agrees and binds himself jointly and severally to pay Lender, its successors or assigns, or the Holder of this Mortgage, all of the Indebtedness secured hereby, without any deduction or credit, together with interest thereon, and default interest on all amounts not paid when due, according to a certain Note(s) of even date herewith, and according to a certain Loan Agreement (and all amendments and renewals thereof), or according to certain other Note(s), Agreements or other obligations which may be given from time to time by Borrower to Lender and secured hereby, the terms of which are incorporated by reference and made a part hereof.

3. OBLIGATIONS SECURED. This Mortgage is given as continuing security for the payment of the aforesaid Note(s) and other obligations; and also as continuing additional security for the performance of all other covenants and agreements between Borrower and Lender and Borrower and any of Lender's wholly owned subsidiaries; and for the payment and performance of all other claims, charges, debts, agreements, liabilities, obligations and indebtedness of Borrower to Lender and to any of Lender's wholly owned subsidiaries (all collectively referred to as "Indebtedness"), whether now existing or arising hereafter, and whether arising out of this present financial transaction or transactions separate and unrelated hereto, and whether such Indebtedness is absolute, contingent, direct or indirect, and whether made as maker, endorser, guarantor or otherwise; and whether incurred by future advances (both obligatory and non-obligatory) or otherwise. Reference to this Mortgage as security for any Indebtedness shall not be required to be stated on the face of any document representing such Indebtedness or elsewhere. If such Indebtedness shall remain or become that of less than all of the Borrowers, any Borrower not liable therefor hereby expressly hypothecates his/her/their ownership in the Mortgaged Premises to the extent required to satisfy the Indebtedness without restriction or limitation unless such Borrower has been discharged in writing by Lender.

4. DESCRIPTION OF MORTGAGED PREMISES. To secure the payment of said Indebtedness, Borrower hereby mortgages the following described real estate located in Franklin County, Commonwealth of Massachusetts, which has an address of Pine Meadow Road, Northfield being all and the same premises as described in Exhibit "A", attached hereto and

made a part hereof, which, together with the rights described in the following paragraphs, shall be collectively referred to herein as the "Mortgaged Premises".

5. LIEN INCLUDES ALL RIGHTS IN THE PROPERTY. The lien granted by this Mortgage shall include all right, title and interest of Borrower in and to the Mortgaged Premises, including without limitation: all buildings, structures and improvements and all replacements and after acquired property of the same kind; all easements; all riparian and other rights running with the land; all fixtures now existing or hereafter attached to the property; the beds of all streets and roads in front of and adjoining said real estate to the center line thereof; all oil, gas, mineral, timber, water, sand, gravel, natural resources and other such rights; all awards for taking by condemnation or eminent domain of all or any portion of the Mortgaged Premises or any easement thereon, including awards for change of grade of streets; all insurance proceeds and unclaimed premiums payable under policies covering the Mortgaged Premises; and all leases affecting the Mortgaged Premises, which leases and all rents, royalties, income and other payments and rights thereunder are hereby assigned to Lender during the term hereof, and the possession of such leases and proceeds therefrom shall be delivered to Lender upon its demand.

It is agreed that this Mortgage shall be considered a financing statement pursuant to the Uniform Commercial Code covering all the Borrowers' personal property described herein.

BORROWER'S COVENANTS

Borrower covenants with Lender as follows:

- 6. DEFAULT.** If one or more of the following "Events of Default" should occur, Lender shall have such rights and remedies as are provided in the Note(s) and Loan Documents, including without limitation and at Lender's sole option, the right to make demand or to accelerate the whole Indebtedness secured hereby. No advance needs to be made or completed if one or more of the following Events of Default should occur:
- a.) A default for more than 30 days in the payment of:
 - (i) amounts demanded, or any installment of principal or of interest due, or any accelerated amount due under the Note(s) or other evidence of the Indebtedness, or under any obligation secured hereby, or under the terms of this Mortgage or any other instrument securing the Indebtedness; or
 - (ii) any tax, water rate or assessment; or
 - (iii) any amount not paid when due under any Loan Document; or
 - b.) The failure of Borrower or any guarantor to observe, perform timely or comply with any provisions contained in the Note(s) or other evidence of the Indebtedness, in this Mortgage or any other instrument securing the Indebtedness, or in any Loan Agreement, Security Agreement, Guaranty or in any other legal document of any kind related to or subject hereto, or in any other obligations secured hereby (collectively called: "Loan Documents"), or in any other obligations of Borrower or any guarantor to Lender or in which Lender has an interest; or
 - c.) A breach of any warranty, representation, covenant or agreement contained herein or contained in the Loan Documents, or in any other obligations of Borrower or any guarantor to Lender or in which Lender has an interest; or any material misrepresentation relating thereto or contained therein or in any loan application or financial statement submitted to Lender; or
 - d.) Failure to pay within 30 days of demand, or a declared default existing for more than 30 days, on any other note(s), mortgages or other obligations of Borrower or any guarantor to Lender or in which Lender has an interest; or
 - e.) Declared default existing for more than 30 days on a mortgage or security agreement to any third party covering the Mortgaged Premises or personal property collateral; or
 - f.) Failure to discharge within 60 days of entry, or of affirmation on appeal, any final judgement for the payment of money against Borrower or any guarantor; or
 - g.) Borrower becomes insolvent or dissolves (if a legal entity); Borrower or any guarantor files or has filed against him any petition in Bankruptcy, or any equivalent action for relief in Bankruptcy Court, or enters into an assignment for the

benefit of creditors or similar arrangement; or Borrower or any guarantor is subject to a court order appointing a receiver or trustee on his behalf.

7. USE OF LOAN PROCEEDS AND COLLATERAL. Borrower covenants and agrees that the proceeds of loans secured hereby shall be used only for the purposes set forth in the application therefor or specified by Lender; that the Mortgaged Premises herein described shall be maintained in a good and husbandlike manner, including the use of prudent and appropriate agricultural or silvacultural practices and soil conservation techniques; that the buildings, improvements and fixtures on Mortgaged Premises shall be kept in good repair; that any natural resources, including timber, topsoil, oil, gas, or water shall not be sold, leased or otherwise exploited without the prior written consent of Lender; that landfill operations, the spreading of sludge, sludge-derived products or other waste, or the deposit of hazardous or toxic substances, materials or waste, other than materials ordinarily used for agricultural purposes and used in accord with applicable laws, shall not be permitted without the prior written consent of Lender. In addition, Borrower shall not commit nor suffer the commission of waste of Mortgaged Premises. Borrower hereby grants to Lender, for as long as this Mortgage remains in effect, the irrevocable right to enter the Mortgaged Premises at reasonable times to conduct inspections, environmental audits or take such other actions as Lender, in its sole discretion and without obligation to do so, may reasonably require to ascertain, to verify or to monitor the Mortgaged Premises' condition and Borrower's compliance with all applicable laws, rules and regulations and with the Covenants of this Mortgage. Unless otherwise agreed in writing, all costs of any environmental audits and inspections shall be borne by Borrower.

8. TITLE WARRANTY. Borrower warrants that Borrower has good and marketable title in fee simple to the Mortgaged Premises described herein; and that Borrower shall defend such title against all claims and demands.

9. ADVANCES. Borrower shall receive and hold any advances secured hereby made for erecting an improvement on the Mortgaged Premises, and the right to receive such advances, as a trust fund to be applied first for the purpose of paying the cost of such contemplated improvement, and shall apply such advance(s) to payment of same before using any part for any other purpose.

10. BUILDINGS. No building, structure or improvement on the Mortgaged Premises shall be removed, demolished, or substantially changed without the prior written consent of Lender.

11. NO SALE OR LEASE. Borrower covenants and agrees that, after the date hereof, none of the following actions shall be taken or permitted without Lender's prior written consent:

- a.) Acquisition of legal or equitable title to all or any part of the Mortgaged Premises by anyone other than those in whom title is vested on the date hereof; or
- b.) All or any part of the Mortgaged Premises becoming subject to either a lease for a term exceeding one year or an installment sales contract, whether or not title passes; or
- c.) Any principal, stockholder or partner of the undersigned legal entity or an entity guaranteeing the Indebtedness selling or otherwise transferring his/her ownership, stock or partnership interest in such entity.

12. ENVIRONMENTAL REQUIREMENTS. Borrower shall comply strictly with the requirements of all applicable federal, state and local environmental laws, rules and regulations and shall not become involved in operations on the Mortgaged Premises or other locations which could lead to Borrower's or Lender's liability thereunder. If Borrower fails to so comply, Lender, at its sole option but without any obligation to do so, may give such notices, incur such expense, take such actions or cause such work to be performed on the Mortgaged Premises or take any and all other actions as Lender deems necessary or prudent to cure such failure of compliance. Any amounts paid as a result thereof, together with interest thereon according to the terms of the Note(s) or obligations secured hereby, shall be due and payable from Borrower to Lender on demand, and until paid shall become a part of the Indebtedness secured hereby with the same lien priority, notwithstanding any limitation of Indebtedness otherwise provided for herein, and the same may be collected as part of the principal debt in any suit hereon or upon the Note(s) or other obligations secured hereby.

Borrower does hereby jointly and severally agree to indemnify, defend and hold Lender harmless of and from any and all liabilities, liens, assessments, suits, damages, judgments, costs and expenses, environmental audit fees and costs, attorney fees, consultant's fees, clean up costs, removal or response costs arising out of the presence, handling and disposal of hazardous or toxic waste, materials or substances of any kind whatsoever in connection with the Mortgaged Premises, including without limitation the assertion of any lien taking priority over the lien hereof, or arising out of any requirement of any applicable law or regulation.

Borrower represents and warrants to Lender that:

- a.) To the best of Borrower's knowledge, the Mortgaged Premises are in compliance with all applicable environmental laws, rules and regulations.
- b.) To the best of Borrower's knowledge, Borrower has made full disclosure to Lender of: all now known or reasonably suspected environmental problems or conditions on or adjacent to the Mortgaged Premises, and all environmental orders or agreements with federal, state and local authorities affecting Borrower or the Mortgaged Premises.
- c.) If environmental contamination or non-compliance with applicable laws affecting Borrower or the Mortgaged Premises is discovered during the term of this Mortgage, Borrower shall:
 - (i) immediately notify Lender of the same;
 - (ii) promptly undertake at Borrower's own expense any remedial action, removal or compliance measures required;
 - (iii) promptly reimburse Lender for all sums Lender expends under this Environmental Requirements section or becomes liable to expend under applicable laws, rules and regulations.

Borrower acknowledges and agrees that any determination by Lender of compliance with environmental laws is made solely for Lender's own benefit. Such determination(s) shall not be disclosed to third parties or relied upon by Borrower or any third party.

All provisions of this Environmental Requirements section, including but not limited to indemnification, shall survive the discharge or other cancellation of this Mortgage and the Indebtedness.

13. INSURANCE. Borrower shall keep the Mortgaged Premises insured against loss by fire, with extended coverage endorsement, and such other hazards (and in such amounts) as Lender may require, for the benefit of Lender, and naming Lender as the Insured. Borrower shall also, on Lender's demand, furnish evidence of coverage to Lender and assign and deliver such policies to Lender. In the event of foreclosure of this Mortgage, Lender shall succeed to all the rights of Borrower in and to all policies required hereunder. If required by Lender, Federal Flood Insurance (if property qualifies), public liability insurance, workman's compensation insurance and other specified kinds of insurance shall be carried by Borrower. Terms of any insurance policy required hereunder shall provide for at least 30 days prior written notice of cancellation to Lender.

Lender shall not be liable to Borrower if insurance lapses; and Lender shall have no duty to notify Borrower of such lapse of insurance coverage. Lender, without obligation to do so, may obtain insurance and pay any late or delinquent insurance premiums related to the Mortgaged Premises. In such event, Lender, at its sole option, may: a) Obtain from Borrower reimbursement for any such amounts paid plus interest under the applicable Note(s), which amount shall be payable by Borrower on Lender's demand; or b) Add such amount to the Indebtedness secured hereby with interest and according to the terms of the applicable Note(s), despite the aforesaid limit on the maximum amount secured hereby; or c) Declare Borrower in default hereunder, subject to Borrower's right to cure within 30 days after Lender's notice and demand. Upon demand from Lender, Borrower shall surrender immediately all insurance policies covering the Mortgaged Premises, which policies in the event of foreclosure shall become the property of Lender, with full authority in Lender to make claims, to settle, compromise or dispose of same at its sole discretion for application to the Indebtedness secured hereby.

14. TAXES, LIENS, JUDGMENTS AND ASSESSMENTS. Borrower shall pay when due all taxes, liens, judgments, assessments, water rates and environmental clean up costs affecting the Mortgaged Premises or the lien hereof; and Borrower shall furnish evidence of payment of same on Lender's demand. If Borrower fails to pay the same, Lender, at its sole option, may: a) Pay the same and add such amount to the Indebtedness secured hereby with interest and according to the terms of the Note(s) secured hereby, despite the aforesaid limit on the maximum amount secured hereby; or b) Obtain from Borrower reimbursement of the amount paid plus interest under the applicable Note(s), which amount shall be payable by Borrower on Lender's demand; or c) Declare Borrower in default hereunder, subject to Borrower's right to cure within 30 days after Lender's notice and demand.

15. SET-OFF. Immediately upon Borrower's default and without notice to Borrower, Lender shall have the right to set-off and apply to the Indebtedness, in such manner as Lender in its sole discretion may determine, any and all sums credited by or due from Lender to Borrower, whether in transit or in the possession of Lender. Such sums shall at all times constitute additional security for the Indebtedness secured hereby.

16. NON WAIVER. Waiver by Lender of the breach of any terms or covenants, or the failure of Lender to exercise any option given to it, or the granting by Lender of any forbearance, restructuring or "borrower rights" (as may be required or allowed under the Farm Credit Act or other applicable law or regulations) shall not be deemed to be a waiver of any subsequent breach of the same covenant or the breach of any other covenant, or of Lender's rights thereafter to exercise any such option. Nothing herein or in any Loan Document shall limit or waive Lender's right to make demand under any demand obligation secured hereby. Any provision of this Mortgage may be waived only by a writing, signed by an authorized representative of Lender.

17. COLLECTION COSTS AND FEES. Borrower jointly and severally agrees to pay all costs, charges and expenses, including reasonable attorneys fees, which are: incurred by Lender in connection with preserving or protecting Lender's rights and interests under the Note(s) or this Mortgage or any other Loan Document whether or not a legal action is filed; or incurred by Lender in the event of suit on the Note(s) or this Mortgage or any Loan Document; or incurred in other legal proceedings for the collection of the Indebtedness secured hereby; or incurred in any foreclosure brought by Lender; or incurred in any other legal proceeding to protect or sustain any mortgage or lien granted as security for the debt secured hereby; or incurred in any litigation or controversy, including any action in Bankruptcy Court, affecting, arising from or connected with the said Note(s), Loan Documents, Indebtedness or this Mortgage. Such amounts together with interest shall be added to the unpaid principal balance hereof, notwithstanding the maximum amount of Indebtedness described above; shall be evidenced by the Note(s) and secured by this Mortgage; and shall be a lien with the same priority on the Mortgaged Premises.

Borrower further agrees to pay all reasonable fees, costs and expenses for all environmental audits or other environmental evaluations of the Mortgaged Premises, updates of environmental audits or evaluations, appraisals of the Mortgaged Premises, appraisal updates or other valuation services or professional opinions which may be required by Lender, in its sole discretion, from time to time in connection with this loan or the collection of the Indebtedness. All sums owing for such services shall be payable on Lender's demand. If unpaid for thirty (30) days after demand, such unpaid sum, at Lender's sole discretion, may either constitute a default on this Mortgage, or it may be added to the unpaid principle balance of the loan and secured by this Mortgage as a lien of the same priority.

18. SALE OF COLLATERAL. All Lender's rights to personal property security and real property security, in Lender's sole discretion, may be exercised either together or separately. Lender, in its sole discretion, may sell personal property security either separately from or together with real property security, whether or not the aggregate proceeds thereof exceed the Indebtedness secured hereby. At any sale, any combination of all of the security may be offered for sale for one total price and the proceeds of such sale accounted for in one account, without distinguishing between items of security or assigning to separate securities proportions of the proceeds. If in the exercise of the power of sale, Lender elects to sell in parts or parcels, such sales may be held from time to time, and the power shall not be fully executed until all of the personal property security and real property security has been sold. In case of a foreclosure sale, the Mortgaged Premises, or so much thereof as may be affected by this Mortgage, may be sold in one parcel or multiple parcels, at Lender's sole discretion.

This mortgage is upon the **STATUTORY CONDITION**, for any breach of which the Lender shall have the **STATUTORY POWER OF SALE**.

19. APPOINTMENT OF RECEIVER. Lender in any action to foreclose this Mortgage shall be entitled to the appointment of a receiver.

20. FINANCIAL INFORMATION. At Lender's request, Borrower shall provide, in a form acceptable to Lender, a current balance sheet and income statement annually and at such other additional times as Lender may request in connection with loans.

21. BINDS HEIRS, EXECUTORS AND ASSIGNS. The covenants, agreements and conditions contained herein shall bind and inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto. The term "Lender" as used herein, shall be construed to include any lawful Holder of this Mortgage.

22. SEVERABILITY. If any provision of the Note(s), this Mortgage, any Loan Document or other obligation secured hereby, or any other document given to secure the said Indebtedness shall be determined to be invalid, inapplicable to any party or unenforceable, such determination shall not affect the validity, applicability or enforceability of any other provision of that instrument or of any other instrument.

23. NOTICE. Notice, demand or request of either party hereto shall be in writing and shall be served in person or by mail.

24. GOVERNING LAW. This Mortgage is subject to the provisions of the Farm Credit Act of 1971 and all acts amendatory thereof or supplementary thereto; and shall be interpreted according to the law of the Commonwealth of Massachusetts.

25. LEGAL ENTITY WARRANTY. If Borrower is a legal entity, Borrower represents and warrants that it is duly constituted under applicable laws and in good standing; that appropriate authorization has been obtained to enter into this Mortgage, the Loan Documents and all instruments evidencing the Indebtedness; and that when executed this Mortgage, the Loan Documents and all instruments evidencing the Indebtedness shall be valid and legally binding on Borrower.

26. NO ORAL MODIFICATION. This Mortgage may not be changed or modified orally, but only by a writing signed by the party against whom enforcement is sought.

27. TIME OF THE ESSENCE. For purposes of this Mortgage, the Loan Documents and the instruments evidencing the Indebtedness secured hereby, time is of the essence.

28. LENDER'S REMEDIES CUMULATIVE. The rights and remedies herein afforded to Lender shall be cumulative and supplementary to, and not exclusive of, any other rights and remedies afforded the holder of this Mortgage under applicable laws.

29. RELEASES. Lender, at its sole option and without notice, may release any part of the security described herein, or release any person or entity liable for or guaranteeing the Indebtedness, or agree to extend time for payment of the Indebtedness, or provide "borrower rights" under the Farm Credit Act without in any way affecting the lien hereof (except to the extent released) or without releasing any unreleased person or entity obligated to pay or guaranty the Indebtedness.

30. INTEREST AFTER DEFAULT OR MATURITY. If the Indebtedness shall become due, either because of Borrower's default or because of demand or maturity under terms of the Note(s) evidencing such Indebtedness, then interest shall continue as provided for in said Note(s) until the Indebtedness is paid in full.

31. EXECUTION OF DOCUMENTS. Borrower covenants to execute, deliver, file and or record such documents or instruments, or take such other actions, as may be reasonably required by Lender to effectuate the intention of this transaction, or to assure the enforceability and collectability of the Indebtedness, the Loan Documents or the Mortgage lien, or to otherwise protect or enforce the rights of Lender hereunder.

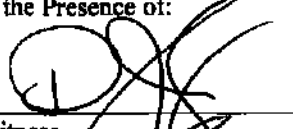
32. RELEASE OF DOWER, CURTESY AND HOMESTEAD. The undersigned release to Lender all rights of dower, curtesy, homestead and other interests in the mortgaged premises.

33. AGENT. The Borrower agrees that Lender may from time to time act as agent for and on behalf of certain other lenders, including without limitation, any wholly owned subsidiary of Lender, which designation and appointment as an agent is coupled with an interest, and that such capacity as agent, Lender is authorized to take such actions on its behalf and on the behalf of those lenders for whom Lender is acting as agent under the provisions of this mortgage and to exercise all powers and perform such duties as it deems necessary or appropriate in connection with the mortgage, including without limitations, all available rights and remedies available hereunder to a lender or mortgagee for its account and the account of others.

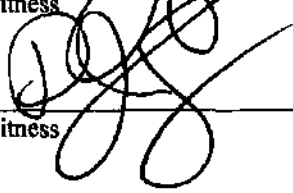
FOR INDIVIDUALS:

WITNESS my/our hand(s) and seal(s) on this 18th day of June, 2015.

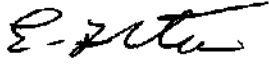
In the Presence of:




 Witness



 Witness


 _____ (L.S.)
 Eugene A. L'Etoile. Individually and as Authorized
 Member of Hopping Ahead LLC, Borrower


 _____ (L.S.)
 Bonnie Tucker. L'Etoile, Individually and as Authorized
 Member of Hopping Ahead LLC, Borrower

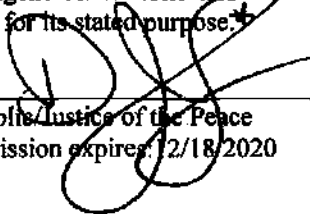
 Witness

 , Borrower (L.S.)

COMMONWEALTH OF MASSACHUSETTS)
) SS Greenfield
 COUNTY OF FRANKLIN)

Date: June 18, 2015

Before me personally appeared Eugene A. L'Etoile and Bonnie Tucker L'Etoile proved to me through satisfactory evidence, which was a driver's license to be the person(s) whose name(s) are Eugene A. L'Etoile and Bonnie Tucker L'Etoile and acknowledged to me that they signed the foregoing instrument voluntarily for its stated purpose.



 Notary Public/Justice of the Peace
 My Commission expires 12/18/2020

* AND AS MEMBERS of Hopping Ahead LLC .

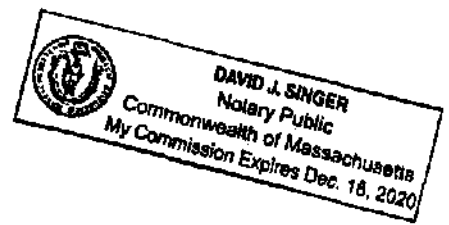


Exhibit "A"

PARCEL ONE:

Eleven parcels of land lying easterly and westerly of Route 63, Northfield, Franklin County, Massachusetts.

Said eleven tracts of land are bounded and described as follows:

FIRST:

Bounded on the west by the New London and Northern Railroad; north by land formerly of Raymond Nims; east by land of Mrs. Scott; and South by lands now or formerly of E. Stratton. Containing 10 acres, more or less. Conveying also a right of way from the Banks Farm Road, so-called.

SECOND:

Bounded west by the road leading through Pine Meadow; north by land formerly of Charles Tenney, now by the third tract hereinafter described; east by land formerly of Raymond Nims; and south by land of Charles Tenney. Containing 6 1/2 acres.

THIRD:

Bounded north by land now or formerly of Colman Smith and land now or formerly of Landman Nye; easterly by land formerly of John L. Banks; southerly by land formerly of James Merriam, now the second tract herein described; and westerly by Pine Meadow Road, containing 7 acres, more or less. Excepting a right of way across the easterly end thereof and the right to maintain a fence on either side of said right of way.

FOURTH:

Bounded easterly by Pine Meadow Road; northerly by land formerly of Charles Tenney; westerly by land conveyed by Dyanizy T. Dymersky to Turners Falls Power and Electric Company by deed dated May 8, 1931, recorded in said Registry, Book 774, Page 201; southerly by land formerly of Charles Tenney. Containing 5 acres, more or less. Conveying also rights in land lying westerly of the above tract as reserved and excepted in said deed to said Turners Falls Power and Electric Company above referred to.

FIFTH:

Beginning at a stone bound on Montague Avenue, so-called, in said Northfield, at the southeast corner of land of Michael Sytnyk; thence easterly along Montague Avenue, so-called, to the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad; thence northerly along the line of said Railroad location to land now or formerly of one Donahue; thence north 75° 30' west 390 feet, more or less, to a stone bound; thence north 0° 41' east 188.66 feet to a stone bound; thence south 83°

58' west 1,464.07 feet along land of Dymersky to the Meadow Road, so-called; thence southerly along the Pine Meadow Road to a stone bound at land of Sytnyk; thence north 84° 22' east 425.33 feet to a stone bound; thence continuing in said direction 434.96 feet to a stone bound; thence south 5° 13' east 127.91 feet to a stone bound; thence south 51° 52' west 170.15 feet to a stone bound; thence south 26° 37' west 102.84 feet to a stone bound; thence south 18° 37' west 128.1 feet to a stone bound at the place of beginning. Containing 73.61 acres, more or less.

SIXTH:

Beginning at a corner of land of J. Podlinski on the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad location; thence northerly along said location to the Pine Meadow Road, so-called; thence southwesterly along the Pine Meadow Road, so-called, to land of Charles A. Parker; thence south 0° 19' east 53.6 feet to an iron pin; thence south 4° 40' west 168.30 feet to an iron pin along land of said Parker; thence south 1° 39' east 144.84 feet to an iron pin along land of said Parker; thence south 0° 49' west 130.12 feet along land of said Parker to an iron pin; thence south 0° 56' east 186.78 feet to an iron pin along land of said Parker; thence south 64° 23' east 40.28 feet along land of said Parker to an iron pin; thence south 64° 43' east 781.8 feet along land of Podlinski to the place of beginning. Containing 43.98 acres, more or less.

SEVENTH:

Beginning at a stone bound on the westerly side of the Pine Meadow Road, so-called, in said Northfield, at the northeast corner of land of Michael Sytnyk; thence northerly along said Pine Meadow Road to an iron pin at land of D. Dymersky; thence westerly along land of said Dymersky 1,280.28 feet to a cement bound; thence continuing westerly 167.5 feet to an old stone bound on the Connecticut River; thence southerly along said River to a stone bound at the northwesterly corner of land of Michael Sytnyk; thence easterly 164.8 feet to a cement bound; thence continuing easterly along land of said Sytnyk 775.45 feet to a stone bound at the place of beginning. Containing 54.85 acres, more or less.

There is excepted from the westerly portion thereof 25 acres, more or less, bordering the Connecticut River as conveyed by Adelbert A. Dunklee to Turners Falls Power and Electric Company, by deed recorded in Franklin Registry of Deeds, Book 751, Page 261; and there is appurtenant to the remaining land the rights to the use of the excepted tract as reserved in said deed to Turners Falls Power & Electric Company.

EIGHTH:

Beginning at an old stone bound on the westerly side of Pine Meadow Road, so-called, at the northeast corner of land of D. Dymersky; thence northerly along the Pine Meadow Road, so-called to an iron pipe at the southeasterly corner of land of A. Ostroski; thence south 84° 30 1/2' west 647.6 feet along land of said Ostroski to an iron pin; thence north 30° 55' east 473.6 feet along land of said Ostroski to a stone bound; thence in the same direction along land of said Ostroski 203.6 feet to a stone bound at other land

of Ostroski; thence south 80° 23' west 919.35 feet along land of said Ostroski to a cement bound; thence continuing in said direction 187.35 feet to a pile of stones on the Connecticut River; thence southerly along said River to an iron pin marking the northwesterly boundary of land of D. Dymersky; thence north 83° 10' east 159.4 feet along land of said Dymersky to a cement bound; thence in the same general direction along land of said Dymersky 423.64 feet to an old stone bound; thence in the same general direction along land of said Dymersky 907.9 feet to the place of beginning. Containing 43 acres, more or less, westerly of the Pine Meadow Road.

