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CAPE COD COMMISSION

DEVELOPMENT OF REGIONAL IMPACT DECISION

Date:	March ___, 2021
Project:	Victory Drive Solar (Cape Cod Commission File No. 20055)
Project Applicant:	LSE Ophiuchus, LLC d/b/a Lodestar Energy c/o Eliza Cox, Esq., Nutter McClennan & Fish LLP, Iyannough Road, Hyannis, MA 02601
Property Owner:	Housing Assistance Corporation of Cape Cod
Property/ Site:	9 Victory Drive/0 Kiah's Way, Sandwich, MA 02563 (Assessors Map 28; Parcels 41, 42, and 48)
Title Reference:	Book 13428, Page 191; Book 13431, Page 139 Plan Book 380, Page 48; Plan Book 145, Page 113, Lot R-4; Plan Book 535, Page 95, Lot 7A

SUMMARY

The Cape Cod Commission ("Commission") hereby grants Development of Regional Impact ("DRI") approval, with Conditions, for "Victory Drive Solar," a project to install a utility-scale, ground-mounted solar photovoltaic system, battery storage and supporting improvements at 9 Victory Drive and 0 Kiah's Way in Sandwich, pursuant to a vote of the Commission at its meeting on March ___, 2020.

FINDINGS

The Cape Cod Commission hereby finds and determines as follows:

EXISTING CONDITIONS

F1. The project site is 46.1-acres +/- fronting on Victory Drive and consisting of three separate, adjacent parcels ("Property," "Project Site" or "Site").

F2. The Property is currently developed with a single-family home, an area improved for the purpose of small-scale farming, and multiple small outbuildings associated with the agricultural use.

F3. The Site contains two Placetypes mapped by the Commission and identified in the 2018 Cape Cod Regional Policy Plan ("RPP"): Industrial Activity Center in the west of the Site and Natural Area in the north of the Site. The remainder of the Site (southern portion) does not contain mapped Placetypes but has characteristics of the Suburban Development Area Placetype as described in said RPP (e.g. it is zoned for lower-density residential development by the Town and is contiguous in part with existing suburban style residential development). The above-referenced Placetypes accurately characterize the Site, and the Site is treated as such for purposes of DRI review.

F4. The surrounding development is business and industrial to the northwest, residential to the southwest and southeast, and vacant, undeveloped land to the northeast. The northern portion of the Property also contains a 190-foot wide, improved electric utility easement area.

F5. The Property is partially within a mapped Wellhead Protection Area (WHPA), but the proposed physical development and development activity is outside of the area. The northern section of the Property is mapped as Priority Habitat under the Massachusetts Endangered Species Act for eastern box turtle (*terrapene carolina*). In addition, per MassGIS, the Site is mapped for Prime Farmland Soils and Prime Forest Land. Further, the northerly portion of the Site that is mapped as a Natural Area Placetype contains two mapped wetlands, NHESP Priority Habitat, and BioMap2 Critical Natural Landscape.

F6. There are no known historic resources on the Site or in the Project vicinity – nothing is identified on the State's cultural resource database (MACRIS) in this area of Sandwich. Further, there are no known archaeological resources on the Site, or known archaeological resources that would be impacted by the Project. The Applicant submitted a Project Notification Form (PNF) to the Massachusetts Historical Commission (MHC) and MHC determined on October 23, 2020 that the Project is unlikely to affect significant historic or archaeological resources (a copy of the PNF and MHC's response is contained in the DRI Application materials).

PROPOSED PROJECT

F7. The Applicant proposes to develop and operate on the Project Site an approximately 2.125 +/- MW/AC utility-scale, ground-mounted solar photovoltaic system with battery storage and other supporting and ancillary improvements, including:

a. Establishment of a fully cleared "fenced area" of 13.8 +/- acres, of which 9.8 +/- acres is currently wooded and undeveloped;

b. Installation of 12.5 +/- acres of piles, racks, and solar modules connected by underground wire to a battery bank and central inverter (the latter to be located on concrete equipment pads), all within this fenced area;

c. Installation of a gated gravel driveway;

d. Imposition of a permanent Conservation Restriction on approximately 30.2 acres of the Site;

e. The total disturbed area (including redevelopment of existing disturbed Site areas) associated with the Project is 15.5 +/- acres, including new tree clearing/ topping of approximately 14 acres;

f. Approximately 1.5 acres of tree topping is planned for shading purposes within a 4.5 +/- acre habitat management area within the proposed conservation-restricted portion of the Site (stumps and low vegetation to remain);

g. Of the currently undisturbed Site areas proposed to be disturbed or cleared, 1.61 acres are Industrial Activity Center and 4.27 acres are mapped Suburban Development Area.

(collectively, the "Project")

F8. Ongoing operations and activity at the Property after Project construction, including regular and permanent vehicle trips, would be minimal as cleaning, snow removal, and maintenance mowing are infrequent, equipment is inspected once or twice annually, and the proposed array and electrical components have a projected lifespan of 20+ years.

