PULLMAN &COMLEY LLC
ATTORNEYS

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September 26, 2017

VIA ELECTRONIC MAIL AND U.S. MAIL

Melanie Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Petition 1294 – Petition of LSE Canes Venatici LLC for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need Is Required for the Construction, Operation and Maintenance of Solar Photovoltaic Facilities in East Windsor, Connecticut (NORCAP North)

Dear Ms. Bachman:

My client, LSE Canes Venatici LLC, hereby submits an original and 15 copies of its D&M Plan in connection with the above-referenced Petition.

If you have any questions concerning this submittal, please contact the undersigned at your convenience. I certify that copies of this submittal have been made to all parties on the service list connected to this Petition.

Sincerely,

Lee D. Hoffman

Enclosures

cc: Service List for Petition 1294

LODESTAR ENERGY

D & M Plan

LSE Canes Venatici Project

NORCAP North

84 Wapping Road, East Windsor, CT

Lodestar Energy

3 Ellsworth Place, Suite 122

Avon, CT 06001

LODESTAR ENERGY

1.0 Facility Description

The LSE Canes Venatici Project is an approximately 2MW AC solar farm proposed at 84 Wapping Road in East Windsor, CT. The Solar array is to be constructed on an approximately 12 acre site, of which 10 acres will be covered in panels. The purpose of the facility is the generation of electricity. The facility will be interconnected to the existing 23 kV overhead distribution circuit that runs along Wapping Road, which is part of Eversource's distribution system.

The project is a ground mounted solar array. The solar panels are mounted on simple fixed tilt steel structures consisting of posts, beams, rails and bracing. Vertical steel posts will be driven into the ground to a depth of approximately 8 feet to anchor the structures. The solar panels will be connected to inverters mounted on the racking structure via copper wire. The inverters will connect to electric panels, transformers, and then switchgear at the array location via underground wire. Output from the switchgear will be connected overhead, along the facility access road to the utility owned poles and metering structure at the entrance of the facility access road.

The estimated useful project life time is 20 years or more. The following list is a summary of the site features:

- 2MW AC solar array consisting of over 9,000 silicon based solar panels (modules)
- Driven post steel and aluminum racking system
- Chain link security fence surrounding the array perimeter.
- Approximately 23 string inverters
- Copper and aluminum wire
- Underground conduit at the array location
- Concrete equipment pad areas
- Gravel access road
- Metal security gates at array location.

2.0 Requirements for a D&M Plan

In approving the NORCAP North Petition, the Siting Council required the preparation of a Development and Management (D&M) Plan for the project. The D&M Plan was to contain the following elements:

- Final site plans for the development of the facility;

- A phasing plan for construction activities to avoid disturbance of no more than five acres at any one time;
- An Erosion and Sedimentation Control Plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control*, as amended;
- A Stormwater Management Plan consistent with the *2004 Connecticut Stormwater Quality Manual*, as amended; and
- Provision to maintain grasses and forbs within the proposed sedimentation basin by mowing the basin once per year, outside of the wood turtle's active season of March 1 to November 1.

These items are discussed in turn.

2.1 Final Site Plans

Final site plans, consisting of six detailed drawings, along with a cover sheet, are included as part of this D&M Plan, and certain drawings are discussed in greater detail below.

2.2 Phasing Plan for construction activities

Sheet six has been added to the final site plans. This sheet includes Erosion and Sediment Control Notes, which provide a more elaborate narrative description of the proposed stabilization and erosion control measures. In addition a discussion of the modification of construction sequence (also provided on sheet six) better defines project phasing.

In addition, modifications have been made to other construction drawings in order to better demonstrate compliance with stormwater and erosion concerns. For example, modifications to the drawings have been made to specifically delineate where additional topsoil will be needed and what the topsoil and seeding requirements will be.

In addition, the Site Plan in the packages of drawings has been revised to provide for additional perimeter exclusionary silt fencing, to be completed in accordance with the Turtle Protection Plan for the facility. The drawing also depicts intermediate rows of silt fencing to provide additional sediment control for the entire site. This was done because the majority of the site is disturbed with bare soil prior to construction commencing.

As noted above, the current condition at the site consists of bare soil that had previously been disturbed before any construction activity was to be commenced in connection with the development of this project. Therefore, the Siting Council's condition 1.b. in its approval of the Project (concerning the phasing of the project construction) presents difficulties. The exposed bare soils that exist at the project site currently are in excess of five acres in size. More importantly, all of the disturbed areas need to be regraded before they can be stabilized. In short, the work that will be done for project construction

will have a beneficial effect on stormwater issues and soil erosion, but such activities cannot physically be undertaken in less than five acres plots.

2.3 Erosion and Sedimentation Control

Fortunately, the site in question possesses unique features which will limit the potential for erosion and sedimentation issues as a result of disturbance. The underlying soil at this site consists of sand and gravel, which are good for infiltration and limit runoff. In addition, the runoff from this site currently flows through an existing sediment basin which has developed into an isolated wetland over the years. This is an area which must be protected.

Such protection shall be accomplished to protect the downstream receptors at the site. To do so, the first phase of construction will include the installation of perimeter silt fencing and the construction of a temporary sedimentation basin to protect the downgradient wetlands. The sedimentation basin will be sized so that it can accommodate the entirety of the site, since the site has already been disturbed and consists primarily of bare soil.

Intermediate rows of silt fencing will then be placed across the site at certain locations (as detailed in the site plans) in order to limit the amount of sediment-laden runoff that reaches the sedimentation basin. These intermediate rows of silt fence will be relocated during grading operations so that the fencing does not interfere with the grading operations and adequately limits any potential runoff issues associated with such grading. Upon establishment of final grades, disturbed areas will receive topsoil and be seeded and mulched as soon as possible to stabilize the soils. The totality of these activities will limit sedimentation as much as feasible given the current characteristics of the site and the fact that the disturbance at the site exceeds five acres prior to the commencement of any construction activities.

In short, by pursuing these activities, and as outlined in greater detail in the attached site plans, the Project will remain in compliance with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control*. In addition, it should be noted that the Project will be registered under the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities prior to the commencement of construction. The Project will also submit a Stormwater Pollution Control Plan to DEEP as part of this process.

2.4 Stormwater Management

As stated above, the Project will register for the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities prior to the commencement of construction and submit a Stormwater Pollution Control Plan to DEEP.

In addition, the revised site plans provide the necessary information to demonstrate the Project's compliance with the *2004 Connecticut Stormwater Quality Manual*, with a few limited exceptions. The site plans admittedly do not contain the calculations typically used to calculate peak flow reduction, groundwater recharge and pollutant reduction. However, there is a reason why such calculations are not included.

As referenced in the Petition for this project (Petition No. 1294), this site has been previously used as a gravel mine. As a result of these mining operations, the majority of the site currently consists of bare soils with little to no vegetation. The construction of the Project will actually result in an improvement of stormwater concerns.