There is excepted from the westerly portion thereof 20 acres, more or less, bordering the Connecticut River, as conveyed by Adelbert A. Dunklee to Turners Falls Power & Electric Company by deed recorded in Franklin Registry of Deeds, Book 751, Page 261; and there is appurtenant to the remaining land the rights to the use of the excepted tract as reserved in said deed to Turners Falls Power & Electric Company.

Tracts FIFTH through EIGHTH are the same premises conveyed by deed of Adelbert A. Dunklee to Charles S. and Louella F. Tenney, dated June 11, 1934 and recorded in Franklin Registry of Deeds, Book 806, Page 49, and being all of the premises in said deed with the exception of the first parcel therein which has been conveyed away. Said tracts are conveyed together with all spring or well rights, together with entrance and maintenance rights, subject the obligations imposed therein; subject to highways and rights of way running through said tracts; all as mentioned in said deed from Adelbert A. Dunklee to said Tenneys.

There is excepted from the EIGHTH tract above described a parcel containing one (1) acre, more or less, on the west side of Pine Meadow Road as conveyed by deed of Harold A. Newton and Joel E. Scroggins to Harold A. Newton and Elizabeth C. Newton, husband and wife, dated August 3, 1971 and recorded in the Franklin County Registry of Deeds, Book 1280, Page 351.

NINTH:

Beginning at the northeast corner of said lot at a point on Pine Meadow Road and running westerly by land now or formerly occupied by Samuel F. Browning, John W. Smith and Dwight Smith to a stone set in the ground; thence southerly on land now or formerly of Thomas Metcalf to a stone; thence easterly by land now or formerly of William Whittaker to a stone bound on the Pine Meadow Road; thence northerly on the Pine Meadow Road to the place of beginning; containing seven acres, more or less.

Excepting 50,047.32 square feet conveyed by deed dated March 15, 1996 and recorded in said Registry in Book 3087, Page 51.

TENTH:

Beginning at a stake and stones at the southwest corner of land now or formerly of John W. Smith and running westerly on the north side of Pine Meadow Road forty-two rods to a stake and stones; thence northerly by land now or formerly of Samuel F. Browning nine rods to a stake and stones; thence easterly by land now or formerly of Samuel F.

Browning ten rods to a stake and stones; thence northerly by land now or formerly of Samuel F. Browning seventy-seven rods and ten links to the Connecticut River; thence easterly by said river to land now or formerly of Artimus Nye; thence southerly by said Nye's land and land now or formerly of John W. Smith to Pine Meadow Road and the place of beginning. Containing by estimation eighteen acres, more or less.

Excepting 50,119.44 square feet conveyed by deed dated January 11, 1995 and recorded in said Registry in Book 2970, Page 144.

ELEVENTH:

Bounded northerly and westerly by the Connecticut River; easterly by land now or formerly of John D. Smith and Clara Smith; and southerly by land now or formerly of Thomas Metcalf; containing fourteen acres, more or less.

Excepting from the TENTH tract 3.72 acres, more or less, and from the ELEVENTH tract 7.80 acres, more or less, being lands conveyed by August and Anna Ostroski to Turners Falls Power and Electric Company by deed dated June 8, 1929 and recorded in Franklin Registry of Deeds, Book 750, Page 292; and there is appurtenant to the remaining land the rights to the use of the excepted tracts as reserved in said deed to Turners Falls Power and Electric Company.

Excepting from PARCEL ONE 30,470.16 square feet conveyed by deed dated December 22, 1994 and recorded in said Registry in Book 2965, Page 328.

Subject to a Boundary Line Agreement between Lawrence D. Whitney and Bonnie Tucker L'Etoile and Eugene L'Etoile dated March 14, 2002 and recorded in said Registry in Book 3982, Page 3.

The foregoing Eleven Tracts of land are the same premises described in deed of Tuckahoe Land Company, L.P. to Bonnie L'Etoile and Eugene L'Etoile, dated October 17, 1994 and recorded in said Registry in Book 2948, Page 194.

FURTHER EXCEPTING THE LAND CONVEYED by Deed from Eugene A. L'Etoile and Bonnie Tucker L'Etoile to Eugene A. L'Etoile, Bonnie Tucker L'Etoile, Jacob L'Etoile and Robin L'Etoile dated December 22, 2009 and recorded in Book 5799, Page 225, and subsequent deed from Eugene A. L'Etoile and Bonnie Tucker L'Etoile to Jacob L'Etoile and Robin L'Etoile dated December 22, 2009 and recorded in Book 5819, Page 29. (This is all of Tract Ten described in Book 2948, Page 194.)

FURTHER EXCEPTING THE LAND CONVEYED by Deed from Eugene L'Etoile and Bonnie Tucker L'Etoile to Nathan L'Etoile and Elizabeth L'Etoile dated December 30, 2010 and recorded in Book 5965, Page 57. (This is a portion of Tract 7 described in Book 2948, Page 194, and is Lot 34 shown on Plan Book 130, Page 100.)

PARCEL TWO:

The following three parcels of land located in Northfield, Franklin County, Massachusetts, lying easterly and westerly of Route 63 and more particularly bounded and described as follows: viz

PARCEL NO. 1

BEGINNING at an iron pipe in the westerly sideline of Route #63 said pipe marking the line between this tract being described and land now or formerly of James E. Hanrahan and Theda M. Hanrahan; thence N 89° 29' 30" W a distance of 129.00 feet to an iron pipe; thence S 32° 52' 20" W a distance of 52.00 feet to an iron pipe; thence S 65° 51' 30" E a distance of 22.33 feet to an iron pipe; thence S 23° 55' 50" W a distance of 32.33 feet to an iron pipe; thence S 70° 13' 00" E a distance of 99.23 feet to a point, the last five courses being along land now or formerly of said Hanrahan; thence Southerly on a curve to the left of radius 1,230.00 feet an arc length of 157.32 feet to a Massachusetts Highway Bound; thence S 16° 55' 23" W a distance of 137.93 feet to a Massachusetts Highway Bound; thence Southerly on a curve to the left of radius 2,030.00 feet an arc length of 75.96 feet to an iron pipe, the last three courses being along said Route #63; thence N 86° 52' 30" W a distance of 1,438.70 feet to an iron pipe; thence N 76° 21' 00" W a distance of 714.34 feet to an iron pipe; thence N 18° 57' 00" E a distance of 160.00 feet to an iron pipe; thence N 71° 03' 00" W a distance of 33.00 feet to an iron pipe; thence N 18° 57' 00" E a distance of 354.66 feet to an iron pipe, the last three courses being along the Central Vermont Railroad; thence S 68° 51' 10" E a distance of 730.35 feet to an iron pipe; thence N 89° 40' 30" E a distance of 1,497.78 feet to an iron pipe; thence S 26° 46' 11" W along said Route #63 a distance of 25.19 feet to the point of beginning. Containing 22.564 acres.

Excepting from PARCEL TWO, PARCEL NO. 1, 30,470.16 square feet conveyed by deed dated December 22, 1994 and recorded in said Registry in Book 2965, Page 328.

PARCEL NO. 2:

BEGINNING at an iron pipe in the westerly line of the Central Vermont Railroad, said pipe being further N 68° 51' 10" W a distance of 82.56 feet from an iron pipe in the easterly line of Central Vermont Railroad marking the northwesterly corner of Parcel No. 1 described above; thence S 18° 57' 00" W a distance of 357.82 feet to an iron pipe; thence N 71° 03' 00" W a distance of 41.25 feet to an iron pipe; thence S 18° 57' 00" W a distance of 169.95 feet to an iron pipe; thence S 71° 03' 00" E a distance of 49.50 feet to an iron pipe, the last four courses being along said Central Vermont Railroad; thence N 76° 21' 00" W a distance of 403.67 feet to a stone bound; thence N 00° 25' 40" E a distance of 188.54 feet to a stone bound; thence N 00° 19' 30" E a distance of 431.58 feet to a stone bound; thence S 68° 51' 10" E a distance of 591.86 feet to the point of beginning. Containing 6.164 acres.

PARCEL NO. 1 and PARCEL NO. 2 are conveyed subject to rights of passage across the northerly portion of each, as defined in the partition of the estate of Charles Stratton, deceased, see Franklin County Registry of Probate, Vol. 26, Page 133, and PARCEL NO.

1 is subject to rights of passage appurtenant to land now or formerly of Charles E. Adams et ux as defined in deed of Emma Donahue dated July 5, 1945, recorded in Franklin Registry of Deeds, Book 884, Page 82, to Charles E. Adams, et ux.

PARCEL NO. 3

The land situated in said Northfield and situated on the westerly side of Pine Meadow Road, with the buildings thereon the same now being occupied as a dwelling by said seller, consisting of one (1) acre, more or less, and bounded and described as follows:

BEGINNING at the westerly side of said Pine Meadow Road near an iron monument the same being an iron "I beam" at corner of other land now or formerly of Harold A. Newton and Joel E. Scroggins; thence Westerly from said road through said iron monument one hundred one (101) feet, more or less, on a course perpendicular to the center line of said road to an iron pipe at land now or formerly of Harold A. Newton and Joel E. Scroggins; thence Southerly, still by said land now or formerly of Harold A. Newton and Joel E. Scroggins four hundred thirty-six (436) feet, more or less, on a course parallel with said road to an iron pipe still by lands now or formerly of Harold A. Newton and Joel E. Scroggins; thence Easterly, still by said land now or formerly of Harold A. Newton and Joel E. Scroggins one hundred one (101) feet, more or less, through an iron galvanized pipe to said road; thence Northerly by said road four hundred thirty-six (436) feet to the point of beginning.

The last three tracts of land (PARCEL TWO) are the same premises described in deed of Tuckahoe Land Company, L.P. to Bonnie Tucker L'Etoile and Eugene L'Etoile dated October 17, 1994 and recorded in the Franklin County Registry of Deeds Book 2948, Page 199.

Excepting from PARCEL ONE and PARCEL TWO, 1.15 acres, more or less, described in deed from Eugene L'Etoile and Bonnie Tucker L'Etoile to Thomas C. Adams and Helen L. Adams dated June 28, 2002 and recorded in said Registry in Book 4031, Page 278.

For purposes of understanding the chain of title, please see Deed from Eugene A. L'Etoile and Bonnie Tucker L'Etoile to Hopping Ahead, LLC dated December 17, 2013 and recorded in Book 6479, Page 201. (This conveyed Parcels Second, Third and Fifth described in Book 2948, Page 194 and Parcel No.2 described in Book 2948, Page 199.)

Section 5 – Narrative to Accompany Planning Board Petition

PROJECT NARRATIVE
PROPOSED DUAL-USE SOLAR ASSEMBLAGE
BWC PINE MEADOW BROOK, LLC
AND BWC OTTER RUN, LLC
VARIOUS LOTS OFF PINE MEADOW ROAD
NORTHFIELD, MASSACHUSETTS

1.0 PROJECT OVERVIEW

On behalf of our clients, BWC Pine Meadow Brook, LLC and BWC Otter Run, LLC, Field Engineering has prepared this Project Narrative to accompany Permit Applications for the construction of a proposed assemblage of three solar arrays to be located on various parcels of land located on Pine Meadow Road in the Town of Northfield, Massachusetts. Two of the three arrays are being proposed as “dual-use” agricultural arrays such that the underlying land can be retained in agricultural use with either grazing animals or planting of crops. Permit applications being filed for each array include a Site Plan Review and Special Permit Petition with the Town of Northfield Planning Board in accordance with Sections 3.4, 3.5, and 10.3.C. of the Town of Northfield Zoning By-Law and applicable permit applications with the Town of Northfield Conservation Commission.

A summary of the three arrays, including project name, size, subject parcels, and landowner are provided in the table below:

Project	Type of Array	System Size (MW DC)	Northfield Assessor's Parcel(s)	Current Landowner
Pine Meadow Road Array A (BWC Pine Meadow Brook, LLC)	Dual-Use Single Axis Trackers	6.0 MW	53-E1 54-B7	Bonnie and Eugene L'Etoile & Hopping Ahead LLC
Pine Meadow Road Array B (BWC Pine Meadow Brook, LLC)	Dual-Use Single Axis Trackers	4.3 MW	54-B5 55-B1	Hopping Ahead LLC
Pine Meadow Road Array C (BWC Otter Run, LLC)	Conventional Fixed Tilt	0.6 MW	54-A8 (612 Pine Meadow Road)	Jacob and Robin L'Etoile

The applicant is proposing to construct three (“PV”) power generation facilities on the various parcels of land listed above with three points of interconnection along Pine Meadow Road. Two of the three arrays will consist of the construction of multiple solar panels on an above ground mounting system with single axis tracker racking which will allow the panels to follow

the sun throughout the day. The third array will consist of multiple solar panels on a fixed tilt racking and foundation system. The applicant is proposing a “dual-use” of the subject properties utilizing the single axis tracker foundations with the panels being constructed in a canopy configuration above the ground to allow enough vertical clearance for the free movement of people and equipment for the continued agricultural use of the property within the footprint of the array. The disturbed areas beneath the solar panel arrays will be restored and seeded as necessary to stabilize the ground following installation of the solar panel foundations and structures, and the array area on the two “dual-use” arrays will be maintained in the future as an agricultural use, supporting either light livestock for grazing or planting of various food crops.

The three sites will be accessed via separate gravel access driveways off of Pine Meadow Road with adequate turnarounds for emergency vehicle access located at the various components of each array. Each installation will be secured with a woven wire agricultural fence installed around the perimeter of the project site. As the solar facility will not require regular staffing on-site, there will be water or sewer utilities required for this project. However, the two “dual-use” arrays will have wells driven on the property for irrigation purposed. The proposed installations will be tied into the existing power lines along Pine Meadow Road via an overhead (or underground) wire connection from the proposed customer owned equipment pads at each array site to the existing power lines. The details of the proposed interconnection are currently being finalized between the applicant and WMEC. The proposed interconnection will require a significant upgrade to the existing pole line along portions of Pine Meadow Road between the project site and an existing substation to provide for three-phase power along the interconnection route.

2.0 EXISTING CONDITIONS

The three arrays comprising the proposed assemblage will sit on a number of parcels of land as listed in the table in Section 1.0. Each parcel of land on which the assemblage would sit is located along Pine Meadow Road in the southwestern portion of Northfield, Massachusetts. A more detailed description of the existing conditions for each array is as follows:

Pine Meadow Road Array A

The Pine Meadow Road Array A is to be situated on two parcels of land shown as Map 53, Lot E1 and Map 54, Lot B7 on the Town of Northfield Assessor’s Maps. These parcels are currently owned by Bonnie and Eugene L’Etoile & Hopping Ahead, LLC respectively and consist mainly of farmed field areas with some peripheral wooded areas along the easterly sides of the site. The total acreage of these two parcels is approximately 53.2 Acres. The parcels consist mainly of farmed upland areas with some bordering vegetated wetland areas as shown on the site plans. The flagged wetland areas shown along the easterly side of the site were flagged by Mr. David Gordon CWS, CPSS, Manager of Thunderchase

Environmental LLC in November 2019. According to the last Federal Emergency Management Agency (FEMA) Flood Insurance mapping of the area, Community Panel No 250124-0010B, dated 9/30/1980, no portions of these properties falls within a Special Flood Hazard area. Additionally, no portion of the project site is located within any mapped habitat according to the latest Natural Heritage and Endangered Species Program (NHESP) mapping. It should also be noted that the parcels of land being utilized for Pine Meadow Road Array A are currently in Chapter 61A and also covered by a Farm Viability Plan through the Massachusetts Department of Agricultural Resources (MDAR). Both of these restrictions will be removed upon successful permitting and installation of the proposed array.

Pine Meadow Road Array B

The Pine Meadow Road Array B is to be situated on two parcels of land shown as Map 54, Lot B5 and Map 55, Lot B1 on the Town of Northfield Assessor's Maps. These parcels are currently owned by Hopping Ahead, LLC and consist mainly of farmed field areas with some peripheral wooded areas along the easterly side of the site associated with the adjacent Pine Meadow Brook. The total acreage of these two parcels is approximately 81.5 Acres. The parcels consist mainly of farmed upland areas with some bordering vegetated wetland areas associated with the Pine Meadow Brook located within the tree line along the easterly side of the site. Approximate bordering vegetated wetland areas are shown on the plan based on topography along Pine Meadow Brook and limits of mapped hydric soils to the south of the project site. According to the last Federal Emergency Management Agency (FEMA) Flood Insurance mapping of the area, Community Panel No 250124-0010B, dated 9/30/1980, there are portions of the site that fall within Flood Zones A1, A16, A17, B and C as shown on the site plans. Additionally, no portion of the project site is located within any mapped habitat according to the latest Natural Heritage and Endangered Species Program (NHESP) mapping. It should also be noted that the parcels of land being utilized for Pine Meadow Road Array B are currently in Chapter 61A and also covered by a Farm Viability Plan through the Massachusetts Department of Agricultural Resources (MDAR). Both of these restrictions will be removed upon successful permitting and installation of the proposed array.

Pine Meadow Road Array C

The Pine Meadow Road Array C is to be situated on one parcel of land shown as Map 54, Lot A8 on the Town of Northfield Assessor's Maps. This parcel is currently owned by Jacob and Robin L'Etoile and consists mainly of field areas and an existing single-family dwelling. The total acreage of this parcel is approximately 13.1 Acres. The parcel consists mainly of field areas along with the driveway and residential dwelling with existing streams associated with the Connecticut Rive along the easterly and westerly side of the site. The flagged bank areas shown along the easterly and westerly side of the site were flagged by Mr. David Gordon CWS, CPSS, Manager of Thunderchase Environmental LLC in November 2019. According to the last Federal Emergency Management Agency (FEMA) Flood Insurance mapping of the area, Community Panel No 250124-0010B, dated 9/30/1980, there are

portions of the site that fall within Flood Zones A1, A16, A17, B and C as shown on the site plans. Additionally, no portion of the project site is located within any mapped habitat according to the latest Natural Heritage and Endangered Species Program (NHESP) mapping.

3.0 PROPOSED CONDITIONS

3.1 PROPOSED SOLAR PANEL ARRAYS

The overall project consists of the construction of an approximate 10.9 megawatt-DC, assemblage of PV power generating facilities on the subject parcels of land as described above. The assemblage will consist of almost 26,000 individual solar panels mounted on either a single axis tracker system or fixed tilt racking system. The single axis tracker systems will slowly rotate as the sun moves for maximum exposure. The proposed panels will be raised a minimum of 10' off the ground and spaced adequately to allow sunlight to reach the ground providing for the capability of a "dual-use" of the property with the solar array above continued unimpeded agricultural use by the landowner. The fixed tilt racking system will be installed at a specific angle for maximum exposure to the sun. Both types of system will be supported by either driven piles or piles with pre-drilled holes to the extent sub-surface conditions require into the ground. The power produced by the panels will be fed into an inverter and transformer to convert from DC to AC power for connection into the existing power grid locating along Pine Meadow Road. The power produced will also feed an energy storage system located on site which will distribute power to the grid at times of low energy production due to darkness or cloud cover.

Construction of the arrays will not require any significant clearing of vegetation within the array footprint in areas as each footprint is currently used for agriculture. Measures to avoid soil compaction to the greatest extent practicable (e.g. use of ground mats, construction logistics plan, and de-compacting the soil following construction) will be implemented across the sites. The proposed arrays will follow the contours of the land with minimal site grading required other than to level out mounds and holes to provide better access across each site. In areas proposed for grazing, the disturbed area will be hydroseeded with a conservation/wildlife mix for erosion control and to establish a managed pasture. In areas designated for crop cultivation, the land will be planted with an initial cover crop appropriate for winter-time preparation for the following year's growing season. The operation and maintenance plan for the arrays prohibit the use of any chemicals or pesticides within the array footprint other than those allowed and approved for the continued agricultural use of the property. In addition, any additional supplemental plantings that may be proposed during the construction of the project will consist of native species.

The individual solar panels currently proposed will produce 420 watts of power (panel selection and wattage will depend on availability at time of construction) and measure approximately 3.35 feet by 6.65 feet. The panels will sit at a minimum of 10' off the ground when horizontal, with an edge at 13 feet off the ground at the highest point of tracking and have a warranty of approximately 30 years. The anticipated noise from the solar facility is minimal and only occurs during the day, directly adjacent to the power inverters, switchgear, and transformer equipment. The inverters, switchgear, transformers, and metering equipment will be placed on concrete pads and will not require any running water or sewage facilities. The proposed assemblage will be tied into the existing WMEC infrastructure along Pine Meadow Road which will also be upgraded as a result of the project.

A summary of the array, including size of project and number of panels is provided in the following table and a more detailed description the specific features of the project is provided below the table.

Array	System Size (MW DC)	Number of Panels	Approximate Fenced Area
Pine Meadow Road Array A (BWC Pine Meadow Brook, LLC)	6.0 MW	14,456	41.3
Pine Meadow Road Array B (BWC Pine Meadow Brook, LLC)	4.3 MW	10,218	26.1
Pine Meadow Road Array C (BWC Otter Run, LLC)	0.6 MW	1,350	1.8

3.2 ACCESS ROADS

The proposed project will be accessed via 18' wide gravel access driveways off of Pine Meadow Road as shown on the project plans. The proposed access driveways will be located as shown on the plans and be used to access the main equipment pads. The access driveway will be inspected during the regular maintenance visits to the facility and gravel will be replaced and re-graded as necessary to provide proper access. During the winter, the access driveways will be plowed after snow events of 4" or more or when snow accumulation in these areas is greater than 4". Complete plowing of the access road will occur within 24 hours of such snow event or accumulation trigger. No sodium chloride, rock salt or chemicals of any kind will be used onsite. Inside the array area, snow will be removed at the conclusion of each snow event once the amount has reached an amount of 12" depth. It is anticipated that the operators of the assemblage will contract with a local snow removal contractor or the property owner to perform the snow removal operations for the access driveways.

3.3 SECURITY MEASURES AND SCREENING

The proposed facility will be totally enclosed by fencing for safety purposes and to eliminate trespassing, potential issues with vandalism, as well as the potential for migration or “wandering” of grazing animals on the project site. The proposed fencing will consist of 8’ high woven wire agricultural fencing around the perimeter of each array. The fenced area on the “dual-use” arrays has been maximized to provide as much contiguous grazing or farmland within the fence as possible, while not encroaching into any of the treed areas on the project sites. The facility will be monitored remotely and the site will be visited on a regular basis by off-site employees responsible for monitoring, inspecting, and repairing the equipment. There will be no full-time manning of the facility with employees associated with the operation of the solar array. Signs will also be posted on the perimeter fence around the facility and at the front entrance gates with emergency contact information. The proposed facilities are located on portions of the property set back significantly from the roadway such that the visual impact to the neighborhood would be minimal. For Array A, which is located closer to Pine Meadow Road than the other arrays, the applicant is proposing a row of screening trees along the northerly fence line of the array to serve to limit the visibility of the facility from the adjacent streets and properties. The applicant is committed to designing and providing visual screening along the northern side of Array A to ensure that there are no adverse impacts to the neighboring properties. The applicant is also committed to ensuring that the visual screening is designed to be compatible with the agricultural character of the neighborhood and beneficial for local ecology.

3.4 STORMWATER MANAGEMENT SYSTEM AND COMPLIANCE WITH APPLICABLE STANDARDS

The proposed stormwater management system has been designed to comply with DEP’s stormwater management standards that were incorporated into the regulations on January 2, 2008 (see 310 CMR 10.05(6)(k)) and incorporates a number of Best Management Practices (BMPs), as prescribed in the Department of Environmental Protection Stormwater Management Handbook. These practices include structural and non-structural measures providing stormwater quantity and quality management. These BMPs will function to minimize potential adverse water quality impacts to the surrounding wetland ecosystem. The Stormwater Management System Report prepared by Field Engineering Co. Inc. describes the temporary and permanent stormwater BMPs proposed for the site development and includes drainage calculations prepared by a Registered Professional Engineer, a DEP Stormwater Management Form Checklist, and a Post Construction Operation and Maintenance Plan with Long Term Pollution Prevention Plan.

The proposed stormwater management plan has been developed based on the projected site conditions and the present condition of the water resource areas and adjacent properties

that receive stormwater runoff from the site. The proposed BMPs have been designed to comply with the Massachusetts Stormwater Management Handbook.

There is minimal impervious area being proposed for this project as the project simply consists of the gravel access driveway with above ground solar panels mounted on a racking system supported by driven posts. The proposed stormwater management plan focuses on the temporary impacts of stormwater runoff on adjacent properties during construction and includes the installation and maintaining of erosion control BMP's around the construction zone to until such time as the site is fully stabilized with vegetation. The site will be inspected on a regular basis to ensure that full stabilization of the site is maintained and there are no erosion or sedimentation issues on adjacent properties. As the plans show, the applicant is proposing to install crushed stone edge drain infiltration trenches along portions of the proposed gravel access drives to intercept water that may run off the driveways and promote infiltration of the water into the soils. These will also serve as filter strips to minimize the migration of sediment from the gravel access drives towards agricultural areas, the existing roadway, or adjacent properties.

In addition, the materials used to construct the solar array are not considered hazardous and have no liquid components that could potentially contaminate the groundwater. The only fluids on-site would be contained within the transformers and inverters and are stored in self-contained vessels at the equipment location. As mentioned previously, the site is monitored remotely and any issues that may arise will be addressed immediately.

Finally, the Project Proponent will file for coverage under the National Pollutant Discharge and Elimination System Construction General Permit. Prior to construction, the Project Proponent will develop Stormwater Pollution Prevention Plan ("SWPPP") identifying BMPs that will be implemented to prevent erosion and sedimentation. A copy of this SWPPP will be forwarded to the Conservation Commission upon completion. The SWPPP will be finalized prior to construction in conjunction with the selection of the site contractor. The SWPPP will be updated as necessary during construction and maintained throughout the period of construction.

3.5 SEDIMENTATION AND EROSION CONTROLS

The site contractor will use appropriate erosion control and best management practices during construction. This includes appropriately sized sediment basins for dewatering, the installation of straw wattles and silt fence along the limits of work of the project, the use of erosion control blankets or mats or straw mulch on exposed slopes for stabilization, and the use of designated construction entrances enhanced with crushed stone to prevent off-site vehicle tracking of sediment.

4.0 COMPLIANCE WITH NORTHFIELD ZONING BYLAWS

4.1 ZONING BYLAW – DECISION CRITERIA FOR SPECIAL PERMITS (NORTHFIELD ZBL SEC. 3.4.C)

Decision Criteria. Unless otherwise specified herein, special permits shall be granted by the special permit granting authority only upon its written determination that the adverse effects of the proposed use will not outweigh its beneficial impacts to the town or the neighborhood, in view of the particular characteristics of the site, and of the proposal in relation to that site. The determination shall include findings that all of the following criteria for granting a special permit are met:

1. The use is in harmony with the general purpose and intent of this Zoning Bylaw;

We feel that the proposed use is in harmony with the general purpose and intent of the Zoning Bylaw as it will allow the applicant to maintain an active agricultural presence in the Town at their current location by supplementing the landowner with consistent income, providing improved utilities and infrastructure for the more efficient operation of the landowner's operations and increasing the tax base within the Town without an additional strain on Town resources (i.e. schools, emergency services, roadway infrastructure, etc.) As further described below, the proposed use will not be detrimental to the neighboring properties and will further the goals and policies of the Northfield Master Plan.

2. The use is in an appropriate location and is not detrimental to the neighborhood and does not significantly alter the character of the zoning district;

The proposed use will not be detrimental to the neighborhood and will not significantly alter the character of the district as the proposed arrays will be set well back from the existing roadway or will be screened from view of adjacent properties where necessary. The proposed use will allow the applicants to keep this land and their other lands in the vicinity of the project in agricultural use, therefore preserving the character of the zoning district.