F9. As noted in the RPP and corresponding Technical Guidance, the regional policy preference is for ground mounted solar photovoltaic (PV) projects to not be developed on 'greenfield' sites or other sites where substantial clearing of trees is required. The Site is, in part, a greenfield, and substantial tree clearing is proposed as part of the Project; however, approximately four acres of the Site is already disturbed, 2/3rds of the Site is proposed to be preserved in substantially its natural state, the Project will be located in substantially the same development footprint as the previously approved Housing

Assistance Corporation ("HAC") Comprehensive Permit development, and a portion of the Site is mapped Industrial Activity Center, where industrial use and development is encouraged.

F10. The Project is a largely passive use that does not involve nor is likely to involve a significant amount of solid waste generation, and solid waste handling or management is not a principal purpose, use, or component of the development. Construction waste will be limited and will not contain substantial amounts of waste materials of significant concern such as gypsum.

BACKGROUND

F11. The Property Owner HAC is a non-profit organization that has served Cape Cod for nearly half a century. HAC offers a full continuum of housing programs and services throughout Cape Cod and the Islands, its stated vision for a "community in which everyone is stably housed so that they can live the life they want to live and contribute to a thriving year-round community." HACs mission is to deliver housing and services that meet the needs of the local community and limit impact on natural resources; and to engage in responsible economic development that generates jobs, stabilizes housing, and strengthens the community.

F12. HAC applied originally in 2002 and ultimately obtained in 2005 a Comprehensive Permit under MGL Ch. 40B ss. 21-23 for an affordable housing development on the Property consisting of a variety of housing types. The proposal also included a community building, a horse stable, two greenhouses, a farm stand, an equipment barn, paddocks, a chicken coop, and an agricultural area.

F13. HAC eventually abandoned its plans to implement this development or other housing development on the Property, citing among other things prohibitive infrastructure costs and a continuing history of local opposition to the development. HAC resolved to establish an alternative plan for use and development of the Property consistent with and in furtherance of its mission.

F14. HAC determined that utility scale solar would be a non-intensive, environmentally- beneficial and feasible use of the Property, consistent with its mission, and issued a request for proposals for the same. The lease revenue from the development would allow HAC to further its housing mission in other parts of the Cape without the particular challenges it experienced in permitting and developing the Property.

F15. The Applicant was the successful respondent to HAC's solar development RFP for the Property. HAC's lease agreement with the Applicant will assist funding the development of HAC's other housing projects across Cape Cod, in areas more conducive to such development.

F16. The Project is located in substantially the same development footprint as HAC's previously approved housing development for the Property.

PROCEDURAL HISTORY

F17. The Project requires mandatory DRI review pursuant to Section 3 of the Commission's Chapter A: Enabling Regulations Governing Review of Developments of Regional Impact, as amended (dated May 13, 2020, with current fee schedule effective July 1, 2020), ("*Enabling Regulations"),* as the Project proposes an Outdoor Use with a Total Project Area of 40,000 sq. ft. or greater.

F18. The Commission received a mandatory DRI referral for the Project from the Town of Sandwich ("Town") Building Commissioner on 7/27/2020.

F19. The Applicant submitted a DRI application for the Project to the Commission on 10/13/2020. The Applicant submitted supplemental application materials in January and February of 2021.

F20. The Applicant has legal standing to pursue the Project as a lessee under a long-term lease agreement with the Property Owner, Housing Assistance Corporation of Cape Cod (a copy of the lease was provided in the DRI application).

F21. The DRI hearing period was opened at a substantive hearing held by a DRI Subcommittee ("Subcommittee") on the Project on 1/26/2021. The hearing was continued to 2/16/2021, when a procedural hearing was held by hearing officer to further continue the hearing to 3/2/2021. The Subcommittee held a continued public hearing on 3/2/2021, where the Subcommittee reviewed a draft written DRI decision prepared by staff at the Subcommittee's direction. At this hearing session, the

Subcommittee voted 3 in favor, 2 opposed to recommend to the full Commission that it grant DRI approval for the Project, with conditions, as set out in the draft written DRI decision reviewed by the Subcommittee. The Subcommittee members opposed stated that they believed the probable project detriment was greater than the probable project benefit, primarily, as identified in the decision, that if the Site were developed as proposed by the Applicant, the Site would no longer being available for the development of housing by HAC or others, at least during the life of the Project.

F22. The full Cape Cod Commission held a hearing on the Project at its meeting on 3/11/2021. It considered the recommendation of the Subcommittee, including the draft written DRI decision. At the hearing on 3/___/2021, the Commission voted...

DRI REVIEW STANDARDS

F23. Section 6(c)(viii) of the *Enabling Regulations* contains the standards to be met for DRI approval, which include, as applicable, consistency with the RPP, District of Critical Planning Concern ("DCPC") implementing regulations, municipal development bylaws, and Commission-certified Local Comprehensive Plans ("LCP"). The Commission must also find that the probable benefit from the Project is greater than the probable detriment.

MUNICIPAL DEVELOPMENT BYLAWS, LCP, AND DCPC CONSISTENCY

F24. There are no DCPC implementing regulations applicable to the Project.

F25. The Town of Sandwich Local Comprehensive Plan (LCP) Goals encourage the Town to integrate solar design into local regulation through a revision to zoning regulations. The LCP's Community Sustainability section identifies solar power under Energy Conservation and Alternative Source Development, stating Sandwich has an excellent opportunity to expand the use and development of solar power.