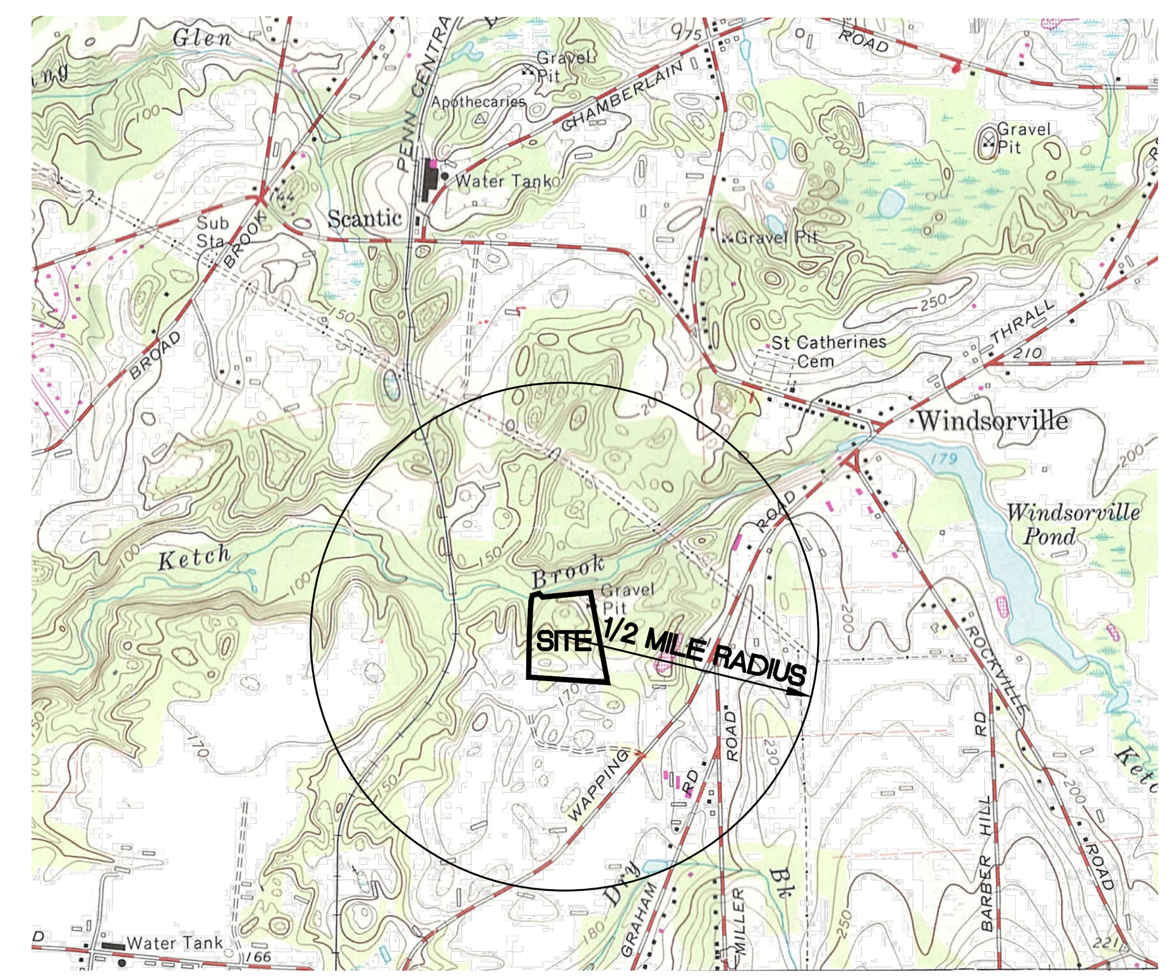
Because the Project will establish vegetation over formerly bare soils, there will be an increase in groundwater recharge and a decrease in runoff. Moreover, for what runoff that will exist at the Project, that runoff will be cleaner than it has been previously due to the filtering and stabilizing characteristics associated with such vegetative cover. Given these qualitative improvements, the Project's engineering team does not believe that quantitative calculations are warranted. Thus the attached site plans, along with this explanation are sufficient to demonstrate that stormwater will be controlled at the site.

2.5 Mowing Requirements

Once seeding has occurred and the cover vegetation has begun growing, the site will be inspected on a regular basis and mowing will occur at least once per year. Given the potential for wood turtles to be present at the site, mowing will not occur during the period of March 1 through November 1 of each year.

Norcap North Solar Array

Wapping Road
East Windsor, Connecticut



LOCATION MAP
1"=2000'

LODESTAR ENERGY

Applicant

LSE Canes Venatici LLC
23 Salem Street
Wakefield, MA 01880

Owner

Northern Capital Region Disposal Facility
321 Olcott Street
Manchester, CT 06040

Prepared By

RUSSO
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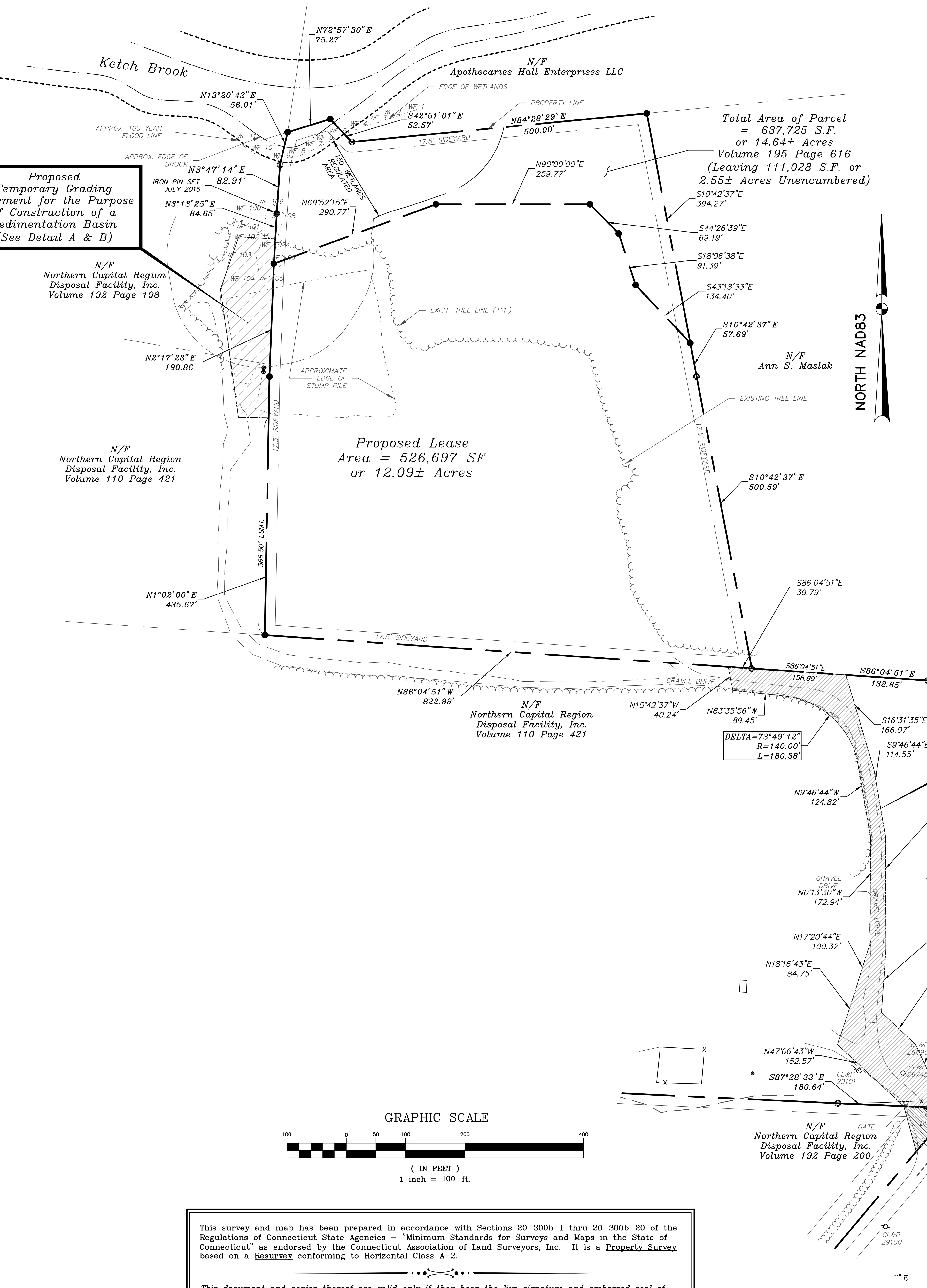
DRAWING INDEX