3. Adequate and appropriate facilities will be provided for the operation of the proposed use;

The proposed assemblage will be accessed from one of three gravel driveways located off of Pine Meadow Road as shown on the design plans. These driveways will provide adequate access to the equipment pads for emergency vehicles as well as provide access to the agricultural uses that will remain on the property. There are no water and sewer facilities proposed or required for the proposed solar uses on the property as these will be unmanned facilities. As there is minimal change in the overall ground cover on the project site, stormwater drainage leaving the site will remain relatively unchanged from pre-developed conditions. Utilities to connect the proposed arrays to the existing grid will be installed in accordance with WMEC requirements.

4. The proposed use will not be detrimental or otherwise offensive to the adjoining zoning districts and neighboring properties due to the effects of lighting, odors, smoke, noise, sewage, refuse materials, or visual or other nuisances;

The proposed use will not be detrimental to the adjoining zoning district and neighboring proposed as there will be no lighting, odors, smoke, sewage or refuse materials resulting from the project. There is minimal noise associated with the proposed electrical equipment (i.e. inverters and transformers) and these pads have been situated in locations where the audible radius would not impact any neighboring properties. The proposed use is situated well off of Pine Meadow Road where possible and has been screened with evergreen vegetation in areas where the array is closer to the street, to minimize the potential for any visual impacts of the project.

5. The proposed use will not cause undue traffic congestion in the immediate area;

The proposed project will not require on-site staffing for the operation and maintenance of the solar arrays; therefore, the facility will only be visited sporadically over the year for general maintenance and to respond to any mechanical problems. The solar facility will be remotely monitored by the proponents of the site; therefore, minimal traffic is anticipated related to the solar following construction. The proposed access driveway for each array is a minimum of 18' wide to provide access to all of the major equipment and panels, therefore providing adequate access for safety vehicles to the array installation. The agricultural use associated with the project site will continue as in current conditions and traffic flow and safety to and from the project site will remain relatively unchanged following construction of the array.

6. To the maximum extent possible, the proposed use conforms to the Principles of Rural Design in Section 8.1.1 of this Bylaw;

A. Wherever feasible, retain and reuse existing old farm or forestry woods roads and lanes rather than constructing new roads or driveways. This minimizes clearing and disruption of the landscape and takes advantage of the attractive way that old lanes are often lined with trees and stone walls.

The applicant is proposing to construct new driveways only as necessary to access the equipment pads for emergency purposes. Where possible, the applicant is proposing to use existing access drive locations to access the property (i.e. Array A)

B. Preserve stone walls and hedgerows. These traditional landscape features define outdoor areas in a natural way and create corridors useful for wildlife. Using these features as property lines is often appropriate, as long as setback requirements do not result in constructing buildings in the middle of fields.

There are no stone walls or hedgerows in the vicinity of the arrays that would be impacted by the project.

- C. Avoid placing buildings in the middle of open fields. Place them either at the edges of fields or in wooded areas. Septic systems and leach fields may be located in fields, however.**

There are no proposed buildings associated with this project with the exception of three proposed “hoop houses” associated with the continued agricultural use of the property associated with Array A. These structures are located well away from view from existing roadways or residences.

- D. Use existing vegetation and topography to buffer and screen new buildings if possible, unless they are designed and located close to the road in the manner historically found in the Town. If vegetative buffers are used, a minimum depth of 50 feet of mixed ground-covers, shrubs, and trees should be provided. Group buildings in clusters or tuck them behind tree lines or knolls rather than spreading them out across the landscape in a "sprawl" pattern.**

The proposed assemblage of arrays will not require any changes in grade or clearing of trees for the construction or operation of the project. The intent is to maintain the existing limits of trees and farm fields and maintain the agricultural use of the underlying ground.

- E. Minimize clearing of vegetation at the edge of the road, clearing only as much as is necessary to create a driveway entrance with adequate sight distance. Use curves in the driveway to increase the screening of buildings.**

The proposed driveways have been placed in locations to maintain existing trees and vegetation at the edge of the road and still provide adequate sight distance for vehicles leaving the site.

- F. Site buildings so that they do not protrude above treetops and crestlines of hills as seen from public places and roads. Use vegetation as a backdrop to reduce the prominence of the structure. Wherever possible, open up views by selective cutting of small trees and pruning lower branches of large trees, rather than by clearing large areas or removing mature trees.**

Once again, there are no buildings associated with the project other than the construction of three “hoop houses” to support the agricultural operations on Array A. These structures are located behind the existing tree line and would not be visible from the road or over the existing canopy.

- G. Minimize crossing of steep slopes with roads and driveways. When building on slopes, take advantage of the topography by building multi-level structures with entrances on more than one level (e.g., walk-out basements, garages under buildings), rather than grading the entire site flat. Use the**

flattest portions of the site for subsurface sewage disposal systems and parking areas.

The proposed access driveways will follow existing grades and not require any substantial grading for their construction. Additionally, there are no proposed grade changes over the footprints of each array other than to smooth out any depressions or high points to provide a level surface for construction.

H. Where feasible, site buildings and other areas to be developed in a manner that does not block trails or paths that have traditionally provided access to back land. This provision shall not be construed to create any public access rights that do not otherwise exist.

The proposed assemblage of arrays will not block trails or paths that have provided access to back lands on these properties. The landowner shall retain access to all portions of the project sites whether, within or outside the proposed fence line.

7. The proposed use is consistent with the Northfield Master Plan;

The proposed use is consistent with a number of the stated goals of the Northfield Master Plan. The proposed use will promote the preservation of open space and natural features as it will allow the landowner to maintain agricultural uses over their lands without pursuing significant other development possibilities. The proposed use will also promote opportunities for recreation and community gathering as it will provide an opportunity for training and educational programs related to the “dual-use” of the project. Finally, the project will also serve to improve public services as it will allow expensive upgrades of the existing electric infrastructure along Pine Meadow Road to provide three phase service to this corridor. This three-phase electrical service will allow for more efficient operations of equipment for the landowner as well as surrounding properties.

4.3 ZONING BYLAW – COMPLIANCE WITH SOLAR BYLAW (NORTHFIELD ZBL SECTION 10.3)

The following requirements are common to all Large-Scale Ground-Mounted Solar Photovoltaic Installations to be sited in Designated Locations.

A. Compliance with Laws and Regulations. The construction and operation of all Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the Massachusetts State Building Code.

The proposed assemblage has been designed to be constructed and operated consistent with all applicable local, state, and federal requirements including but not limited to the Massachusetts State Building Code and the National Electrical Code.

B. Building Permit. No Large-Scale Ground-Mounted Solar Photovoltaic Installation shall be constructed, installed, or modified without first obtaining a building permit.

The applicant shall apply for and obtain all necessary building permits and electrical permits prior to construction of the facility.

C. Fees. The application for a building permit for a Large-Scale Ground-Mounted Solar Photovoltaic Installation must be accompanied by the application fees required for a building permit and Site Plan Review.

The Site Plan Review fees have been included with this application package. The applicant shall furnish the required application fees for the building permits upon submittal of those applications.

D. Site Plan Review. Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be subject to Site Plan Review by the Planning Board in accordance with this Section and Section 3.5 prior to construction, installation, or modification. Site plan submission requirements and procedures shall be in accordance with the Planning Board's rules and regulations.

An application for Site Plan Review has been included with this application package. The Site Plan is being submitted in accordance with the submission requirements and procedures discussed on the Site Plan Review Application in accordance with the Planning Board's Rules and Regulations.

E. Setback and Height Requirements. For Large-Scale Ground-Mounted Solar Photovoltaic Installations, including Appurtenant Structures and parking areas, setbacks shall be at least 100 feet from any property boundary; the minimum setback areas are not included in the calculation of the 5-acre maximum specified in this Solar Generation Zoning By-law. The height of a Large-Scale Ground-Mounted Solar Photovoltaic Installation or any Appurtenant Structure, shall not exceed 20 feet.

As the attached Site Plans depict, the proposed project complies with all setback and height requirements of the Zoning By-Law. All panels and equipment with the solar assemblage are located over 100 feet from any property boundary and no structure will exceed 20 feet in height.

F. Appurtenant Structures All such Appurtenant Structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

The design of the appurtenant structures of the proposed array has been prepared to be compatible and consistent with commonly used structures for the industry. The proposed equipment pads are set back from the road and/or screened from view with vegetation such that there will be no adverse visual impacts from these structures.

G. Design and Performance Standards

1. Lighting. Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

There is no proposed lighting associated with this project.

2. Signage. Signs on Large-Scale Ground-Mounted Solar Photovoltaic Installations shall comply with section 11.05 of the By-law. A sign consistent with the By-law shall be required to identify the owner and provide a 24-hour emergency contact phone number. Solar electric installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar electric installation.

All signage will be installed as required for safety and identification under state and local requirements and the National Electrical Code. A typical site identification sign is provided on the Site Drawings and typical signage details for signage within the array and associated with the proposed electrical equipment is included in this Application Package.

3. Utility Connections. Reasonable efforts, as determined by the Planning Board, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

The details of the interconnection design are still being worked on with the Utility Company, WMEC. The applicant is committed to minimizing the amount of above-ground infrastructure as required by the By-Law but will be required to comply with WMEC requirements. As the site plans currently show, the applicant is proposing an underground conduit run of the medium voltage power from the equipment pads to a minimum number of utility poles located at the driveway entrance to each site, as required by WMEC.

4. Roads. Access roads shall be constructed to minimize grading, removal of stone walls or street trees, and minimize impacts to environmental or historical resources.

The proposed access drives have been designed and will be constructed to minimize grading by following existing grades to the maximum extent practicable. They have also been strategically located along the Pine Meadow Road frontage of each parcel to be situated in close proximity to the point of interconnection of each array and minimize any impacts to stone walls and/or street trees.

5. Control of Vegetation. Herbicides may not be used to control vegetation at the solar electric installation. Mowing or the use of pervious pavers or geotextile materials underneath the solar array are possible alternatives.

The operation and maintenance plan for the arrays prohibit the use of any chemicals, herbicides, or pesticides within the array footprint other than those allowed and approved for the continued agricultural use of the property.

6. Hazardous Materials. Hazardous materials stored, used, or generated on site shall not exceed the amount for a Very Small Quantity Generator of Hazardous Waste as defined by the DEP pursuant to MassDEP regulations 310 CMR 30.000 and shall meet all requirements of the DEP including storage of hazardous materials in a building with an impervious floor that is not adjacent to any floor drains to prevent discharge to the outside environment. If hazardous materials are utilized within the solar electric equipment then impervious containment areas capable of controlling any release to the environment and to prevent potential contamination of groundwater are required.

The materials used to construct the solar array are not considered hazardous and have no liquid components that could potentially contaminate the groundwater. The only fluids on-site would be contained within the transformers and inverters and are stored in self-contained vessels at the equipment location. As mentioned previously, the site is monitored remotely and any issues that may arise will be addressed immediately.

7. Noise. Sound or noise levels may not exceed 50 dBA at the boundary of the property.

The only noise associated with the project comes from the transformer and inverter pads which have been strategically located such that the audible radius from the pads is contained entirely on the property. There should be no audible impact from the project to the boundaries of the property.

8. Safety and Environmental Standards

H. Emergency Services. The Large-Scale Ground-Mounted Solar Photovoltaic Installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Northfield Fire Chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

Upon completion of the Construction Drawings and prior to application for Building Permits, the chosen contractor will provide a complete set of drawings, project summary, and electrical plans to the Northfield Fire Chief for review and approval. Additionally, prior to commissioning of the facility, the contractor shall provide training on the operation, maintenance, and requirements for shutting down the facility for emergency personnel. The Site Plans currently show fencing around the entire facility with vehicular access gates located along the access driveways. Any gates to be used for vehicular emergency access will be equipped with Knox Box (or other options approved by the Fire Department) for emergency access into the facility.

I. Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Large-Scale Ground-Mounted Solar Photovoltaic Installation or otherwise prescribed by applicable laws, regulations, and this By-law.

As the proposed site plans show, there is minimal clearing of any natural vegetation required for the installation and operation of the proposed solar assemblage. The proposed array has been strategically situated in areas of the site that will not be shaded by existing tree lines. There are also minimal requirements for soil excavation and site grading, therefore the potential for soil erosion is minimal. The site contractor will be required to comply with a Stormwater Pollution Prevention Plan as required under the EPA's NPDES Construction General Permit for discharges from construction activities on sites over one acre.

4.3 ZONING BYLAW – COMPLIANCE WITH SOLAR BYLAW (FORMERLY NORTHFIELD ZBL CHAPTER 11)

Pursuant to the Site Plan Review process, the project proponent shall provide the following documents:

(a) A site plan showing:

i. Property lines and physical features, including roads, for the project site;

All property lines and physical features such as roads, topography, and existing tree lines are provided on the Site Plans.

ii. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;

All proposed conditions including proposed structures, fencing, and plantings are provided on the Site Plans. There is no substantial grading or vegetation clearing proposed for the site and there is no exterior lighting required for the project.

iii. Locations of wetlands and Priority Habitat Areas defined by the Natural Heritage & Endangered Species Program (NHESP);

Locations of wetlands and wetland resource areas are provided on the Site Plans. There are no arears on the subject parcels located within Priority Habitat Areas as defined by NHESP.

iv. Locations of Floodplains or inundation areas for moderate or high hazard dams;

The locations of the Flood Hazard areas as shown on the current FEMA Flood Maps are shown on the Site Plans.

v. Locations of Priority Heritage landscapes and local or National Historic districts;

The proposed arrays are not located within any Priority Heritage landscapes or local/National Historic districts.

vi. A list of hazardous materials proposed to be located on the site in excess of household quantities and a plan to prevent their release to the environment as appropriate;

There are no hazardous materials proposed to be located on the site.

vii. Blueprints or drawings of the solar photovoltaic installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures

The proposed site plans have been signed and stamped by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts. The proposed layout of the system is shown on the plans as well as typical shade sprays from the trees located at the limit of work line.

viii. One- or three-line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;

One-line electrical diagrams have been provided as an Attachment to the Site Plan Review/Special Permit Application Package.

ix. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;

Documentation of the major system components to be used for the project has been provided as an Attachment to the Site Plan Review/Special Permit application package.

x. Name, address, and contact information for proposed system installer;

The project will be competitively bid by a number of EPC Contractors for the detailed engineering design and installation of the facility. Once the system installer is chosen, their contact information will be provided.

xi. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;

Contact information for the Project Proponent and property owners is provided on the Site Plan Review/Special Permit Petition and on the cover sheet of the drawings.

xii. The name, contact information and signature of any agents representing the project proponent;

Field Engineering Co. Inc. is acting as the agent representing the Project Proponents, BWC Pine Meadow Brook, LLC and BWC Otter Run, LLC. Contact information for Field Engineering Co. Inc. is provided on the site drawings.

(b) Site Control. The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.

A redacted Lease Option Agreement between the Proponents of the Project and the Landowners for each array has been included in this application package.

- (c) Operation & Maintenance Plan.** The project proponent shall submit a plan for the operation and maintenance of the Large-Scale Ground-Mounted Solar Photovoltaic Installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

An operation and maintenance plan for the proposed installation has been provided as an Attachment to the Site Plan Review/Special Permit application package. In addition, the post construction stormwater management facility operation and maintenance plan is provided in the Stormwater Management System Report and on the site plans.

- (d) Utility Notification.** No Large-Scale Ground-Mounted Solar Photovoltaic Installation shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

Evidence that the utility company (WMEC) has been informed of the solar photovoltaic installation owner's intent to install an interconnected customer-owner generator has been provided as an Attachment to the Site Plan Review/Special Permit application package.

- (e) Zoning District Designation.** The project proponent shall submit a zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose).

Reference Maps, including a copy of the zoning map with the parcel(s) identified have been included in the Site Plan Review/Special Permit application package.

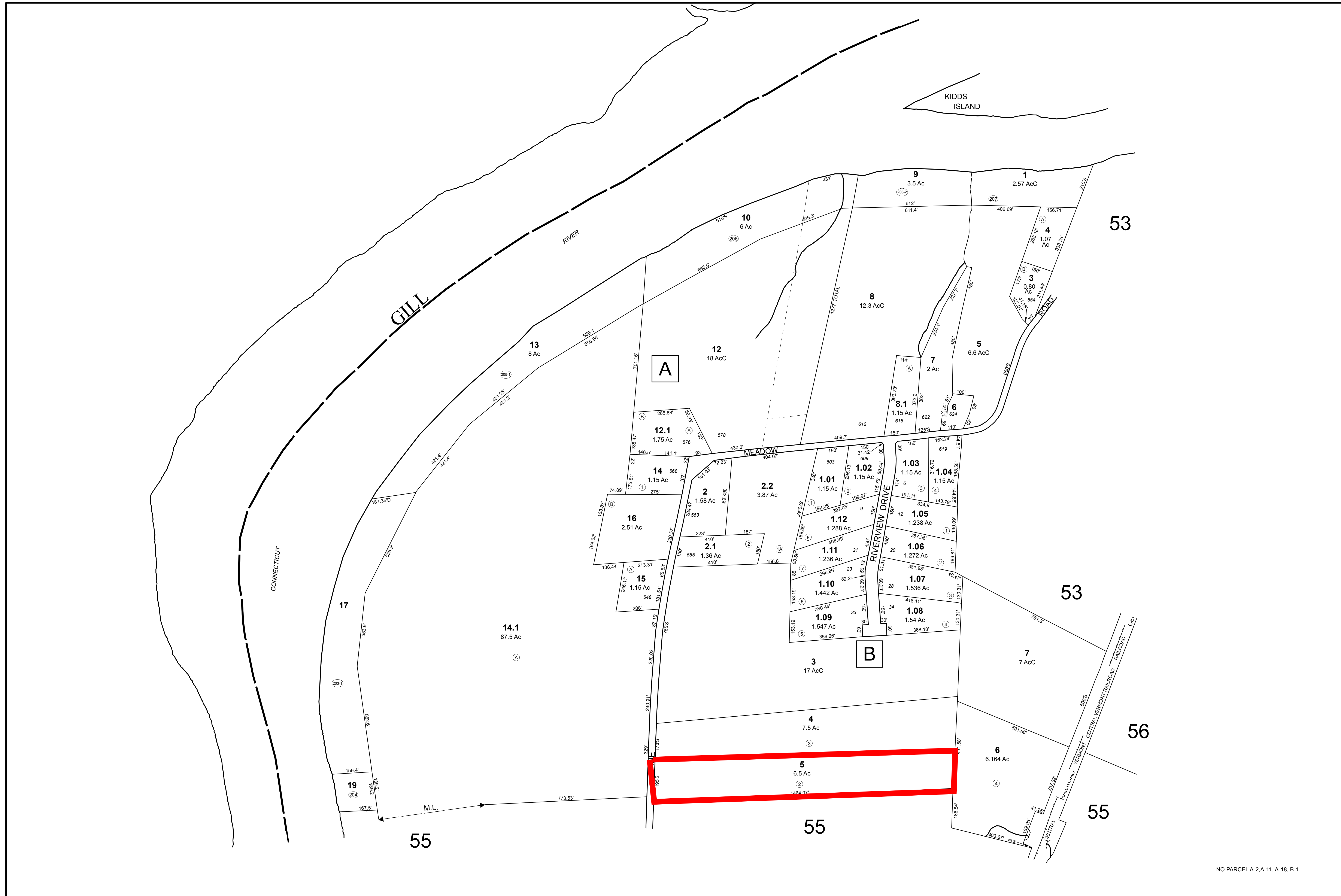
- (f) Proof of Liability Insurance.** The project proponent shall submit to the Planning Board proof of liability insurance for the project.

Proof of Liability Insurance of the Project Proponent has been included in the Site Plan Review/Special Permit application package.

(g) Financial Surety. The project proponent shall submit a description of financial surety that satisfies Section 11.08.06.

A Stamped Preliminary Decommissioning Report and sample form of surety has been included in the Application Package. The Decommissioning Report includes a mechanism for increased costs due to inflation.

Section 6 – Map References of Project Site



NO PARCEL A-2-A-11, A-18, B-1

THIS MAP IS FOR ASSESSMENT PURPOSES. IT IS NOT VALID FOR LEGAL DESCRIPTION OR CONVEYANCE.
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 AERIAL PHOTOGRAPHY DATE: 4/29/1972

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LEGEND

AREA SURVEYED	Ac
AREA CALCULATED	AcC
RECORD DIMENSION	100'
SCALED DIMENSION	100'S
BLOCK NUMBER	.....
MATCH LINE	← M.L. →	
WATER	~W~	
EXEMPT PROPERTY	..... (E)	
SUBDIVISION LOT NO.	..... (2)	
BUILDING	.....
RIGHT OF WAY/ACCESS	.....
TRACT LINES	.....
WETLANDS	.....

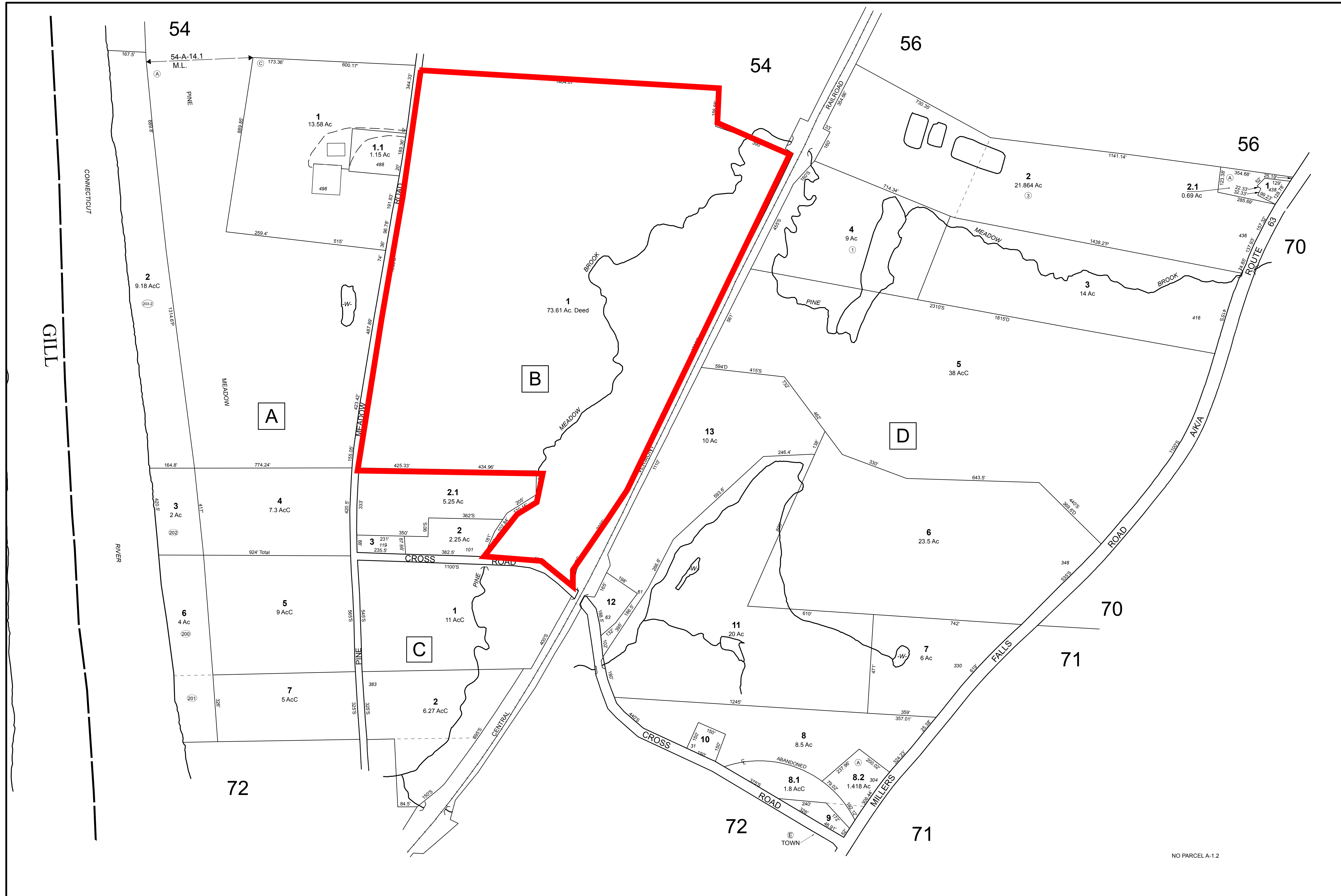
SCALE: 1" = 200'

REVISD TO: JANUARY 1, 2017

PROPERTY MAPS
NORTHFIELD
 MASSACHUSETTS

INDEX DIAGRAM

MAP NO.
54



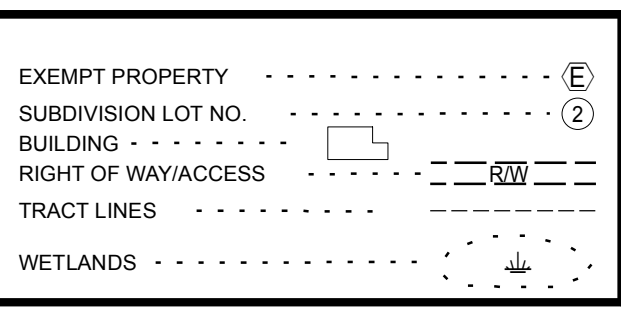
NO PARCEL A-1.2

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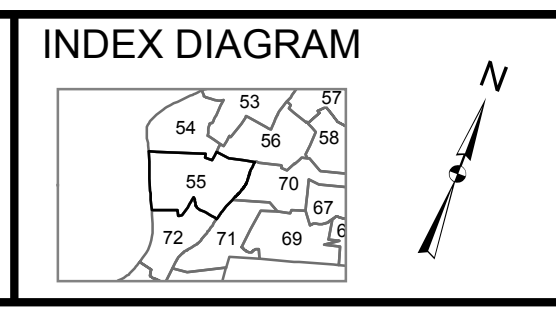
LEGEND

AREA SURVEYED	Ac
AREA CALCULATED	AcC
RECORD DIMENSION	100'
SCALED DIMENSION	100'S
BLOCK NUMBER	.....
MATCH LINE	.....
WATER	.....
EXEMPT PROPERTY	.....	(E)
SUBDIVISION LOT NO.	.....	(2)
BUILDING	.....
RIGHT OF WAY/ACCESS	.....
TRACT LINES	.....
WETLANDS	.....