F26. The Site is split zoned within the R-2 and FLEX zoning districts under the Sandwich Zoning By-law ("Bylaw"). The By-law allows large scale, ground-mounted solar arrays by special permit in the R-2 zoning district and by right in the FLEX district. Section 4180 of the Bylaw, titled "Large Scale Ground Mounted Solar Photovoltaic Installations" provides requirements for placement, design, construction, operation, monitoring, and decommissioning of large-scale ground-mounted solar voltaic installations.

F27. The Commission received correspondence from Sandwich Town Planner, Ralph Vitacco, on 1/25/2021, which provided the following commentary relative to the Project's consistency with the Town of Sandwich Zoning Bylaw:

- The Property is located within the R-2 zoning district, which is designated for lower-density residential development and within the FLEX district, which is designated for a mix of non-residential uses;
- Pursuant §4180 of the Bylaw, the Project must have a minimum lot area of 15 acres;
- Large-scale ground-mounted solar voltaic installations are categorized under the §2300 of the Bylaw, Use Regulations Schedule, as a type of Industrial/Utility Use;
- Pursuant to §2600 of the Bylaw, any industrial use abutting any other district is required to have a minimum rear and side yard of 100 feet.
- As proposed, the Project will meet the dimensional requirements set forth in the Sandwich Zoning Bylaw with respect to lot-size and set-backs.

F28. The Applicant anticipates the following local reviews, actions, permits, licenses, and/or approvals for the Project: Sandwich Planning Board Special Permit and building permit.

RPP CONSISTENCY REVIEW

F29. The Commission reviewed the Project relative to the 2018 RPP and companion Technical Bulletins, which were those in effect at the time the Commission commenced substantive hearing on the Project. Under Section 9 of the RPP, the Commission assesses the Project's consistency with the RPP by determining whether the Project is consistent with the goals and objectives in the RPP that are deemed applicable, material and regionally significant with respect to the Project. The companion Technical Bulletins assist in elaborating and interpreting the RPP's goals and objectives.

F30. The RPP goals and objectives specifically referenced in this section of the Decision and discussed in detail below are those determined to be applicable, material, and regionally significant with respect to the Project and are thus subject to RPP consistency review.

F31. Subject to the Conditions set out in this Decision, the Project is consistent with the RPP goals and objectives and with the corresponding provisions from the Technical Bulletins, as discussed in detail below, and as such the Project is consistent with the RPP.

Water Resources

F32. The Water Resources goal of the RPP is to maintain a sustainable supply of high-quality untreated drinking water and protect, preserve, or restore the ecological integrity of Cape Cod's fresh and marine surface water resources. The Water Resources objectives that are applicable and material to the Project are: to protect and preserve groundwater quality (WR1); to protect, preserve, and restore marine water resources (WR3); and to manage and treat stormwater to protect and preserve water quality (WR4).

F33. A small portion of the Property is located in a Wellhead Protection Area (WHPA) and the entirety of the site is located within a Potential Public Water Supply Area (PPWSA) and the Scorton Harbor Marine Water Recharge Area (MWRA).

F34. The Project does not propose water use, wastewater generation, or turf fertilization. The Project manages stormwater for water quality treatment, maintains vegetated buffers around the Site, and is not located within a freshwater recharge area.

F35. The DRI application materials contain nitrogen loading concentration calculations for the Site. The Project's nitrogen loading concentration is approximately 0.0023 ppm-N (shown as 0.00 ppm-N on the Nitrogen Loading and Mitigation Worksheet), which is materially below the 1-ppm standard for PPWSAs under the RPP. Additionally, the Project represents a net reduction in calculated nitrogen loading concentration from 0.30 ppm-N from the existing residential and farm use.

F36. As the Site is located in both a WHPA and PPWSA, the Commission looks to the Applicant to minimize, limit or avoid handling or storage of Hazardous Materials or Hazardous Wastes associated with the Project.

- The DRI application materials for the Project state biodegradable transformer fluid will be used to mitigate the potential for hazardous materials release.
- The Project includes a 20'x30' concrete pad for the switch gear, transformer, and inverter and a 20'x40' concrete pad for the battery equipment. It is unclear from the DRI application what Hazardous Materials might be contained in this equipment. As conditioned herein, the Applicant is required to mitigate for potential spills or releases of Hazardous Materials from the equipment.

F37. The Project will require a Federal NPDES permit, and associated with that permit, the Applicant has proposed to prepare and adopt a Stormwater Pollution Prevention Plan (SWPPP), which will include identification of potential impacts to groundwater and actions that will be taken to prevent discharge of any pollutant to groundwater (anticipated provisions from the SWPPP were included with the Stormwater Report in the DRI application). The management and mitigation actions proposed by the Applicant will protect and preserve groundwater quality during and after land clearing, stump grubbing, and solar panel installation, consistent with and in satisfaction of Objective WR1.

F38. The Scorton Harbor watershed is identified as a low water threat level, and the Project's net reduction in nitrogen loading over current conditions will benefit the watershed, consistent and in satisfaction with Objective WR3. The project management protocols outlined in the application materials will also mitigate any potential impacts to the MWRA during and after construction.