Notes:

1. Portion of Subject Parcel lies in Inland Wetlands as shown hereon;
2. Portion of Parcel lies in a Special Flood Hazard Zone per Flood Insurance Rate Map Hartford County Connecticut Community Panel 09003C0245F effective date September 26, 2008 as shown hereon;
3. Horizontal datum based on NAD83 Elevations based on NGVD88;
4. All underground utility locations on this plan are approximate and may not be complete. Anyone using this information without verifying the locations does so at their own risk. No construction will be done on this site prior to utility mark out. "Call Before You Dig 1-800-922-4455".

Map References:

1. "Boundary Survey Prepared For Anna S. Maslak & Jean Martin East Windsor, connecticut 7-28-88" by Gardner & Peterson;
2. Map Prepared For Anne S. Maslak Division Of Land Wapping Road East Windsor CT 4-12-96 Rev. 11-10-96" By Anchor Engineering;
3. "ALTA/NSPS Land Title Survey, Norcap North Solar Array Prepared for Norcap North LLC Wapping Road East Windsor Connecticut. scale 1"=100', Dated May 25, 2016 prepared by J.R. Russo & Associates"

Deed Reference:

Quit Claim Deed From Anne S. Maslak to Northern Capital Regional Disposal Facility, Inc. Volume 195 Page 616

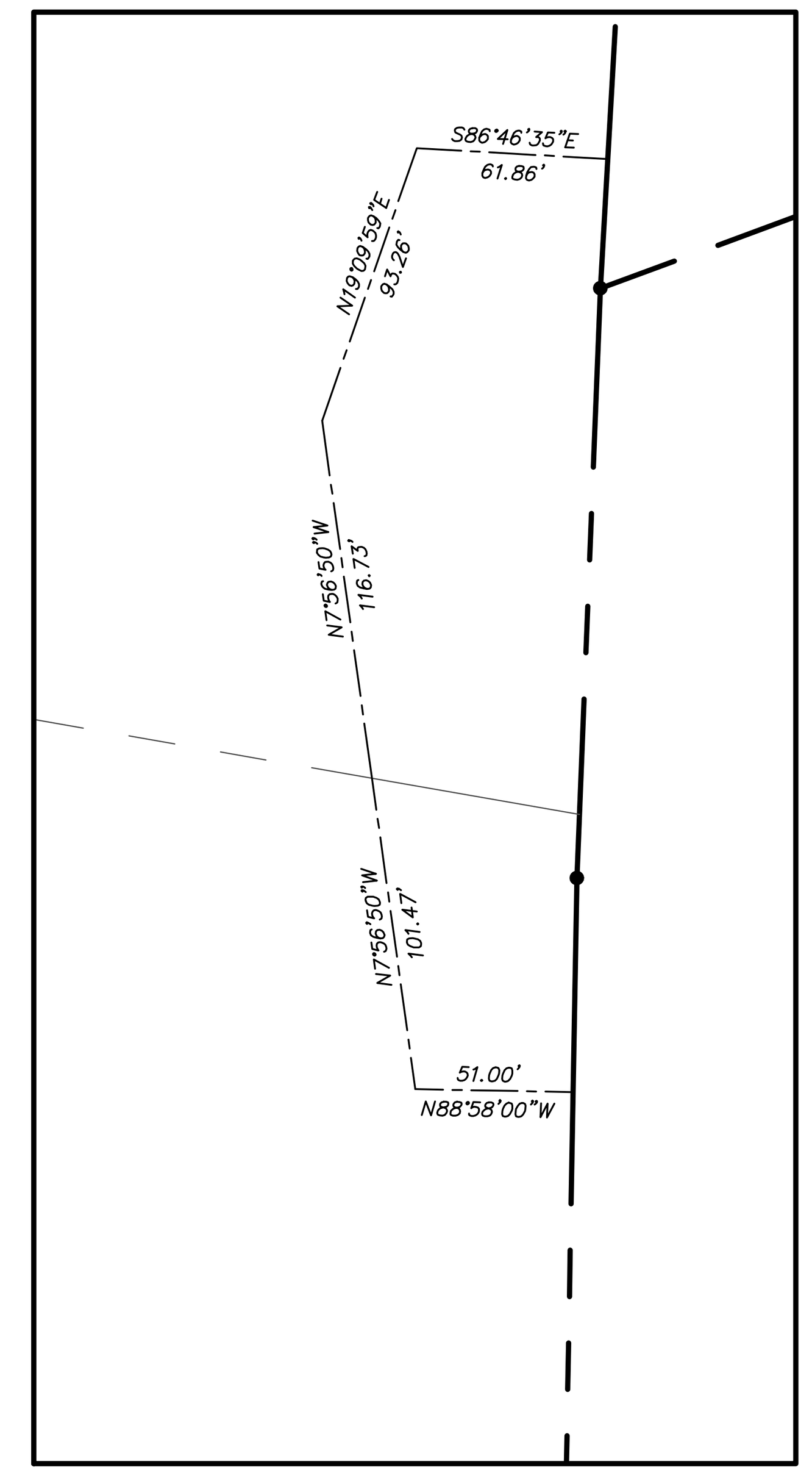
DATA BLOCK

ZONE:	A1
MIN. LOT AREA:	43,560 S.F.
MIN. FRONTAGE:	175'
FRONT YARD:	50'
SIDE YARD:	17.5'
REAR YARD:	30'
MAX BLDG. HEIGHT:	30'