REVISD TO: JANUARY 1, 2017

PROPERTY MAPS
NORTHFIELD
 MASSACHUSETTS

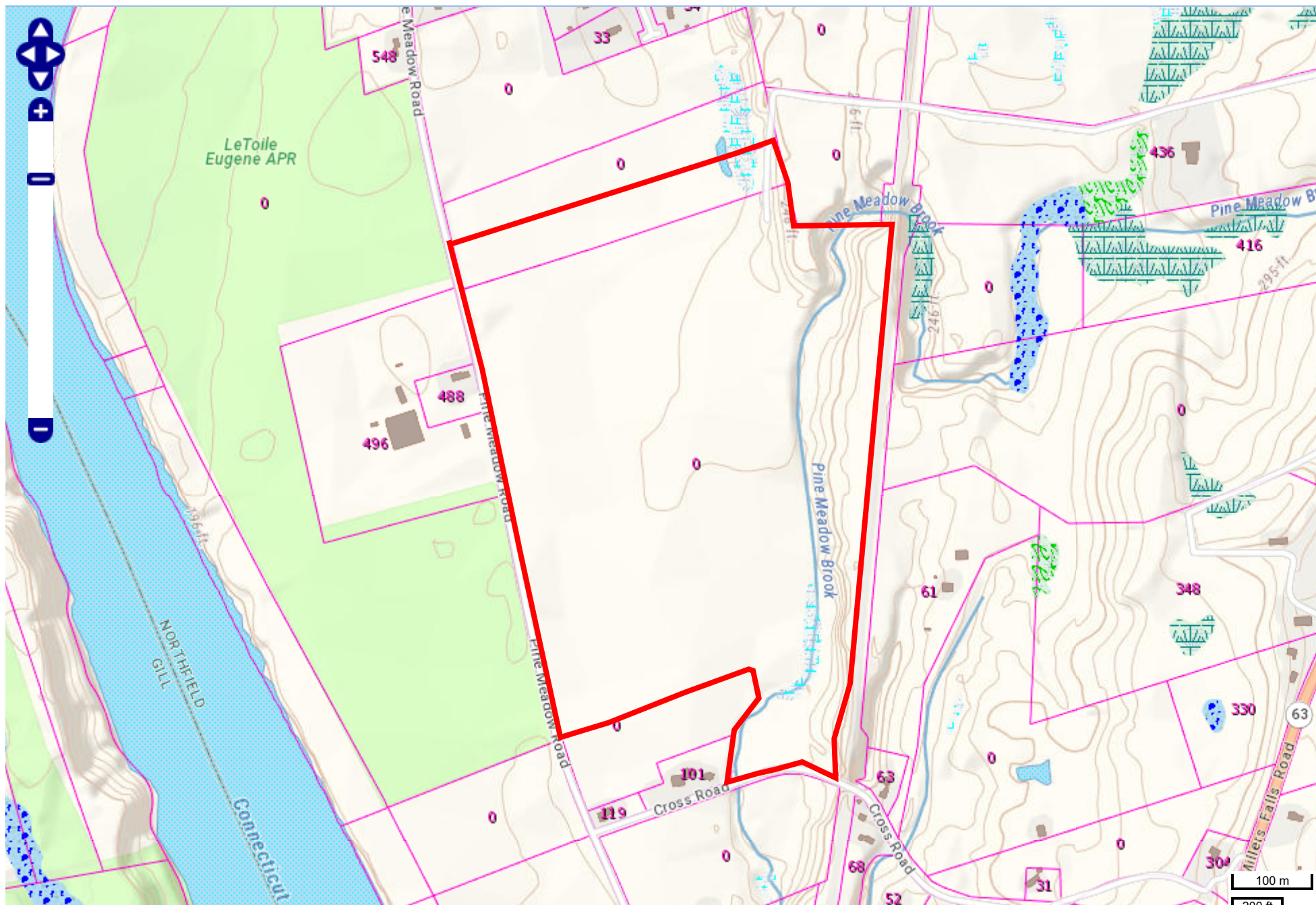


MAP NO.
55



Search for a location

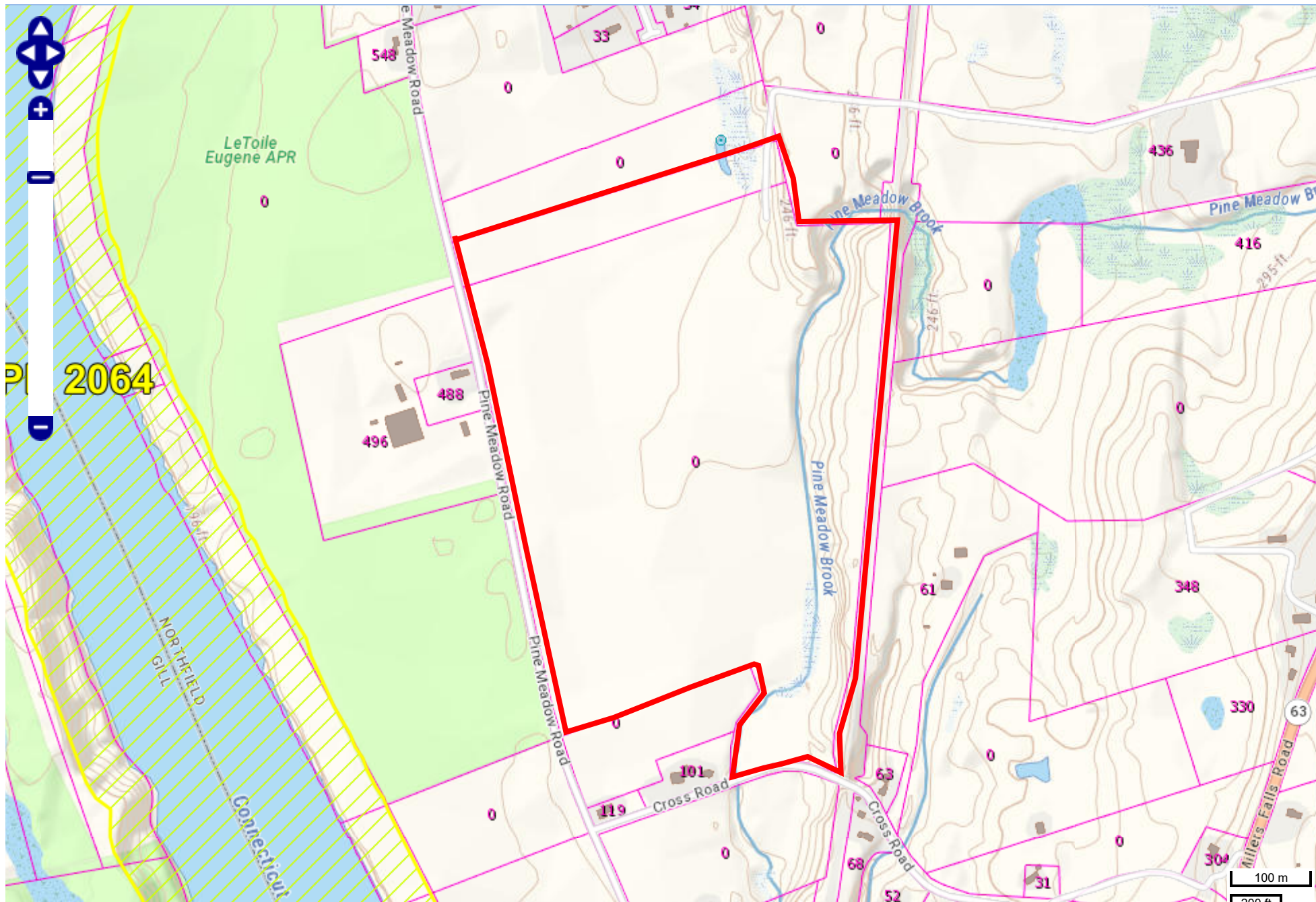
Zoom to a town

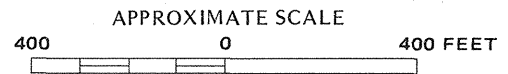
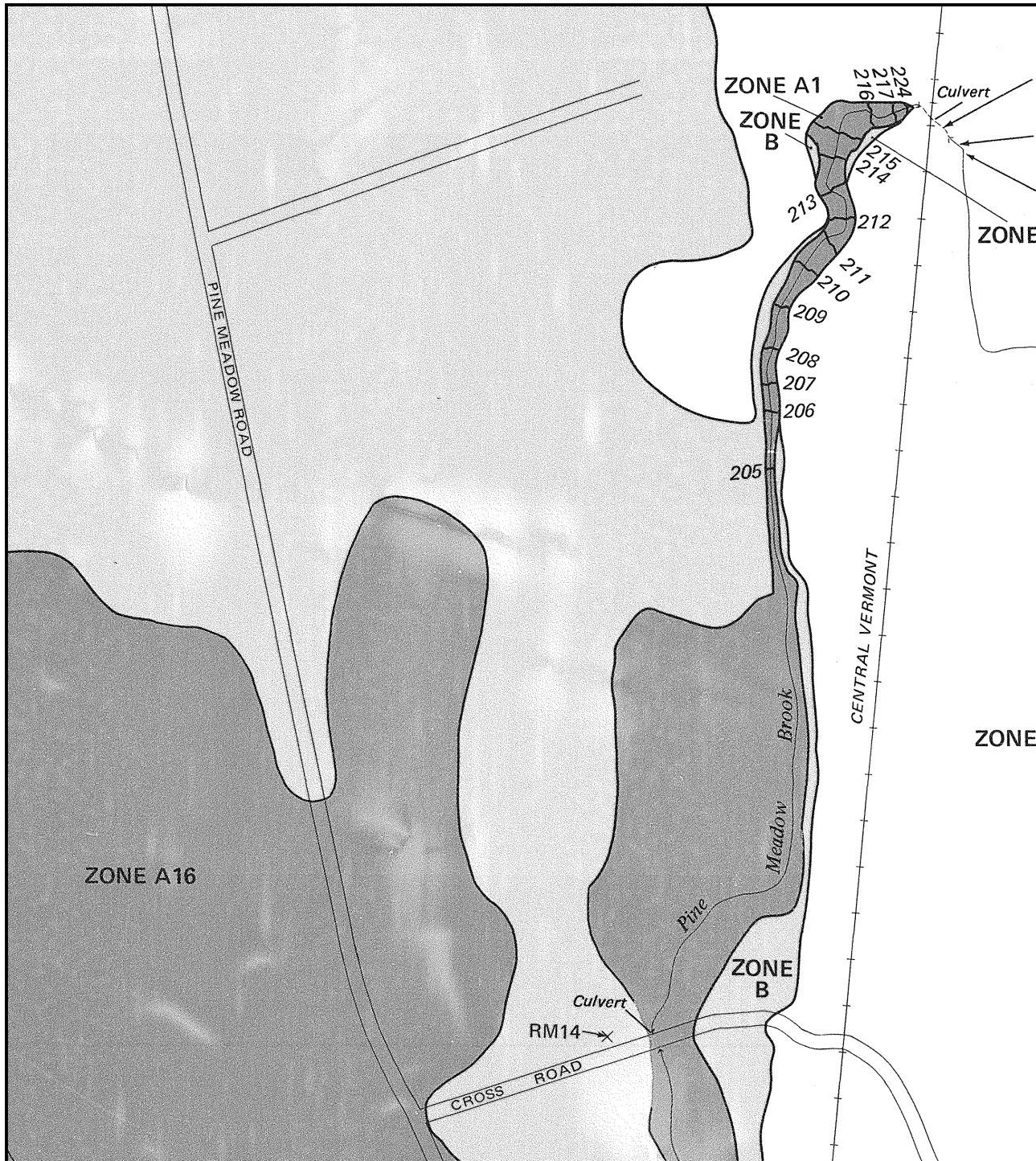




Search for a location

Zoom to a town





NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
NORTHFIELD,
MASSACHUSETTS
FRANKLIN COUNTY

PANEL 10 OF 13
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250124 0010 B

EFFECTIVE DATE:
SEPTEMBER 30, 1980



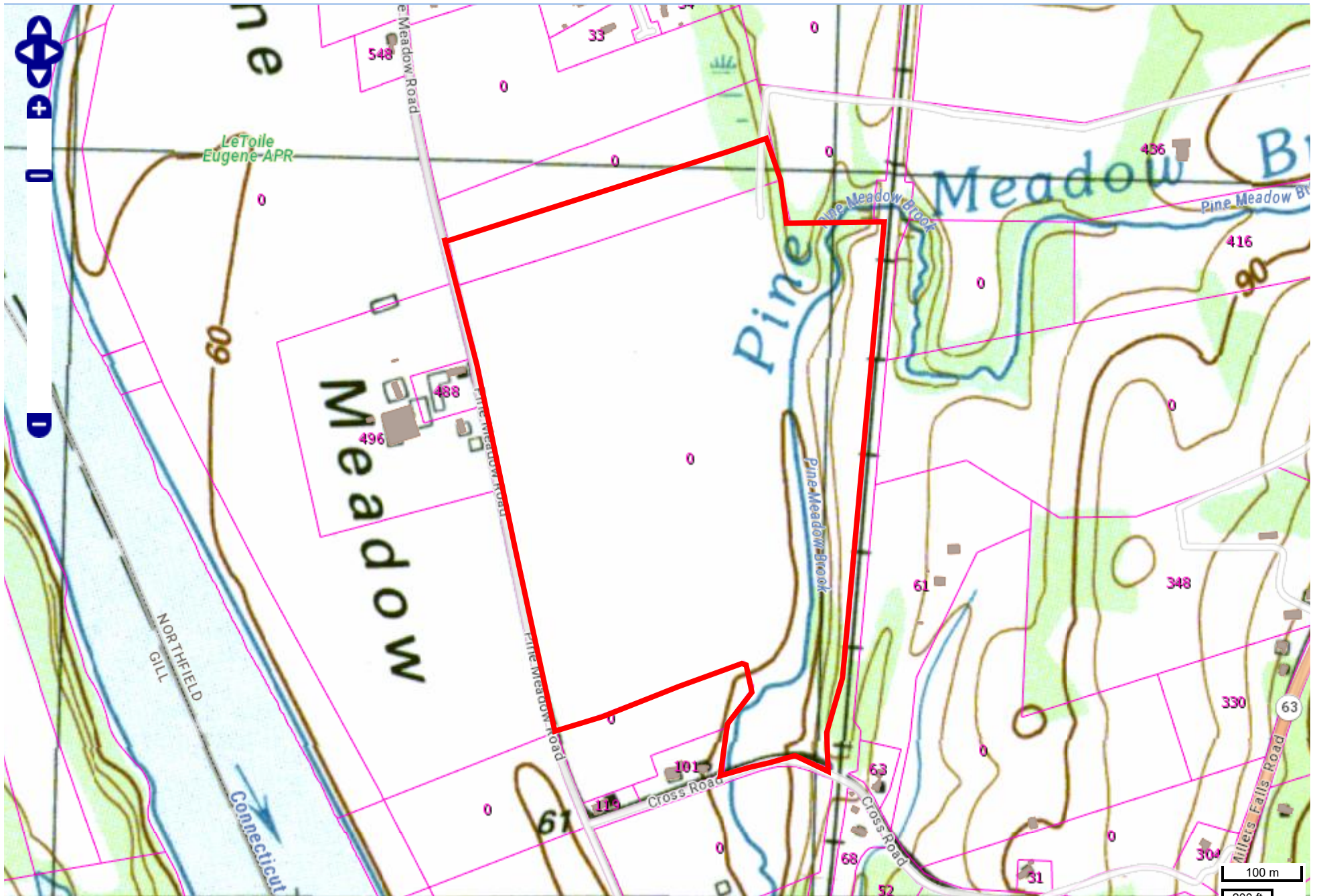
U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

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Search for a location

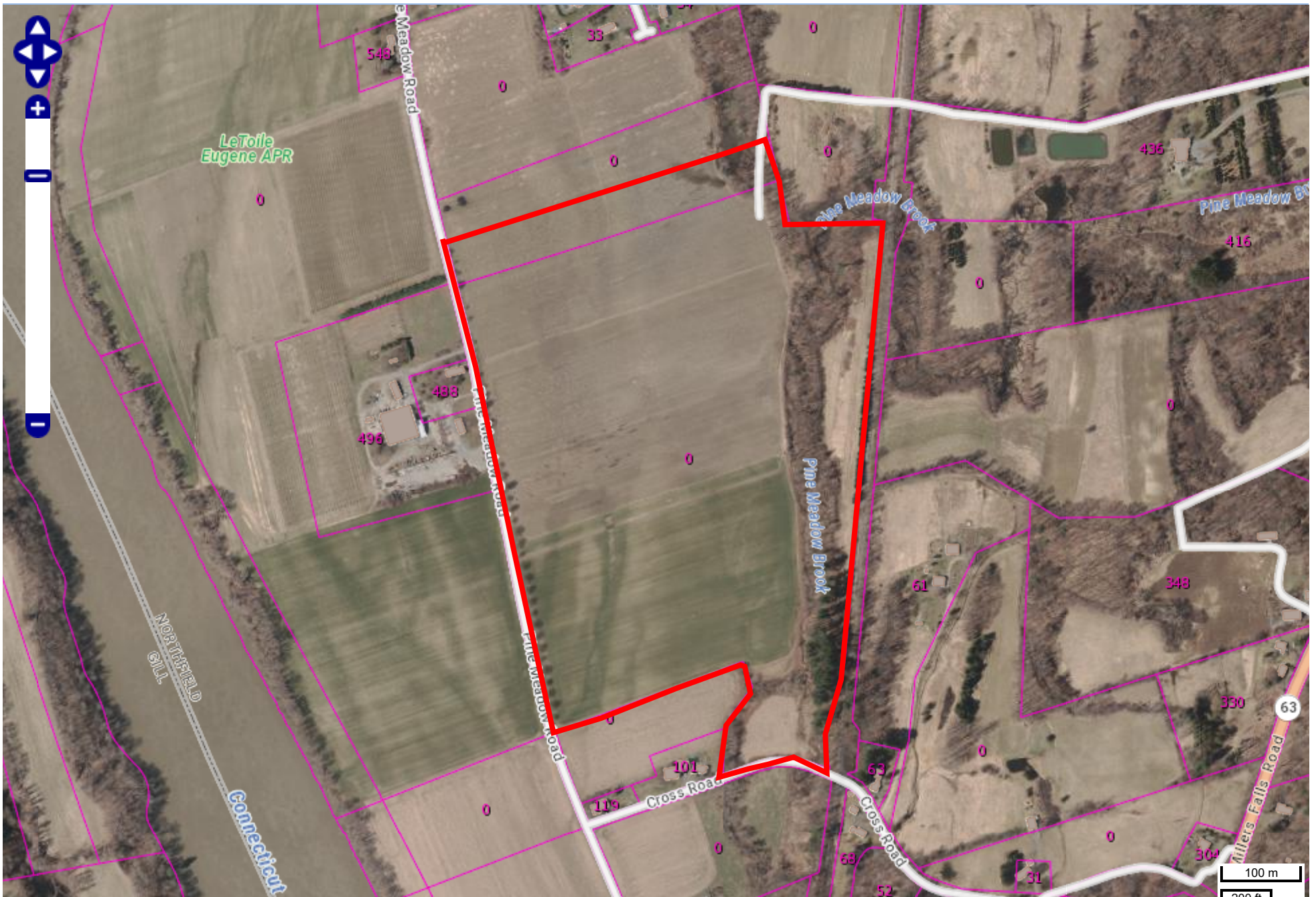
Zoom to a town

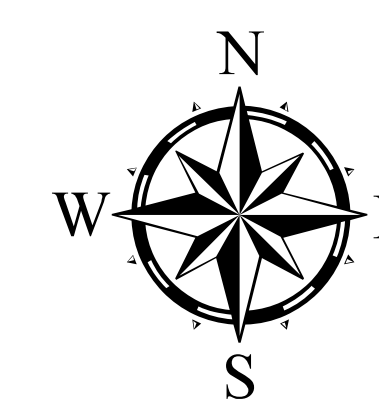




Search for a location

Zoom to a town





VERNON, VERMONT

HINSDALE, NEW HAMPSHIRE
WINCHESTER, NEW HAMPSHIRE

BERNARDSTON

WARWICK

ERVING

GILL

PROJECT SITE

LEGEND

- RAILROAD
- ROAD
- SECONDARY ROAD
- PRIVATE ROAD
- TRAIL
- RIGHT OF WAY
- TOWN LINE
- PROPERTY LINE
- PROPERTY LINE, in contention
- UTILITY EASEMENT
- WATER
- WETLAND

Zone

- RESIDENTIAL - AGRICULTURAL
- RESIDENTIAL - AGRICULTURAL - FORESTED

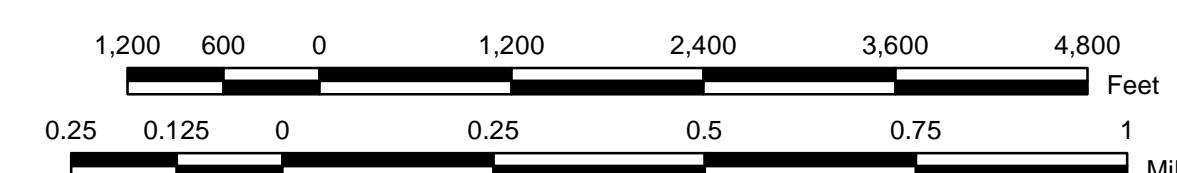
NOTES

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PROPERTY LINES CURRENT TO JANUARY 1, 2017

ZONING MAP
OF

NORTHFIELD MASSACHUSETTS

SCALE: 1" = 1200'



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Section 7 – Preliminary Decommissioning Plan and Form of Surety

December 22, 2020
Project No. 2312

Ms. Jackie Firsty
BWC Pine Meadow Brook, LLC
c/o BlueWave Solar
111 Huntington Avenue, Suite 650
Boston, MA 02199

RE: Decommissioning Cost Estimate
BWC Pine Meadow Brook Solar Array "B"
Northfield, Massachusetts

Dear Ms. Firsty:

As you have requested, Field Engineering Co. Inc. (FEC) has prepared this Decommissioning Plan and Cost Estimate for the proposed 4.3 MW DC solar array known as Pine Meadow Brook Solar Array "B" to be located on various parcels of land off of Pine Meadow Road in the Town of Northfield, Massachusetts.

Decommissioning Plan

- Electrical equipment will be sold back to the manufacturer or to a recycling facility.
- The project contains large amounts of copper, aluminum and other conductive metals which are easily recyclable.
- All non-recyclable materials will be taken to the nearest approved landfill for disposal.
- All resulting depressions, voids and excavation areas will be backfilled, graded to the proper elevation.
- All disturbed areas associated with the array will be re-vegetated in effort to return the landscape of the earth as close to its previous state as possible. This includes the gravel access drives within the fenced array area.
- A portion of the gravel access drive into the site will be retained for owner access to the property.
- Transformers, inverters and switchgear will be removed from their respective concrete pads.
- Fencing will be rolled up on an industrial sized spool and removed from the site.
- PV Panels will be detached from the racking system by and stacked for removal.
- Sections of the racking system will be scissored together and stacked for removal.
- Energy storage containers will be removed in accordance with applicable local, state, and federal regulations.
- Racking posts will be taken out of the ground using an excavator or front-end loader.
- The concrete foundations for the energy storage container, transformers and switchgear will be lifted, secured onto flat beds, and transported off-site for processing.
- AC and DC wiring, after proper disconnection, will be pulled out with an excavator.
- Any on site power poles for above ground wiring will be dug out and removed.
- The 13.2 KV electric lines will be removed by the local utility and are not the subject of this study.

Concrete that is "clean", meaning it doesn't have substantial amounts of rebar could be recycled at a local recycling facility free of charge.

Decommissioning Cost Estimate

Based on previous experience and work on a variety of different projects, we have developed a Decommissioning Cost Estimate based on the following assumptions for labor and equipment costs:

- Assume 10 minutes per pair of modules to calculate labor costs for module removal.
- Assume 8 minutes per post to calculate labor costs for post removal.
- Assume 8 minutes per post to calculate equipment costs associated with post removal.

The decommissioning costs have been based on the following information:

- 4.3 MW DC (approximately 10,500 Modules)
- Approximately 26 Acres of Fenced Area
- Two Equipment Pads including One Energy Storage System Pad

LABOR AND EQUIPMENT CALCULATIONS

Decommissioning Estimate Breakdown-Total Project						
Resource	Task	Task Quantity	Task Duration	Hours	Rate	Cost
Labor	Remove modules	5,250 pairs	10 minutes per pair	875.0	\$ 30.00	\$ 26,250.00
Labor	Remove Posts	1,750 posts	8 minutes per post	233.3	\$ 30.00	\$ 7,000.00
Labor	Remove fencing		16 Hours	16.0	\$ 30.00	\$ 480.00
Labor	Fine Grade & Seed Site		16 Hours	16.0	\$ 30.00	\$ 480.00
Labor	Remove Conduit		16 Hours	16.0	\$ 30.00	\$ 480.00
Labor	Remove Pad Equip.		16 Hours	16.0	\$ 30.00	\$ 480.00
Equipment	Remove posts	1,750 posts	8 minutes per post	233.3	\$ 150.00	\$ 35,000.00
Equipment	Excavate trenching		16 Hours	16.0	\$ 150.00	\$ 2,400.00
Equipment	Fine Grade & Seed Site		16 Hours	16.0	\$ 150.00	\$ 2,400.00
Equipment	Remove fencing		16 Hours	16.0	\$ 150.00	\$ 2,400.00
Equipment	Remove scrap		16 Hours	16.0	\$ 150.00	\$ 2,400.00
Equipment	Remove Pad Equip.		8 Hours	8.0	\$ 150.00	\$ 1,200.00
Equipment	Remove Pads		8 Hours	8.0	\$ 150.00	\$ 1,200.00
Totals						
	Resource	Hours	Cost	# of Days		
	Labor	1172.33	\$ 35,170.00	18.32		
	Equipment	313.33	\$ 47,000.00	19.58		

DECOMMISSIONING COST SUMMARY

Removal Cost Summary		
		Comments
Array Removal		
Laborers	\$ 36,000.00	See above calculations
Equipment	\$ 47,000.00	See above calculations
Debris containers w/ disposal	\$ 12,800.00	16 Days X \$800.00 per day
Energy Storage Container Removal	\$ 20,000.00	Disposal and Hauling
Subtotal	\$ 115,800.00	
Salvage Credit	(\$20,000.00)	Material Salvage + Hauling
Site Restoration Materials		
Seeding	\$ 7,800.00	Assume 10 lb/acre @ \$30/lb
Total Cost (2020 Dollars)	\$ 103,600.00	(\$24,100 per MWDC +/-)
Total Cost (Year 20 Dollars)	\$ 164,100.00	(\$38,200 per MWDC +/-)

If you have any questions or require any additional information, please do not hesitate to contact me directly at 508-758-2749.

Sincerely,
Field Engineering, Inc.

Richard R. Riccio III
 Richard R. Riccio III, P.E.
 Project Manager



Form of Removal Bond

Bond No. _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____, collectively as Principal, and SURETY COMPANY NAME, licensed to do business in the Commonwealth of Massachusetts, as Surety, are held and firmly bound unto the _____ (Obligee), in the penal sum _____ Dollars, lawful money of the United States of America, for the payment of which sum, well and truly to be made, the Principal and Surety do bind themselves, their heirs, executors, administrators, and successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the above bounden Principal has entered into a certain written Contract with the above named Obligee entitled “_____ effective the ___ day of _____, 2018 and terminating twenty (20) years after _____, as defined in and more fully described in said Contract, which Contract is made a part hereof and incorporated herein by reference, except that nothing said therein shall alter, enlarge, expand or otherwise modify the term of the bond as set out below. Under said Contract, Principal is obligated to remove the Project from, and to restore, the Property as defined in Section ___ (Decommissioning Assurance) of the Contract.

NOW, THEREFORE, if Principal, its executors, administrators, successors and assigns shall promptly and faithfully perform the Contract according to the terms, stipulations and conditions of Section ___ (Decommissioning Assurance) of the Contract, then this obligation shall become null and void, otherwise to remain in full force and effect. Surety waives any right to receive any notice of any modifications or amendments to the Contract. This bond is executed by the Surety and accepted by the Obligee subject to the following express condition:

Notwithstanding the provisions of the Contract, the term of this bond shall apply from _____, _____, until _____, _____, and may be extended by the Surety by Continuation Certificate. However, neither nonrenewal by the Surety, nor the failure or inability of the Principal to file a replacement bond in the event of nonrenewal, shall itself constitute a loss to the Obligee recoverable under this bond or any renewal or continuation thereof, provided that the foregoing shall not relieve Principal of its obligation to furnish a replacement bond in the event of nonrenewal, as set forth in the Contract, nor for any liabilities arising from its failure to do so. The liability of the Surety under this bond and all continuation certificates issued in connection therewith shall not be cumulative and shall in no event exceed the amount as set forth in this bond or in any additions, riders, or endorsements properly issued by the Surety as supplements thereto.

Sealed with our seals and dated this ___ day of _____, _____.