F39. The Project will result in new stormwater run-off from the Project's impervious areas: the proposed equipment pads and gravel drive (though the latter is semi-impervious). The Applicant has designed a stormwater system consisting of drainage swales and subsurface infiltration to adequately manage and protect water quality consistent with and in satisfaction of Objective WR4.

- The proposed stormwater system adequately mitigates the increased runoff associated with removal of natural vegetation from the Site, decreasing peak discharge and runoff volume associated with impervious areas.
- The Applicant has an appropriate operations and maintenance plan for the stormwater system;
- The profile and composition of soil media for the proposed infiltration basin, provides adequate treatment of the stormwater run-off for nitrogen.
- Given the size, existing slope, and the natural hydrology of the site, the proposed vegetated filter strip is appropriate for pretreatment of stormwater runoff, which will remove more than 45% of TSS.
- The system has been designed to exceed the required 1-inch water quality volume run-off standard from impervious areas.
- The soils are mapped at this location by MassGIS as Prime Farmland Soils (the specific soil type is Enfield silt loam, 0 to 3 percent slopes [HSG B]); such soils have low erodibility, high water-holding capacity, and may increase the infiltration rate. The Applicant proposes to retain and reuse these existing soils on-site.
- The Applicant has prepared and proposes Project soils management protocols, and erosion and sedimentation controls for Project construction.

Wetlands

F40. The RPP goal for Wetlands resources is to protect, preserve, or restore the quality and natural values and functions of wetlands and their buffers. According to the Natural Resources Inventory (NRI) for the Project, submitted in the DRI application, two Isolated Vegetated Wetlands occur on, or partially on, the Site. Although neither wetland is identified as a vernal pool according to MassGIS, the NRI concludes the wetland located on the eastern edge of the Site contains the physical characteristics to potentially function and qualify as a vernal pool.

F41. Objective WET1 is to protect wetlands and their buffers from vegetation and grade changes. The project will maintain a 100+ foot undisturbed buffer from both wetlands. A proposed 350-foot buffer to the potential vernal pool is proposed and discussed further in the RPP Consistency Analysis/ Wildlife and Plant Habitat (WPH) Findings herein.

F42. Objectives WET2 and WET3 are to protect wetlands from changes in hydrology and stormwater discharges, respectively.

F43. As proposed, soil disturbance is minimized, stormwater will be managed to direct runoff away from wetlands and their buffers, erosion and sediment controls will be in place during construction, and the Site will be stabilized and maintained with native vegetation after construction.

F44. Adequate Wetland buffers are provided and will help protect wetlands from adverse Project impacts. Proposed stormwater basins are located outside these wetland buffers. In addition, there are no steep slopes within the Project footprint and proposed installation of solar panels on racks on steel piles driven into the ground requires minimal soil disturbance. Substantial re-grading of the Site will not be required; however, there will be some soil disturbance or grading associated with tree clearing and stumping within the solar array footprint and installation of conduit and poles to interconnect with existing distribution lines.

Wildlife and Plant Habitat

F45. Wildlife and Plant Habitat Goal of the RPP is to protect, preserve, or restore wildlife and plant habitat to maintain the region's natural diversity. The following Wildlife and Plant Habitat Objectives are part of the DRI review of the Project: maintain existing plant and wildlife populations and species diversity (WPH1); restore degraded habitats through use of native plant communities (WPH2); protect and preserve rare species habitat, vernal pools, and 350-foot buffers to vernal pools (WPH3); manage

invasive species (WPH4); and promote best management practices to protect wildlife and plant habitat from the adverse impacts of development (WPH5).

F46. Objective WPH1 is to maintain existing plant and wildlife populations and species diversity. Development of the project will result in alteration of approximately 14 acres of forested upland to developed meadow and low growing vegetation. This alteration will result in a change to the existing plant and wildlife species assemblages present and contribute to additional habitat fragmentation and loss of forested habitat on Cape Cod.

F47. To meet Objective WPH1, the Applicant proposes to minimize cleared acreage by clustering the solar facility within disturbed areas and adjacent to the industrial area and away from the most sensitive areas of the site; minimize clearing of vegetation and alteration of natural topography; retain 100+ foot vegetated buffers to the residential developments surrounding the solar facility; leave a 6-inch gap at the bottom of the fence to allow for wildlife movement around and through the array; plant native species of grasses and wildflowers within the solar array; retain prime soils on-site; and not use pesticides or chemicals to manage plantings.

F48. The Project will essentially be located in the same development footprint of HAC's previously approved housing development on the Property. However, the solar arrays will extend approximately 50-100 additional feet to the south, east, and north, into existing wooded areas to accommodate utility interconnection and a one-time tree topping to prevent shading of the panels.

F49. To minimize habitat impacts, areas proposed for disturbance outside of the fenced solar field area will not be cleared of low vegetation and stumps unless they interfere with the installation of the utility connections.

F50. The Applicant also proposes to maintain an area along the eastern edge of the solar facility as a habitat management area. Within this area, large trees will be removed to reduce shading of the solar panels; however, stumps will remain and edge habitat will be created to provide a transitional zone between the solar facility and the surrounding forest and wetlands.

