



Stantec Consulting Services Inc.
30 Park Drive, Topsham ME 04086-1737

October 15, 2021
File: 195601928

Attention: Jennifer Leeman, Assistant to Code Enforcement
Town of Naples
15 Village Green Lane
Naples, Maine 04055

Reference: Site Plan Review Application – Naples Solar Project – Maine DG Holdco, LLC

Dear Ms. Leeman and Planning Board Members,

On behalf of Maine DG Holdco, LLC (the Applicant), a subsidiary of Longroad Development Company, LLC, Stantec Consulting Services Inc. (Stantec) is filing an application for a Site Plan Review of a Large Solar Farm in accordance with the Town of Naples Land Use Ordinance for construction of the Naples Solar Project (Project).

The proposed Project is a solar facility off Fire Lane 24 with an installed capacity of approximately 4.95 megawatts alternating current. The footprint of the project will be approximately 45 acres, connecting with Central Maine Power at the base of the Fire Lane on Route 302 (Figure 1).

The enclosed Site Plan Review Application includes the following:

- Narrative – Submission Requirements, Criteria and Standards, and Performance Standards for Solar Energy Systems and Solar Farms
- Attachment A – Application Form
- Attachment B – Site Plans
- Attachment C – Abutters List
- Attachment D – Soil Report
- Attachment E – Stormwater Analysis
- Attachment F – Lease Agreement
- Attachment G – Standard Boundary Survey
- Attachment H – Sound Report
- Attachment I – Operations and Maintenance Plan
- Attachment J – Decommissioning Plan
- Attachment K – Draft Decommissioning Surety
- Attachment L – Viewshed Analysis
- Attachment M – Agent Authorization

This submittal includes nine paper copies of the complete application package, including nine copies of the Project Site Plans printed at 24x36 inches. A check in the amount of \$570 made payable to the Town of Naples for the Planning Board fee (\$400), public notice fee (\$50), and certified abutter notice (\$10 per lot) is included with this application. Also included is a check in the amount of \$2,000 made payable to the Town of Naples for the Planner Escrow fee for Major Applications.

Reference: Site Plan Review Application – Naples Solar Project – Maine DG Holdco, LLC

We look forward to reviewing the Project with the Planning Board during the meeting on November 2, 2021. Please contact me if you have any questions regarding the enclosed materials.

Regards,

Stantec Consulting Services Inc.



Brooke Barnes

Principal
Phone: 207-522-4870
brooke.barnes@stantec.com

Attachments: Site Plan Review Application Package and Site Plans

c. Chad Allen, Longroad Energy

Design with community in mind

Maine DG Holdco, LLC

Naples Solar Project

Major Site Plan Review

Application



Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

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Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

PROJECT DESCRIPTION

Maine DG Holdco, LLC (Applicant), a subsidiary of Longroad Development Company, LLC, proposes to construct the Naples Solar Project (Project), a distributed generation solar energy facility off Fire Lane 24 in Naples (see Figure 1 below). The proposed Project is located on Tax Map 4, Lots 34, 35 and 36, on the west side of Route 302. The Project is a Large Solar Farm under the Naples Land Use Ordinance. The Project parcels are within the Rural Zoning District; a Large Solar Farm is an allowed use in this district. The Site Plan Review application form is provided in Attachment A.

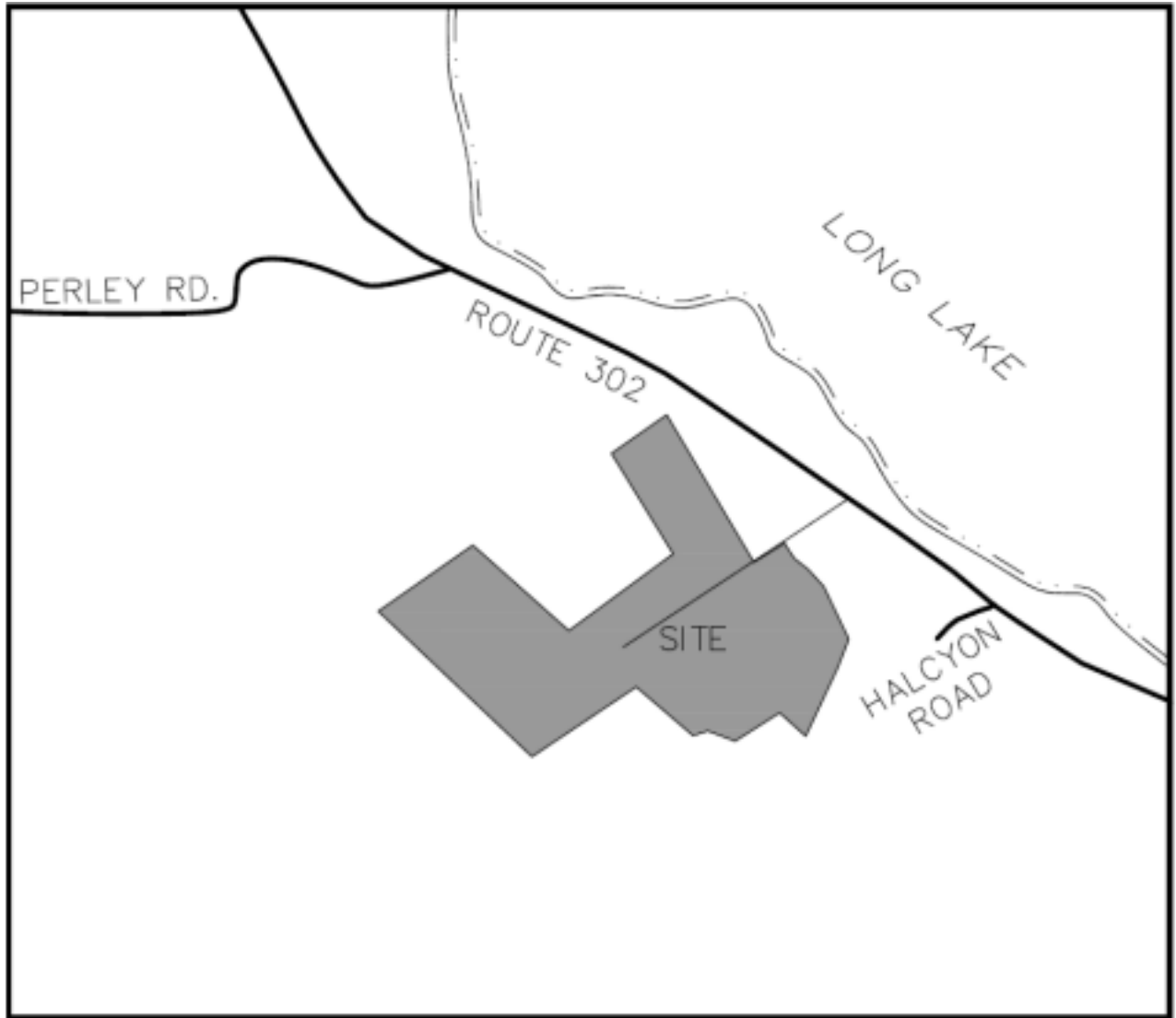
The Project is designed to use photovoltaic (PV) panels mounted on a fixed tilt system to generate solar energy production throughout the year. The solar arrays will have an installed capacity of approximately 4.95 megawatts alternating current (MWac) electricity. Modules will be mounted on galvanized steel frames supported by ground screws or pilings. In compliance with applicable codes and standards, the frames will be capable of withstanding wind speeds of up to 100 miles per hour. The panels will stand approximately up to 10 feet from the ground at their highest point. Based on the 4.95 MWac capacity, the solar array is expected to generate enough clean electricity to power the equivalent of approximately 1,300 Maine homes.

Other Project features will include an approximately 4,270-foot-long access road within the Project, six inverters mounted on two skids, and a medium voltage electrical collector line (Collector) connecting to the electrical grid at a point of interconnection (POI) adjacent to Route 302. The road to the Project will be 20 feet wide for 50 feet at the beginning of Fire Lane 24 to accommodate vehicle entry. Interior access roads will be 16 feet wide. The access roads will terminate with hammerhead turnarounds to accommodate emergency response vehicles. A 7-foot-tall perimeter fence will surround the proposed solar array. The total fenced area of the proposed solar arrays is approximately 27.4 acres. Detailed civil plans (Site Plans) are contained in Attachment B.