(Principal) (Seal)

(Witness)

(Title)
SURETY COMPANY

(Attest)

(Attorney -in-Fact)

**Section 8 – Proof of Utility Notification and
Preliminary One-Line Electrical Diagram**



**Generating Facility Expedited/Standard Process
Interconnection Application**

Contact Information:

Date Prepared: 1/29/19

Legal Name and address of Interconnecting Customer

Interconnecting Customer (print): BWC Pine Meadow Brook, LLC Contact Person: Eric Graber-Lopez

Mailing Address: 111 Huntington Ave, Suite 650

City: Boston State: MA Zip Code: 02199

Telephone (Daytime): 617-209-3122 (Evening): -

Facsimile Number: 617-395-2730 E-Mail Address: interconnection@bluewavesolar.com

Customer name (if Customer is not Interconnecting Customer) _____

Customer email: _____ Customer telephone: _____

Customer Mailing Address:

City: _____ State: _____ Zip Code: _____

Landowner name (if neither Interconnecting Customer nor Customer)

Hopping Ahead, LLC

Landowner email: - Landowner telephone: 413-498-2968

Landowner Mailing Address:

496 Pine Meadow Rd

City: Northfield State: MA Zip Code: 01360



Alternative Contact Information

(e.g., system installation contractor or coordinating company, if appropriate):

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Ownership (include % ownership by any electric utility):

0

Site Control? (Y/N) Y

Will Facility be constructed on a single parcel of land? (Y/N) N

Authorized/Proposed generation capacity already exists (check all that apply):

On Current Account On Same Legal Parcel of Land In Same Building/Structure

If any apply, include existing generation capacity on design diagrams, and provide

Application Number(s): _____

Confidentiality Statement: "I agree to allow information regarding the processing of my application (without my name and address) to be reviewed by the Massachusetts DG Working Group that is exploring ways to further expedite future interconnections." Yes X No _____

Group Study Agreement: "I understand and agree if my project becomes part of a Group Study, the Company is authorized to share my contact information and project details with other parties that are also involved in the Group Study."

Generating Facility Information

Please provide all Pre-Application Reports (either mandatory or optional) as attachments. This is mandatory for systems greater than or equal to 500 kW.

Address of Facility: 0 Pine Meadow Rd

City: Northfield State: MA Zip Code: 01360

Electric Distribution Company:

WMECO

Account Number: New Account #

Meter Number: New Meter #



System Design Capacity: Nominal 4980 (kW) 4980 (kVA)
 Maximum 4980 (kW) 4980 (kVA)

For Solar PV provide the DC-STC rating: 6980 (kW_{DC})

Type of Generating Unit: Synchronous _____ Induction _____ Inverter X

Manufacturer: Power Electronics Model: FS2600CU15

Prime Mover: Fuel Cell Reciprocating Engine Gas Turbine Steam Turbine
 Microturbine Photovoltaic Other _____

Energy Source: Solar Wind Hydro Diesel Natural Gas Fuel Oil
Other _____ (Please Specify)

For Solar PV provide the DC-STC rating: 6980 (kW)

IEEE 1547.1 (UL 1741) Listed? Yes X No _____

1) Generating Unit Type 1

Manufacturer: Power Electronics Model Name and Number: FS2600CU15

Quantity: 2

Single ___ or Three X Phase

AC Rating: Nominal: 2600 (kW) 2600 (kVA) 600 (AC Volts)

Maximum: 3110 (kW) 3110 (kVA) 600 (AC Volts)

Values above are original nameplate only. Units will be de-rated to 2490 kW maximum.

2) Generating Unit Type 2 (if applicable)

Manufacturer: _____ Model Name and Number: _____

Quantity: _____

Single ___ or Three ___ Phase

AC Rating: Nominal: _____ (kW) _____ (kVA) _____ (AC Volts)

Maximum: _____ (kW) _____ (kVA) _____ (AC Volts)



3) Generating Unit Type 3 (if applicable)

Manufacturer: _____ Model Name and Number: _____

Quantity: _____

Single __ or Three __ Phase

AC Rating: Nominal: _____ (kW) _____ (kVA) _____ (AC Volts)

Maximum: _____ (kW) _____ (kVA) _____ (AC Volts)

Need an air quality permit from DEP? Yes _____ No Not Sure _____

 If "yes", have you applied for it? Yes _____ No _____

Planning to Export Power? Yes No _____ A Cogeneration Facility? Yes _____ No

Anticipated Export Power Purchaser:

Export Form? Simultaneous Purchase/Sale _____ Net Purchase/Sale _____ Net Metering _____

Other (Specify)

If net metering, please refer to Schedule Z of the Standards for Interconnection of Distributed Generation. Please note that if under the public cap, all off-takers must be a Municipality or Other Governmental Entity (as defined in 220 C.M.R. 18.02) and therefore be certified by the DPU.

Est. Install Date: 1/29/20 Est. In-Service Date: 1/29/20 Agreement Needed By: 1/29/20

Application Process

I am opting to forego the Expedited Process. Please review this application under the Standard Process. Yes No

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true:

Interconnecting Customer Signature:  Title: Sr. Vice Pres. Date: February 19, 2019

The information provided in this application is complete:
Company Signature: _____ Title: _____ Date: _____



Generating Facility Technical Detail

Information on components of the generating facility that are currently Listed

Equipment Type	Manufacturer	Model	National Standard
1. <u>Inverter</u>	<u>Power Electronics</u>	<u>FS2600CU15</u>	<u>UL1741SA, IEEE1547.1</u>
2. <u>Recloser</u>	<u>Tavrida</u>	<u>OSM25</u>	<u>ANSI C37</u>
3. <u>Transformer</u>	<u>TBD</u>	<u>TBD</u>	<u>ANSI C57</u>
4. <u>Protective Relay</u>	<u>SEL</u>	<u>651R</u>	<u>ANSI C37</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____

Total Number of Generating Units in Facility?

2

Generator Unit Power Factor Rating:

>0.99

Max Adjustable Leading Power Factor? 0.00 Max Adjustable Lagging Power Factor? 0.00

Generator Characteristic Data (for all inverter-based machines)

Max Design Fault Contribution Current? 10,293A pk / 1890A RMS Instantaneous _____ or RMS? _____
PER INVERTER

Harmonics Characteristics:

THD <3% per IEEE519

Start-up power requirements:

Generator Characteristic Data (for all rotating machines)

Rotating Frequency: _____ (rpm) Neutral Grounding Resistor (If Applicable): _____

Additional Information for Synchronous Generating Units

Synchronous Reactance, Xd: _____ (PU) Transient Reactance, X'd: _____ (PU)
Subtransient Reactance, X'd: _____ (PU) Neg Sequence Reactance, X2: _____ (PU)
Zero Sequence Reactance, Xo: _____ (PU) kVA Base: _____
Field Voltage: _____ (Volts) Field Current: _____
(Amps)

Additional information for Induction Generating Units

Rotor Resistance, Rr: _____ Stator Resistance, Rs: _____
Rotor Reactance, Xr: _____ Stator Reactance, Xs: _____
Magnetizing Reactance, Xm: _____ Short Circuit Reactance, Xd'': _____
Exciting Current: _____ Temperature Rise: _____
Frame Size: _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____

Additional information for Induction Generating Units that are started by motoring

Motoring Power: _____ (kW) Design Letter: _____

Interconnection Equipment Technical Detail

Date: _____

Will a transformer be used between the generator and the point of interconnection?

Yes No

Will the transformer be provided by Interconnecting Customer? Yes No

Transformer Data (if applicable, for Interconnecting Customer-Owned Transformer):

Nameplate Rating: 2500 (kVA) Single or Three Phase

Transformer Impedance: 5.75 (%) on a 2500 kVA Base

If Three Phase:

Transformer Primary: 13800 (Volts) Delta Wye WyeGrounded Other

Transformer Secondary: 600 (Volts) Delta Wye WyeGrounded Other



Transformer Fuse Data (if applicable, for Interconnecting Customer-Owned Fuse):
(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____ Load Rating: _____ (Amps)
Interrupting Rating: _____ (Amps) Trip Speed: _____ (Cycles)

Interconnection Protective Relays (if applicable):

(If microprocessor-controlled)

List of Functions and Adjustable Setpoints for the protective equipment or software:

	Setpoint Function	Minimum	Maximum
1.	See Online Diagram	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

(If discrete components)

(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting:

Current Transformer Data (if applicable):

(Enclose copy of Manufacturer's Excitation & Ratio Correction Curves)

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Potential Transformer Data (if applicable):

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection:



General Technical Detail

Date: _____

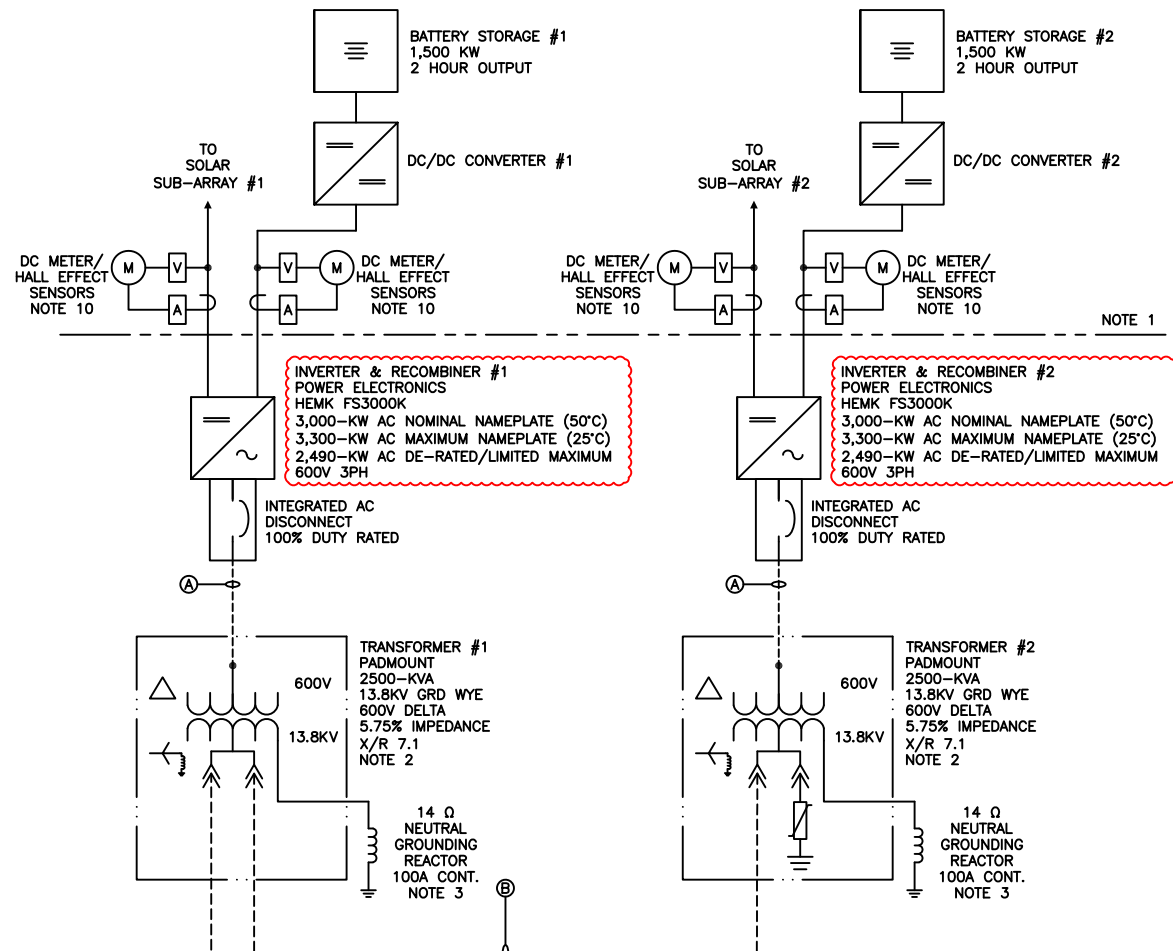
Enclose 3 copies, or send 1 electronic copy, of site electrical One-Line Diagram showing the configuration of all generating facility equipment, current and potential circuits, and protection and control schemes with a Massachusetts registered professional engineer (PE) stamp. Enclose 3 copies, or send 1 electronic copy, of any applicable site documentation that indicates the precise physical location of the proposed generating facility (e.g., USGS topographic map or other diagram or documentation).

Proposed Location of Protective Interface Equipment on Property:
(Include Address if Different from Application Address)

Enclose copy of any applicable site documentation that describes and details the operation of the protection and control schemes.

Enclose copies of applicable schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).

When mailing application fee checks, please enclose a copy of this signed interconnection application form with the payment. Please enclose any other information pertinent to this Facility.



WIRE AND CONDUIT SCHEDULE				
ID	VOLTAGE	SETS	WIRE	CONDUIT
A	1000V	8	(3) 600 KCMIL CU	(8) 4" (NOTE 11)
B	15KV	1	(3) #1 AWG AL, FULL NEUTRAL, XLPE-133%, MV-105	(1) 4"
C	15KV	1	(3) 250 MCM AL, FULL NEUTRAL, XLPE-133%, MV-105	(1) 4"
D	15KV	1	(3) 4/0 AWG ACSR COVERED OVERHEAD WIRE	N/A

INVERTER PROTECTIVE SETTINGS			
INVERTER PROTECTIVE FUNCTIONS	PICKUP SETTING		OPERATING TIME CYC. (SEC.)
	PERCENT	VALUE	
27P1 - UNDERVOLTAGE	50%	300.0V	66 (1.10)
27P2 - UNDERVOLTAGE	88%	528.0V	120 (2.00)
59P1 - OVERVOLTAGE	110%	660.0V	120 (2.00)
59P2 - OVERVOLTAGE	120%	720.0V	9.6 (0.16)
81U1 - UNDERFREQUENCY	-	56.5 Hz	9.6 (0.16)
81U2 - UNDERFREQUENCY	-	58.5 Hz	18000 (300)
81O1 - OVERFREQUENCY	-	61.2 Hz	18000 (300)
81O2 - OVERFREQUENCY	-	62.0 Hz	9.6 (0.16)

PROTECTIVE RELAY SETTINGS 52-1			
SEL-651R PROTECTIVE FUNCTIONS	PICKUP SETTING		OPERATING TIME (SECONDS)
	PERCENT	VALUE	
27P1 - UNDERVOLTAGE	50%	0.45V (3,984V)	TOTAL: 1.10 RELAY: 1.05
27P2 - UNDERVOLTAGE	88%	0.80V (7,012V)	TOTAL: 2.00 RELAY: 1.95
59P1 - OVERVOLTAGE	110%	1.00V (8,764V)	TOTAL: 2.00 RELAY: 1.95
59P2 - OVERVOLTAGE	120%	1.09V (9,561V)	TOTAL: 0.16 RELAY: 0.11
81UP1 - UNDERFREQUENCY	-	56.5 Hz	TOTAL: 0.16 RELAY: 0.11
81UP2 - UNDERFREQUENCY	-	58.5 Hz	TOTAL: 300.00 RELAY: 299.95
81OP1 - OVERFREQUENCY	-	61.2 Hz	TOTAL: 300.00 RELAY: 299.95
81OP2 - OVERFREQUENCY	-	62.0 Hz	TOTAL: 0.16 RELAY: 0.11
32 - DIRECTIONAL POWER	-	4,981KW	TOTAL: 0.16 RELAY: 0.11
51 - PHASE TIME OVERCURRENT	0.43A (260A PRI.)	-	CURVE: U4 T.D.: 2.0
51C - VOLT. CTRL. PH. TIME O.C.	0.17A (104A PRI.) 0.80V (88%)	-	CURVE: U4 T.D.: 2.2
51G - VOLT. CTRL. GND. TIME O.C.	0.09A (52A PRI.) 0.80V (88%)	-	CURVE: U4 T.D.: 2.4
79 - AUTO RESTORE VOLT. RANGE	1.49 (13,110) ≤ V ≤ 1.66 (14,600)	-	300
79 - AUTO RESTORE FREQ. RANGE	59.5 ≤ f ≤ 60.5	-	300
ALARM - HARDWARE AND LOSS OF POWER (AC AND DC)	-	-	< 120

* SETTINGS ARE BASED ON IEEE-1547 AND NPCC DIRECTIVE 12 FIGURE 1 CURVE.
* VOLTAGE SETTINGS ARE BASED ON LINE TO LINE VOLTAGES.

* 79 FUNCTION IS ONLY ENABLED ON VOLTAGE AND FREQUENCY DISTURBANCES. A 5 MINUTE DELAY FOR THE 79 FUNCTION IS ENABLED ON VOLTAGE AND FREQUENCY DISTURBANCES ONLY. A 5 MINUTE DELAY WILL BE SET FOR RE-CLOSING UPON GOOD QUALITY VOLTAGE. THE FIVE MINUTE TIME INTERVAL WILL RESTART IF THE UTILITY VOLTAGE OR FREQUENCY FALLS OUTSIDE OF THE WINDOW IDENTIFIED IN THE ABOVE CHART. RECLOSER WILL LOCKOUT ON OVERCURRENT OPERATION.

* RECLOSER WILL ONLY BE ALLOWED TO CLOSE WHEN THE VOLTAGE AND FREQUENCY ARE IN COMPLIANCE WITH IEEE-1547 AND ANSI C84.1, TABLE 1. VOLTAGE RANGE 95% TO 105% OF NOMINAL. VOLTAGE IS BASED ON LINE TO LINE VOLTAGE. FREQUENCY BETWEEN 59.5HZ TO 60.5HZ.

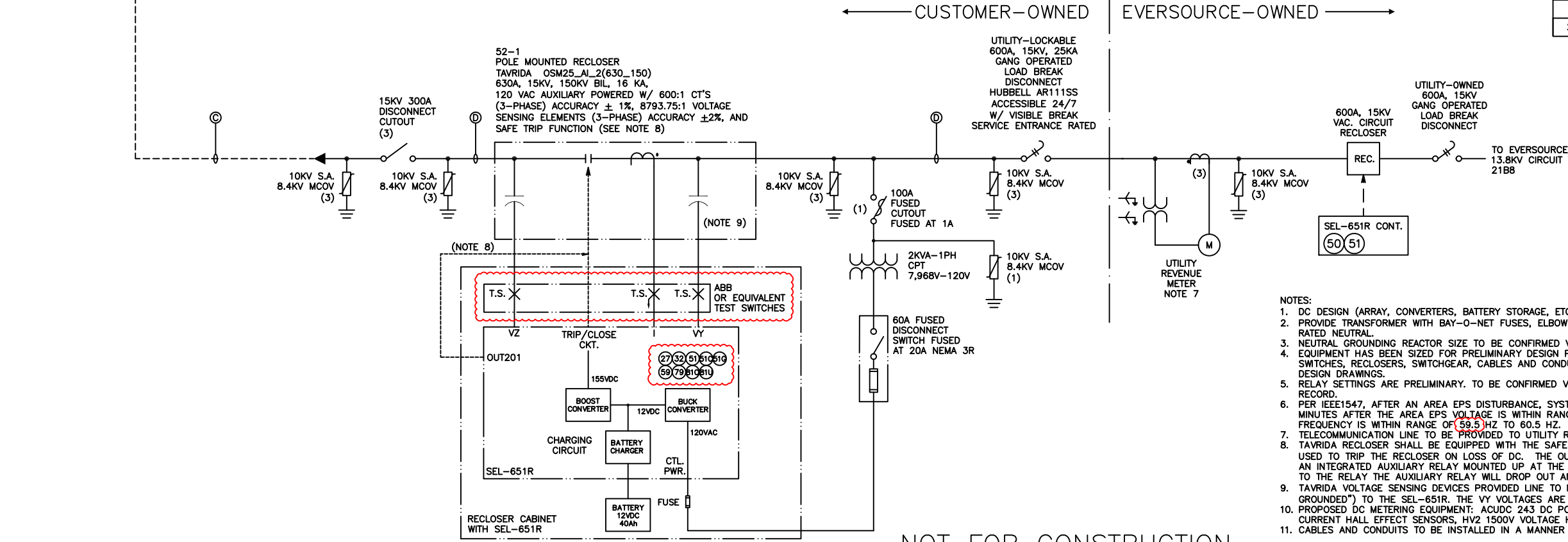
* SETTINGS ARE BASED ON IEEE-1547 AND ANSI C84.1 AND NPCC DIRECTIVE 12 FIGURE 1 CURVE.

* RELAY WILL AUTOMATICALLY TRIP AND BLOCK CLOSE IF THERE IS A HARDWARE FAILURE OR POWER SUPPLY FAILURE AND ON ANY OVERCURRENT OPERATION (51, 51C, 51G). THIS WILL BE DONE VIA LOGIC IN THE SEL-651R RELAY.

* TOTAL CLEARING TIME INCLUDES RELAY OPERATING TIME AND RECLOSER OPERATING TIME. RECLOSER OPERATING TIME IS 3.0 CYCLES.

* VOLTAGE SETTINGS BASED ON LINE TO NEUTRAL VOLTAGE.

AGGREGATE AC SYSTEM RATING		
INVERTER RATING	QTY	AGGREGATE RATING
2,490-KW DE-RATED	2	4,980 KW DE-RATED



- NOTES:
- DC DESIGN (ARRAY, CONVERTERS, BATTERY STORAGE, ETC) BY OTHERS.
 - PROVIDE TRANSFORMER WITH BAY-O-NET FUSES, ELBOW TYPE S.A. (8.4KV MCOV), AND FULLY RATED NEUTRAL.
 - NEUTRAL GROUNDING REACTOR SIZE TO BE CONFIRMED VIA IMPACT STUDY.
 - EQUIPMENT HAS BEEN SIZED FOR PRELIMINARY DESIGN PURPOSES. ALL EQUIPMENT, INCLUDING SWITCHES, RECLOSERS, SWITCHGEAR, CABLES AND CONDUITS TO BE SIZED AND LISTED ON FINAL DESIGN DRAWINGS.
 - RELAY SETTINGS ARE PRELIMINARY. TO BE CONFIRMED VIA IMPACT STUDY AND ENGINEER OF RECORD.
 - PER IEEE1547, AFTER AN AREA EPS DISTURBANCE, SYSTEM SHALL NOT RECONNECT UNTIL 5 MINUTES AFTER THE AREA EPS VOLTAGE IS WITHIN RANGE B OF ANSI C84.1-1995, TABLE 1 AND FREQUENCY IS WITHIN RANGE OF 59.5 HZ TO 60.5 HZ.
 - TELECOMMUNICATION LINE TO BE PROVIDED TO UTILITY REVENUE METERING.
 - TAVRIDA RECLOSER SHALL BE EQUIPPED WITH THE SAFE TRIP FUNCTION. THIS FUNCTION WILL BE USED TO TRIP THE RECLOSER ON LOSS OF DC. THE OUTPUT CONTACT (OUT201) IS WIRED TO AN INTEGRATED AUXILIARY RELAY MOUNTED UP AT THE RECLOSER. UPON LOSS OF ALL POWER TO THE RELAY THE AUXILIARY RELAY WILL DROP OUT AND THE RECLOSER WILL TRIP.
 - TAVRIDA VOLTAGE SENSING DEVICES PROVIDED LINE TO NEUTRAL VOLTAGE INPUTS ("WYE GROUNDED") TO THE SEL-651R. THE VY VOLTAGES ARE ON THE UTILITY SIDE OF THE RECLOSER.
 - PROPOSED DC METERING EQUIPMENT: ACUDC 243 DC POWER AND ENERGY METERS, HAK & HAB CURRENT HALL EFFECT SENSORS, HV2 1500V VOLTAGE HALL EFFECT SENSORS.
 - CABLES AND CONDUITS TO BE INSTALLED IN A MANNER TO ACHIEVE AN AMPACITY OF 2,995A.

NOT FOR CONSTRUCTION



FIRM NAME: LIG CONSULTANTS, PC
FIRM REG #: N/A
PROF. ENGINEER: ANTHONY M. MORREALE, P.E.
ENGINEER LICENSE #: 50860

REV	DATE	DESCRIPTION	DRW	APR'D	REV	DATE	DESCRIPTION	DRW	APR'D
B	6/14/19	REVISED PER EVERSOURCE COMMENTS & UPDATED INVERTERS							
A	1/30/19	ISSUED FOR INTERCONNECTION APPLICATION							

LIG Consultants, PC

BWC PINE MEADOW BROOK, LLC
0 PINE MEADOW RD B, NORTHFIELD, MA
4.98MW-AC SOLAR PV & STORAGE SYSTEM - INTERCONNECTION ONELINE

SIZE	B	DATE	1/29/2019
SCALE	NTS	SCALE	NTS
SHEET	1 of 1	DWG NO.	E-001
		FILE NO.	

Section 9 – Documentation of Major System Components

SOMERA P-DUPLEX HALF-CELL 144 P-TYPE BIFACIAL MODULE



BIFACIAL
MODULE

UP TO 480 W
@15% BIFACIAL GAIN

144 MONO PERC
SOLAR CELLS



UP TO 27 YEARS linear power warranty



HIGHER LIFETIME YIELD by using transparent Dupont® backsheet



UP TO 15% POWER GAIN from ground facing side



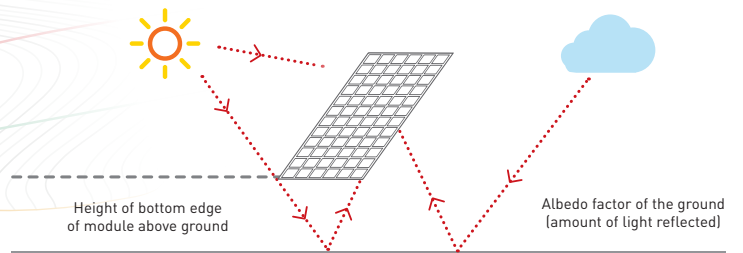
Bypass diodes and innovative series-parallel connections enable the module to perform better in **PARTIAL SHADOW CONDITIONS**



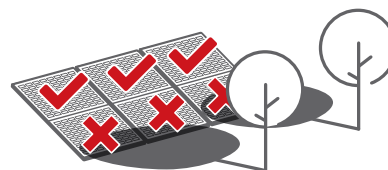
Half-cell generates only half the current, lowering heat production and **LESS HOT SPOT**, increasing module reliability



LIGHT WEIGHT easy to install bifacial module



INCREASED SHADE TOLERANCE



HALF-CELL MODULE
Functions like two parallel modules, enabling the half-cell string to work in partial shading



Ⓜ Applicable in USA | Ⓜ Applicable in Europe, Indian Subcontinent and ROW (excluding USA) | † Applicable in India

QUALITY AND SAFETY

- ♦ 27 years of linear power output warranty **
- ♦ Rigorous quality control meeting the highest international standards
- ♦ 100% EL tested to minimise micro crack
- ♦ Certified for salt mist corrosion resistance – severity VI
- ♦ Excellent anti-PID performance
- ♦ Positive power tolerance

APPLICATIONS

- ♦ Utility scale applications
- ♦ Greenhouse applications
- ♦ Agricultural industry applications

TECHNICAL DATA

SOMERA P-DUPLEX HALF-CELL 144 P-TYPE BIFACIAL MODULE

THIS DATASHEET IS APPLICABLE FOR: SOMERA VSM DHT.72.AAA.05 (AAA=380-420)

Electrical Data^{1,2} All data refers to STC (AM 1.5, 1000 W/m², 25°C)

Peak Power P _{max} (Wp) (0~ +4.99Wp)	380	385	390	395	400	405	410	415	420
Maximum Voltage V _{mpp} (V)	40.3	40.4	40.5	40.6	40.7	40.8	41.1	41.3	41.4
Maximum Current I _{mpp} (A)	9.43	9.53	9.62	9.73	9.83	9.92	9.97	10.06	10.14
Open Circuit Voltage V _{oc} (V)	47.2	47.3	47.4	47.5	47.6	47.7	48.0	48.2	48.2
Short Circuit Current I _{sc} (A)	10.05	10.17	10.28	10.39	10.51	10.61	10.67	10.77	10.88
Module Efficiency η(%)	18.63	18.88	19.13	19.37	19.62	19.86	20.11	20.35	20.60

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. 1 2) Power measurement uncertainty is within +/- 3%.