GRAPHIC SCALE

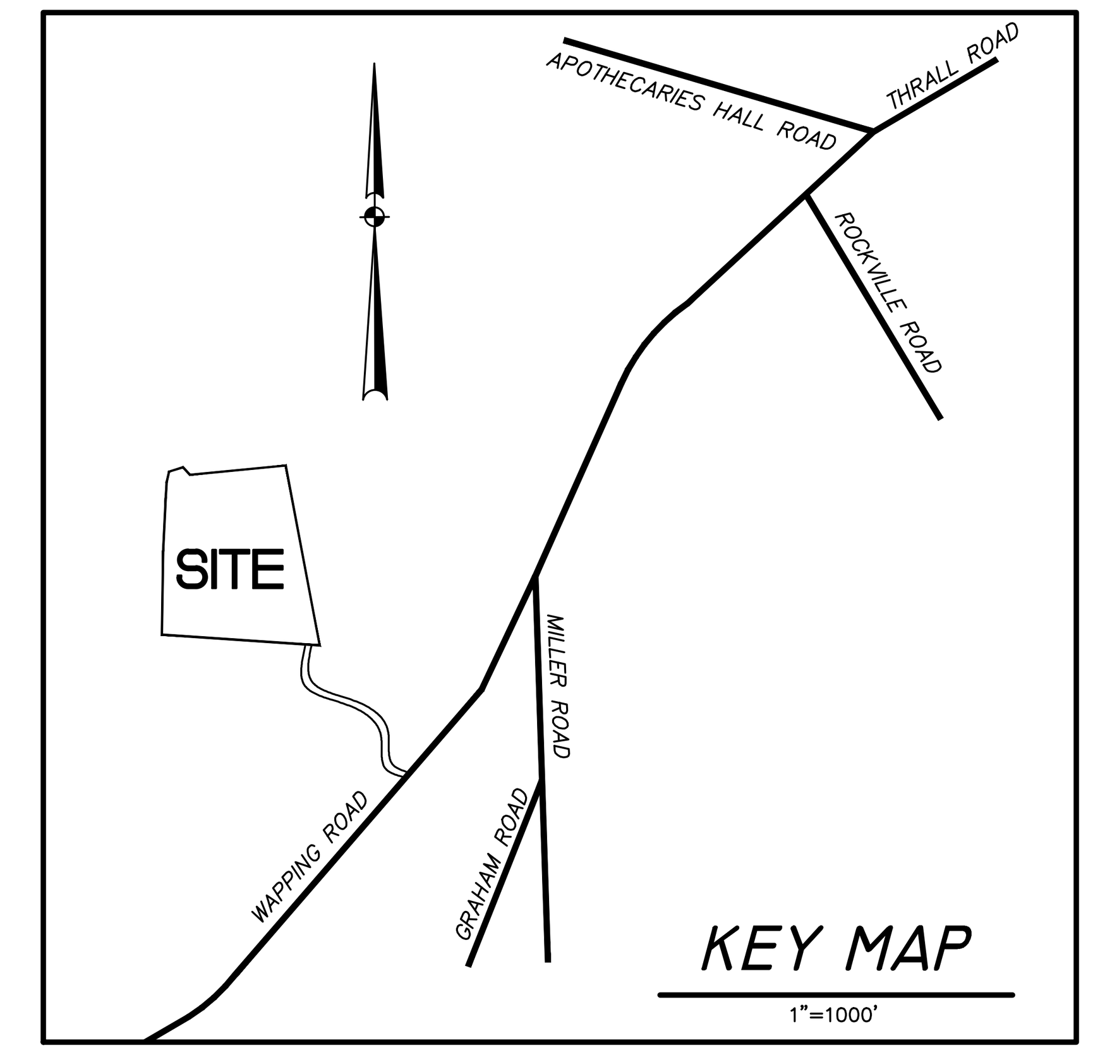
100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.



EASEMENT A & B DETAIL

1"=60'

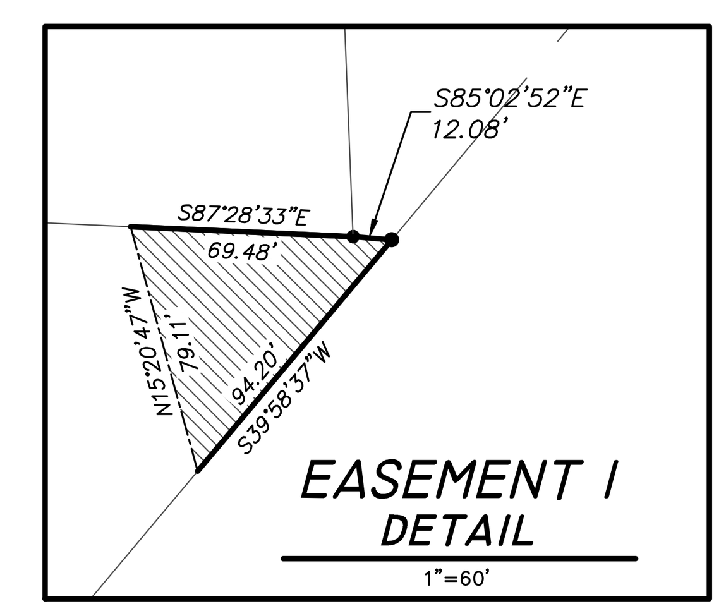


KEY MAP

1"=1000'

LEGEND

- EXISTING SIGN
- EXISTING IRON PIN (FOUND)
- PROPOSED IRON PIN (TO BE SET)
- EXISTING MONUMENT (FOUND)
- EXISTING TREELINE
- LIMIT OF WETLANDS
- PROPERTY LINE
- EASEMENT LINE



EASEMENT I DETAIL

1"=60'

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

This survey and map has been prepared in accordance with Sections 20-300b-1 thru 20-300b-20 of the Regulations of Connecticut State Agencies – "Minimum Standards for Surveys and Maps in the State of Connecticut" as endorsed by the Connecticut Association of Land Surveyors, Inc. It is a Property Survey based on a Resurvey conforming to Horizontal Class A-2.

This document and copies thereof are valid only if they bear the live signature and embossed seal of the designated professional. Unauthorized alterations render any declaration hereon null and void.