The solar power generated from the Project will be transmitted through a 12.47-kilovolt (kV) Collector to the POI with the existing roadside distribution line. A portion of the Collector will run underground in a trench adjacent to the interior access roads and Fire Lane 24. To meet public utility requirements, a short length of the Collector will run overhead for approximately 125 feet on several poles before tying into the electrical grid at the POI on Route 302.

Construction is projected to commence in spring/summer 2022, with the goal of commercial operation in early 2023.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project



Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

SECTION 907. SUBMISSION REQUIREMENTS

The submission requirements detailed below are presented in the order outlined on the Site Plan Review final application checklist (see Attachment A).

1. Total area of any land within 500 feet of proposed project which is owned by Applicant

The Applicant will lease a portion of the three parcels on which the Project will be located. The total area of the Project is approximately 45 acres; the total area of three parcels is approximately 264 acres. An abutters list is found in Attachment C.

2. Zoning classification

The solar array development area is proposed to be located within the Rural Zoning District. Large Solar Farms are an allowed use in this district.

3. Soil types and location of soil boundaries

A Natural Resource Conservation Service soil report is provided as Attachment D. The area of the proposed solar array is primarily (92.4%) excessively drained Hermon sandy loam and Lyman-Tunbridge soils, with a lesser amount (7.6%) moderately drained Peru fine sandy loam.

There will be no on-site staff required for Project operations, and no wastewater disposal systems will be installed. During construction, portable toilets will be brought on-site and serviced by a licensed septage hauler.

4. Location of all building setbacks

There are no buildings proposed for this Project. There will be two concrete pads on which inverters and transformers will be located.

5. Location, size and character of all signs and exterior lighting

The proposed Project will include signage limited to safety and security notifications. There will be a Project sign on the entrance gate that will not exceed 4 square feet of sign area. The sign will provide a 24-hour emergency telephone number to contact in the event of an emergency. No exterior lighting is proposed for the Project. Temporary lighting may be used if needed during maintenance activities.

6. Lot area of the parcel, street frontage and minimum lot size and frontage

The lot area of three undeveloped parcels is approximately 264 acres, with the Project occupying approximately 45 acres. Setbacks between the property lines and the Project area are provided on the Site Plans in Attachment B.

7. Location of all existing and proposed buildings, driveways, sidewalks, parking spaces, loading areas, open spaces, large trees, open drainage courses, signs, exterior lighting, service areas, easements and landscaping

There are no buildings proposed for this Project. To comply with the National Electric Code and protect critical infrastructure equipment, no public use of the Project area will be allowed. Therefore, there will be no sidewalks and a gate will be installed around the perimeter of the Project area to prevent unauthorized access.

The Project will not require permanent parking spaces for construction or operation. Construction personnel will park at the temporary laydown areas during construction. After construction, the laydown areas will be revegetated and the site will generally be unmanned, except for mowing and maintenance.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

The interior of the Project will be maintained as a meadow, and the area outside the fence and within the designated clearing limits shown on the Site Plans (Attachment B) will be maintained as low shrub growth to prevent trees and vegetation from shading the solar panels. No landscaping is proposed.

The Project will adhere to the National Electric Code in terms of signage, including access warning signs on fencing and electrical equipment. A sign will be placed at the gate and POI providing an emergency contact and required emergency shut-off information. A Knox Box lock (or similar locking mechanism) will allow for access by emergency responders.

8. Location of all buildings within 50 feet of the parcel and the location of intersecting roads or driveways within 200 feet of the parcel

There are no buildings within 50 feet of the Project area. The intersection of Fire Lane 24 and Route 302 is shown on the Site Plans in Attachment B.

9. Existing and proposed topography of the site at 2-foot contour intervals if major changes to the existing topography are being proposed

Site Plans are provided in Attachment B, which show existing and proposed topographical lines based on available LIDAR data.

10. All surface water features within 500 feet of the project boundaries including perennial streams and wetlands

Wetlands and waterbodies are shown on the Site Plans in Attachment B.

11. Location and dimensions of on-site pedestrian and vehicle or vehicle dealer access ways, parking areas, loading and unloading facilities, design of entrances and exits of vehicles to and from the site on to public streets, curve and sidewalks

The site is fenced and locked with no pedestrian access ways. Access roads with the parcel, fencing and gates are shown on the Site Plan, Attachment B.

12. Location of all wells and septic systems within 150 feet of the property boundary The

Applicant is unaware of any wells or septic systems within 150 feet of the Project area. 13.

Existing land cover and vegetation conditions

The area of the proposed solar array is part of larger parcels managed for timber growth. The Project area includes multi aged forest cover, skidder roads and timber landing areas.

14. Drainage plan to describe the location and size of road culverts, road drainage, ditches, phosphorus and run off control measures and other similar features

The Site Plans provide a design identifying erosion control and stormwater treatment measures (Attachment B). This Project will undergo review by the Maine Department of Environmental Protection (MDEP) as part of a Site Location of Development Act (Site Law) review process. Stormwater and erosion control will be specifically reviewed and addressed by MDEP staff engineers in the Site Law review process. An analysis of stormwater is included in this application as Attachment E.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

15. On-site soil and investigation report by a DHS licensed site evaluator

There will be no staff on site during operation except for mowing and maintenance. Since no wastewater disposal is proposed, the Applicant requests a waiver of this requirement due to the nature of the proposed Project activity.

16. Statement from the Fire Chief that the property is accessible by present fire apparatus and detailing any additional on-site fire protection facilities required

Fire Chief Pond was contacted on October 11, 2021, and provided with details regarding the proposed Project, including details related to access. As of this writing, there has been no further communication, but the Applicant remains willing to consult with the Fire Chief and review risks and emergency access associated with the Project.

The Project will adhere to the National Electric Code in terms of signage, including access warning signs on fencing and electrical equipment. A sign will be placed at the gate and POI providing an emergency contact and required emergency shut-off information. A Knox Box lock (or similar locking mechanism) will allow for access by emergency responders.

17. Soil and erosion control plan app approved by the Cumberland County soil and water conservation District

Please see response to Item #14.

18. Existing and proposed method of handling storm water runoff

Please see the stormwater analysis in Attachment E.

19. Direction and flow of the runoff through the use of arrows

Please see the Site Plans in Attachment B.

20. Location, location and size of all catch basins, dry wells, drainage ditches, Swales, retention basins and storm sewers

Please see the Site Plans in Attachment B.

21. Engineering calculation used to determine drainage requirements based upon a 25-year storm frequency, if the project will significantly alter the existing patterns due to such factors such as the amount of new impervious surfaces being proposed

Please see the stormwater analysis in Attachment E.

22. Phosphorus and analysis: required if the proposed project is within the Shoreland zone or the non vegetative areas exceed 40,000 ft.². If required, the analysis of prosperous loading shall utilize the methods contained in the latest revised edition of the manual underlying phosphorus control and Lake

watersheds and underline, published by the main DTP, and shall require third-party review

Since the Project is not in the shoreland zone and new unvegetated area does not exceed 40,000 square feet, this requirement is not applicable. See the stormwater analysis in Attachment E.

23. A utility plan showing provisions for the water supply and wasteland disposal, including the size and location of all piping, holding tanks, leach field, etc.

Since there is no water supply or wastewater disposal proposed for the project, this provision does not apply.

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Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

24. Building plan showing all of the floors and elevations

Since there are no buildings proposed for this Project, this provision does not apply.

25. Evidence of applicants right and or title to the property, and copies of any proposed or existing easements, conveyances and deed restrictions

Attachment F provides the lease option to the Applicant. There are no known easements, conveyances, or deed restrictions. The property is currently in the Tree Growth Taxation program. A boundary survey is included as Attachment G.

26. Description and design of proposed temporary and permanent signs, including location, size and lighting

The Project will adhere to the National Electric Code in terms of signage, including access warning signs on fencing and electrical equipment. A sign will be placed at the gate and POI providing an emergency contact and required emergency shut-off information. There will be no signage on Fire Lane 24, and there will be no on-site lighting unless temporary lighting is needed during maintenance.

