# Appendix H: Seascape, Landscape, and Visual Impact Assessment

## **H.1** Introduction

This appendix describes the Seascape, Landscape, and Visual Impact Assessment (SLVIA) methodology and key findings that the Bureau of Ocean Energy Management (BOEM) used to identify the potential impacts of offshore wind structures (wind turbine generators [WTGs] and offshore substation platforms [OSPs]) on scenic and visual resources in the geographic analysis area. This SLVIA methodology applies to any offshore wind energy development proposed for the Outer Continental Shelf (OCS) and incorporates by reference the detailed description of the methodology described in the Assessment of Seascape, Landscape, and Visual Impacts of Offshore Wind Energy Developments on the Outer Continental Shelf of the United States (BOEM 2021). Section H.2, Method of Analysis, describes the specific methodology used to apply the SLVIA methodology to the Mayflower Wind Construction and Operations Plan (COP) (Mayflower Wind 2022) and Section H.3, Results, summarizes the wind farm distances, fields of view (FOVs), noticeable elements, visual contrasts, scale of change, and prominence that contributed to the determination of impact levels for each key observation point (KOP) under the Proposed Action and each of the action alternatives that include modifications to WTG array layouts. Maps of scenic resources present in the geographic analysis area are included in Section 3.6.9, Scenic and Visual Resources. Visual simulations of the Proposed Action alone, other ongoing and planned offshore wind projects without the Proposed Action, and other offshore wind projects in combination with the Proposed Action are included in Attachment H-1, Cumulative Visual Simulations.

# **H.2** Method of Analysis

The seascape, open ocean, and landscape impact assessment (SLVIA) has two separate but linked parts: the SLIA and visual impact analysis (VIA). The SLIA analyzes and evaluates sensitivity, susceptibility, and magnitude of change in consideration of impacts on both the physical elements and features that make up a landscape, seascape, or open ocean; and the aesthetic, perceptual, and experiential aspects of the landscape, seascape, or open ocean that make it distinctive. These impacts affect the "feel," "character," or "sense of place" of an area of landscape, seascape, or open ocean, rather than the composition of a view from a particular place. In the SLIA, the impact receptors (the entities that are potentially affected by the proposed Project) are the seascape/open ocean/landscape itself and its components, both its physical features and its distinctive character.

The VIA analyzes and evaluates the impacts on people of adding the proposed development to views from selected viewpoints. The VIA evaluates the change to the composition of the view itself and assesses how the people who are likely to be at that viewpoint may be affected by the change to the view. Enjoyment of a particular view is dependent on the viewer and, in the VIA, the impact receptors are people. The inclusion of both the SLIA and VIA in the BOEM SLVIA methodology is consistent with the National Environmental Policy Act (NEPA)'s objective of providing Americans with aesthetically and

culturally pleasing surroundings and its requirement to consider all potentially significant impacts of development.

The magnitude of effect in a seascape, open ocean, landscape, or view depends on the nature, scale, prominence, and visual contrast of the change and its experiential duration. The SLVIA offshore geographic analysis area consists of the earth curvature-based extent of the zone of theoretical visibility and zones of visual influence (COP Appendix T; Mayflower Wind 2022), as follows.

- The offshore turbine array area where the WTGs and OSP would be located plus a 42.8-mile (68.9-kilometer) radius area. This distance is the maximum extent within which a seascape, open ocean, landscape, or visual effect could occur, given visibility of the maximum height of the WTG rotor (1,066 feet [324.9 meters]).
- The OSP (maximum height of 344.5 feet [105 meters]) would potentially be visible to a distance of 25.5 miles (41.0 kilometers).

WTG visibility would be variable through the day depending on many factors. View angle, sun angle, and atmospheric conditions would affect the WTG visibility. Visual contrast of WTGs would vary throughout the day depending on the visual character of the horizon's backdrop and whether the WTGs are backlit, side-lit, or front-lit. If less visual contrast is apparent in the morning hours, then it is likely that the visual contrast may be more pronounced in the afternoon. The inverse is possible, as well. These effects are also influenced by varying atmospheric conditions, direction of view, distance between the viewer and the WTGs, and elevation of the viewer.