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LODESTAR ENERGY

6-26-17	APPROVAL CONDITIONS
4-19-17	TEMPORARY GRADING EASEMENT FOR BASIN

REVISIONS

BY: RLS | CHK: JEU

NORCAP North

Prepared For

LSE Canes Venatici LLC

Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A-1

BOUNDARY PLAN

DATE: 12-5-16
SCALE: 1"=100'
JOB NUMBER: 2016-037
SHEET: 2 of 7

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LODESTAR ENERGY

REVISIONS	
6-26-17	APPROVAL CONDITIONS
4-19-17	UTILITY LINE & EASEMENT
BY: RLS	CHK: JEU

Norcap North Solar Array

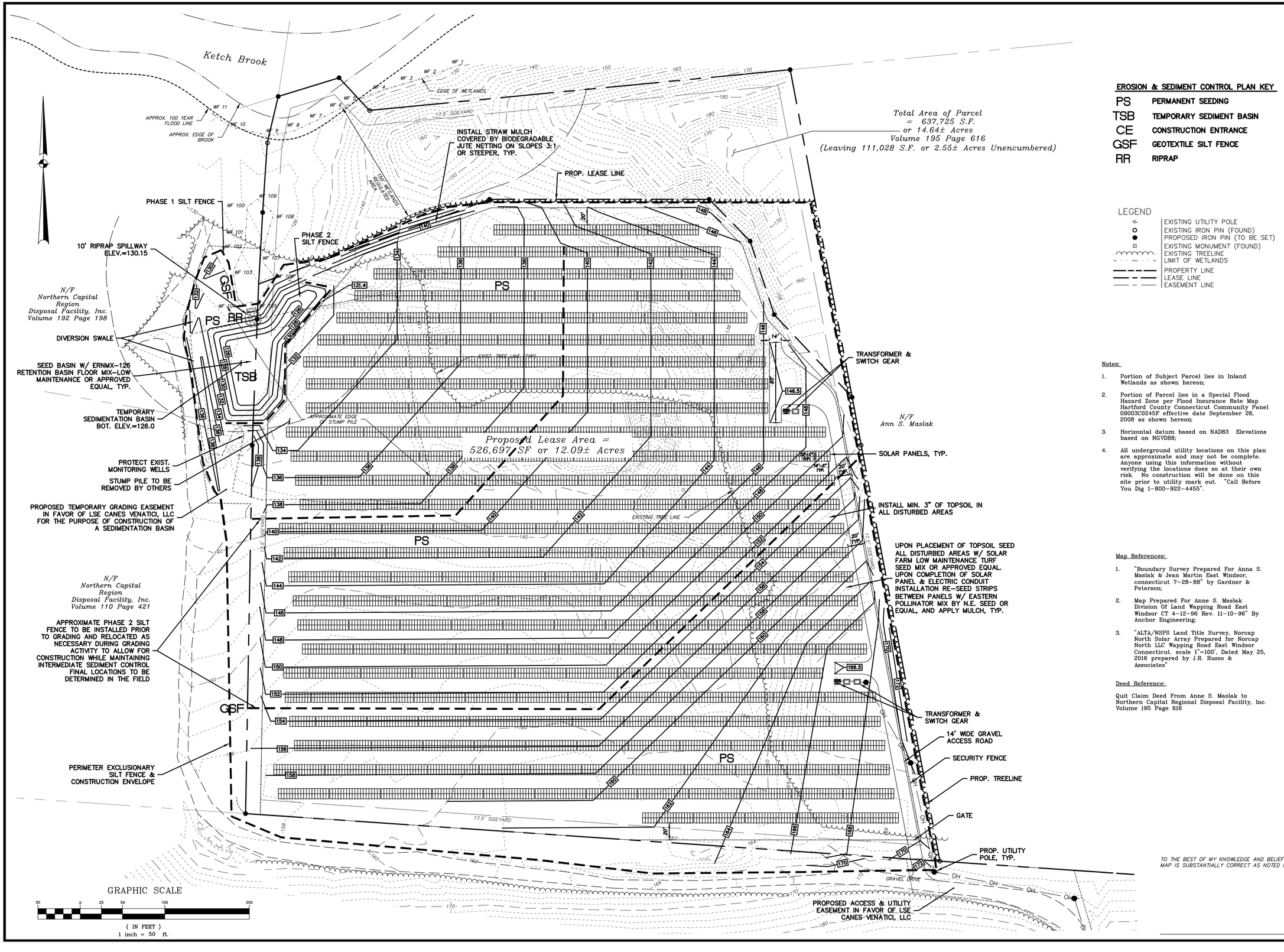
Prepared For

LSE Canes Venatici LLC

Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A-1

Overall Site Plan

DATE	12-05-16
SCALE	1"=100'
JOB NUMBER	2016-037
SHEET	3 of 7



EROSION & SEDIMENT CONTROL PLAN KEY

PS	PERMANENT SEEDING
TSB	TEMPORARY SEDIMENT BASIN
CE	CONSTRUCTION ENTRANCE
GSF	GEOTEXTILE SILT FENCE
RR	RIPRAP

LEGEND

- EXISTING UTILITY POLE
- EXISTING IRON PIN (FOUND)
- PROPOSED IRON PIN (TO BE SET)
- EXISTING MONUMENT (FOUND)
- EXISTING TREELINE
- LIMIT OF WETLANDS
- PROPERTY LINE
- LEASE LINE
- EASEMENT LINE

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LODESTAR ENERGY

REVISIONS

BY	CHK	
LF/TAC	JEU	
		6-26-17 APPROVAL CONDITIONS
		4-19-17 TEMPORARY GRADING EASEMENT FOR BASIN

Norcap North Solar Array

Prepared For

LSE Canes Venatici LLC

Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A-1

Site Plan

DATE 12-05-16
SCALE 1"=50'
JOB NUMBER 2016-037
SHEET 4 of 7

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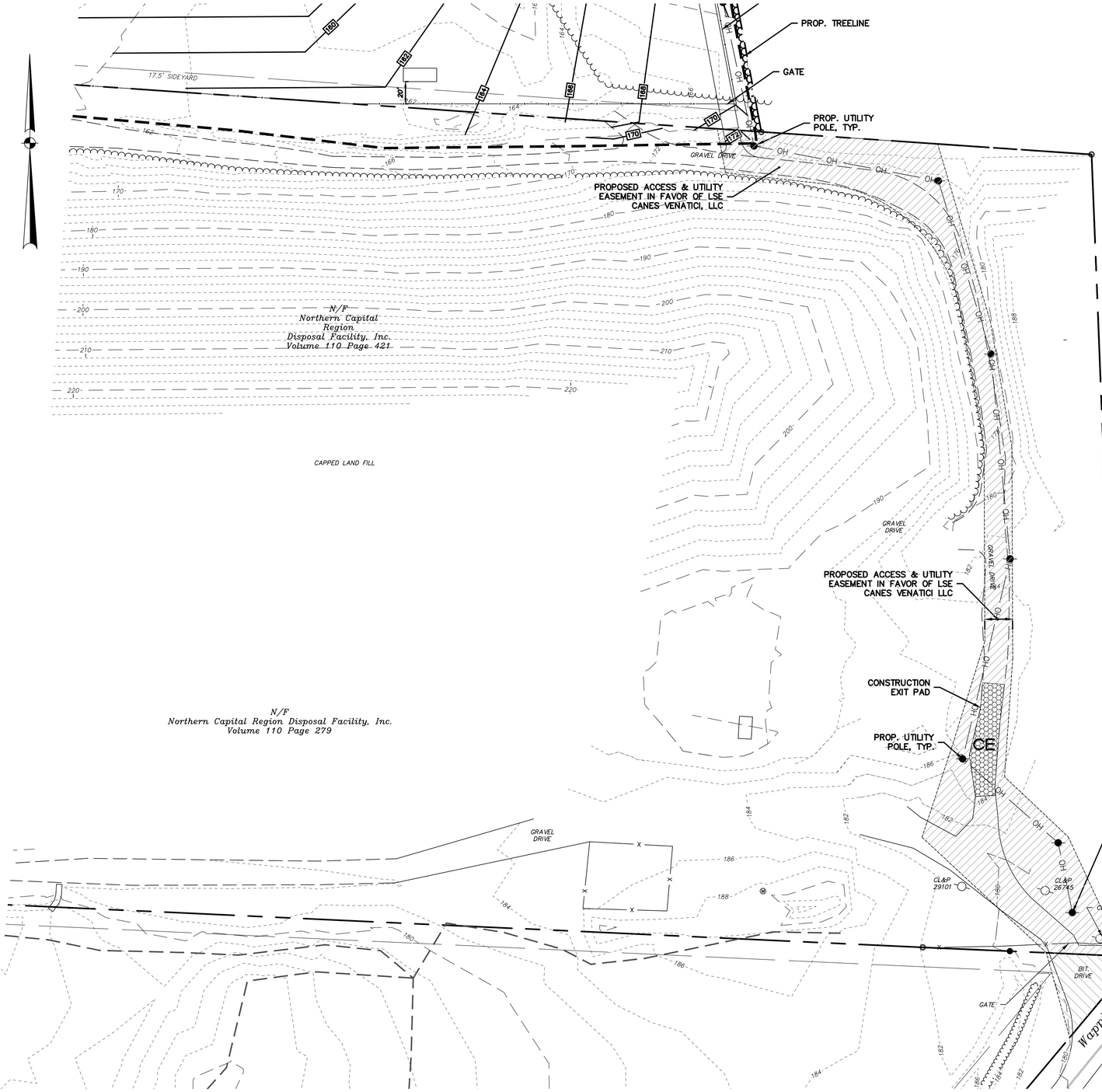