27. Copies of all required state approvals and permits

As of this date, no state approvals have been received for the Project. The Applicant intends to submit its Site Law permit application to the MDEP on or around November 12, 2021.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

SECTION 908. CRITERIA AND STANDARDS

1. PRESERVATION OF LANDSCAPE

The proposed Project has been designed to reflect the natural capabilities of the site to support the Project. The Project is located within the most suitable portions of the site, beyond the crest of the ridge to avoid visibility. Environmentally sensitive areas, including wetlands and shoreland areas, are avoided with the exception of small wetland clearing areas along Fire Lane 24 necessary to accommodate the utility interconnection.

The fixed tilt panel design is adaptable to the existing topography, minimizing the need for grading. Grading will be limited to the extent necessary, and the proposed Project does not require a substantial change to existing topography.

2. RELATION OF THE PROPOSED BUILDING TO THE ENVIRONMENT

There are no structures or buildings with a visual relationship near the Project area. The low profile of the panels, approximately 10 feet, combined with the forested buffer along the perimeter effectively prevent the Project from being a visually prominent feature in the environment. As noted above, little grading is required

for fixed tilt panels, the drainage characteristics of the soils will be preserved, and natural drainage courses will not be substantially altered.

3. VEHICULAR ACCESS

Access to the Project will be via Fire Lane 24, off Route 302. The only traffic associated with the Project will occur during the construction period. Traffic associated with Project construction is expected to consist of an average of 30 to 40 passenger vehicles and trucks per weekday over an approximately 6-month construction period. The peak construction period may generate traffic volumes of up to 110 vehicles per weekday. A traffic control plan, in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), will be implemented during Project construction. During operations, the Project will be accessed infrequently by a passenger vehicle or equipment to perform maintenance.

4. PARKING AND CIRCULATION

The Project will not have parking or pedestrian use. Parking during construction will be in the designated laydown areas.

5. SURFACE WATER DRAINAGE

The proposed Project has made adequate provisions for the collection and disposal of stormwater through a stormwater drainage system and maintenance plan such that stormwater runoff will not have an adverse impact on abutting or downstream properties. Stormwater runoff systems have been designed to detain and/or retain water such that the post-construction flow rate does not exceed the pre-development flow rate.

The area within the solar panel arrays will be maintained as a meadow and will not be mowed more than twice per year. The meadow areas will self-treat the runoff from the solar panels. Additional information regarding stormwater treatment is included with the stormwater calculations contained in Attachment E and the Site Plans in Attachment B. Stormwater calculations for the Project are based on a 25-year storm frequency.

The Project has been designed to manage stormwater in accordance with Maine's Stormwater Management Law (Chapter 500). The Project will file a Site Location of Development Act (Site Law) permit application with

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

the MDEP, and a copy of the Site Law approval will be provided to the Town upon issuance. To obtain approval under the Site Law, the Project must meet MDEP stormwater standards.

6. UTILITIES

The Project will not have any water or wastewater utilities. The Project was designed so the electricity generated by the Project will be collected via underground cable to a point near the entrance to Fire Lane 24 off Route 302. There it will go above ground on several utility poles and equipment required to connect to the Central Maine Power distribution system. Telecommunication infrastructure will be installed on these same structures/at these same locations.

7. ADVERTISING FEATURES

The Project will have no exterior lighting or advertising signage.

8. SPECIAL FEATURES

The Project area is located in a forested environment with no residential development within 1,000 feet of the Project area. The Site Plans include an undisturbed forested area between the clearing limit for the Project and the property boundary, and a minimum of 200 feet from the property boundary to the Project fence line.

9. EXTERIOR LIGHTING

No exterior lighting is proposed for the Project. Temporary task lighting may be used if nighttime maintenance activity is required.

10. EMERGENCY VEHICLE ACCESS

The Project will be gated and locked, but a Knox Box (or similar locking mechanism) will be provided to allow for emergency vehicle entrance.

11. LANDSCAPING

There is no parking area to be screened or buffered, and as noted above, the Site Plans include an undisturbed forested area between the clearing limit for the Project and the property boundary. Therefore, no landscaping is proposed for the Project.

12. ENVIRONMENTAL CONSIDERATIONS

During construction, sound and dust can be expected. Construction sound will be limited to daylight hours, and water or other dust suppressants will be used to control dust. The distance of more than 1,000 feet to residences, as well as the forested area between clearing limits and the property boundary, will also reduce the nuisance associated with construction activities.

The Project, once constructed, is inert with no air, water or toxic emissions. The proposed Project will not produce electromagnetic radiation or interference. Project components, such as PV panels and inverters, produce extremely low frequency electric and magnetic fields (EMF) when generating and transmitting electricity. The extremely low frequency EMF from PV arrays is the same as the EMF people are exposed to

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

from household electrical appliances, wiring in buildings, and electric transmission lines. EMF produced by cell phones, radios, and microwaves is at much higher frequencies.¹

Solar panels are designed to absorb solar energy and convert it to electricity. As such, most solar panels are designed with anti-reflective materials to capture and retain as much of the solar spectrum as possible. Solar module glass has less reflectivity than water or window glass.² The proposed Project is sited to minimize or negate potential glare onto nearby properties and roadways.

Sound is discussed in “noise levels” below.

13. SIGNS

The Project will not have any freestanding signs. Signage will be on the Project facilities (e.g., fences,

inverters) only.

14. MUNICIPAL SERVICES

The Project is anticipated to require no municipal services.

15. AIR POLLUTION

As noted above, the only air emissions will be fugitive dust emissions during construction. When operational, the Project will not produce air emissions.

16. NOISE LEVELS

During operations, the anticipated sound level of the Project is based on two components: TMEIC PVU-L0840GR inverters (or similar) and transformers (up to 2,520 kilovolt-ampere). It is important to note that these devices only generate noise when the sun is up and that sound levels are proportional to load. A sound assessment of potential noise impacts from the Project's noise generating equipment during regular operation was conducted by Reuter Associates, LLC (see Attachment H). The anticipated sound levels associated with the Project were modeled in accordance with the No Adverse Environmental Effect Standards of the Site Law 06-096 CMR 375.10 (Control of Noise). As described in 06-096 CMR 375.10(C)(1)(v), the most restrictive limits for protected locations are 55 A-weighted decibels (dBA) during daytime hours (7 am to 7 pm) and 45 dBA during nighttime hours (7 pm to 7 am).

The proposed Project will include six inverters, and the inverters and transformers will be co-located on two equipment skids (three inverters per skid). The sound level of the transformers is negligible compared to the inverters, and the sound level from the inverters is dependent on orientation. With three inverters per skid, the minimum distance to a protected location from the inverters is 460 feet for the front, 210 feet for the rear, and 135 feet for the sides, while the minimum distance to an unprotected location is 65 feet for the front, 25 feet for the rear, and 20 feet for the sides (see Attachment H).

The location of the proposed skids for the Project inverters exceeds all the minimum distances required to meet the most restrictive sound level limits provided by MDEP. The northern inverter skid will be located approximately 550 feet (measured from the side of the nearest inverter) from the nearest property line of a protected location (an abutting parcel containing a residence). The southern inverter skid will be located

¹ Massachusetts Department of Energy Resources, Massachusetts Department of Environmental Protection, and Massachusetts Clean Energy Center. 2015. Questions & Answers: Ground-Mounted Solar Photovoltaic Systems. Available at: <https://www.mass.gov/files/documents/2016/08/rm/solar-pv-guide.pdf>. Accessed July 30, 2021. ² Massachusetts Department of Energy Resources, Massachusetts Department of Environmental Protection, and Massachusetts Clean Energy Center. 2015. Questions & Answers: Ground-Mounted Solar Photovoltaic Systems. Available at: <https://www.mass.gov/files/documents/2016/08/rm/solar-pv-guide.pdf>. Accessed July 30, 2021.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

approximately 750 feet (measured from the side of the inverter) from the nearest property line of a protected location (an abutting parcel containing a residence). Additionally, the two inverter skids will be approximately 1,000 feet apart. The sound level assessment conservatively demonstrates that full operation of the Project will meet the most restrictive applicable sound level limits provided by MDEP.

SECTION 615. PERFORMANCE STANDARDS FOR SOLAR ENERGY SYSTEMS AND SOLAR FARMS

a) Application Requirements for Solar Farm, Medium and Solar Farm, Large. Outside agency permitting must be completed prior to application submission.