At closer distances, approximately 12 miles or closer, the form of the WTG may be the dominant visual element creating the visual contrast regardless of color. At greater distances, color may become the dominant visual element creating visual contrast under certain visual conditions that gives visual definition to the WTG's form and line.

As the elevation of the viewer increases, the lesser the effect Earth curvature (EC) has on the visible height of individual WTGs.

While the shoreline has a prevailing southward viewing direction, localized views may vary from southeast to west. All cardinal directions are conceivable when viewing from a lighthouse or a water vessel at sea. When viewing from onshore toward a southerly direction and scanning to the east and west, the color of the horizon backdrop often will vary. Variation will continue as the sun arcs across the sky from sunrise to sunset. Depending on sun angle, the backdrop sky color may have various intensities of white to gray and sky blue to pale blue to dark blue-gray. Partly cloudy to overcast conditions will also influence the color make-up of the horizon's backdrop. The sunrise and sunset have varying degrees of light blue to dark blue, light and dark purples intermixed with oranges, yellows, and reds. Partly cloudy skies may increase the remarkable color effects during the sunset and sunrise periods of the day.

When placing WTGs offshore, the visual interplay and contrasting elements in form, line, color, and texture may vary with the ever-changing character of the backdrop. Front-lit WTGs may have strong color contrast against a darker gray sky, giving definition to the WTG's vertical form and line contrast to

the ocean's horizontal character and the line where the sea meets sky, or visually dissipates against a whiter backdrop created by high levels of evaporative atmospheric moisture during clear sunny days. Partly cloudy skies may create varying degrees of sunlight reflecting off the white wind turbines, placing some WTGs in the shadow and making them appear a darker gray and less conspicuous while highlighting others with a bright white color contrast. The level of noticeability would be directly proportional to the degree of visual contrast and scale of change between the WTGs and the corresponding backdrop.

These variations through the course of the day may result in periods of moderate to major visual effects while at other times of day would have minor or negligible effects.

The onshore geographic analysis area includes landfalls, buried onshore export cables, an onshore substation and a converter station, and transmission connections to the electric grid. The visual impacts of onshore components are assessed in Chapter 3, Section 3.6.9, *Scenic and Visual Resources*.

The SLVIA methodology and parameters consider local stakeholders' identity, culture, values, and issues and the understanding of baseline maritime conditions. Project activities for all stages of the Project life cycle (construction and installation, operations and maintenance [O&M], and decommissioning) are assessed against the environmental baseline to identify the potential interactions between the Project and the seascape, landscape, and viewers. Potential impacts are assessed to determine an impact level consistent with the definitions in Table H-1.

Table H-1. Definitions of Potential Adverse Impact Levels

| Impact<br>Level | Historic Properties<br>under Section 106<br>of the NHPA   | Visual Resources  |
|-----------------|---|---|
| Negligible      | No historic<br>properties<br>affected, as<br>defined at 36 CFR<br>800.4(d)(1).                    | SLIA: Very little or no effect on seascape/landscape unit character, features, elements, or key qualities either because unit lacks distinctive character, features, elements, or key qualities; values for these are low; or Project visibility is minimal.  VIA: Very little or no effect on viewers' experiences because Project visibility/contrast/magnitude of change is minimal, or view receptor sensitivity/susceptibility/value is minimal.   |
| Minor           | No adverse effects<br>on historic<br>properties could<br>occur, as defined<br>at 36 CFR 800.5(b). | SLIA: The Project would introduce features that may have low to medium levels of visual prominence in the geographic area of an ocean/seascape/landscape character unit. The Project features may introduce a visual character that is somewhat inconsistent with the character of the unit, which may have minor to medium negative effects on the unit's features, elements, or key qualities, but the unit's features, elements, or key qualities have low susceptibility or value.  VIA: The visibility of the Project would introduce a small but noticeable to medium level of change to the view's character; have a low to medium level of visual prominence that attracts but may or may not hold the viewer's attention; and have a small to medium effect on the viewer's experience. The viewer receptor sensitivity/susceptibility/value is low. If the value, susceptibility, and viewer concern for change is medium or high, then evaluate the nature of the sensitivity to determine if elevating the impact to the next |