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

EROSION & SEDIMENT CONTROL PLAN KEY

PS	PERMANENT SEEDING
TSB	TEMPORARY SEDIMENT BASIN
CE	CONSTRUCTION ENTRANCE
GSF	GEOTEXTILE SILT FENCE
RR	RIPRAP

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LODESTAR ENERGY

REVISIONS		
4-19-17	UTILITY LINE & EASEMENT	
6-26-17	APPROVAL CONDITIONS	

BY: LF/TAC | CHK: JEU

Norcap North Solar Array

Prepared For

LSE Canes Venatici LLC

Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A-1

Site Plan

DATE
12-05-16

SCALE
1"=50'

JOB NUMBER
2016-037

SHEET
5 of 7

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PERMANENT SEEDING (PS)

SPECIFICATIONS

Time Of Year

Seeding dates in Connecticut are normally April 1 through June 15 and August 15 through October 1. Spring seedings give the best results and spring seedings of all mixes with legumes is recommended. All disturbed areas are to be seeded with the Solar Farm Seed Mix as soon as possible after placement of topsoil. Stormwater basin shall be seeded upon completion of construction and removal of accumulated sediment. Strips between panels shall be overseeded with Eastern Pollinator Mix upon completion of installation of panels and electric conduit.

Site Preparation

Grade in accordance with the Land Grading measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Install all necessary surface water controls.

For areas to be mowed remove all surface stones 2 inches or larger. Remove all other debris such as wire, cable tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

Seed Selection

General Seeding:	*Solar Farm Low Maintenance Turf Seed Mix or approved equal.*
Stormwater Basin:	*ERNMX-126 Retention Basin Floor Mix – Low Maintenance or approved equal.*
Between panels:	*Eastern Pollinator Mix by N.E. Seed or approved equal.*

Seedbed Preparation

Apply topsoil, if necessary, in accordance with the Topsoiling measure which is in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

Where soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10–10–10 or equivalent and limestone at 4 tons per acre or 200 pounds per 1,000 square feet.

Work lime and fertilizer into the soil to a depth of 3 to 4 inches with a disc or other suitable equipment.

Inspect seedbed just before seeding. If the soil is compacted, crusted or hardened, scarify the area prior to seeding.

Seed Application

Apply selected seed at rates per manufacturer's recommendations uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder (slurry including seed, fertilizer). Normal seeding depth is from 0.25 to 0.5 inch. Increase seeding rates by 10% when hydroseeding or frost crack seeding. Seed warm season grasses during the spring period only.

Mulching

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary soil protection area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

DUST CONTROL (DC)

SPECIFICATIONS

Mechanical Sweeping

Use mechanical sweeping on paved areas where dust and fine materials accumulate as a result of truck traffic, pavement saw cutting spillage, and wind or water deposition from adjacent disturbed areas. Sweep daily in heavily traveled areas.

Water

Periodically moisten exposed soil surfaces on unpaved travelways to keep the travelway damp.

Non-Asphaltic Soil Tackifier

Non–asphaltic soil tackifier consists of an emulsified liquid soil stabilizer of organic, inorganic or mineral origin, including, but not limited to the following: modified resins, calcium chloride, complex surfactant copolymers or high grade latex acrylics. The solutions shall be non–asphaltic, non toxic to human, animal and plant life, non corrosive and nonflammable. Materials used shall meet local, state and federal guidelines for intended use. All materials are to be applied according to the manufacturer's recommendations and all safety guidelines shall be followed in storing, handling and applying materials.

MAINTENANCE

Repeat application of dust control measures when fugitive dust becomes evident.

MULCH FOR SEED (MS)

SPECIFICATIONS

Materials

Types of Mulches *within this specification include, but are not limited to:*

1. Hay: *The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.*

2. Straw: *Cut and dried stems of herbaceous plants, such as wheat, barley, cereal rye, or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.*

3. Cellulose Fiber: *Fiber origin is either virgin wood, post–industrial/pre–consumer wood or post consumer wood complying with materials specification (collectively referred to as "wood fiber"), newspaper, kraft paper, cardboard (collectively referred to as "paper fiber") or a combination of wood and paper fiber. Paper fiber, in particular, shall not contain boron, which inhibits seed germination. The cellulose fiber must be manufactured in such a manner that after the addition to and agitation in slurry tanks with water, the fibers in the slurry become uniformly suspended to form a homogeneous product. Subsequent to hydraulic spraying on the ground, the mulch shall allow for the absorption and percolation of moisture and shall not form a tough crust such that it interferes with seed germination or growth. Generally applied with tackifier and fertilizer. Refer to manufacturer's specifications for application rates needed to attain 80%–95% coverage without interfering with seed germination or plant growth. Not recommended as a mulch for use when seeding occurs outside of the recommended seeding dates.*

Tackifiers *within this specification include, but are not limited to: Water soluble materials that cause mulch particles to adhere to one another, generally consisting of either a natural vegetable gum blended with gelling and hardening agents or a blend of hydrophilic polymers, resins, viscosifiers, sticking aids and gums. Good for areas intended to be mowed. Cellulose fiber mulch may be applied as a tackifier to other mulches, provided the application is sufficient to cause the other mulches to adhere to one another.* ***Emulsified asphalts are specifically prohibited for use as tackifiers due to their potential for causing water pollution following its application.***

Nettings *within this specification include, but are not limited to: Prefabricated openwork fabrics made of cellulose cords, ropes, threads, or biodegradable synthetic material that is woven, knotted or molded in such a manner that it holds mulch in place until vegetation growth is sufficient to stabilize the soil. Generally used in areas where no mowing is planned.*

Site Preparation

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Application

Timing: *Applied immediately following seeding. Some cellulose fiber may be applied with seed to assist in marking where seed has been sprayed, but expect to apply a second application of cellulose fiber to meet the requirements of* ***Mulch For Seed*** *in the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.*

Spreading: *Mulch material shall be spread uniformly by hand or machine resulting in 80%–95% coverage of the disturbed soil when seeding within the recommended seeding dates. Applications that are uneven can result in excessive mulch smothering the germinating seeds. For hay or straw anticipate an application rate of 2 tons per acre. For cellulose fiber follow manufacture's recommended application rates to provided 80%–95% coverage.*

When seeding outside the recommended seeding dates, increase mulch application rate to provide between 95%–100% coverage of the disturbed soil. For hay or straw anticipate an application rate to 2.5 to 3 tons per acre.

When spreading hay mulch by hand, divide the area to be mulched into approximately 1,000 square feet and place 1.5–2 bales of hay in each section to facilitate uniform distribution.

For cellulose fiber mulch, expect several spray passes to attain adequate coverage, to eliminate shadowing, and to avoid slippage.

Anchoring: *Expect the need for mulch anchoring along the shoulders of actively traveled roads, hill tops and long open slopes not protected by wind breaks.*

When using netting, the most critical aspect is to ensure that the netting maintains substantial contact with the underlying mulch and the mulch, in turn, maintains continuos contact with the soil surface. Without such contact, the material is useless and erosion can be expected to occur.