As discussed with the Planning Board on September 21, 2021, the Planning Board agreed to accept the application for this Project and process it concurrently with state permit applications.

i. *A fully executed and signed copy of the application for Site Plan Review.*

The Site Plan Review application is provided in Attachment A.

ii. *Name of the owner and operator of the facility, and the names of the owner of the property.*

Maine DG Holdco, LLC (Applicant) is the owner and operator of the facility. M.S. Hancock Inc. is the owner of M4-035 and M4-036; Hancock Land Co. is the owner of M4-034.

iii. *Cover letter describing the project, with details on the size and location of the proposed system and the subject property.*

See attached cover letter.

iv. *Plans (including location of proposed system, identifying the location of the facility on the property and physical dimensions of the system and the property. Location of any public road or right-of-way that is contiguous with the property. Location of overhead utility lines).*

See the Site Plans in Attachment B.

b) Dimensional Standards

i. *Minimum Lot Size = 5 acre minimum.*

The three lots where the Project will be located are each greater than 5 acres and have a combined acreage of approximately 264 acres.

ii. *Maximum Developed Area/Area of Disturbance per Solar Farm = 60 acres.*

The maximum developed area, including all areas of clearing, is approximately 45 acres.

iii. *Maximum Height: 25 feet, measured from ground level to the highest point of the facility when oriented at maximum tilt.*

The fixed tilt panels for the Project are less than 25 feet from ground level. The height will vary with small topographic variations, but most panels will be approximately 10 feet from ground to the highest point.

iv. *Minimum Setbacks, Front, Side, and Rear: 50 feet*

All panels, fences and clearing around the array will be more than 50 feet from property boundaries.

c) Solar Farm Performance Standards

i. *A sign shall be required to be installed on the property to identify the owner and provide a 24-hour emergency contact phone number. Additional signage may be required. All signs must conform to the standards of the Land Use Ordinance.*

A sign compliant with Section 700 of the Naples Land Use Ordinance will be located on the entrance gate identifying the landowner and providing an emergency contact number. The gate will also be equipped with a Know Box lock (or similar locking mechanism) for local emergency personnel entrance.

- ii. *All electrical and control equipment for a ground-mounted Solar Farm shall be labeled and secured to prevent unauthorized access.*

The facility will be fenced and will have a locked gate(s). Transformers, disconnect switches, and generation equipment cabinets will be locked and prominently marked with danger and hazard identification signage as required by the National Electric Code and good industry practices.

- iii. *Solar Farms that have frontage on a public road must maintain a twenty-five (25) foot wooded buffer at the property's front, side and rear lot lines.*

The Project does not have frontage on a public road.

- iv. *Existing trees, shrubs and other vegetation within the buffer area shall be preserved. The Planning Board may require additional plantings to create a naturalized vegetated buffer.*

As noted above, there is no frontage on a public road requiring a buffer. However, there is an extensive buffer of existing forested vegetation between the Project and Route 302.

- v. *Access drives may cross the buffer area, but parking areas or internal access drives may not be located within this area.*

As noted above, there is no frontage on a public road requiring a buffer.

- vi. *A Solar Farm Maintenance and Operations Plan shall be provided upon Site Plan approval.*

See Operations and Maintenance Plan in Attachment I.

- vii. *Decommissioning and removal of the Solar Farm is required after twelve (12) consecutive months of no energy generation. The owner or operator and/or operator shall remove the system, in its entirety, by no later than ninety (90) days after the end of the twelve-month period.*

See Decommissioning Plan in Attachment J.

- viii. *Removal surety required for all Solar Farms. Upon Site Plan approval, and prior to applying for any applicable building permits for a Solar Farm, Large the applicant shall submit to the Town a surety or performance guarantee to be approved by the Town Manager in the amount of 125% of the estimated removal costs. Such costs will account for physical removal of all structures, systems, equipment, security barriers and electrical lines, disposal of all solid and hazardous waste, and stabilization or re-vegetation of the site as necessary to minimize erosion. The surety or performance guarantee shall be kept in effect throughout the lifetime of the system, and the form and amount of the financial surety will be reviewed by the Town Manager or designee every five (5) years, and renewed or adjusted as necessary.*

See draft form of surety in Attachment K.

- ix. *Solar Farms shall be located outside of any portions of a property within a Shoreland or Stream*

Protection zone and must meet current standards. Additional plantings may be required to meet these standards.

All portions of the Project are beyond Shoreland and Stream Protection zones. See Site Plans in Attachment B for relation of the Project to identified wetland and stream resources.

x. *Applicant must demonstrate that the project is not viewable from any point on a great pond or navigable water in town.*

TJD&A of Yarmouth completed a viewshed analysis that concluded there would be no visibility of the Project from great ponds or navigable waters in the town. See Attachment L.

xi. *Solar Farms must be sited on land with less than a 50% slope.*

There are no slopes greater than 50%. See Site Plans in Attachment B.

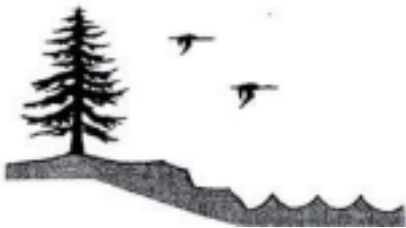
xii. *Solar Farms located in the Rural District, applicant must demonstrate that the project is not viewable from a public road.*

The Project will not be viewable from a public road. See TJD&A analysis in Attachment L.

xiii. *All Solar Farms must meet the standards of DEP Chapter 500 rules for stormwater management and must show that post-development stormwater conditions will not increase the flow above pre development conditions.*

The Project has been designed to meet the stormwater management standards in accordance with Maine's Stormwater Management Law (Chapter 500) and will not significantly increase stormwater flow above pre development stormwater conditions.

ATTACHMENT A: APPLICATION FORM



TOWN OF NAPLES
PLANNING BOARD APPLICATION

P.O. Box 1757, Naples, Maine 04055
Phone: (207) 693-6364 / Fax: (207) 693-3667
www.townofnaples.org

Major Site Plan Review Application

Date: October 15, 2021

Owner/Applicant Name: _____ Mailing Address: _____

_____ Telephone: _____ Email: _____ Property

Owner:

Property Location: _____ Map & Lot:

Any easements, covenants, or deed restrictions related to the property? _____

Zoning District: _____ Waivers requested:
A list must be submitted for waivers

Name, address, & phone # of applicants engineer, land surveyor or planner:

The undersigned, being the applicant, owner or legally authorized representatives, states that all information contained in this application is true and correct to the best of his/her knowledge and hereby does submit the information for review by the Town and in accordance with applicable ordinances, statues, and regulation of the Town, State and Federal governments.

Date: _____ Signature: _____

_____ All applications will be reviewed by

a town-contracted planner to ensure all information necessary is provided. After your submission, we will contact you with the total price and the date that your application will be reviewed by the Planning Board.

Fee Schedule:

Advertising: \$50.00 Aquatic Structure (non-commercial): \$50.00 Fee per abutter: \$10.00

Under 1,000 sq. ft. gross floor area: \$300.00

1,000 10,000 sq. ft. gross floor area: \$400.00

Over 10,000 sq. ft. gross floor area: \$400.00

**Plus \$25.00 for each 1,000 sq. ft. over 10,000

Development without building: \$400.00 Review Escrow: \$2,000.00

Modification of approved plan: \$100.00

Commercial Annual Renewal: \$50.00 Applicants Total: \$ 2,570.00

Please include one hard copy, and one digital copy of all supporting documents, including a letter of intent when submitting your application. After it is reviewed by a town-contracted planner, 9 final copies will be needed before your hearing date is scheduled.