Electrical Parameters at NOCT³

Power (W)	281.2	284.9	288.6	292.3	296.0	299.7	303.4	307.1	310.8
V@P _{max} (V)	37.1	37.2	37.3	37.4	37.4	37.6	37.8	38.0	38.1
I@P _{max} (A)	7.56	7.64	7.72	7.81	7.89	7.96	8.00	8.07	8.14
V _{oc} (V)	43.6	43.7	43.8	44.0	44.0	44.2	44.4	44.6	44.6
I _{sc} (A)	8.05	8.14	8.23	8.31	8.40	8.48	8.54	8.62	8.71

3) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

Equivalent Bifacial Output

Bifacial Gain	Overall Power output (W)								
5%	410	415	420	425	431	436	441	446	451
10%	429	435	440	446	451	457	462	467	472
15%	449	454	460	466	472	477	483	488	493

Temperature Coefficients (Tc) permissible operating conditions

Tc of Open Circuit Voltage (β)	-0.27%/°C
Tc of Short Circuit Current (α)	0.065%/°C
Tc of Power (γ)	-0.35%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

Mechanical Data

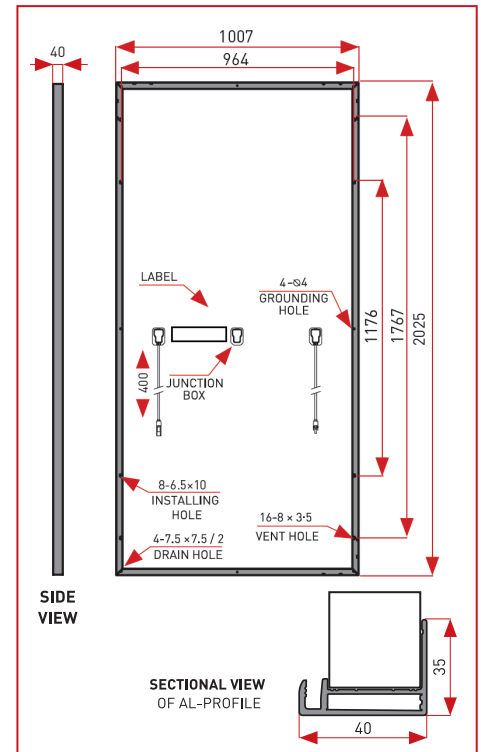
Length × Width × Height	2025 × 1007 × 40 mm (79.72 × 39.64 × 1.57 inches)
Weight	22.8 kg (50.26 lbs)
Junction Box	IP68/IP67, Split Junction Box with individual bypass diodes
Cable & Connectors [#]	400 mm length cables, MC4 Compatible/MC4 Connectors
Application Class	Class A (Safety class II)
Superstrate	3.2 mm (0.125 inches) high transmission low iron tempered glass, AR coated
Cells	72 Mono PERC (144 half-cells) P-Type Bifacial solar cells
Back Sheet	High Transmittance Composite film with Clear Tedlar [®] from Dupont [®]
Frame	Anodized aluminium frame with twin wall profile
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)
Maximum Series Fuse Rating	20 A

Warranty and Certifications

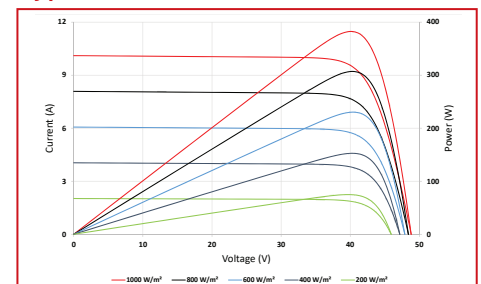
Product Warranty**	10 years
Performance Warranty**	Linear Power Warranty for 27 years with 3% for 1st year degradation and 0.65% from year 2 to year 27
Approvals and Certificates [^]	IEC 61215 : 2016, IEC 61730 : 2016, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 62804, CE, CEC (California), UL 1703

[^] All (*) certifications under progress. 1 ** Refer to Vikram Solar's warranty document for terms and conditions. 1 # 1200mm (47.24 inches) cable length is also available

Dimensions in mm

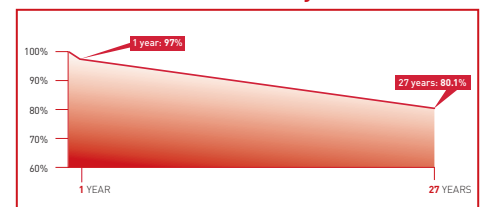


Typical I-V Curves⁴



4) Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

Performance Warranty



Packaging Information

Quantity /Pallet	27
Pallets/Container (40' HC)	22
Quantity/Container (40' HC)	594

CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

Vikram Solar and Somera and the accompanying Logos are trademarks of Vikram Solar Limited registered in India.

SUNNY TRIPOWER 12000TL-US / 15000TL-US / 20000TL-US / 24000TL-US / 30000TL-US



STP 12000TL-US-10 / STP 15000TL-US-10 / STP 20000TL-US-10 / STP 24000TL-US-10 / STP 30000TL-US-10



RATED FOR
1000 V DC & 600 V DC
SYSTEMS



Design flexibility

- 1000 V DC or 600 V DC
- Two independent DC inputs
- 15° to 90° mounting angle range
- Detachable DC Connection Unit

System efficiency

- 98.0% CEC, 98.6% Peak
- 1000 V DC increases system efficiency
- OptiTrac Global Peak MPPT

Enhanced safety

- Integrated DC AFCI
- Floating system with all-pole sensitive ground fault protection
- Reverse polarity indicator in combination with Connection Unit

Future-proof

- Complete grid management feature set
- Integrated Speedwire, WebConnect, ModBus interface
- Bi-directional Ethernet communications
- Utility-interactive controls for active and reactive power

SUNNY TRIPOWER 12000TL-US / 15000TL-US / 20000TL-US / 24000TL-US / 30000TL-US

The ultimate solution for decentralized PV plants, now up to 30 kilowatts

The world's best-selling three-phase PV inverter, the SMA Sunny Tripower TL-US, is raising the bar for decentralized commercial PV systems. This three-phase, transformerless inverter is UL listed for up to 1000 V DC maximum system voltage and has a peak efficiency above 98 percent, while OptiTrac Global Peak minimizes the effects of shade for maximum energy production. The Sunny Tripower delivers a future-proof solution with full grid management functionality, cutting edge communications and advanced monitoring. The Sunny Tripower is also equipped with all-pole ground fault protection and integrated AFCI for a safe, reliable solution. It offers unmatched flexibility with a wide input voltage range and two independent MPP trackers. Suitable for both 600 V DC and 1,000 V DC applications, the Sunny Tripower allows for flexible design and a lower levelized cost of energy.

www.SMA-America.com

Technical data	Sunny Tripower 12000TL-US	Sunny Tripower 15000TL-US	Sunny Tripower 20000TL-US	Sunny Tripower 24000TL-US	Sunny Tripower 30000TL-US
Input (DC)					
Max. usable DC power (@ $\cos \varphi = 1$)	12250 W	15300 W	20400 W	24500 W	30800 W
Max. DC voltage	*1000 V	*1000 V	*1000 V	*1000 V	1000 V
Rated MPPT voltage range	300 V...800 V	300 V...800 V	380 V...800 V	450 V...800 V	500 V...800 V
MPPT operating voltage range	150 V...1000 V	150 V...1000 V	150 V...1000 V	150 V...1000 V	150 V...1000 V
Min. DC voltage / start voltage	150 V / 188 V	150 V / 188 V	150 V / 188 V	150 V / 188 V	150 V / 188 V
Number of MPP tracker inputs	2	2	2	2	2
Max. input current / per MPP tracker input	66 A / 33 A	66 A / 33 A	66 A / 33 A	66 A / 33 A	66 A / 33 A
Output (AC)					
AC nominal power	12000 W	15000 W	20000 W	24000 W	30000 W
Max. AC apparent power	12000 VA	15000 VA	20000 VA	24000 VA	30000 VA
Output phases / line connections	3 / 3-N-PE				3 / 3-N-PE, 3-PE
Nominal AC voltage	480 / 277 V WYE				480 / 277 V WYE, 480 V Delta
AC voltage range	244 V...305 V				
Rated AC grid frequency	60 Hz				
AC grid frequency / range	50 Hz, 60 Hz / -6 Hz...+5 Hz				
Max. output current	14.4 A	18 A	24 A	29 A	36.2 A
Power factor at rated power / adjustable displacement	1 / 0.0 leading...0.0 lagging				
Harmonics	< 3%				
Efficiency					
Max. efficiency / CEC efficiency	98.2% / 97.5%	98.2% / 97.5%	98.5% / 97.5%	98.5% / 98.0%	98.6% / 98.0%
Protection devices					
DC reverse polarity protection	●	●	●	●	●
Ground fault monitoring / grid monitoring	●	●	●	●	●
All-pole sensitive residual current monitoring unit	●	●	●	●	●
DC AFCI compliant to UL 1699B	●	●	●	●	●
AC short circuit protection	●	●	●	●	●
Protection class / overvoltage category	I / IV	I / IV	I / IV	I / IV	I / IV
General data					
Dimensions (W / H / D) in mm (in)	665 / 650 / 265 (26.2 / 25.6 / 10.4)				
Packing dimensions (W / H / D) in mm (in)	780 / 790 / 380 (30.7 / 31.1 / 15.0)				
Weight	55 kg (121 lbs)				
Packing weight	61 kg (134.5 lbs)				
Operating temperature range	-25°C...+60°C				
Noise emission (typical) / internal consumption at night	51 dB(A) / 1 W				
Topology	Transformerless				
Cooling concept / electronics protection rating	OptiCool / NEMA 3R				
Features					
Display / LED indicators (Status / Fault / Communication)	- / ●				
Interface: RS485 / Speedwire, WebConnect	○ / ●				
Data interface: SMA Modbus / SunSpec ModBus	● / ●				
Mounting angle range	15°...90°				
Warranty: 10 / 15 / 20 years	● / ○ / ○				
Certifications and approvals	UL 1741, UL 1998, UL 1699B, IEEE 1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1				

NOTE: US inverters ship with gray lids. Data at nominal conditions. *Suitable for 600 V DC max. systems

● Standard features ○ Optional features – Not available

Type designation STP 12000TL-US-10 STP 15000TL-US-10 STP 20000TL-US-10 STP 24000TL-US-10 STP 30000TL-US-10

Accessories



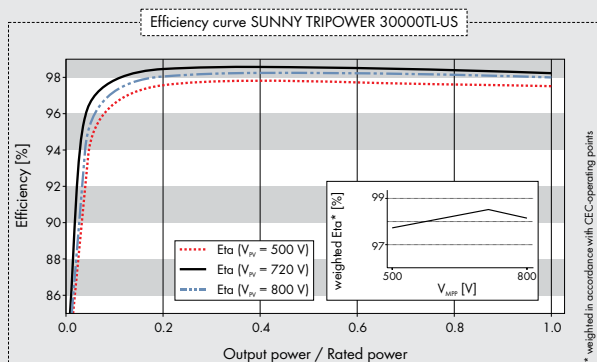
RS485 interface
DM-485CB-US-10

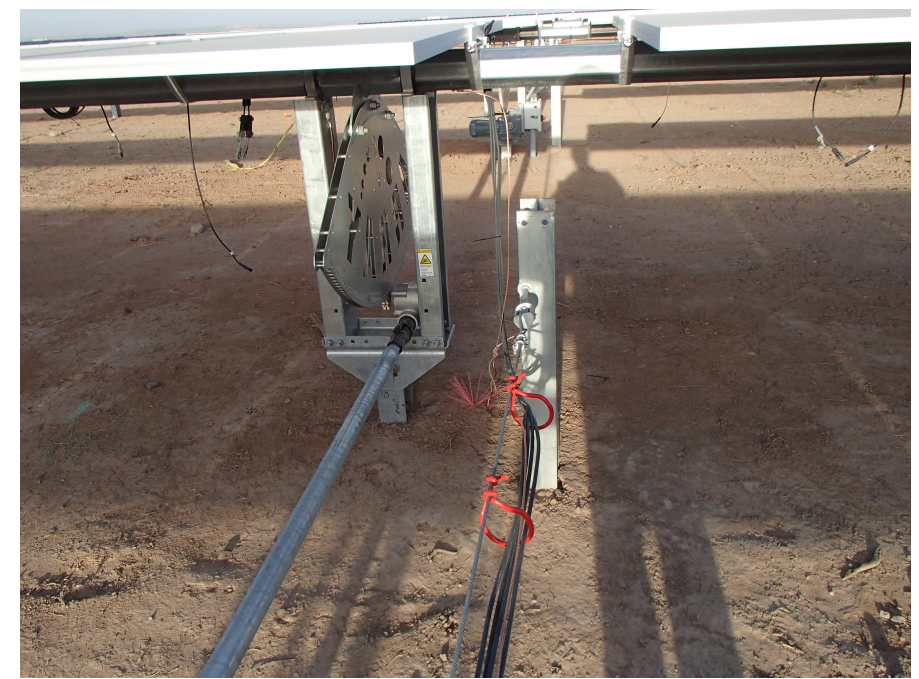
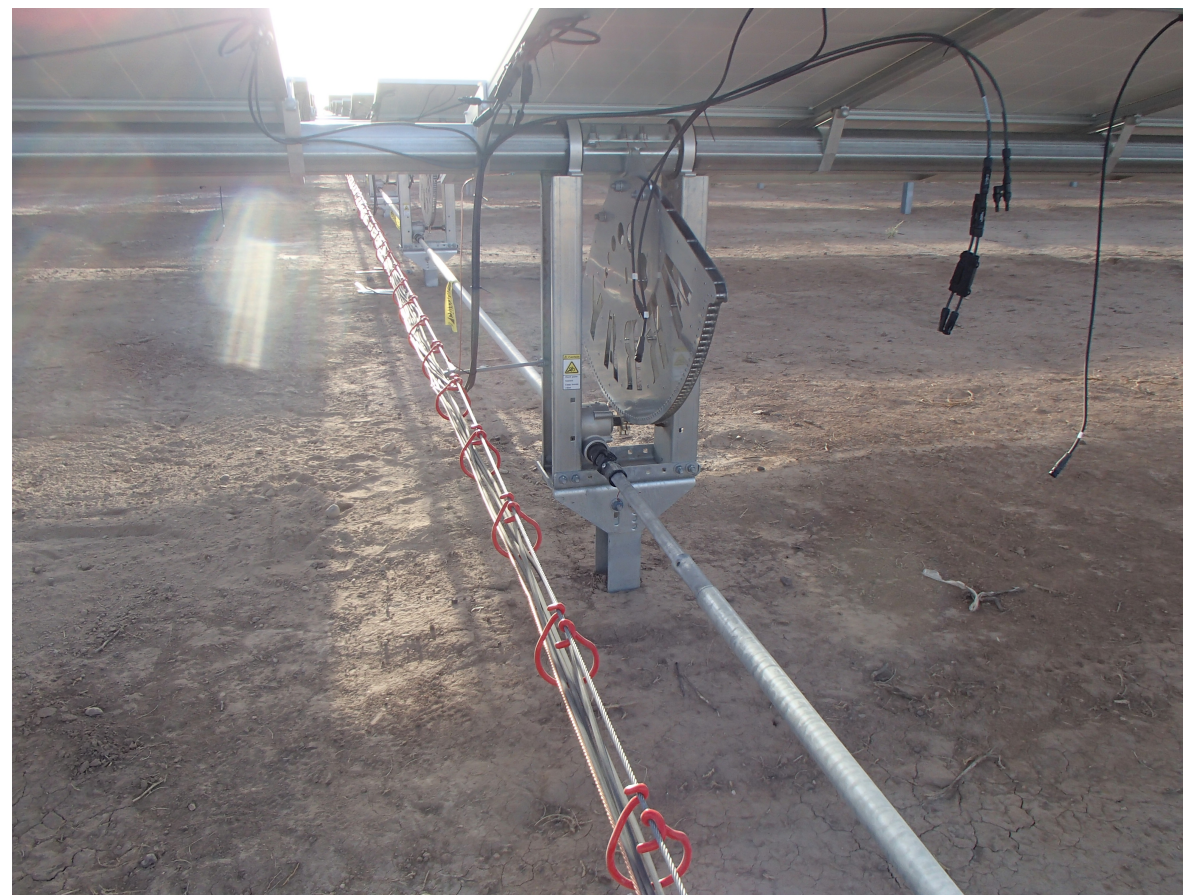
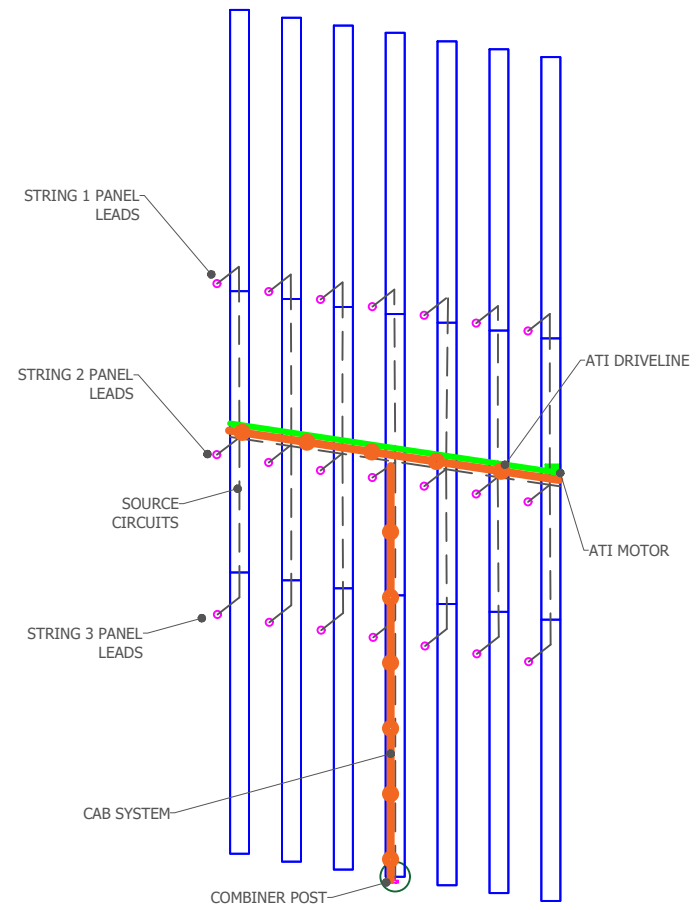


Connection Unit
CU 1000-US-10



SMA Cluster Controller
CLCON-10

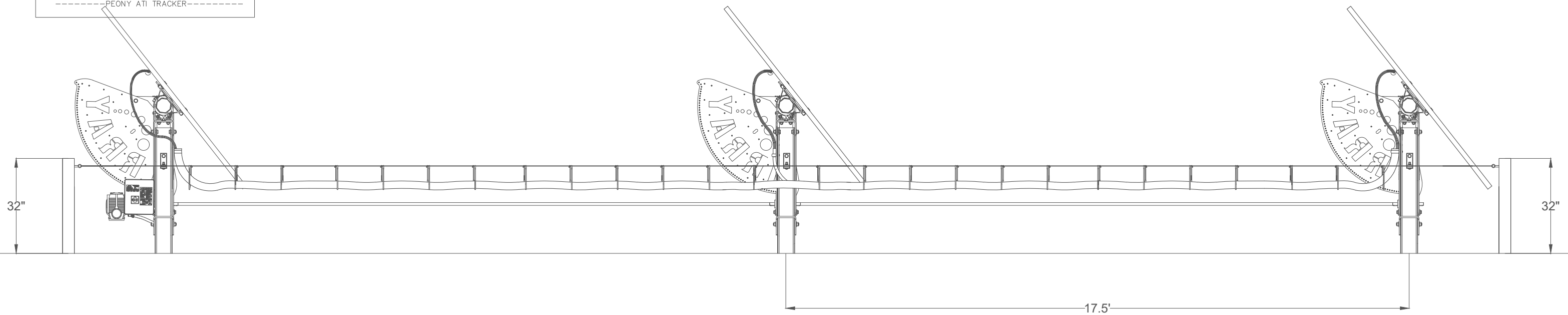




CAB SYSTEM ELEVATIONS

REV 1 MARTIN HILL 01/28/17

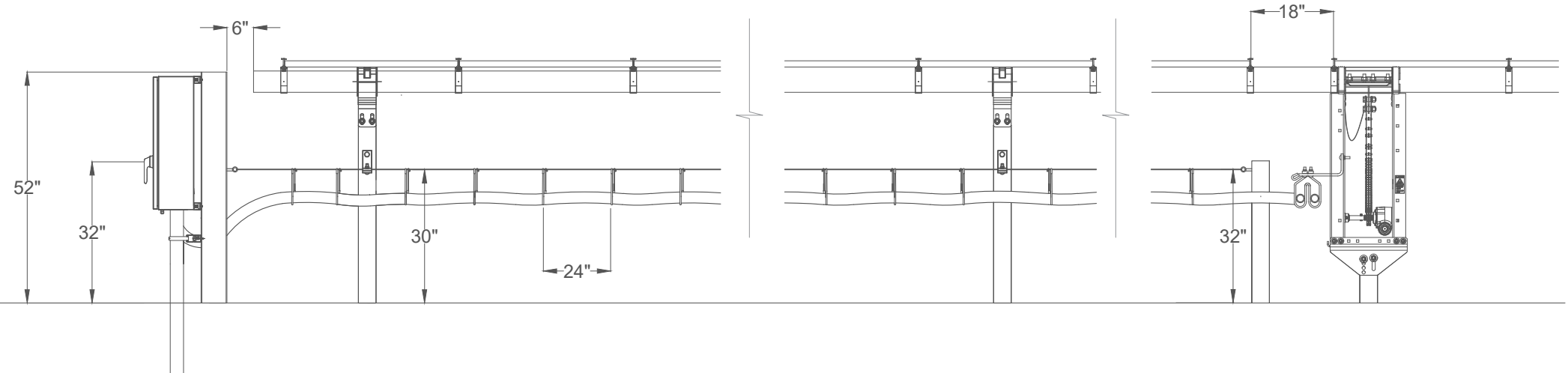
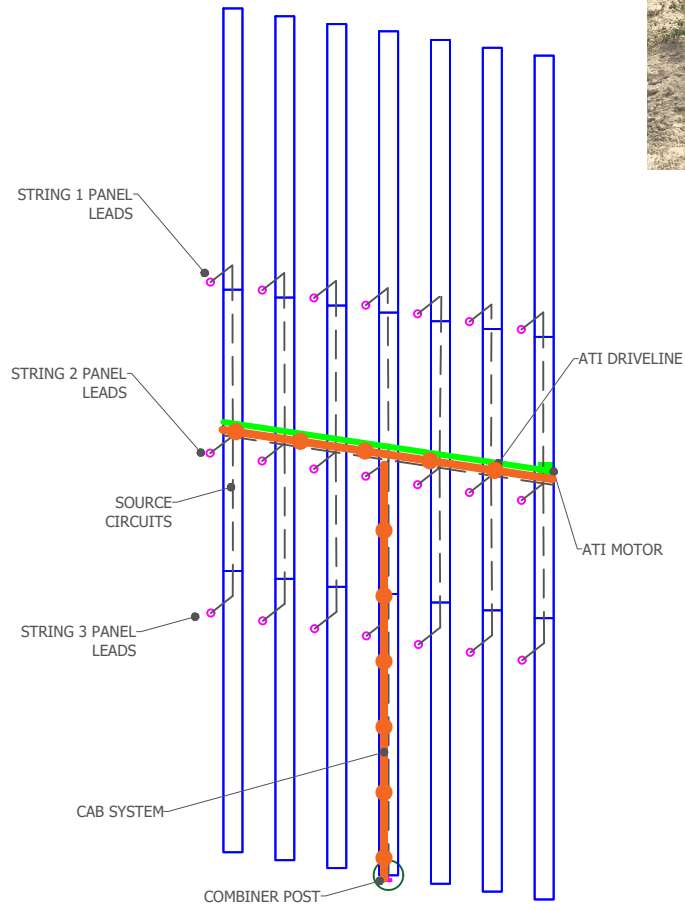
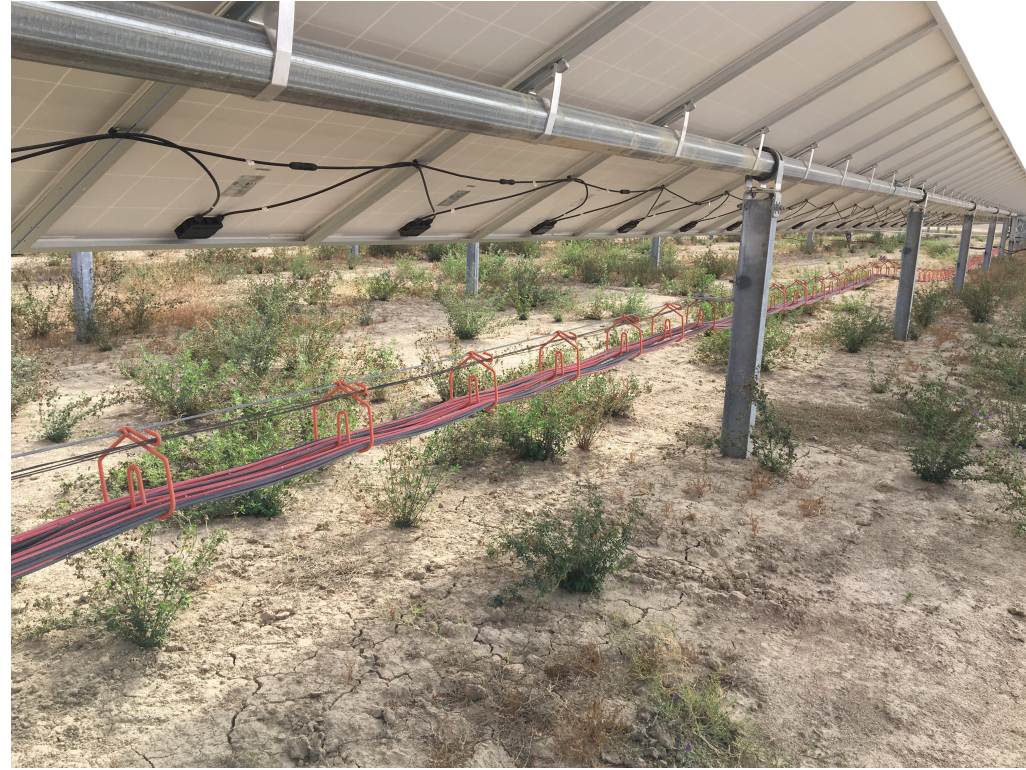
-----PEONY ATI TRACKER-----



CAB SYSTEM ELEVATIONS

REV 1 MARTIN HILL 01/28/17

-----PEONY ATI TRACKER-----



Introduction, Samsung new battery platform

- E3 2P12S compact platform with 100Ah

Tentative Design; Subject to Change

2019 02 20

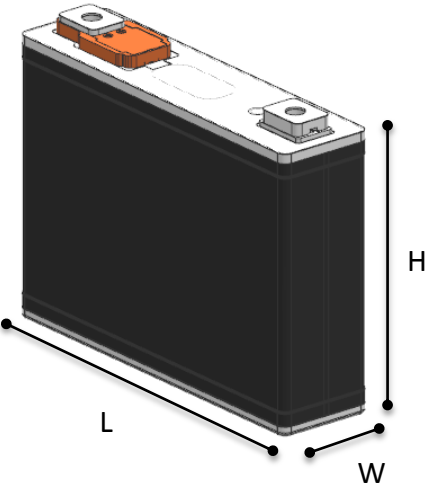
Rev 02




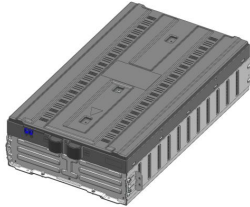
SAMSUNG SDI

SAMSUNG

- NCM-based high reliability battery cell (shared with and derived from SDI's EV solutions)
- Solid metal cell exterior body → Robust mechanical design supports **long term usage**
- Cell dimensions are identical across the line of ESS cells. Cell chemistry is tailored to application.