MAINTENANCE

Inspect mulch for seed area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater until the grass has germinated to determine maintenance needs.

Where mulch has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

TEMPORARY SEEDING (TS)

SPECIFICATIONS

Site Preparation

Install needed erosion control measures such as diversions, grade stabilization structures, sedimentation basins and grassed waterways in accordance with the approved plan.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparation, seeding, mulch application and mulch anchoring.

Seedbed Preparation

Loosen the soil to a depth of 3–4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing harrowing, raking or dragging with a section of chain link fence.

Apply ground limestone and fertilizer according to soil test recommendations (such as those offered by the University of Connecticut Soil Testing Laboratory or other reliable source).

If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10–10–10 or equivalent.

Seeding

Apply seed uniformly by hand, cyclone seeder, drill, cultipacker type seeder or hydroseeder. The temporary seed shall be Rye (grain) applied at a rate of 120 pounds per acre. Increase seeding rates by 10% when hydroseeding.

Mulching

See guidelines in the Mulch For Seed measures.

MAINTENANCE

Inspect temporary seeding area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has been moved or where soil erosion has occurred, determine the cause of the failure and repair as needed.

SOIL ERSOION & SEDIMENT CONTROL NOTES

1. *All soil erosion and sediment control work shall be done in strict accordance with the Connecticut Guidelines For Soil Erosion and Sediment Control latest edition.*
2. *Any additional erosion/sediment control deemed necessary by the engineer during construction, shall be installed by the developer. In addition, the developer shall be responsible for the repair/replacement and/or maintenance of all erosion control measures until all disturbed areas are stabilized to the satisfaction of the town staff.*
3. *All soil erosion and sediment control operations shall be in place prior to any grading operations and installation of proposed structures or utilities and shall be left in place until construction is completed and/or area is stabilized.*
4. *In all areas, removal of trees, bushes and other vegetation as well as disturbance of the soil is to be kept to an absolute minimum while allowing proper development of the site. During construction, expose as small an area of soil as possible for as short a time as possible.*
5. *The developer shall practice effective dust control per the soil conservation service handbook during construction and until all areas are stabilized or surface treated. The developer shall be responsible for the cleaning of nearby streets, as ordered by the town, of any debris from these construction activities.*
6. *All fill areas shall be compacted sufficiently for their intended purpose and as required to reduce slipping, erosion or excess saturation. Fill intended to support buildings, structures, conduits, etc., shall be compacted in accordance with local requirements or codes.*
7. *Topsoil is to be stripped and stockpiled in amounts necessary to complete finished grading of all exposed areas requiring topsoil. The stockpiled topsoil is to be located as designated on the plans. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.*
8. *Any and all fill material is to be free of brush, rubbish, timber, logs vegetative matter and stumps in amounts that will be detrimental to constructing stable fills. Maximum side slopes of exposed surfaces of earth to be 3:1 or as otherwise specified by local authorities.*
9. *Soil stabilization should be completed within 5 days of clearing or inactivity in construction.*
10. *Waste Materials – All waste materials (including wastewater) shall be disposed of in accordance with local, state and federal law. Litter shall be picked up at the end of each work day.*
11. *The Contractor shall maintain on–site additional erosion control materials as a contingency in the event of a failure or when required to shore up existing BMPs. At a minimum, the on–site contingency materials should include 30 feet of silt fence and 5 straw haybales with 10 stakes.*

CHECKLIST FOR EROSION CONTROL PLAN

PROJECT: NORCAP North Solar Array

LOCATION: Wapping Road

PROJECT DESCRIPTION: Construction of 10± acres of ground mounted solar panels.

PARCEL AREA: 12.4 acres

RESPONSIBLE PERSONNEL: Jordan Belknap (617) 982–3201

EROSION AND SEDIMENT CONTROL PLAN PREPARER: J.R. Russo & Associates, LLC

CHECKLIST:

Work Description Erosion & Sediment Control Measures	Location	Date Installed	Initials	Date Removed	Initials
Install construction exit pad	As shown on plan.				
Install Phase 1 sediment barriers	As shown on plan.				
Install temporary sediment basin	As shown on plan.				
Install Phase 2 sediment barriers	As shown on plan.				
Install Jute Netting	On 3:1 slopes plan.				

MAINTENANCE OF MEASURES:

Location	Description or Number	Date	Initials

Project Dates:

Date of groundbreaking for project:

Date of final stabilization:

PROJECT NARRATIVE AND CONSTRUCTION SEQUENCE

This project is located the NORCAP Facility (NORCAP North) on Wapping Road in East Windsor, Connecticut. The proposed activity is the construction of a 2.0 MW AC photovoltaic solar facility. The suggested schedule of construction is as follows:

Phase 1: Installation of Erosion Control Measures

1. Install construction anti–tracking pad (CE).
2. Install perimeter exclusionary silt fence (GSF) & construction envelope.
3. Qualified Environmental Professional to perform a sweep for turtles within the construction envelope and remove turtles found outside of envelope. Similar sweeps along the perimeter fence shall be conducted by contractor each day prior to the start of work.
4. Construct temporary sedimentation basin and outlet for use during construction.
5. Install silt fence along upstream edge of sediment basin.
6. Install intermediate sediment barriers across existing disturbed areas of site as shown on plans.

Phase 2: Earthwork

7. Clear trees and grub stumps.
8. Strip topsoil where present and stockpile within limits of work. Number and location of stockpiles to be determined in field. Temporarily seed (TS) stockpiles if they are to remain more than 30 days.
9. Grade site from north to south. Remove and relocate intermediate sediment barriers from ungraded to final graded areas as work progresses. Re–spread topsoil, seed with solar farm seed mix and mulch entire disturbed area as soon as possible.
10. Install erosion control blankets on 3:1 slopes as shown on plans.

Phase 3: Panel Construction

11. Install foundations and solar panels.
12. Install electrical equipment and distribution lines.
13. Reposition intermediate sediment barriers as necessary to maintain sedimentation protection while allowing for construction.
14. Remove accumulated sediment from temporary sediment basin. Install topsoil and permanent seed in basin.
15. Overseed strips between panels with pollinator seed mix.
16. Remove silt fence and sediment barriers after site is fully stabilized.

Construction of this site is anticipated to begin in the Summer of 2017, pending approvals. Site work is anticipated to be completed within one construction season. Temporary erosion control measures shall be installed prior to any soil disturbance and maintained throughout construction until soils have been stabilized with permanent vegetation.

The Contractor shall keep the area of disturbance to a minimum and establish vegetative cover on exposed soils as soon as practical. All soil and erosion control measures shall be installed and maintained in accordance with these plans and the "Connecticut DEEP Guidelines for Soil Erosion and Sediment Control", as amended. The Contractor shall verify all conditions noted on the plans and shall immediately notify the Engineer of any discrepancies.

The developer shall be responsible for the repair/replacement/maintenance of all erosion control measures until all disturbed areas are stabilized. Sediment deposits shall be periodically removed from the upstream sides of silt fence (GSF). This material is to be spread and stabilized in areas not subject to erosion, or to be used in areas which are not to be paved or built on. Silt fences (GSF) are to be replaced as necessary to maintain proper filtering action. Silt fence (GSF) shall remain in place and shall be maintained to insure efficient sediment capture until all areas above the erosion checks are stabilized and vegetation has been established.