TOWN OF NAPLES
Planning Board Checklist of Submitted
Materials For
SITE PLAN REVIEW

Waived
by PB

[Redacted]
Preliminary

Application Submitted Not
by Applicant

waived
Applicable Rcvd. By
Applicant Request to PB
be

[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

[Redacted]
Site Plan (drawn at a scale sufficient to review items in section 6 of the ordinance but not more than 100 feet to the inch and showing:

- [Redacted]
- Perimeter survey of parcel made and certified by a registered land surveyor
- Total area of any land within 500 feet of the proposed project which is owned by the applicant
- Zoning classifications of the property and location of zoning district boundaries if the property is located in two or more zoning districts
- Soil types and location of soil boundaries as certified by a registered engineer or certified soil scientist
- Location of all building setbacks as required by town ordinances
- Location, size and character of all signs in exterior lighting
- Lots area of the parcel, street frontage and

minimum lot size and frontage

Location of all existing and proposed buildings, driveways, sidewalks, parking spaces, loading areas, open spaces, large trees, open drainage courses, signs, exterior lighting, service areas, easements and landscaping

Location of all buildings within 50 feet of the parcel and the location of intersecting roads are driveways within 200 feet of the parcel

Existing and proposed topography of the site at 2 foot print to war intervals if major changes to the existing topography are being proposed

All surface water features within 500 feet of the project boundaries including perennial streams and wetlands

	Location and dimensions of on-site pedestrian and vehicle or vehicle dealer				
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access ways, parking areas, loading and unloading facilities, design of entrances and exits of vehicles to and from the site on to public streets, curve and sidewalks

Location of all Wells and septic systems within 150 feet of the property boundary

Drainage plan to describe the location and size of road culprits, road drainage, ditches, phosphorus and run off control measures and other similar features

On-site soil and investigation report by a DHS licensed site evaluator

Statement from the Fire Chief that the property is accessible by present fire apparatus and detailing any additional on-site fire protection facilities required

Soil and erosion control plan app approved by the Cumberland County soil and water conservation District show when

Existing and proposed method of handling storm water runoff

Direction and flow of the run off through the use of air rose

Location, location and size of all catch basins, dry wells, drainage ditches, Swales, retention basins and storm sewers

Engineering calculation used to determine drainage requirements based upon a 25 year storm frequency, if the project will significantly alter the existing patterns due to such factors such as the amount of new impervious surfaces being proposed

Phosphorus and analysis; required if the proposed project is within the Shoreland zone or the non-vegetative areas exceed 40,000 ft.². If required, the analysis of prosperous loading shall utilize the methods contained in the latest revised edition of the manual underlying phosphorus control and Lake watersheds and underline, published by the main DTP, and shall require third-party review

A utility plan showing provisions for the water supply and wasteland disposal, including the size and location of all piping, holding tanks, leach field, etc.

Building plan showing all of the floors and elevations

Evidence of applicants right and or title to the property, and copies of any proposed or existing easements, convey ends and deed restrictions

Description and he sign a proposed temporary and permanent signs, including location, size and lighting

	Copies of all required state approvals and permits					
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Any of the requirements may be waived by the planning board if it is deemed that because of the special circumstances of the site as long as the burden is upon the applicant and would not adversely affect a building landowners and the general health, safety and welfare of the town. Please note any request for waivers will be requested as part of the application process, and any waivers that are granted must be listed on the final plan.

DECISION

on materials and supporting documents submitted by the applicant, the Planning Board approved/denies the application for Major Site Plan approval.

Approval with conditions:

The application is approved, subject to the meeting the following conditions:

A. Standard conditions of approval:

1. This approval is limited to development only as described and shown on the plans and documents presented.
2. The project must comply at all times with all applicable federal, state and local approval to which it is subject.
3. Copies of all required State permits and/or letters of approval (DOT, Fire Marshall, DEP, etc.) shall be submitted to the Naples Code Enforcement Officer prior to completion of project.
4. Any required stormwater and phosphorus controls shown on the site plan must be inspected by a licensed engineer or other certified individual and a signed statement that the controls were installed as presented in the plans is to be provided to the Naples CEO prior to the building being placed in service.

5. For amendment to previously approved site plan, all previously conditions of approval, if any, shall remain in force unless explicitly changed by the Planning Board.

B. Project- Specific Conditions of Approval:

Naples Planning Board Chairman ~~Date:~~

Specific conditions of approval for this project are enumerated in Appendix I.

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

ATTACHMENT B: SITE PLANS

PERMIT SET

NAPLES

SOLAR

NAPLES,

CUMBERLAND

COUNTY, MAINE

PREPARED FOR

MAINE DG

HOLDINGS, LLC

386.21.03

OCTOBER 14, 2021

SHEET NO.
DESCRIPTION

COVER

C-1 SITE PLAN

C-2 SITE GRADING PLAN

C-3 EROSION AND SEDIMENTATION CONTROL PLAN

C-4 PRE DEVELOPMENT DRAINAGE PLAN

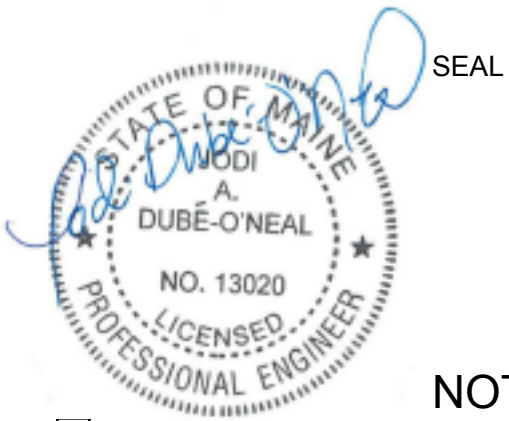
C-5 POST DEVELOPMENT DRAINAGE PLAN

C-6 POST DEVELOPMENT QUALITY DRAINAGE PLAN

D-1, D-2 DETAILS

VICINITY MAP

DESIGN TEAM:

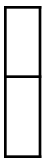


NOT FOR CONSTRUCTION 10-14-2021



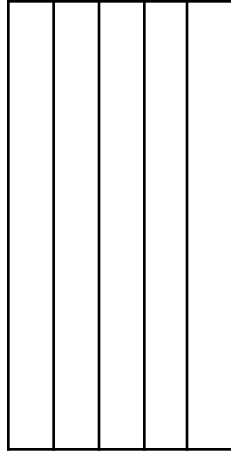












Seal ,Project No.

MAINE DG HOLDCO, LLC

Designed By

386.21.03

Drawn By
Dwg. By Rev. # Description Date

MS/AD MS/AD



Engineer

136 CENTER ST ENGINEERING NAPLES, MAINE

Date
10/14/2021

OLD TOWN, ME

Project Location

SURVEYING

NAPLES, MAINE

Scale

AS SHOWN



Drawing Description

Approved

10/14/2021 2:32 PM

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Checked

NAPLES SOLAR PROJECT

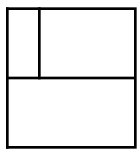
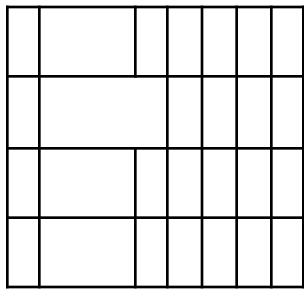
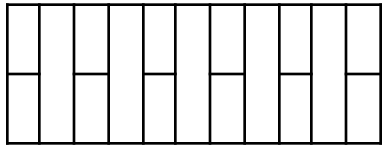
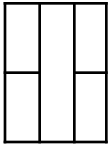
SITE PLAN

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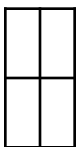
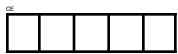
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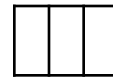
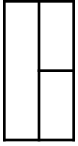






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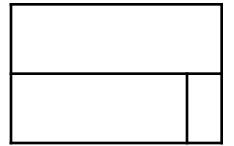
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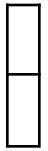
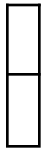
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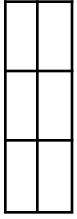
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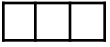


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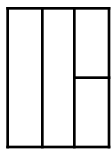
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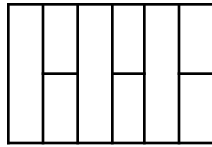
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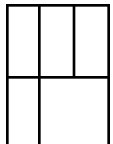


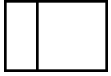
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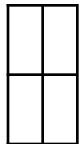


Sheet No.

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MAINE REGISTERED PROFESSIONAL ENGINEER



Seal
Project No.