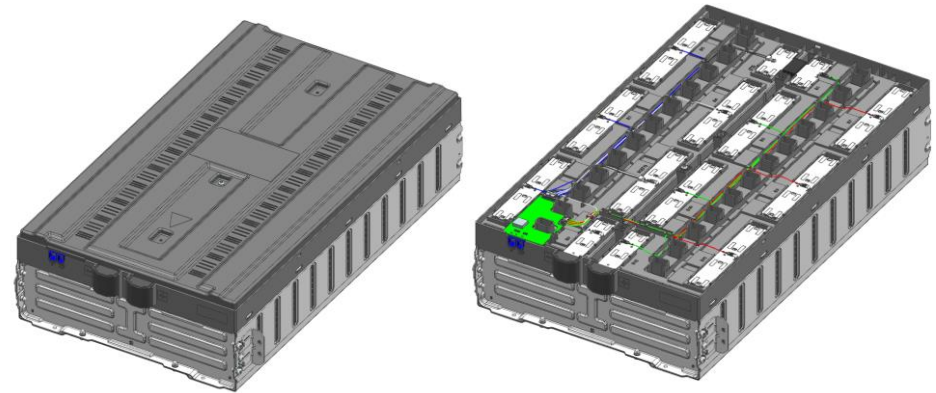
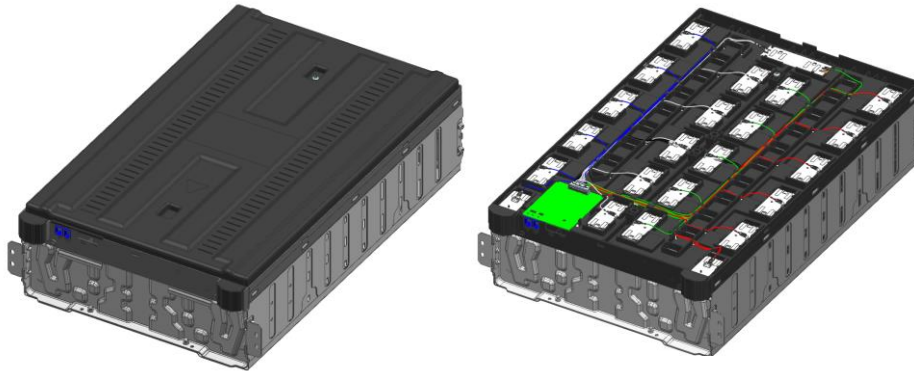
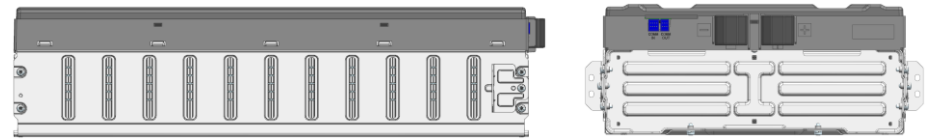
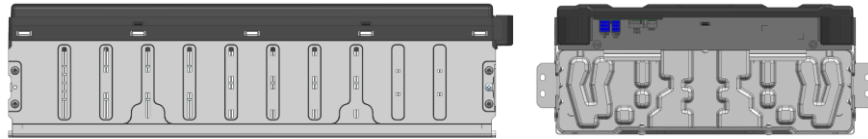
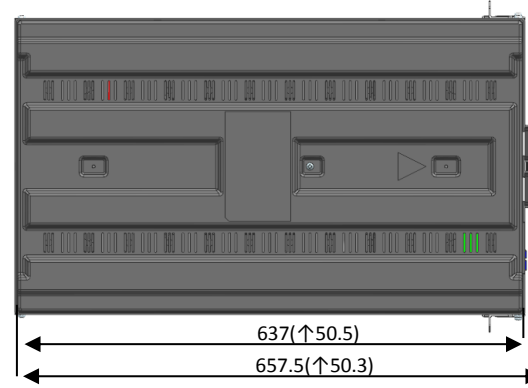
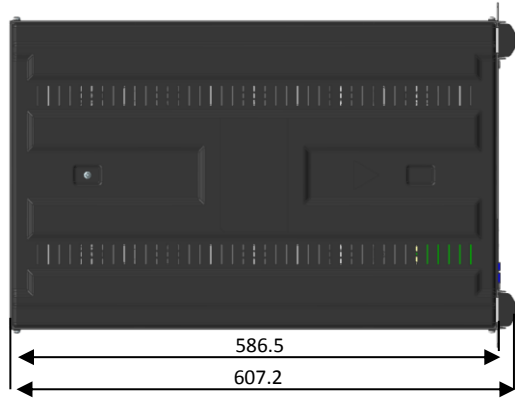
Item		E2 94Ah	E3 100Ah	
	Cell Dimension, L x H x W [mm] <i>(excluding terminals)</i>	173 x 125 x 45		
	Weight [g]	2,100	2,150	
	Capacity [Ah] <i>(nominal)</i>	94	100	
	Design Energy [Wh] <i>(nominal)</i>	345.9	368	
	Energy Density	Gravimetric [Wh/kg]	164.7	171.1
		Volumetric [Wh/L]	355.5	378.2
	Voltage	Max [V]	4.15	4.15
Nominal [V]		3.68	3.68	
Min [V]		2.70	2.70	

- Diverse platform : Can cover various application with cost effective solutions

Classification		E2 (94Ah 22S)	E3 (100Ah 2P12S)
Image			
Cell		94Ah	100Ah
Configuration		22S1P	2P12S
Design Energy [kWh] (nominal)		7.61	8.83
Power [kW]	Continuous (CHG/DCHG)	3.805 (0.5CP)	4.42 (0.5CP)
	Peak	-	-
Operating Voltage(V)		70.4 - 91.3	38.4 ~ 49.8
Dimension (W×L×H)		370 × 586.5 × 160	370 × 637 × 160
Weight (kg)		< 53	< 58
E-Density	Gravimetric [Wh/kg]	143.6	152.3
	Volumetric [Wh/L]	219.2	234.2
Recommended application			0.5CP ↓ (1 equivalent cycle per day application)

22S Module

2P12S Module

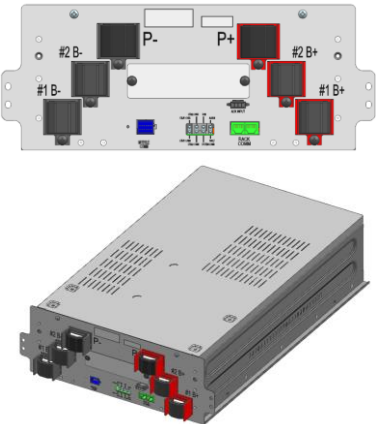
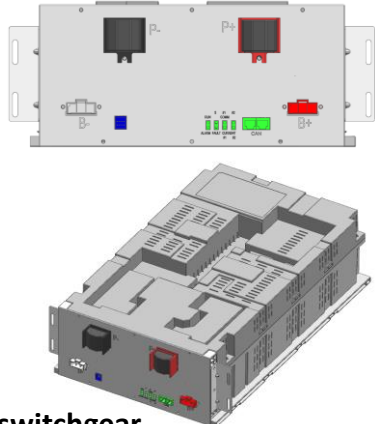


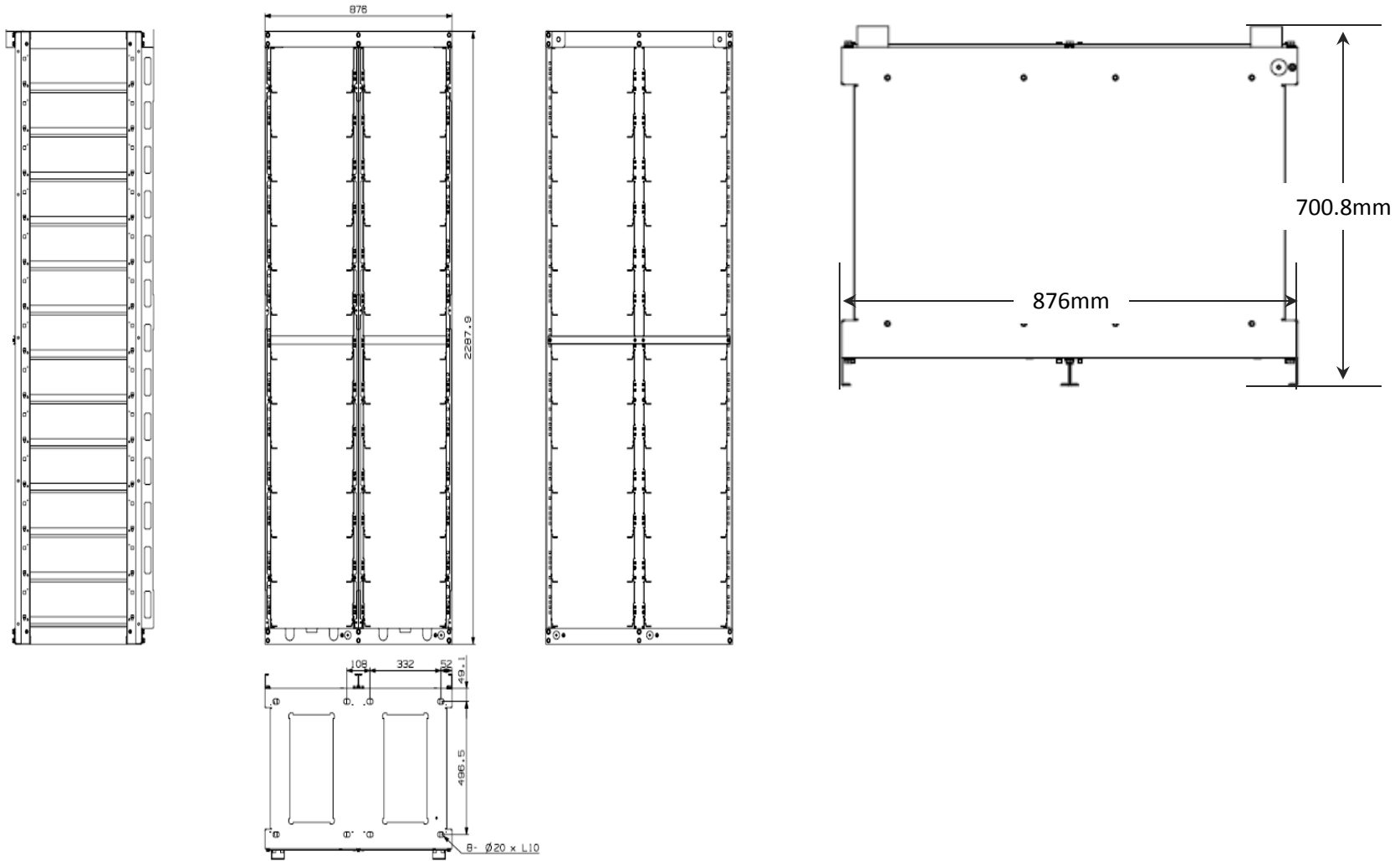
Size: D586.5(607.2) X W370 X H160 Weight: 53Kg

Size: D637(657.5↑50.3) X W370 X H160 Weight 58Kg

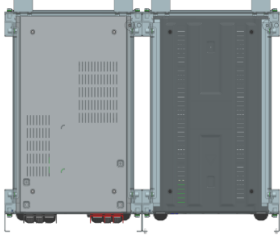
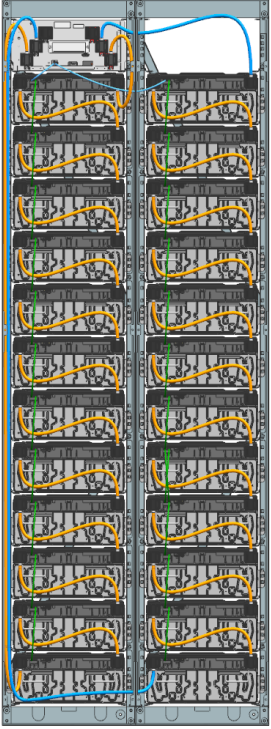
- Rack BMS and protective devices are placed in the same box
- Designed with redundancy: DC contactor and fuse equipped on **both** poles
- Enhanced power connection: solid bus-bars are used

Switchgear design and protection components can be changed according to application type

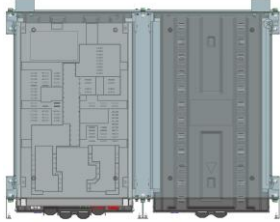
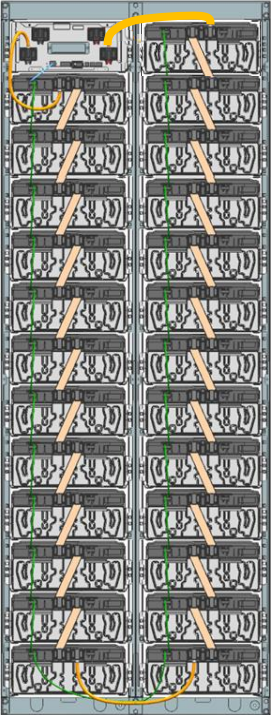
Classification		E2 – 2String		E3 – Single string	
Image				 <p>Plastic switchgear</p>	
Dimension		413.4 X 586.2 X 160		413.4 X 586.2 X 160	
Weight		15Kg		T.B.D	
Protect Device	DC Contactor	(+)	GPR-H500A x 2	GPR-H500A x 1	
		(-)	GPR-H500A x 1	GPR-H500A x 1	
	DC Fuse	(+)	1500V 80A x 2	1200V 160A x 1	
		(-)	1200V 200A x 1	1200V 160A x 1	
Dielectric strength		AC 3000V for 60sec		AC 3000V for 60sec	



Classification		E2 Rack		E3 Rack	
Cell		94Ah		100Ah	
Configuration		198S2P (9x2module) 220S2P (10x2module) 242S2P (11x2module) 264S2P (12x2module) 286S2P (13x2module)		2P204S (17module) 2P228S (19module) 2P252S (21module) 2P276S (23module) 2P300S (25module)	
Energy [kWh]		198S2P 136.9 220S2P 152.2 242S2P 167.4 264S2P 182.6 286S2P 197.9		2P204S 150.1 2P228S 167.8 2P252S 185.5 2P276S 203.1 2P300S 220.8	
Operating Voltage(V)		633.6 ~ 821.7 704.0 ~ 913.0 774.4 ~ 1004.3 844.8 ~ 1095.6 915.2 ~ 1186.9		652.8 ~ 846.6 729.6 ~ 946.2 806.4 ~ 1045.8 883.2 ~ 1145.4 960 ~ 1245	
Weight(kg)		730 (for 264S)		TBD	
Dimension (mm)	W	876 x 702 x 2290 (264S)		876 x 712 x 2290 (300S)	
E-Density (Wh/L) with 13 slots dual Rack		129		155	
Recommended application		0.5CP ↓ (1 equivalent cycle per day application)		0.5CP ↓ (1 equivalent cycle per day application)	

※ 264S2P Rack

※ 2P300S Rack

Section 10 – Solar Facility Operation and Maintenance Plan

Operation and Maintenance Plan

Property Location: Various Lots off of Pine Meadow Road
Northfield, Massachusetts

Property Owners: Hopping Ahead LLC
496 Pine Meadow Road
Northfield, Massachusetts 01360

Project Developer: BWC Pine Meadow Brook, LLC
C/O BlueWave Capital
111 Huntington Ave, Suite 650
Boston, Massachusetts 02119

Solar Array Operation and Maintenance Plan During Construction

- Contractor shall provide Building Inspector, Police Department and Fire Department with emergency contact information, including supervisor's names, addresses and telephone numbers.
- Contractor shall comply with all requirements of the Police and Fire Departments regarding emergency access to the job site.
- Contractor shall be required to post and maintain required signage at the job site.
- Contractor shall keep copies of any Town or State permits & approvals on site.
- Contractor activities shall occur between the hours of 7:00 a.m. and 5:00 p.m. unless further regulated by the Town.
- Contractor shall secure the site on a daily basis by closing and locking gates.
- Contractor shall keep construction vehicles, including worker's automobiles, from parking on Pine Meadow Road or obstructing access along Pine Meadow Road.
- Contractor shall do its best to minimize disturbance to residential neighbors located on Pine Meadow Road.
- Equipment fueling and maintenance of vehicles shall be performed off-site.

**Post Construction Solar Array
Operation and Maintenance Plan**

- Operation and maintenance of the facility will be done remotely. Any problems detected at the site will be addressed by the Developer.
- Maintenance of the grounds, including mowing, trimming, pruning, replacing vegetation, etc. will be done on an as needed basis.
- Emergency access to the site will be maintained year round, including snow plowing.
- The security fence will be inspected and repaired as needed.
- Cleaning and maintenance of the solar panels and equipment will be done as needed.
- The facility shall be maintained in good condition, including signage, access gates, & locks.

**Post Construction Stormwater Management System
Operation and Maintenance Plan**

1. The contractor shall be responsible for the proper inspection and maintenance of all stormwater management facilities including the continued stabilization of the site until such time as the project is accepted by the owner. Thereafter, the owner shall be responsible for the proper inspection and maintenance of any stormwater facilities in accordance with this operation and maintenance plan.
2. All Structural Best Management Practices (BMP's) including the siltation control should be inspected after every major rainfall event exceeding 1.0-inch for the first 6 months after construction to ensure proper stabilization and construction.
3. Thereafter, regular BMP inspections should be conducted according to the following schedule:

<u>BMP Structure</u>	<u>Inspections per Year</u>
Crushed Stone Edge Drains	2

4. Accumulated silt and sediment ahead of the siltation controls should be removed if the accumulated depth of sediment exceeds one half of the height of the structure.
5. The crushed stone edge drains and infiltration trenches shall be inspected twice per year. If it is determined that the top stone above the filter fabric is silted or compromised, the top

stone shall be removed, any damaged filter fabric shall be removed and replaced and clean stone shall be placed over the filter fabric.

6. All removed sediments are to be properly disposed of at a location to be approved by the Board of Health. Transportation and disposal of sediments shall comply with all local, state and federal regulations.
7. The access driveway into the facility shall be plowed after all snow events to maintain emergency access to the facility. Snow shall be stockpiled within the fenced area and allow to melt on-site and flow overland following natural drainage patterns.
8. The access driveway shall be monitored on a regular basis to insure its suitability for access. Gravel along the access driveway shall be replaced as necessary to maintain suitable access to the array. In addition, the entire facility shall be monitored on a regular basis for any signs of erosion due to stormwater runoff. Eroded areas shall be stabilized as soon as possible.
9. The site shall be monitored to insure proposed drainage patterns are maintained following construction. Should channel flow from runoff develop within the site that requires corrective measures, these measures shall be reviewed with the Planning Board prior to their implementation.
10. The site should be inspected for trash on a regular basis. Any accumulated trash, litter, and discarded materials should be removed.
11. The contractor and the owner shall maintain a BMP Inspection Report following each site inspection as recommended above. The BMP Inspection Report shall identify the date of inspection, the name and contact number of the responsible party, specific structures inspected, specific maintenance require and observations. At a minimum, inspection reports should address the following conditions where applicable:
 1. Embankment Subsidence
 2. Erosion
 3. Cracking of Containment Berm
 4. Inlet/Outlet Conditions
 5. Sediment Accumulations
 6. Slope Stability
12. No hazardous material shall be stored on-site during and/or following construction of the solar array.
13. No fertilizers or herbicides of any kind shall be used or stored on-site during and/or following construction of the proposed solar array, unless authorized and required for the agricultural uses on the property.

Section 11 – Proof of Liability Insurance



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/22/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

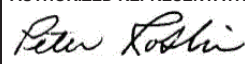
PRODUCER Roblin Insurance, a division of EPIC 144 Gould Street Suite 100 Needham, MA 02494	CONTACT NAME: PHONE (A/C, No, Ext): (781) 455-0700 E-MAIL ADDRESS: certificates@roblininsurance.com	FAX (A/C, No): (781) 449-8976	
	INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED BWC Pine Meadow Brook, LLC, 111 Huntington Avenue, Suite 650 Boston, MA 02199	INSURER A : AXIS Specialty Insurance Company		15610
	INSURER B : RLI		
	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

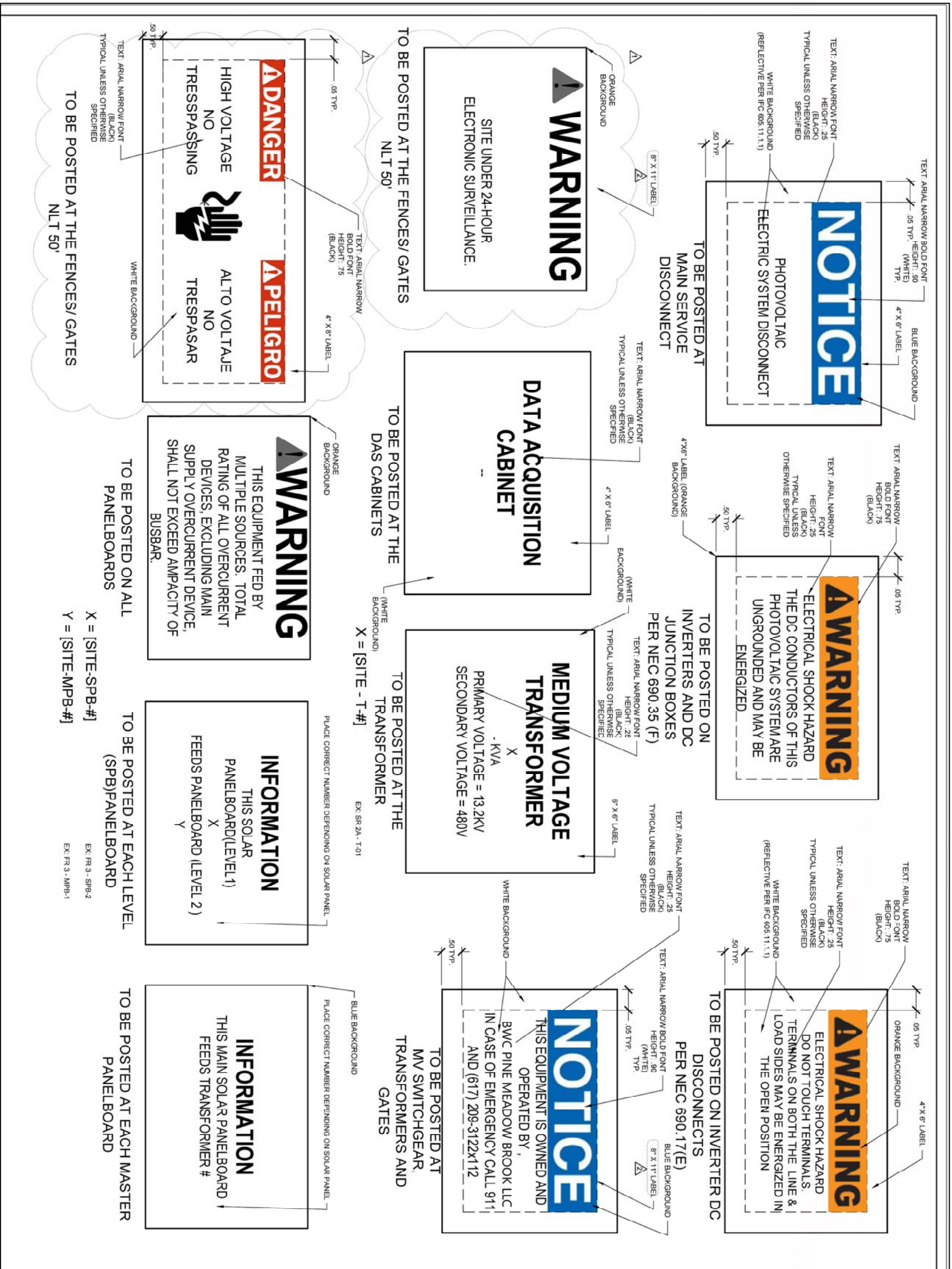
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			3386420	12/14/2020	12/14/2021	EACH OCCURRENCE	\$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 1,000,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ 2,000,000
							PRODUCTS - COMP/OP AGG	\$ 1,000,000
								\$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident)	\$
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE	\$
							AGGREGATE	\$
								\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / N If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE	OTH-ER
							E.L. EACH ACCIDENT	\$
							E.L. DISEASE - EA EMPLOYEE	\$
							E.L. DISEASE - POLICY LIMIT	\$
B	Professional Liabili			E & O	12/14/2020	12/14/2021	E&O	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Issued as Evidence of Insurance.

CERTIFICATE HOLDER Issued as Evidence of Insurance	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

Section 12 – Proposed Signage Detail Plans



FIELD ENGINEERING CO., INC.
 CONSULTING ENGINEERS
 11D INDUSTRIAL DRIVE
 P.O. BOX 1178
 MATTAPANSETT, MA 02739
 TEL: (508) 758-2749
 FAX: (508) 758-2849

PROPOSED SIGNS
 BWC PINE MEADOW BROOK LLC
 PINE MEADOW ROAD
 NORTHFIELD, MASSACHUSETTS

Project No.	2312	Date	12/18/2020
Scale	N.T.S.	Revised	
Issued For	PERMITTING	Sheet	2 OF 2

**Section 13 – ENF Certificate
and Supporting Data for Agricultural Covenant Removal**



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Kathleen A. Theoharides
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
<http://www.mass.gov/eea>

June 19, 2020

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Four Star Farms
PROJECT MUNICIPALITY : Northfield
PROJECT WATERSHED : Connecticut River
EEA NUMBER : 16212
PROJECT PROPONENT : Hopping Ahead, LLC.
DATE NOTICED IN MONITOR : May 20, 2020

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the removal of an Agricultural Covenant (Covenant) from 130.2 acres of Four Star Farms (the Farm) in order to allow additional land uses and opportunities not currently permitted under the Covenant. The ENF describes a potential 10-megawatt (MW) direct-current (DC) dual-use solar project to be constructed on the land. The ENF states that the dual-use solar array would be constructed in such a way that, if pursued, would not removal of land from agricultural production, tree clearing, or result in any direct impacts to wetlands. Preliminary plans for the solar array include two concrete pads and two wells to be used for livestock. One well is proposed on land that currently is held under the Covenant, the other well and a portion of the proposed solar array is proposed on an adjacent parcel of land that is currently owned and operated by the Proponent but is not subject to the Covenant.

Project Site

The project site totals ±130.2 acres¹ located on Four Star Farms in Northfield. The site is currently in active agricultural use growing a variety of crops, including vegetables, hops, turfgrasses, and other grains. The project site is bounded to the west by agricultural land utilized by the Proponent, to the south by Pine Meadow Brook and Cross Road, to the east by Millers Falls Road and undeveloped land, and to the north by Pine Meadow Road and further north by the Connecticut River. The surrounding area is comprised of agricultural land and forested areas. The site contains Bordering Vegetated Wetlands (BVW) and associated Buffer Zone, and Riverfront Area associated with the Connecticut River. The project site is not located in *Estimated and Priority Habitat of Rare Species* as delineated by the Natural Heritage and Endangered Species Program (NHESP) or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth (Inventory).

Environmental Impacts and Mitigation

Potential environmental impacts associated with the project include the release of 130.2 acres of land currently held under an Agricultural Covenant. To mitigate the release of the Agricultural Covenant, the Proponent will provide funds to the Massachusetts Department of Agricultural Resources (MDAR) to be used for acquiring new agricultural covenants. The ENF states any solar project developed on the land currently held under the Covenant would not take the land out of active agricultural use.

Jurisdiction and Permitting

This project is subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(1)(a)(5) because it requires a State Agency Action and results in the release of an interest in land held for agricultural preservation purposes. The project requires a transfer of 130.2 acres currently held under an Agricultural Covenant from MDAR to the Proponent.