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www.jrrusso.com • info@jrrusso.com

LODESTAR ENERGY

REVISIONS

BY: LF/TAC	CHK: JEU

Norcap North Solar Array

Prepared For

LSE Cames Venatici LLC

Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A–1

Erosion & Sediment Control Notes

DATE	6–26–17
SCALE	As Noted
JOB NUMBER	2016–037
SHEET	6 of 7

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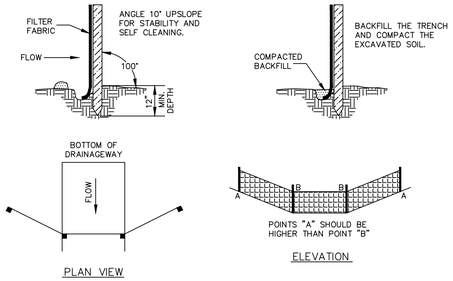
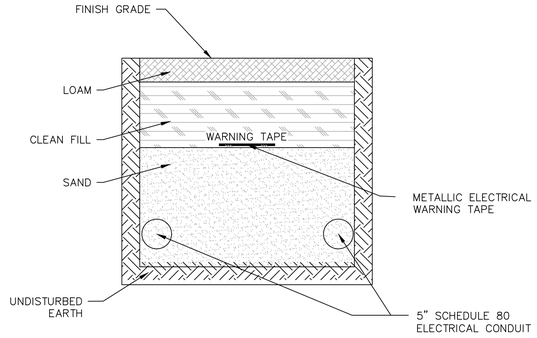


SOURCE: U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

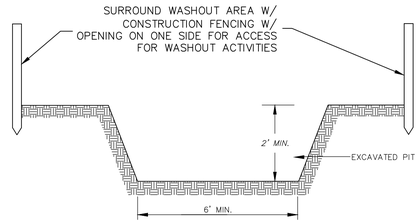
GEOTEXTILE SILT FENCE (GSF)

NOT TO SCALE



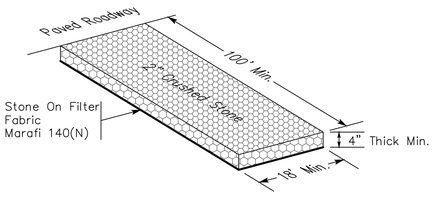
MEDIUM VOLTAGE CABLE TRENCH DETAIL (MV)

NOT TO SCALE



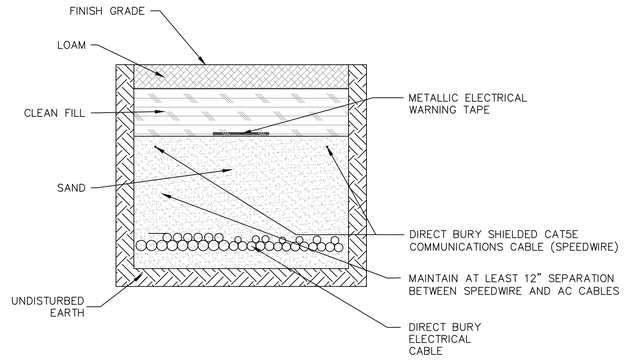
CEMENT TRUCK WASHOUT AREA

NOT TO SCALE



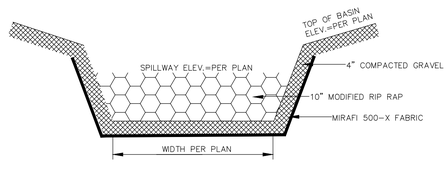
ANTI-TRACKING PAD DETAIL (CE)

NOT TO SCALE



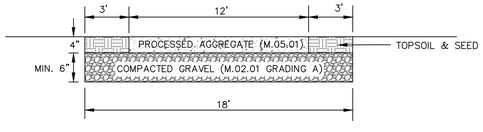
INVERTER POWER & COMMS CABLE TRENCH DETAIL (INV/C)

NOT TO SCALE



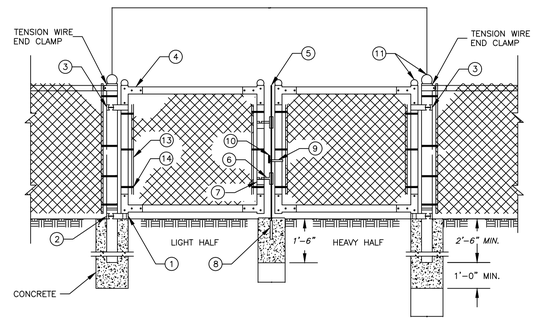
RIPRAP SPILLWAY

NOT TO SCALE



DRIVEWAY DETAIL

NOT TO SCALE

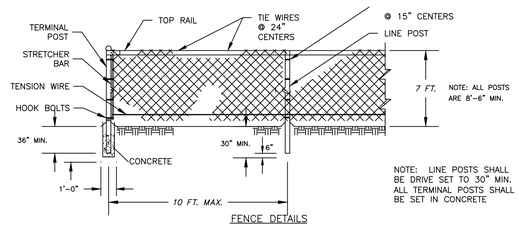


GATE DETAIL

LEGEND

PART NO.	DESCRIPTION	QUANTITY
1	STRAIGHT PLUG	2
2	BOTTOM HINGE	2
3	TOP HINGE	2
4	CORNER ELBOW	8
5	PLUNGER ROD	1
6	LATCH FORK	2
7	FORK CATCH	2
8	PLUNGER ROD CATCH	1
9	LOCK KEEPER GUIDE	1
10	LOCK KEEPER	1
11	ORNAMENTAL TOPS	6
12	TRUSS RODS	4
13	STRETCHER BAR	4
14	HOOK BOLTS	12

NOTE:
THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH.



NOTE: LINE POSTS SHALL BE DRIVE SET TO 30" MIN. ALL TERMINAL POSTS SHALL BE SET IN CONCRETE

FENCE DETAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FENCE POSTS AND RAILS			
ITEM	SHAPE	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
** TERMINAL POSTS	ROUND	2.375	3.65
	*ROUND	2.375	3.12
LINE POSTS	ROUND	1.90	2.72
	*ROUND	1.90	2.28
TOP & BRACE RAILS	ROUND	1.66	2.27
	*ROUND	1.66	1.84
* GRADE B HIGH STRENGTH STEEL ** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS			

GATE FRAME MEMBERS SIZE AND WEIGHT		
GATE FRAME	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	1.66	2.27
*ROUND	1.66	1.84
* GRADE B HIGH STRENGTH STEEL		

GATE POST SIZE AND WEIGHT		
GATE LEAF WIDTH OF 6 FT. OR LESS	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	2.875	5.79
*ROUND	2.875	4.64
* GRADE B HIGH STRENGTH STEEL		

CONSTRUCTION NOTES

1. MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
2. ALL POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE INSTALLED ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST WILL BE VERTICAL.
3. THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH.

CHAIN LINK FENCE DETAIL

NOT TO SCALE

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LODESTAR ENERGY

REVISIONS	
BY: LF/TAC	CHK: JEU
6-26-17	APPROVAL CONDITIONS

Norcap North Solar Array
Prepared For
LSE Canes Venatici LLC
Wapping Road
East Windsor, Connecticut
Map 037 Block 65 Lot 027A Zone: A-1

Detail Sheet

DATE 12-05-16
SCALE As Noted
JOB NUMBER 2016-037
SHEET 7 of 7

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