386.21.03

MAINE DG HOLDCO, LLC

Designed By
Drawn By
Dwg. By Rev. # Description Date

MS/AD MS/AD



Engineer

136 CENTER ST ENGINEERING NAPLES, MAINE

Date
10/14/2021

OLD TOWN, ME

Project Location

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Drawing Description

Approved

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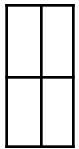
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PLAN

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OLD TOWN, ME

Project Location

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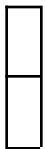
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PLAN**

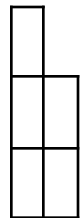
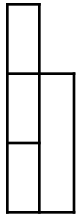
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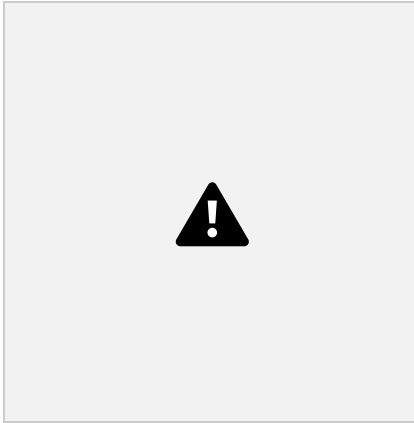
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136 CENTER ST ENGINEERING NAPLES, MAINE

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NAPLES SOLAR ENERGY PROJECT

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136 CENTER ST ENGINEERING NAPLES, MAINE

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Project Location

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NAPLES, MAINE

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Drawing Description

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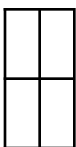
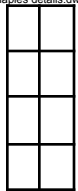
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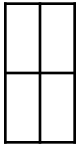
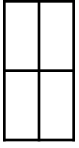
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DETAILS

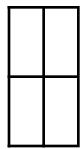
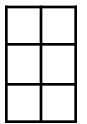
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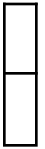
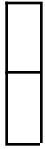
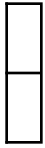
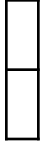
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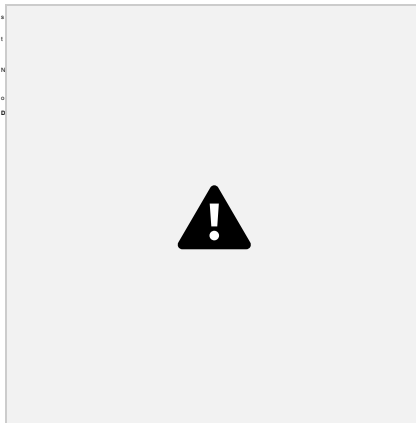
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MAINE DG HOLDCO, LLC

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136 CENTER ST ENGINEERING NAPLES, MAINE

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OLD TOWN, ME

Project Location

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longroad naples details.dwg

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

ATTACHMENT C: ABUTTERS LIST

Naples Solar Project: Abutter List

R04-026

MOUNTAIN VISTAS, LLC

C/O DEBOER, CHARLOTTE

29 BUSH HILL RD

IPSWICH, MA 02938

R04-038

**HALE, ROLAND W
712 NAPLES ROAD
HARRISON, ME 04040**

R04-039

**LEE, POY
C/O LINDA LEE
52 TENNYSON ST
SOMERVILLE, MA 02145**

R03-002

**MKFT TIMBERLANDS, LLC
C/O F & W FORESTRY SERVICES
PO BOX 3610
ALBANY, GA 31706**

R03-003

**MKFT TIMBERLANDS, LLC
C/O F & W FORESTRY SERVICES
PO BOX 3610
ALBANY, GA 31706**

U34-003

**FLECK, SUSAN T
FLECK, MICHAEL D
60 HALCYON LANE
NAPLES, ME 04055
U34-005**

**BACON, MALCOLM
PO BOX 143
FREEDOM, NH 03836**

U35-001

TREADWELL, MRS

**ARTHUR C/O ANDREA
SILVA
1455 SECOND AVE
#1006 SAN DIEGO, CA
92101**

U35-002

**STEWARD, JOHN
19 ORCHARD ST
RANDOLPH, MA 02638**

U35-003

**ESTATE OF BARKER, PAUL
L. BARKER, MATTHEW PR
70 MIDDLE ROAD
NAPLES, ME 04055**

U35-016

**SHAW, RONALD
SHAW, PATRICIA
92 KING HILL RD.
NAPLES, ME 04055**

U36-009

**LANDAVERDE,
ERINOO MITCHELL,
JULIE
1407 ROOSEVELT
TRAIL NAPLES, ME
04055**

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

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100
150
200
250
300

0 50 100 200 300

Feet

0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

 **Natural Resources Conservation Service**

Web Soil Survey


National Cooperative Soil Survey

10/10/2021 Page 1 of 3

Soil Map—Cumberland County and Part of Oxford County, Maine
(Naples Solar Project)

MAP LEGEND MAP INFORMATION

Area of Interest (AOI)

 Area of Interest (AOI)

Soils


Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot


 Closed Depression


 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot



Conservation Service

- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

Web Soil Survey
National Cooperative Soil Survey
The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of map may cause misunderstanding of the detail of map accuracy of soil line placement. The maps do not show small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine

Survey Area Data: Version 18, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 5, 2013—Oct 22, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

10/10/2021

Page 2 of 3

Soil Map—Cumberland County and Part of Oxford County, Maine Naples Solar Project

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HgB	Hermon sandy loam, 3 to 8 percent slopes	14.6	39.3%
HgC	Hermon sandy loam, 8 to 15 percent slopes	4.0	10.7%
HhB	Hermon sandy loam, 0 to 8 percent slopes, very stony	0.4	1.1%
HhC	Hermon sandy loam, 8 to 15 percent slopes, very stony	12.5	33.6%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	2.8	7.6%
PkB	Peru fine sandy loam, 3 to 8 percent slopes	2.8	7.6%
Totals for Area of Interest		37.2	100.0%

ATTACHMENT E: STORMWATER ANALYSIS

Summary of Stormwater Calculations

The project, due to its size and location, is subject to the BMP phosphorous and basic standards, and the flooding standards of storm water management. The purpose of the BMP standard is to include treatment measures that will mitigate for the increase of channel erosive flows, treat the pollutants effectively, and to mitigate for the potential temperature impacts due to the runoff from the proposed site. The project has been designed to prevent flooding and erosion down gradient of the site.

The applicant proposes to meet the required **BMP Phosphorous Standard** by doing the following:

The runoff from the project goes to Long Lake. The following describes the phosphorus loading for the Long Lake watershed. See the attached calculations.

The phosphorus analysis is based on several assumptions listed in this narrative, the support calculations, and the specific analytical methods described in *Maine Stormwater Management Design Manual: Phosphorous Control Manual Volume II* (MDEP, March 2016). Data on current water quality and allowable loading for Long Lake was obtained from MDEP. See the attached phosphorous calculations for the phosphorous allocations, small watershed thresholds, and the phosphorous budget for the lake watershed.

The phosphorous budget for the Long Lake watershed was calculated using the MDEP provided P value and by selecting a development area of 149.31 acres within the watershed. Based on this, a Project Phosphorus Budget (PPB) of 4.330 pounds/year was calculated. The post development calculation on the attached spreadsheet was prepared using a new permanent gravel (impervious) area of 1.86 acres of gravel roads that will remain on the site once revegetation occurs. The calculations reflect 1.4972 pounds/year of phosphorous export for this new impervious area, which is under the allowable phosphorous export budget of 4.330 pounds/year.

Phosphorus treatment will be accomplished by implementing a combination of meadow roadside buffers and stone bermed level lip spreaders. The area in and around the panels will remain a meadowed stormwater buffer for treatment and won't be mowed more than 2 times in one year. The relative amount of disturbance from the development is minimal. See the attached calculations for the sizing and assumptions.

The applicant proposes to meet the **Flooding Standard** as follows:

The flooding standard will be addressed by restoring the ground cover under the panels to a meadowed area, and installing several level spreaders. As part of the flooding standard the runoff at each of the property lines must meet or be less than the predevelopment flows. A runoff curve number (CN) comparison was calculated as a check. It was determined there was no significant

change in the CN therefore there would be no significant change in the runoff rate. When comparing the CN for the pre and post development conditions for the North (watershed 1) the CN was reduced showing there would be a decrease in the runoff rate. When comparing the CN for the pre and post development conditions for the South and East (watershed 2 and 3), the CN shows a small insignificant increase in the runoff rate. There are several level spreaders being proposed within the South and East watersheds that will slow the runoff down and return it to sheet flow before it leaves the property. These level spreaders have not been considered in the CN calculations. There will most likely not be an increase in runoff rate at the property line with the level spreaders being proposed. See the supporting calculations at the end of this section.