F51. In addition, the Project has been consolidated to maximize preservation of the remaining contiguous, undeveloped land which will be placed under a Conservation Restriction (CR).

F52. Objective WPH2 is to restore degraded habitats using native plant communities. Although the Project is not a habitat restoration project, the Project will convert developed areas of the Site including a residence, garden, and pasture into meadow under the solar panels by utilizing a native grass and wildflower seed mix. The Project also includes invasive species and long-term vegetation management plans.

F53. Objective WPH3 is to protect and preserve rare species habitat, vernal pools, and 350-foot buffers to vernal pools. As noted in the RPP Consistency Analysis/ Wetlands Findings of this Decision, there is one potential vernal pool located on the Site. This wetland has the physical characteristics of a vernal pool but the timing of the inspection in winter did not allow for the assessment of biological characteristics to confirm the status of the wetland as a vernal pool; however, the Applicant is taking a proactive and protective approach, designing the Project to minimize impacts to the potential vernal pool with a 350-foot buffer. This potential vernal pool and its entire 350-foot buffer will be included in the Site's proposed Conservation-Restricted open space area.

F54. To accommodate the 350-foot buffer to the potential vernal pool, the Project will extend into mapped box turtle habitat to the north. It was infeasible for the Project to be located both completely outside the 350-foot buffer to the potential vernal pool and outside mapped Priority Habitat area on-Site; the size of the solar array has already been reduced by approximately 20% through the early stages of and discussions during DRI review.

F55. Pursuant to the Massachusetts Endangered Species Act, the Project will require state review and approval under a Comprehensive Management Permit (CMP) with the Natural Heritage and Endangered Species Program (NHESP) to authorize the 'take' of eastern box turtle (technically, review and approval is through amending the CMP originally granted to HAC for the aforementioned, previously approved housing development on the Site). The Applicant is proposing essentially the same

amount and configuration of Conservation-restricted open space on-Site as previously proposed under the CMP.

F56. The Applicant, Commission staff and NHESP discussed the balance between meeting a 350-foot buffer to the potential vernal pool and limiting intrusion into mapped, Priority Habitat for eastern box turtle, and explored design options. The final Project layout is based on those exchanges, including condensing the solar arrays to the south and west as much as possible and respecting the previously established northerly Limit of Work associated with HACs previously approved housing development.

F57. To accommodate this final Project layout, the proposed fence is to be installed at the edge of said 350-foot buffer and some selective tree topping at the edge of the buffer is necessary to reduce shading of the panels adjacent to the proposed fence. The area outside the fence where trees are to be cut but within the buffer will be maintained with low-growing vegetation, leaf litter, and woody debris to provide good quality upland habitat for any vernal pool species that may be present.

F58. As part of the anticipated CMP with NHESP, the Applicant has developed turtle protection and operations and maintenance plans. According to these plans, turtle barriers will be installed, and the work zone will be searched for turtles prior to the start of work during the turtle's active season. Turtles encountered will be moved outside the barrier into the CR area. Barriers will be maintained throughout work and contractors will be educated on the presence of turtles. Post-construction, the fencing will be inspected annually, and the bottom gap maintained free of vegetation that would substantially impair travel. In addition, maintenance of the habitat management area and occasional mowing of the fenced, solar array area will be timed to avoid potential impacts to turtles.

F59. Objective WPH4 is to manage invasive species. Invasive autumn olive and multiflora rose were recorded on previously developed areas of the Site in conducting the Natural Resources Inventory ("NRI"), a copy of which was submitted in the DRI application.

F60. As noted in the NRI, if unmanaged, these invasive species could proliferate throughout the proposed solar facility. These species' seeds will be present in the soils surrounding these infestations and, as invasive seeds do well in disturbed soils, the Applicant will need to use caution when working on the site to prevent these species' spread.

F61. The NRI includes a proposed invasive species management plan; the suggested practices in said plan apply to a variety of Site activities including digging up, bagging, and removing invasive plants and associated soils from the Site for proper disposal. In addition, all plant and soil materials should be removed from machines and equipment used in infestation areas before working in other areas of the Site.

F62. The NRI's invasive species management plan includes a proposal to conduct site evaluations following, at a minimum, the first and second growing seasons after plant installation to document the presence / absence of invasive species.

F63. Objective WPH5 is to promote best management practices to protect wildlife and plant habitat from the adverse impacts of development. As noted above, the Applicant proposes to meet this objective through use of best management practices including minimizing clearing, avoiding grading, raising the fence to allow for the passage of wildlife, and timing maintenance activities to avoid impacts to box turtles. Tree removal should be avoided during the spring / summer breeding bird and bat roosting seasons to avoid impacts to nesting birds and roosting bats.

Open Space

F64. The Open Space Goal of the RPP is to conserve, preserve, or enhance a network of open space that contributes to the region's natural and community resources and systems. The following Open Space Objectives are included in this DRI review: protect and preserve natural, cultural, and recreational resources (OS1); increase open space connectivity (OS2); and protect or provide open space appropriate to context (OS3).

F65. Objective OS1 is to protect and preserve natural, cultural, and recreational resources. The Applicant proposes to meet this objective through minimizing the development footprint as much as practicable,

preserving wildlife habitat, preserving prime soils, and preserving open space that benefits natural community systems.