| Impact<br>Level | Historic Properties<br>under Section 106<br>of the NHPA   | Visual Resources   |
|-----------------|---|--|
|                 |   | level is justified. For instance, a KOP with a low magnitude of change, but a high level of viewer concern (combination of susceptibility/value), may justify adjusting to a moderate level of impact.   |
| Moderate        | Adverse effects on historic properties as defined at 36 CFR 800.5(a)(1) could occur but would be avoided or minimized using a less-impactful scenario contemplated under the PDE. | SLIA: The Project would introduce features that would have medium to large levels of visual prominence within the geographic area of an ocean/seascape/landscape character unit. The Project would introduce a visual character that is inconsistent with the character of the unit, which may have a moderate negative effect on the unit's features, elements, or the key qualities. In areas affected by large magnitudes of change, the unit's features, elements or key qualities have low susceptibility or value.  VIA: The visibility of the Project would introduce a moderate to large level of change to the view's character; may have a moderate to large level of visual prominence that attracts and holds, but may or may not dominate the viewer's attention; and has a moderate effect on the viewer's visual experience. The viewer receptor sensitivity/susceptibility/value is medium to low. Moderate impacts are typically associated with medium viewer receptor sensitivity (combination of susceptibility/value) in areas where the view's character has medium levels of change; or low viewer receptor sensitivity (combination of susceptibility/value) in areas where the view's character has large changes to the character. If the value, susceptibility, and viewer concern for change is high, then evaluate the nature of the sensitivity to determine if elevating the impact to the next level is justified. |
| Major           | Adverse effects on historic properties as defined at 36 CFR 800.5(a)(1) could occur; at least some would require mitigation to resolve.   | SLIA: The Project would introduce features that would have dominant levels of visual prominence in the geographic area of an ocean/seascape/landscape character unit. The Project would introduce a visual character that is inconsistent with the character of the unit, which may have a major negative effect on the unit's features, elements, or key qualities. The concern for change (combination of susceptibility/value) to the character unit is high. VIA: The visibility of the Project would introduce a major level of character change to the view; would attract, hold, and dominate the viewer's attention; and would have a moderate to major effect on the viewer's visual experience. The viewer receptor sensitivity/susceptibility/value is medium to high. If the magnitude of change to the view's character is medium, but the susceptibility or value at the KOP is high, then evaluate the nature of the sensitivity (combination of susceptibility/value) at the KOP is low in an area where the magnitude of change is large, then evaluate the nature of the sensitivity to determine if lowering the impact to moderate is justified.   |

# H.3 Results

# H.3.1 Proposed Action

Atmospheric conditions offshore and near the shoreline limit views more than the typically drier-air conditions in inland areas. Visual simulations from representative viewpoints included as Attachment 3 to the *Mayflower Wind Visual Impact Assessment Report* (COP Appendix T; Mayflower Wind 2022)

indicate that daytime and nighttime visibility of WTGs and OSPs would be noticeable to the casual observer from seascape character areas, the open ocean character area, landscape character areas, and viewer viewpoints. Based on COP VIA Appendix T Table 5-5 (Mayflower Wind 2022), acreages of character areas overall in the offshore geographic analysis area and within the offshore wind farm viewshed are listed in Table H-2. Applicable effects from the Proposed Action and alternatives on seascape character units, the open ocean character unit, and landscape character units are listed throughout this appendix.