See the attached calculations. The overall storm water management system is designed to prohibit any adverse impact on areas downstream from the site.

CN Summary Page 1

Date 10/13/2021

Done by JAO

Project Name **Naples Solar**

Project Number **386.21.03**

Condition Total Area Overall CN

CN Value Calcs

Pre Development 84.48 46.1 Post Development 85.10

46.7

South

(acres) Value

Condition [redacted] Pre Development [redacted]

[redacted] Post Development [redacted]

North

(acres) Value

Condition [redacted] Pre Development [redacted]

[redacted] Post Development [redacted]

East

(acres) Value

Date 10/13/2021 Long Lake Done by JAO

Project Name **Naples Solar** Naples Project Number **386.21.03** Cumberland County
CN Calcs South Page 1

3 3680015 2402744 1232639 23122 169 21341 100.0% 46.1 46.1
PRE DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CNA B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value WOODS Meadow Lawn

Total Area = 3680015 100.00% **CN Value = 46.1** 84.48
3 3707013 1454336 918937 976502 275431 81807 100% 46.7 46.7
POST DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CNA B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value

Total Area = 3707013 100.00% **CN Value = 46.7** 85.10

Date 10/13/2021 Done by JAO
Project Name **Naples Solar** Project Number **386.21.03**
CN Calcs North Page 1

WOODS Meadow Lawn
CN Value Calcs NORTH

Q=ciA
1 1447750 801581 634258 11911 100.0% 51.1 51.1
PRE DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CNA B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value

0.0

WOODS Meadow
Total Area = 1447750 100.00% **CN Value = 51.1** 33.24
1 1447750 505251 634258 301520 6721 100% 50.9 50.9
POST DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CN
Lawn
A B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value

Total Area = 1447750 100.00% **CN Value = 50.9** 33.24

Date 10/13/2021 Done by JAO
Project Name **Naples Solar** Project Number **386.21.03**
CN Calcs East Page 1

WOODS Meadow Lawn
CN Value Calcs EAST

Q=ciA
2 1366355 963333 385373 11883 1062 4704 100.0% 43.5 43.5
PRE DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CNA B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value

0.0

WOODS Meadow Lawn

Total Area = 1366355 100.00% **CN Value = 43.5** 31.37
 2 1339357 783299 299505 141730 83014 31809 100% 45.1 45.1
POST DEVELOPMENT

Watershed ID AREA (SF) Gravel Impervious % of Area CN Value Weighted CNA B C D A B C D A B C D All All
30 55 70 77 30 58 71 78 49 69 79 84 96 98 Value

Total Area = 1339357 100.00% **CN Value = 45.1** 30.75
 Qual Calcs Long Lake Page 1 Project Name **Naples Solar** BA=Buffer Adjacent to Small Imp RB=Roadside buffer BRS=Roadside Buffer with Rock

Sandwich Date 10/13/2021 DT=Buffer w/ditch turnout WP=Wet pond
 Done by JAO USF=Underdrain Soil Filter INF=Infiltration
 Project Number **386.21.03** BL=Buffer w/level spreader DB=Detention basin

QUALITY CALCULATIONS FOR LINEAR PORTION

Watershed per acre phosphorus budget (Appendix C): P 0.029 # P/acre/year Total ac of devel. parcel: TA 149.31 acres Small Watershed Threshold (Appendix C) SWT 409 acres NWI wetland acreage: WA acres

Long Lake (Naples)

Allowable increase in Town's share of annual phos (App C) FC 47.72 lbs P/year Steep slope acreage: SA acres Area avail. For development (App C) AAD

4091 acres Existing imp area (Pre 1980) EIA_B acres

Phosphorous Requirement

Project acreage: A = TA - (WA + SA + EIA_B + EIA_A)^A 149.31 acres Existing imp area (post 1980) EIA_A acres A/AAD R 0.036

Project Phos Budget: PPB = P x A **PPB 4.330 lbs P/year**
 Subwatershed Cover Area BMP BMP Area Treatment Export Pre- Post
 Project Phos Budget with small watershed adjustment: **PPB N/A lbs P/year**
 ID Type (sqft) No. Soils / Cover (acres) Factor Coefficient Treatment Treatment
 Q1 Impervious 2014 RB1 A / Meadow 0.0462 0.2 1.75 0.0809 0.0162
 Q2 Impervious 2942 BL1 A / Meadow 0.0675 0.2 1.75 0.1182 0.0236
 Q3 Impervious 3258 BL2 A / Meadow 0.0748 0.2 1.75 0.1309 0.0262
 Q4 Impervious 4114 RB2 A / Meadow 0.0944 0.2 1.75 0.1653 0.0331
 Q5 Impervious 3896 BL3 A / Meadow 0.0894 0.2 1.75 0.1565 0.0313
 (or none) Type lbs P/Year lbs P/year
 Q6 Impervious 3744 BL4 A / Meadow 0.0860 0.2 1.75 0.1504 0.0301
 Q7 Impervious 1176 BL5 A / Meadow 0.0270 0.2 1.75 0.0472 0.0094
 Q8 Impervious 8286 BL6 A / Meadow 0.1902 0.2 1.75 0.3329 0.0666
 Q9 Impervious 850 RB3 A / Meadow 0.0195 0.2 1.75 0.0341 0.0068
 Q10 Impervious 1981 BL7 A / Meadow 0.0455 0.2 1.75 0.0796 0.0159
 Q11 Impervious 5629 RB4 A / Meadow 0.1292 0.2 1.75 0.2261 0.0452
 Q12 Impervious 2153 None 0.0494 1 1.75 0.0865 0.0865
 Q13 Impervious 5678 BL8 A / Meadow 0.1303 0.2 1.75 0.2281 0.0456
 Q14 Impervious 3417 BL9 A / Meadow 0.0784 0.2 1.75 0.1373 0.0275
 Q15 Impervious 7711 BL10 A / Meadow 0.1770 0.2 1.75 0.3098 0.0620
 Q16 Impervious 24175 None 0.5550 1 1.75 0.9712 0.9712

Total Area **1.860** acres Total Pre Tx Phos (Pre-PPE) **3.2551** lbs P/year Total Post Tx Phos (Post-PPE) **1.4972** lbs P/year
 RB Buffer Calcs Page 1

Project Number **386.21.03** Imp=Impervious area W=Width
 Date 10/11/2021 Land=Landscaped Area B=Buffer
 Done by JAO
 Project Name **Naples Solar** RB=Roadside Buffer

REQUIRED BUFFER FLOW PATH LENGTHS

of Travel Ways Length of Flow Length of Flow
~BUFFER ADJACENT TO DOWN HILL SIDE OF ROAD~
 to Buffer Forest Meadow
 1 35 50

2 55 80
Travel Way (1)

- * Buffer slopes may not exceed 20%
- ** Buffers may not be located in a wetland
- *** Roadside slopes may be included in a meadow buffer if the slope is less than 4:1 and if the soils allow infiltration

BMP Type & # of Travel Buffer Type Treatment Standard Buffer

RB1 1 A / Meadow 1.75 50
RB2 1 A / Meadow 1.75 50
RB3 1 A / Meadow 1.75 50
RB4 2 A / Meadow 1.75 80

Ways (1 or 2) (Forest or Meadow) Factor Length (ft)

BL Buffer Calcs Page 1

Date 10/11/2021 Land=Landscaped Area B=Buffer
Done by JAO C1=Loamy Sand or Sandy Loam C2=Silt Loam, Clay Loam or Silty Clay Loam
Project Name **Naples Solar** BL=Buffer with a Level Lip SpreaderL=Length
Project Number **386.21.03** Imp=Impervious area W=Width

REQUIRED BUFFER FLOW PATH LENGTHS

~BUFFERS WITH LEVEL LIP SPREADERS~

Soils Length of Flow Berm L for Forested Buffer(ft) Berm L for Meadow Buffer(ft) Length of Flow Berm L for Forested Buffer(ft) Berm L for Meadow Buffer(ft) Thru Buffer (ft)

Per acre Imp Per acre Land Per acre Imp Per acre Land Thru Buffer (ft) Per acre Imp Per acre Land Per acre Imp Per acre Land 100 65 20 75 25 100 78 24 90 30