F66. Objective OS2 is to maintain or increase the connectivity of open space. Much of the project's proposed 30.2 acres of protected open space is within BioMap2 Critical Natural Landscape and is connected to adjacent undeveloped land. Wildlife will also be able to move through the vegetated buffers surrounding the solar facility and some wildlife will be able to move through the facility through the gaps in the perimeter fence.

F67. Objective OS3 is to protect or provide open space appropriate to context. The Applicant is proposing to address its open space mitigation requirement through permanent protection of 30.2 acres of woodlands and edge habitat onsite with a CR.

- The Applicant proposes that the CR will be executed with the Town of Sandwich, NHESP, and Massachusetts Executive Office of Energy and Environmental Affairs; the Town of Sandwich Conservation Commission is intended to hold the CR.
- As noted above, portions of the Site are located in or constitute several different Placetypes. According to the Commission's Open Space Technical Bulletin, projects in Industrial Activity Centers are required to provide substantial buffers to development and protect sensitive resources in a ratio of 1:1; projects in Suburban Development Areas are required to provide high-quality open space and adequate buffers in a ratio of 1:1; and projects in Natural Areas are required to provide high-quality open space onsite or in a Natural Area offsite in a ratio of 3:1.
- The following is a breakdown of the impacted area in each Placetype and corresponding open space area requirements:

Placetype	Acres Impacted	Open Space Acres Required
Industrial Activity Center	1.61	1.61
Suburban Development Area	4.27	4.27
Natural Area	5.49	16.47

- The total open space requirement as calculated under said Technical Bulletin is therefore 22.35 acres. The Applicant proposes to meet its open space requirements through placing approximately 30.2 acre of the Site, outside the fenced solar array area, under a permanent Conservation Restriction.
- Most of this CR area will be in a Natural Area Placetype in the North portion of the Site and includes Priority Habitat, BioMap2 Critical Natural Landscape and the two wetlands and their buffer areas. The remainder of the proposed open space will be in the south and southeast of the Site and includes vegetated buffers between the Project and its residential abutters.

Community Design

F68. The Community Design goal of the RPP is to protect and enhance the unique character of the region's built and natural environment based on the local context. The Community Design objectives that are applicable and material to the Project are to: promote context-sensitive building and site design (CD1), minimize the amount of newly disturbed land and impervious surfaces (CD2), and avoid adverse visual impacts from infrastructure to scenic resources (CD3).

F69. The area surrounding the Site is a mix of commercial, industrial, and residential development and is in the Sandwich FLEX and R-2 zoning districts where large scale ground-mounted solar energy systems are allowed by right and by Special Permit, respectively. In the subject R-2 zoning district, a minimum 100-foot-wide setback is required between industrial or quasi-industrial uses like utility scale ground mounted solar installations and residential development. Because the Site is located in part in the R-2 district, the Applicant will pursue a zoning special permit for the Project.

F70. The Project maintains natural forested area (pine and oak approx. 30-40' in height) along the Site perimeter and a managed area with proposed supplemental evergreen screening (approx. 8-10' in

height) resulting in an overall vegetated buffer varying in depth from roughly 115-150 feet wide. The height of solar panels and frames/racks is proposed to be 103 to 127 inches or 8.5 to 10.5 feet.

F71. Site access is drawn from Jan Sebastian Drive, and the Project is consistent with the industrial/commercial character and use of the roadway.

F72. The amount of impervious surface in the finished Project will be minimal, with the cleared area under the array to be planted with a native seed mix. The Project is not in an area with scenic vistas or other public visual or cultural resources; the proposed vegetated buffer to the solar array, and setback of the area to surrounding properties and development, will preserve the wooded character of the area, limit visual impacts from the solar panels, and maintain consistency with the surrounding land use and development context.

Energy

F73. The Energy goal of the RPP is to provide an adequate, reliable, and diverse supply of energy to serve the communities and economies of Cape Cod. The following Energy Objectives are applicable and material to the Project: support renewable energy development that is context sensitive (EN1); and increase resiliency of energy generation and delivery (EN2).

F74. This Project has energy generation, distribution, and storage as a primary purpose. The proposed solar array would have a generation capacity of approximately 2.125 MW/AC and would include a lithium-ion battery storage system. The Project will contribute to the statewide goal of reducing reliance on non-renewable energy sources.

F75. The Project is expected to sell its power through the Community Solar program, which allows households and businesses with the same electrical utility to lease a portion of the array. This will benefit Cape Cod residents who are unable to host a private solar system. The Community Solar program would require the Project to lease to small customers needing 25kW or less.

F76. The Project would increase diversification of the local electrical network and manage periods of peak demand that come with the highest electricity prices. This furthers Massachusetts' Energy Storage Initiative, which aims to achieve the benefits of incorporating advanced storage technologies into Massachusetts' energy portfolio by establishing an energy storage market structure, and to support storage projects at the electric wholesale system, utility distribution system, and customer side scale.