The project is not receiving Financial Assistance from the Commonwealth. Therefore, MEPA jurisdiction for any future review would be limited to those aspects of the project that are within the subject matter of any required or potentially required Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a description of existing and proposed conditions, a discussion of project alternatives, preliminary project plans, copies of the Agricultural Covenant and Legislation requiring the transfer of the land held under the Covenant, and identified measures to avoid, minimize and mitigate environmental impacts.

¹ The project site is limited to the area currently held under the Agricultural Covenant and does not contain the entirety of the land the solar array and associated infrastructure is proposed on.

Alternatives Analysis

The ENF described a No-Build Alternative, Partial Release Alternative, Alternative Site Alternative, and the Preferred Alternative. The No-Build Alternative would involve leaving the Agricultural Covenant in place. According to the ENF, this alternative was dismissed as it would not allow the Proponent to pursue the dual use solar array or other land uses to preserve the long-term economic viability of the Farm. The Partial Release Alternative would consist of releasing the Agricultural Covenant from a portion of the subject property. According to the ENF, this alternative was dismissed after consultation with state agencies determined a partial release to not be a viable option. The Alternative Site Alternative evaluated other parcels owned by the Proponent for the development of a solar array. The ENF indicated that these other sites were dismissed due to inefficient size, potential interconnection costs, and the presence of existing buildings and/or permanent conservation restrictions. The ENF indicated that the Preferred Alternative, as described herein, was selected due to site characteristics suitable for development of a solar array and in consideration of the existing legislation to remove the Agricultural Covenant.

Agricultural Land

As previously noted, the entirety of the 130.2-acre project site is currently held under an Agricultural Covenant for the protection and preservation of agricultural land, encouragement of sound soil management practices, preservation of natural resources, and maintenance of land in active agricultural use. The ENF included a copy of the legislation releasing the project site from the Covenant – *An Act Releasing Certain Land in Northfield from the Operation of An Agricultural Covenant* (Legislation). To mitigate this release, the Legislation states the landowner shall pay MDAR a monetary amount determined by the Commissioner of MDAR, not to exceed the funds the landowner originally received as consideration for the Covenant. These funds will be held in trust by MDAR and will be used for acquiring new agricultural covenants.

The ENF states the proposed 10-MW DC dual-use solar array is the maximum potential build-out the Proponent is considering on the project site. The exact layout of the solar array may change following review during local permitting and the interconnection process with the utility company.

Wetland Resources

The project site contains BVW and associated Buffer Zone, and Riverfront Area associated with the Connecticut River. The site also contains areas within the 100-year flood zone. The ENF states that the proposed solar project will not directly impact wetland resource areas. Comments from MassDEP state that the conversion of, or dual-use of agricultural activities with solar generation is subject to the Wetlands Protection Act (WPA) and regulations (310 CMR 10.00). Further, MassDEP states that any ground disturbance, including the placement of solar panels or racks or fencing at or below the floodplain elevation will require the filing of a Notice of Intent, and must comply with relevant performance standards of the WPA. Comments from MassDEP urge the Proponent to formally delineate all resource areas on the property and to submit an Abbreviated Notice of Resource Area Delineation (ANRAD) to the Northfield Conservation Commission prior to advancing any designs for future non-agricultural uses of the project site (including dual-use activities). I refer the Proponent to comments

from MassDEP for more information regarding development in or adjacent to wetland resource areas and their relevant regulations.

Climate Change

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and directs Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change.

Adaptation and Resiliency

The Northeast Climate Science Center at the University of Massachusetts at Amherst has developed projections of changes in temperature, precipitation, and sea level rise for Massachusetts. This data is available through the Climate Change Clearinghouse for the Commonwealth at www.resilientma.org. By the end of the century, the average annual temperature in the Connecticut River Drainage Basin is projected to rise by 5.09 to 9.48 degrees Fahrenheit (°F), including an increase in the number of days with temperatures over 90 °F from a minimum of 24.84 days and a maximum up to 66.66 days compared to the 1971-2000 baseline period. During the same time span, the average annual precipitation is projected to increase by a minimum of 3.88 to a maximum of 6.01 inches, which may be associated with more frequent and intense storm events. The Massachusetts State Hazard Mitigation & Climate Adaptation Plan (2018) may provide additional data and resources applicable to the project site.

I encourage the Proponent to consider future climate change conditions as the design of the project is finalized and proceeds to permitting. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions and effects when issuing permits, licenses, and other administrative approvals and decision pursuant to M.G.L. c. 30, § 61. I encourage the Proponent to consider the potential impacts of climate change on the final design of this project. The project will create a limited amount of new impervious surfaces; however, portions of the site are located within the floodplain. Given the potential for increased storm frequency and intensity, consideration of the potential resiliency and, as necessary, design refinements to facilitate adaptation to future conditions, is warranted.

Construction Period

According to the ENF, the project will be completed in one phase starting in June 2020, ending in June 2021. All construction activities should be managed in accordance with applicable MassDEP regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that

its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). If oil and/or hazardous materials are found during construction, the Proponent should notify MassDEP in accordance with the Massachusetts Contingency Plan (310 CMR 40.00). All construction activities should be undertaken in compliance with the conditions of all State and local permits.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with State Agencies I have determined that an EIR is not required.

June 19, 2020

Date

K. Theoharides

Kathleen A. Theoharides

Comments received:

06/09/2020 Massachusetts Department of Environmental Protection (MassDEP) - Western Regional Office (WERO)

KAT/ELM/elm



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

June 8, 2020

Kathleen A. Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
Massachusetts Environmental Policy Act Office
Eva Murray, EEA No. 16212
100 Cambridge Street, 9th Floor
Boston, MA 02114-2524

Re: Northfield
Four Star Farms ENF

Dear Secretary Theoharides,

The Massachusetts Department of Environmental Protection (MassDEP), Western Regional Office (WERO) appreciates the opportunity to comment on the Environmental Notification Form (ENF 16212) submitted for the removal of an existing Agricultural Covenant for property at 496 Pine Meadow Road in Northfield, Massachusetts. MassDEP attended a virtual site visit on June 3, 2020.

I. Project Description:

The project involves the transfer of 130.2 acres currently held under an Agricultural Covenant back to the owner. The Proponent, Hopping Ahead, LLC, operates Four Star Farms at the site where a variety of crops are grown including vegetables, hops, turfgrasses, and other grains. Removal of the Agricultural Covenant will allow the Proponent to explore additional land uses while continuing to use the land for agricultural purposes. The project includes the potential for dual-use solar array on some of the parcels allowing the land under the array to continue to be used for agriculture. There is currently no development or alteration proposed, only conceptual future uses.

Environmental impacts associated with this project potentially include:

- 130.2 total site acreage
- 200,000 SF Bordering Land Subject to Flooding - Temporary
- 0.11 new acres of impervious area (potential concrete pads)
- Less than 10 vehicle trips per day – current, no change
- 40,000 gallons per day water withdrawal for irrigation – current, no change
- > 1 mile length of water mains – current, no change

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

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II. Required Mass DEP Permits and/or Applicable Regulations

Wetlands

310 CMR 10.000

Air Pollution

310 CMR 7.00

Solid Waste

310 CMR 16.00

Hazardous Waste

310 CMR 30.00

Bureau of Waste Site Cleanup

310 CMR 40.000

III. Permit Discussion

Bureau of Water Resources

Wetlands

Certain uses and maintenance within existing agricultural fields for commercial agricultural purposes may be considered exempt activities under the Wetlands Protection Act (Act). For the purpose of providing guidance now with respect to the contemplated future uses that are not a part of this filing, MassDEP notes that the conversion of or "dual use" of such areas (i.e., "Land in Agricultural Use" as described under the definition of "Agriculture" at 310 CMR 10.04) to solar generation is fully subject to the Wetlands Protection Act and regulations.

The submitted project plans suggest Bordering Land Subject to Flooding (BLSF) occurs on the southern parcel (i.e., "Array A"), to the north of Cross Road, coming on to the site from both the Connecticut River and Pine Meadow Brook. MassDEP notes that any ground disturbance, which includes but is not limited to the placement of any panels or racks or fencing at or below floodplain elevation, requires the filing of a Notice of Intent, and any solar-array related work will need to comply with the BLSF performance standards. Actual elevation survey data must be obtained for the project using one defined elevation datum.

Again, for the purpose of guidance relative to potential future use of the site, any alteration within the 200 Foot Riverfront Area of Pine Meadow Brook, including solar-array related work within this Riverfront Area must also comply with the relevant performance standards and be permitted under the Act at that time.

Various aerial photos suggest the presence of hydric soils on the parcels proposed for the solar farm. The wetlands regulations provide that a disturbed site (such as an agricultural field) may be considered a Bordering Vegetated Wetland, at the time of any proposed

change in land use. Where an area has been disturbed (e.g. by cutting, filling, or cultivation), the boundary is the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, a predominance of wetland indicator plants, or credible evidence from a competent source that the area supported or would support under undisturbed conditions a predominance of wetland indicator plants prior to the disturbance. Continued agricultural activities consistent with historic use alone would not be such a change in use.

The project proponent is urged to formally delineate all resource areas on the property (in accordance with the specific methods, outlined in the Wetlands Regulations, for each) and to submit an Abbreviated Notice of Resource Area Delineation (ANRAD) to the Northfield Conservation Commission prior to advancing any designs for future non-agricultural uses of the project site.

Bureau of Air and Waste

Air Quality

Construction Activities

The construction and demolition activity must conform to current Air Pollution Control Regulations. The proponent should implement measures to alleviate dust, noise, and odor nuisance conditions that may occur during the construction and demolition activities. Such measures must comply with the MassDEP's Bureau of Air and Waste (BAW) Regulations 310 CMR 7.01, 7.09, and 7.10.

Solid Waste

The proponent shall properly manage and dispose of all solid waste generated by this proposed project pursuant to 310 CMR 16.00 and 310 CMR 19.000.

Solid and Hazardous Waste Management (Soil Management)

The following activities may be performed at the site:

1. Incidental vegetation removal by cutting brush necessary to provide perimeter pathways and installation of fencing around the facility.
2. Solar module and electrical infrastructure.
3. Solar panel substructure and footings.
4. Two Concrete pads for accompanying electrical equipment.

If soil contamination is discovered and if the material demonstrates characteristics of hazardous waste or the presence of other contaminants, the Proponent is referred to MassDEP policy COMM-97-001 "*Reuse and Disposal of Contaminated Soil at Massachusetts Landfills*".

Hazardous Waste

Any hazardous wastes generated by the construction activities must be properly managed in accordance with 310 CMR 30.0000; the Proponent must ensure that such generation is properly registered with EPA.

Bureau of Waste Site Cleanup

MassDEP received a Response Action Outcome (RAO) or Permanent Solution Statement dated June 25, 2009 for Release Tracking Number (RTN) 1-0017099 for an approximate 13-gallon release from a pole mounted transformer containing mineral oil dielectric fluid (MODF) and polychlorinated biphenyls (PCBs) located at the subject site. If soil and/or groundwater contamination is encountered during construction of the potential solar array development, the proponent should retain a Licensed Site Professional (LSP); the MCP details procedures to follow for the parties conducting work. MassDEP staff are available for guidance.

In addition, a spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction of the solar array activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential releases. This plan is of particular importance due to the close proximity of work at the Connecticut River.

If you have any questions regarding this comment letter, please do not hesitate to contact Kathleen Fournier at (413) 755-2267.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Michael Gorski
Regional Director

cc: MEPA File

Acts (2018)

Chapter 224

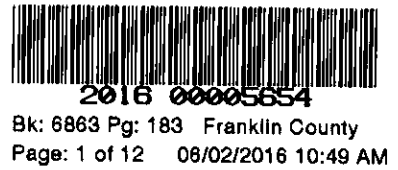
AN ACT RELEASING CERTAIN LAND IN NORTHFIELD FROM THE OPERATION OF AN AGRICULTURAL COVENANT.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:

SECTION 1. Notwithstanding any general or special law to the contrary, under section 22 of chapter 20 of the General Laws, the commissioner of agricultural resources shall execute a release of the agricultural covenant held by the commonwealth, acting on its behalf, on certain land in the town of Northfield owned currently by Hopping Ahead LLC, (“Landowner”). Title was acquired by a covenant recorded in Book 6863, Page 183, at the Greenfield Registry of Deeds.

SECTION 2. As a condition precedent to the release authorized in section 1, the current landowner shall pay to the department of agricultural resources a monetary amount as determined by the commissioner, provided such sum shall not exceed the funds the landowner originally received as consideration for said covenant. Monies received by the commonwealth for said release under this section, shall be held in trust by the department, to be expended only for acquiring new agricultural covenants.

Approved, August 9, 2018.



COMMONWEALTH OF MASSACHUSETTS
AGRICULTURAL COVENANT

Grantor: Hopping Ahead, LLC
Massachusetts Limited Liability Company

Premises:
Pine Meadow Road
Northfield, MA

Hopping Ahead, LLC, Massachusetts Limited Liability Company, with a business address of 496 Pine Meadow Road, Town of Northfield, Franklin County, Massachusetts, 01360, (the Grantor), for good and valuable consideration paid, receipt of which is hereby acknowledged, **grant to the Commonwealth of Massachusetts**, acting through the Commissioner of the Department of Agricultural Resources (the Grantee or Commissioner), with an address at 251 Causeway Street, Suite 500, Boston, Massachusetts, 02114-2151, its successors and assigns, an Agricultural Covenant for a period of Ten (10) Years commencing upon the execution of this document (Agricultural Covenant or Covenant) by the Grantee on the Premises as defined herein, in accordance with the following terms and conditions.

I. STATEMENT OF PURPOSE

By obtaining this Agricultural Covenant, it is the intent of the Commonwealth to protect and preserve agricultural lands, encourage sound soil management practices, preserve natural resources, and maintain land in active agricultural use through improving the agricultural economic viability of the Premises. No activity detrimental to the actual or potential Agricultural

Use of the Premises, or detrimental to water conservation, soil conservation, or to good agricultural and/or forestry management practices or which is otherwise wasteful of the natural resources of the Commonwealth of Massachusetts shall be permitted.

II. DEFINITIONS

When used throughout this entire Covenant, the following words or phrases shall have the following meaning:

1. **Abandoned:** land that has not been actively utilized for agricultural uses for a period exceeding two years unless the non-activity is recommended in a current United States Department of Agriculture (USDA)/Natural Resource Conservation Service or successor USDA entity (USDA/NRCS) plan.
2. **Agricultural Use:** the raising of animals, including but not limited to, dairy cattle, beef cattle, poultry, sheep, swine, horses, ponies, mules, goats, bees and fur-bearing animals, for the purpose of selling such animals or a product derived from such animals in the regular course of business; or when primarily and directly used in a related manner which is incidental thereto and represents a customary and necessary use in raising such animals and preparing them or the products derived there from for market, as defined in M.G.L. c. 61A, §1, as amended. Also horticultural uses, the raising of fruits, vegetables, berries, nuts and other foods for human consumption, feed for animals, tobacco, flowers, sod, trees, nursery, or greenhouse products, and ornamental plants and shrubs for the purpose of selling such products in the regular course of business; or when primarily and directly used in raising forest products under a program certified by the state forester to be a planned program to improve the quantity and quality of a continuous crop for the purpose of selling such products in the regular course of business; or when primarily, directly used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products and preparing them for market, as defined in General Laws, Chapter 61A, §2, as amended.
3. **Farm Viability Plan:** a business plan prepared by the Grantee, with the cooperation of the Grantor, that contains a course of action for managing and improving agricultural operations on the Premises.
4. **Premises:** Approximately 130.24+/- acres of land including any buildings thereon located at or near Pine Meadow Road, the Town of Northfield, Franklin County, Massachusetts, as more fully described in Exhibit A, attached hereto and incorporated by reference into this document. **Reference is made to the deed recorded at the Franklin District Registry of Deeds in Book 6479 Page 201.**

5. **Permanent Structure:** any structure that requires the grading of soil, or the excavation for footings or foundations or which substantially alters or otherwise affect the soil profile.

6. **Temporary Structure:** a structure that does not have a permanent foundation, or does not substantially alter or otherwise affect the soil profile.

III. TERMS AND CONDITIONS

A. RETAINED RIGHTS

Notwithstanding any provision of this instrument to the contrary, the Grantor(s) hereby reserves to and for themselves the customary rights and privileges of ownership not inconsistent with the Statement of Purpose herein, including but not limited to, the right to:

- (1) Privacy and to carry out normal agricultural activities.
- (2) The maintenance and use of existing trails and farm and wood roads on the Premises substantially in their present condition or as reasonably necessary for their continued use for agricultural uses or other uses as designated in a Farm Viability Plan prepared by the Grantee.
- (3) The construction or placement of Temporary Structures for Agricultural Uses or other uses as designated in a Farm Viability Plan prepared by the Grantee.

B. PROHIBITED USES

The Grantor covenants that the Premises will at all times be held, used and conveyed subject to, and not in violation of, the following restrictions:

- (1) No use shall be made of the Premises, and no activity thereon shall be permitted, which is inconsistent with the Statement of Purpose, or that is not provided for in Section III hereof, Terms and Conditions.
- (2) No non-agriculturally related uses or Temporary or Permanent Structure shall be constructed, placed or permitted to remain on the Premises, except those uses or

structures existing on the Premises at the time of the execution of this Covenant, or other uses as designated in a Farm Viability Plan prepared by the Grantee or those structures permitted pursuant to Section C of this Covenant.

- (3) No refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, radio-active or hazardous waste or other substance or material whatsoever shall be placed, stored, dumped or permitted to remain on the Premises, except as required for the use of the Premises for normal agricultural activities.

C. USES WHICH REQUIRE PRIOR WRITTEN APPROVAL

The following uses are not permitted without the prior written approval of the Grantee, and said approval may be granted, with such conditions as the Grantee deems appropriate, provided that such uses do not defeat or derogate from the intent of this Covenant, as set forth in the Statement of Purpose above:

- (1) The construction or placing of a residential dwelling, including appurtenant improvements and amenities, such as driveway, septic system, or any other underground sanitary system, water system, or other utility, substantially for use by the Grantor, or a family member of Grantor who is actively and substantially engaged in agricultural operations on the Premises.
- (2) The construction or placing of Permanent Structures for agriculturally related uses, including related retail sales, unless such construction or placing is contained in an approved Farm Viability Plan.
- (3) The excavation, dredging, depositing or removal from the Premises of loam, peat, gravel, soil, sand, rock or other mineral resources, or natural deposits in accordance with a USDA/NRCS Plan.
- (4) The subdivision, recording of a subdivision plan, partition, or any other division of the Premises, or any portion thereof, into two or more parcels, even in the event that the Premises is comprised of one or more separate deeded parcels at the time of execution of this Covenant.
- (5) The performing of commercial non-Agricultural Uses and activities for which the Grantor receives payment, compensation, or any other type of monetary or non-monetary remuneration unless the Grantor:

- (a) provides the Grantee with adequate information, plans, agreements or other documents necessary to evaluate the requested activity or use;
- (b) the Premises is being actively utilized for commercial agriculture;
- (c) the activity or use is minor, ancillary and subordinate to the Agricultural Use of the Premises; and
- (d) such uses and activities are not inconsistent with the Statement of Purpose of this Agricultural Covenant.

D. ENFORCEMENT OF THE TERMS AND CONDITIONS

- (1) The Grantor grants to the Grantee, and its successors at law, the right to enter the Premises in a reasonable manner and at reasonable times, for the purposes of:
 - (a) inspecting the Premises to determine compliance with this Covenant and any approvals given hereunder, and
 - (b) enforcing this Covenant,
- (2) In the event of a violation of the terms of this Covenant, the Grantee may pursue any remedy available at law, in equity or otherwise, including injunctive relief.
- (3) The rights hereby granted shall be in addition to, and not in limitation of, any other rights and remedies available to the Grantee for enforcement of this Covenant.

IV. AFFIRMATIVE DUTY TO FARM

The Premises shall remain in active agricultural use and no part thereof shall be abandoned, except in accordance with a USDA/NRCS Farm Management Plan, approved by the conservation district for the locality in which the Premises is located.

V. AUTHORIZATION

The foregoing Covenant is authorized by Massachusetts General Laws, Chapter 20, Section 22, as amended, and otherwise by law, and is intended to ensure the protection and preservation of agricultural lands as expressed herein.

This Covenant shall be administered on behalf of the Grantee by the Commissioner and shall be enforced by the Commissioner in his/her sole discretion. Nothing herein shall impose upon the Grantee any duty to maintain the Premises in any particular state or condition, notwithstanding the Grantee's acceptance hereof.

Except as otherwise provided herein, this Covenant does not grant to the Grantee, the public, or any other person any right to enter upon the Premises.

This Covenant is in gross, exists for a period of years and is not for the benefit of or appurtenant to any particular land owned by the Grantee. Grantee may assign its rights under this Covenant to another governmental or charitable corporation or trust which has power to acquire interests in land and whose purposes include conservation of agricultural land and natural areas. The burdens and obligations of Grantor under this Covenant run with any transfer of the Premises and shall be binding upon all successors in title.

If any section or provision of the Covenant shall be held to be unenforceable by any court of competent jurisdiction, this Covenant shall be construed as though such section had not been included in it. If any section or provision of the Covenant shall be subject to two constructions, one of which would render such section or provision invalid, then such section or provision shall be given the construction that would render it valid. If any section or provision of this Covenant is ambiguous, it shall be interpreted in accordance with the rules, regulations, policy and provisions, as amended of Grantee and the provisions expressed in the General Laws, Chapter

20, Section 22, as amended, or in regulations adopted by Grantee pursuant thereto. This instrument is not a deed. It does not purport to transfer a fee interest to the Grantee. No Massachusetts deed excise stamps are affixed hereto as none are required by General Laws 64D, Section 1, as amended.

WITNESS the execution hereof under seal this 3 day of March, ²⁰¹⁶2015.

HOPPING AHEAD, LLC, by

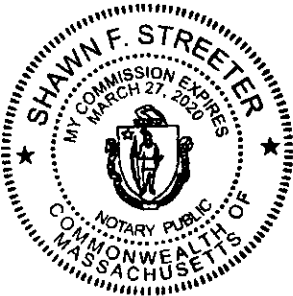
Eugene A. L'Etoile

EUGENE A. L'ETOILE, Manager

COMMONWEALTH OF MASSACHUSETTS

Franklin, ss March 3, 2016

On this 3 day of March, 2016, before me, the undersigned Notary Public, personally appeared Eugene A. L'Etoile who proved to me through satisfactory evidence of identification, namely MA Dr. Lic (driver's license, personal knowledge etc.), to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.



Shawn F. Streeter

(print name) Shawn F. Streeter, Notary Public

My Commission Expires: March 27, 2020

WITNESS the execution hereof under seal this 3 day of March, 2016.

HOPPING AHEAD, LLC, by

Bonnie Tucker L'etoile
BONNIE TUCKER L'ETOILE, Manager

COMMONWEALTH OF MASSACHUSETTS

Franklin, ss March 3, 2016

On this 3 day of March, 2016, before me, the undersigned Notary Public, personally appeared Bonnie Tucker L'Etoile who proved to me through satisfactory evidence of identification, namely MA Dr. Lic (driver's license, personal knowledge etc.), to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.



Shawn F. Streeter


(print name) Shawn F. Streeter, Notary Public

My Commission Expires: March 27, 2020

ACKNOWLEDGEMENT OF THE COMMONWEALTH OF MASSACHUSETTS

The undersigned Commissioner of Agricultural Resources of the Commonwealth of Massachusetts hereby certifies that the foregoing Agricultural Covenant for a Period of Ten (10) Years granted to the Commonwealth of Massachusetts with respect to parcels of land belonging to Hopping Ahead, LLC, located in Northfield, Franklin County, Massachusetts described therein, has been acquired pursuant to Massachusetts General Laws, Chapter 20, section 22.

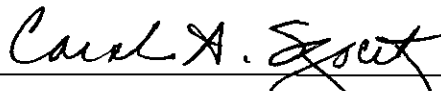
Date: March 8, 2016

By: 
JOHN LEBEAUX, Commissioner
Department of Agricultural Resources

COMMONWEALTH OF MASSACHUSETTS

, ss March 8, 2016

On this 8th day of March, 2016, before me, the undersigned Notary Public, personally appeared the above-named John Lebeaux who proved to me through satisfactory evidence of identification, namely personal knowledge, to be the person whose name is signed on this document, or the preceding or the attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.


Carol A. Szocik, Notary Public

My Commission Expires:



CAROL A. SZOCIK
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 20, 2020

EXHIBIT A (Page 1 of 2)

Parcel 1: BEGINNING at an iron pipe in the westerly line of the Central Vermont Railroad, said pipe being further N. 68° 51' 10" W. a distance of 82.56 feet from an iron pipe in the easterly line of Central Vermont Railroad marking the northwesterly corner of Parcel No. 1 described above;

THENCE S. 18° 57' 00" W. a distance of 357.82 feet to an iron pipe;

THENCE N. 71° 03' 00" W. a distance of 41.25 feet to an iron pipe;

THENCE S. 18° 57' 00" W. a distance of 169.95 feet to an iron pipe;

THENCE S. 71° 03' 00" E. a distance of 49.50 feet to an iron pipe, the last four courses being along said Central Vermont Railroad;

THENCE N. 76° 21' 00" W. a distance of 403.67 feet to a stone bound;

THENCE N. 00° 25' 40" E. a distance of 188.54 feet to a stone bound;

THENCE N. 00° 19' 30" E. a distance of 431.58 feet to a stone bound;

THENCE S. 68° 51' 10" E. a distance of 591.86 feet to the point of beginning.

Containing 6.164 acres.

Parcel 2: Bounded west by the road leading through Pine Meadow; north by land formerly of Charles Tenney, now by the third tract hereinafter described; east by land formerly of Raymond Nims; and south by land of Charles Tenney. Containing 6 1/2 acres.

Parcel 3: Beginning at a stone bound on Montague Avenue, so-called, in said Northfield, at the southeast corner of land of Michael Sytnyk; thence easterly along Montague Avenue, so-called, to the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad, thence northerly along the line of said Railroad location to land now or formerly of one Donahue; thence north 75° 30' west 390 feet, more or less, to a stone bound; thence north 0° 41' east 188.66 feet to a stone bound; thence south 83° 58' west 1,464.07 feet along land of Dymersky to the Meadow Road, so-called; thence southerly along the Pine Meadow Road to a stone bound at land of Sytnyk; thence north 84° 22' east 425.33 feet to a stone bound; thence continuing in said direction 434.96 feet to a stone bound;

thence south 5° 13' east 127.91 feet to a stone bound; thence south 51° 52' west 170.15 feet to a stone bound; thence south 26° 37' west 102.84 feet to a stone bound; thence south 18° 37' west 128.1 feet to a stone bound at the place of beginning. Containing 73.61 acres, more or less.

EXHIBIT A (Page 2 of 2)

Parcel 4: Beginning at a corner of land of J. Podlinski on the Central Vermont Railroad location, formerly the Vermont and Massachusetts Railroad location; thence northerly along said location to the Pine Meadow Road, so-called; thence southwesterly along the Pine Meadow Road, so-called, to land of Charles A. Parker; thence south $0^{\circ} 19'$ east 53.6 feet to an iron pin; thence south $4^{\circ} 40'$ west 168.30 feet to an iron pin along land of said Parker; thence south $1^{\circ} 39'$ east 144.84 feet to an iron pin along land of said Parker; thence south $0^{\circ} 49'$ west 130.12 feet along land of said Parker to an iron pin; thence south $0^{\circ} 56'$ east 186.78 feet to an iron pin along land of said Parker; thence south $64^{\circ} 23'$ east 40.28 feet along land of said Parker to an iron pin; thence south $64^{\circ} 43'$ east 781.8 feet along land of Podlinski to the place of beginning. Containing 43.98 acres, more or less.

For grantors title see Book 6489 Page 201.

ATTEST: FRANKLIN, Scott A. Cote Register