0-8% Buffer Slope 9-15% Buffer Slope

B 75 [REDACTED] 54 100 [REDACTED] 36
A 75 75 25 125 35 75 90 30 150 42 C1 75 [REDACTED] 54
100 100 30 125 35 100 120 36 150 42
150 50 15 60 20 150 60 18 72 24 C2 100 150 45 200 60 100 180 54 240 72
150 65 20 75 25 150 78 24 90 30 D 150 150 45 200 60 150 180 54 240 72
150 75 25 100 30 150 90 30 120 36 150 100 30 150 45 150 120 36 180 54

BMP Type & # Imp (acres) Soils/Buffer Type Treatment Buffer Standard Buffer L of Berm L of Berm Standard Berm

BL1 0.0675 A / Meadow 1.75 5% 75 125 35 8
(forest/meadow) Factor Slope Length (ft) per ac. imp per ac. Land Length (ft)
BL2 0.0748 A / Meadow 1.75 5% 75 125 35 9
BL3 0.0894 A / Meadow 1.75 7.5% 75 125 35 11
from table from table
BL4 0.0860 A / Meadow 1.75 9% 75 150 42 13
BL5 0.0270 A / Meadow 1.75 5% 75 125 35 3
BL6 0.1902 A / Meadow 1.75 6% 75 125 35 24
BL7 0.0455 A / Meadow 1.75 7% 75 125 35 6
BL8 0.1303 A / Meadow 1.75 5% 75 125 35 16
BL9 0.0784 A / Meadow 1.75 2% 75 125 35 10
BL10 0.1770 A / Meadow 1.75 7% 75 125 35 22

Reference: Site Plan Review Application – Maine DG Holdco, LLC – Naples Solar Project

Land Casco Timber Company, Inc. a Maine corporation Casco pursuant to a split of real
property under the Plan of Reorganization of event date herewith (the Exclusive Option

to Lease for Solar PV Project, dated as of December 20, 2019, between Land and LSH,

~~as amended by that certain Amendment to Option to Lease, dated as of June 8, 2020.~~

~~Casco hereby assumes all obligations and liabilities of Land with respect to the Naples~~

~~Property that arise on or after the date of this Assignment Agreement Assumed~~

~~Liabilities. Land shall retain all monies it has received before the date of this~~

~~Assignment~~

ASSIGNMENT AND ASSUMPTION AGREEMENT

Assignment Agreement signed

and made effective on August 3, 2021 by Hancock Land Company, Inc., a Maine corporation

Plan), and with the consent of LSH Land Holdings, LLC (LSH).

For good and valuable consideration, the receipt and sufficiency of which is acknowledged, to the extent that it relates to lots 34, 35, and 36 on Naples, Maine Tax Map R-4 (the Naples Property), Land hereby assigns to Casco all of its right, title, and interest under the

and as further amended by that certain Second Amendment to Option to Lease, dated as of November 24, 2020, all of which are attached hereto as Exhibit A (collectively, the Option Agreement).

Agreement and other rights that accrued before such date, and shall retain obligations, and liabilities under the Option Agreement not assumed by Casco, including those that relate to

LSH hereby consents to this Assignment Agreement.

This Assignment Agreement shall be governed by the laws of the State of Maine.

The parties hereto may execute this Assignment Agreement in counterparts, each of which is deemed an original, but all of which together shall constitute one and the same agreement. This Assignment Agreement may be executed or delivered by electronic or facsimile means, and electronic or facsimile copies of executed signature pages shall be binding as originals.

[space intentionally left blank; signature page follows]

IN WITNESS WHEREOF, the parties hereto have hereunto caused this Assignment Agreement to be executed as of the date set forth above.

HANCOCK LAND COMPANY, INC.

By:
Paul Wainman, President

CASCO TIMBER COMPANY, INC.

By:

K. Matthew Hancock, President

Consented to by:

LSH LAND HOLDINGS, LLC

By: _____
Name: Michael U. Alvarez
Title: Chief Operating Officer
Exhibit A [Option Agreement]



LSH Land Holdings, LLC

330 Congress Street, 6th Floor

to enter into leases for the Properties (the "Leases") and obtain any corresponding
Boston, MA 02210

December 20, 2019

Hancock Land Company, Inc.
P.O. Box 299
Casco, ME 02015

Re: Exclusive Option to Lease for Solar PV Project

Dear Mr. Hancock:

LSH Land Holdings, LLC, a Delaware limited liability company (“Developer”), is pleased to provide this letter to confirm its agreement (“Letter Agreement”) for an exclusive option to enter into definitive lease agreements with Hancock Land Company, Inc. (“Landowner”), Developer and Landowner each sometimes being referred to herein as a “Party” and are collectively sometimes being referred to herein as, the “Parties” for the lease of approximately acres of land in Naples, Maine, being more particularly described in the Memorandum of Option attached hereto as Exhibit B (the “Properties”).

1. Grant of Option. Landowner hereby grants Developer an exclusive option (the “Option”)

easements for access and transmission lines. Developer and Landowner shall negotiate exclusively in good faith regarding the terms and provisions of the Leases for the Properties, which Leases shall include the general terms described on the term sheet attached hereto as Exhibit “A” and incorporated by reference herein (the “Term Sheet”), which shall also contain such other reasonable terms and provisions as the Parties may agree. The Parties recognize that successful negotiation of the Leases will also entail substantial definition and refinement of the concepts expressed in the Term Sheet and final mutual agreement on all of the terms and conditions set forth herein.

2. Term. The Option term (the “Option Term”) will be for a period of twenty-four (24) months commencing with the execution of this Letter Agreement.

3. Option Term Payment

CONFIDENTIAL
Hancock Land Company, Inc.
December __, 2019 Page 1

EXHIBIT “A” TERM SHEET

(See Memorandum of Option to Lease attached hereto.)
Page 6

EXHIBIT "B"

MEMORANDUM OF OPTION TO LEASE

By this Memorandum of Option to Lease (this "Memorandum"), Hancock Land Company, Inc. ("Owner"), a Maine corporation, evidences that it has entered into an Option to Lease Agreement dated December 20, 2019 (the "Agreement") with LSH Land the County of Cumberland, State of Maine, more particularly described on Exhibit 'A' attached hereto and made a part hereof (the "Properties"), on the terms and conditions set forth in the Agreement.

The term of the option commenced on December 20, 2019 and shall expire, unless RECORDING REQUESTED BY AND WHEN RECORDED RETURN TO:

Longroad Development Company, LLC 735 Montgomery Street, Suite 480
San Francisco, CA 94111

County of Cumberland

Tax Parcel ID No(s): Town of Naples, Map R-4, Lots 34-36; ;

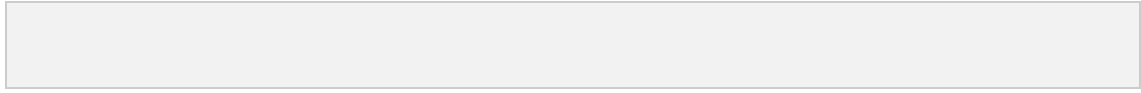
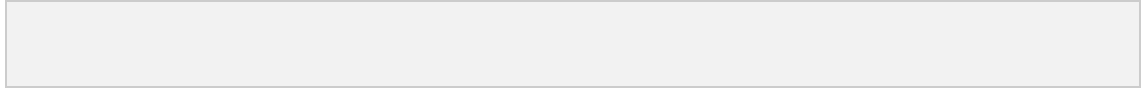
Holdings, LLC, a Delaware limited liability company ("Optionee") granting the Optionee an exclusive option to lease and an easement over those certain real properties situated in

Optionee: Owner:

LSH Land Holdings, LLC Hancock Land Company, earlier terminated, on 12:01 on December 20, 2021 (the "Expiration Date"). Unless this Memorandum has been terminated prior to the Expiration Date by the recordation of a Release of Option in the Official Records of the County of Cumberland, State of Maine, signed by Optionee and specifically referencing this Memorandum, this Memorandum shall automatically cease to impart constructive notice of the Agreement from and after the Expiration Date.

The parties have executed and recorded this instrument for the purpose of imparting notice to all third parties of the Agreement.

This Memorandum and the Agreement shall bind and inure to the benefit of the parties



5
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