Capital Facilities & Infrastructure

F77. The Capital Facilities & Infrastructure Goal of the RPP is to guide the development of capital facilities and infrastructure necessary to meet the region's needs while protecting regional resources. The following Capital Facilities & Infrastructure Objectives are applicable and material to the Project: ensure capital facilities and infrastructure promote long-term sustainability and resiliency (CAP1); and coordinate the siting of capital facilities and infrastructure to enhance the efficient provision of services and facilities that respond to the needs of the region (CAP2).

F78. The Project will improve the quality and availability of electrical service. Equipped with a battery, the array is required to dispatch power at the times of higher system demand. The solar and battery together can handle both large and small output adjustments to stabilize the frequency of the local distribution network in the event of sudden fluctuations in demand.

F79. The array is designed with wind and snow loading appropriate to Cape Cod, is not under threat from falling adjacent trees, and is designed as compactly as is feasible. The Property is not in a flood prone or high hazard area. The battery equipped array is designed to be sustainable in all weather conditions and is required to operate in a manner that reduces energy prices and supports the grid during human or natural disasters.

F80. The Project is located adjacent to existing transmission lines, and no new easements or rights of way are required. Site utilities and connections will run underground until connecting to existing above ground infrastructure.

REGIONAL BENEFITS/DETRIMENTS

F81. Probable benefits of the Project identified include:

- The Project is an efficient way to introduce a substantial amount of clean, renewable energy into the regional grid, consistent with state, local and regional energy and emissions reductions policies.
- The Project will increase the resilience of the grid with additional solar generated energy and battery storage.
- As 'community' solar, the Project will increase local energy independence and offer clean renewable energy for purchase by local residents and businesses.
- The Project will result in 30.2 acres of land being put into a permanent Conservation Restriction. This area includes a vernal pool and Priority Habitat for the endangered Eastern Box Turtle.
- The lease of the Site will provide a new revenue stream to support the Housing Assistance Corporation's production of housing elsewhere on Cape Cod, in areas more conducive for housing.
- As a solar installation the Project is more passive and has fewer permanent impacts than other likely alternative use and development scenarios for the Property.
- The Project proposes a use and development scenario more appropriate, given the Site's split zoning and variety of uses and development surrounding the Site, than other likely alternative use and development scenarios for the Property.

F82. Probable detriments of the Project identified include:

- The Project Site will no longer be available for HAC or others to develop for housing.
- The Project proposes substantial clearing of existing wooded area.
- The Project is not a solar energy project co-located with other development or that adaptively re-uses a previously developed site, which are preferred development scenarios for solar energy projects under the RPP.
- Because of the associated clearing, some of the Project's carbon sequestration benefits are lost, as well as other natural infrastructure services like nitrogen uptake the cleared trees would otherwise provide.

CONCLUSION

Based on the Findings above and subject to the Conditions set out below, the Commission further determines, finds, and concludes that the Project is consistent with the 2018 Cape Cod Regional Policy Plan, applicable provisions from the Sandwich LCP, and applicable municipal development bylaws; the probable benefit of the Project is greater than the probable detriment; and the Commission hereby grants DRI approval for the Victory Drive Solar Project described herein.

CONDITIONS

C1. This Decision shall be final when the appeal period set out in Section 17 of the Cape Cod Commission Act has elapsed without appeal (or if such an appeal has been filed, when the appeal has been finally settled, dismissed, adjudicated, or otherwise disposed of in favor of the Applicant). Thereafter, this Decision shall be valid and in effect, and local development permits may be issued pursuant hereto for a period of seven years from the date of this Decision, or for such extended period as may be permitted by the Commission pursuant to the *Enabling Regulations*.

C2. A copy of the Decision, when final and prior to commencement of the Project, shall be recorded with the Barnstable Registry of Deeds.

C3. This Decision shall be appurtenant to and run with the Property. The Decision shall bind and be enforceable against, and inure to the benefit of, the Applicant, its heirs, successors, and assigns.

C4. The Applicant shall obtain all required federal, state, and local permits, licenses, and approvals for the Project. Consistency with Municipal Development Bylaws shall be ratified and confirmed by the Applicant obtaining all said required local permits, licenses, and approvals for the Project. Prior to

commencement of the Project, the Applicant shall provide the Commission with copies of all required local permits, licenses, and approvals for the Project.

C5. The Project shall be constructed, operated, and maintained consistent with the following documents ("Approved Project Plans"). Plans, protocols, and other documents received or required to be submitted as Conditions of this Decision shall be treated as incorporated into the Approved Project Plans once received, reviewed, and approved for consistency with this Decision by Commission staff, and the Project shall thereafter be constructed, operated, and maintained consistent with the Approved Project Plans, as so supplemented:

- Plan set entitled "Victory Drive Solar, 9 Victory Drive, 0 & 144 Kiah's Way, Sandwich, MA 02563," consisting of 7 sheets, with a latest revised date of 2-08-2021, prepared by Russo Surveyors and Engineers for Lodestar Energy LLC;
- Stormwater Report, Victory Drive Solar, revised dated 12-08-2020, prepared by Russo Surveyors and Engineers for Lodestar Energy LLC;
- Natural Resources Inventory, Victory Drive Solar, dated October 2, 2020, prepared by LEC for Lodestar Energy LLC, including Attachment G (Solar Operations and Maintenance Plan), Attachment H (Eastern Box Turtle Protection Plan), Attachment I (Invasive Species Management Plan) thereto;
- Plan sheet entitled "Victory Drive Solar, Open Space Plan," revised dated 12-08-20, prepared by Russo Surveyors and Engineers for Lodestar Energy LLC.

C6. The Applicant shall provide a copy of this Decision and the Approved Project Plans to the Project's general contractor prior to commencement of the Project. The Applicant shall maintain a copy of this Decision and the Approved Project Plans on the Project Site throughout Project construction.

C7. Prior to and as a Condition to issuance of a building permit/s for the Project from the Town of Sandwich, the Applicant shall request and obtain from the Commission a Preliminary Certificate of Compliance; the issuance of such Preliminary Certificate of Compliance evidences that the Applicant has satisfied all Conditions in this Decision required to have been satisfied prior to the issuance of a local building permit/s.

C8. Prior to and as a Condition to issuance of a Certificate/s of Use and Occupancy or building permit sign-off/s for the Project from the Town of Sandwich Building Department, the Applicant shall request and obtain from the Commission a Final Certificate of Compliance; the issuance of such Final Certificate of Compliance evidences that the Applicant has satisfied all Conditions in this Decision required to have been satisfied prior to the issuance of a local Certificate/s of Use and Occupancy or building permits sign-off/s, and shall confirm that the Project was constructed or implemented in accordance with this Decision.

C9. The Applicant hereby authorizes Commission staff to make site visits as necessary, at reasonable times and upon reasonable notice to the Applicant, to confirm that the Project has been implemented in accordance with this Decision, including upon an Applicant's request for a Certificate of Compliance hereunder.

C10. That 30.2-acre portion of the Property identified and labelled as "Open Space/ Conservation Restriction (30.22+/- ac.)" on the plan sheet entitled "Victory Drive Solar, Open Space Plan," revised dated 12-08-20, prepared by Russo Surveyors and Engineers for Lodestar Energy LLC ("Open Space") shall be restricted for open space and conservation purposes in perpetuity in accordance with the relevant provisions of MGL Chapter 184 Sections 31 through 33 ("Conservation Restriction").

- Prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall prepare and provide to Commission staff for review a draft Conservation Restriction for the Open Space.
- Prior to and as a condition to issuance of a Final Certificate of Compliance by the Commission, the Applicant shall provide to the Commission a copy of the Conservation Restriction for the Open Space, previously reviewed and approved by Commission staff, as recorded with the Barnstable Registry of Deeds.

C11. Existing agricultural soils shall be retained and re-used on-Site.

C12. The bottom of all fencing shall be set at no less than 6 inches above the finish grade to allow for movement of wildlife through the Site.

C13. The Applicant shall use only bio-degradable transformer fluid or dry-cooled transformers as part of the Project.

C14. The Applicant shall incorporate into the Project measures to prevent, minimize or mitigate potential spills or releases of Hazardous Materials from the switch gear, inverter and battery equipment to groundwater.

- Prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall submit for review by Commission staff detailed equipment specifications for proposed transformers, batteries, and other components to determine types and quantities of any Hazardous Materials quantities that might be contained in such equipment.
- As warranted by the types and quantities of Hazardous Materials contained in the equipment, the Applicant shall, in the discretion of Commission staff after review of the equipment specifications, incorporate either containment for the equipment storage pads, or a spill response plan, or both, sufficient to address potential spills or releases. As applicable, prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall provide Commission staff for review and approval plans depicting sufficient containment, or a spill response plan, or both.

C15. Prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall submit the final Stormwater Pollution Prevention Plan (SWPPP) for review and approval by Commission staff.

C16. The Applicant shall use native seed and plantings to establish the proposed meadow around the solar arrays in the fenced area according to final specifications reviewed and approved by Commission staff.

- Prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall provide final meadow planting specifications for review and approval by Commission staff.

C17. No use of herbicides or pesticides on-Site shall be permitted unless proposed for invasive species management, no feasible mechanical alternative exists for the same, and then only with the prior written approval of the Commission staff.

C18. The Applicant shall provide evergreen trees to supplement the existing vegetated buffer to be retained in the southerly portion of the Site.

- Prior to and as a condition to issuance of a Preliminary Certificate of Compliance by the Commission, the Applicant shall provide for review and approval by Commission staff a planting plan and protocol for the proposed supplemental evergreen trees, including planting and maintenance specifications.

SIGNATURE PAGE FOLLOWS

SIGNATURE PAGE

Executed this _____ day of _____ 2021

For the Cape Cod Commission by:

_____
Signature

_____
Print Name and Title

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss _____, 2021

Before me, the undersigned notary public, personally appeared_____,
in his/her capacity as _____ and on behalf of the Cape Cod Commission, whose name is signed on the preceding or attached document, and such person acknowledged to me that he/she signed such document voluntarily for its stated purpose. The identity of such person was proved to me through satisfactory evidence of identification, which was [ ] photographic identification with signature issued by a federal or state governmental agency, [ ] oath or affirmation of a credible witness, or [X] personal knowledge of the undersigned.

_____
Notary Public
My Commission Expires: _____

SEAL