Table H-2. Area of Landscape/Seascape and Ocean Character Types within the Offshore Project Area Viewsheds

| Landcover / Open Ocean             | Acres (hectares)<br>of Landscape/<br>Seascape and<br>Ocean Character<br>Type | Acres<br>(hectares)<br>within Area of<br>Potential Visual<br>Impact | Percentage of<br>Landscape/Seascape<br>Character Type in<br>Area of Potential Visual Impact |  |  |  |  |  |  |  |  |
|------------------------------------|--|---|---|--|--|--|--|--|--|--|--|
| Martha's Vineyard Viewshed         |  |   |   |  |  |  |  |  |  |  |  |
| Coastal Bluffs                     | 100.92<br>(40.77)  | 31.81<br>(12.87)  | 31.52   |  |  |  |  |  |  |  |  |
| Coastal Scrub                      | 5,873.36<br>(2,372.84)   | 1,534.77<br>(621.10)  | 26.13   |  |  |  |  |  |  |  |  |
| Commercial                         | 278.91<br>(112.68)   | 0.41<br>(0.17)  | 0.15  |  |  |  |  |  |  |  |  |
| Dunes                              | 396.73<br>(160.28)   | 183.78<br>(74.37)   | 46.32   |  |  |  |  |  |  |  |  |
| Environmental Justice<br>Community | 8,246.23<br>(3,331.48)   | 1315.42<br>(532.33)   | 15.95   |  |  |  |  |  |  |  |  |
| Fields/Meadows                     | 22.6<br>(9.13)   | 19.47<br>(7.88)   | 86.15   |  |  |  |  |  |  |  |  |
| Forests/Woodlands                  | 59,350.69<br>(23,977.68)   | 4,237.71<br>(1,714.94)  | 7.14  |  |  |  |  |  |  |  |  |
| Historic                           | 866.03<br>(349.88)   | 4.02<br>(1.63)  | 0.46  |  |  |  |  |  |  |  |  |
| Light Industrial                   | 866.59<br>(350.1)  | 1.56<br>(0.63)  | 0.18  |  |  |  |  |  |  |  |  |
| Ocean Beach                        | 469.48<br>(189.99)   | 469.48<br>(189.99)  | 64.20   |  |  |  |  |  |  |  |  |
| Rural/Suburban<br>Residential      | 56,058.02<br>(22,647.44)   | 5,461.30<br>(2,210.11)  | 9.74  |  |  |  |  |  |  |  |  |
| Ponds/Tidal Marsh                  | 10,221.75<br>(4,129.59)  | 3,340.65<br>(1,351.91)  | 32.68   |  |  |  |  |  |  |  |  |
| Village/Town                       | 2,254.34<br>(910.75)   | 2.85<br>(1.16)  | 0.13  |  |  |  |  |  |  |  |  |

| Landcover / Open Ocean             | Acres (hectares)<br>of Landscape/<br>Seascape and<br>Ocean Character<br>Type | Acres<br>(hectares)<br>within Area of<br>Potential Visual<br>Impact | Percentage of<br>Landscape/Seascape<br>Character Type in<br>Area of Potential Visual Impact |
|------------------------------------|--|---|---|
| Nantucket Viewshed                 |  |   |   |
| Coastal Bluffs                     | 38.14<br>(15.41)   | 5.35<br>(2.17)  | 14.03   |
| Coastal Scrub                      | 17,529.77<br>(7,082.03)  | 4,331.89<br>(1,753.05)  | 24.71   |
| Commercial                         | 158.77<br>(64.14)  | 23.55<br>(9.53)   | 14.83   |
| Dunes                              | 500.4<br>(202.16)  | 363.07<br>(146.93)  | 72.56   |
| Environmental Justice<br>Community | 2,287.93<br>(924.32)   | 236.79<br>(95.83)   | 10.35   |
| Fields/Meadows                     | 208.8<br>(84.35)   | 97.64<br>(39.52)  | 46.76   |
| Forests/Woodlands                  | 371.52<br>(150.1)  | 6.03<br>(2.44)  | 1.62  |
| Historic                           | 36,160.62<br>(14,608.89)   | 7,208.19<br>(2,917.05)  | 19.93   |
| Light Industrial                   | 631.99<br>(255.32)   | 458.88<br>(185.70)  | 72.61   |
| Ocean Beach                        | 677.76<br>(273.81)   | 393.93<br>(159.42)  | 58.12   |
| Parks/Developed<br>Recreation      | 1,157.75<br>(467.73)   | 335.89<br>(135.93)  | 29.01   |
| Rural/Suburban<br>Residential      | 3,800.08<br>(1,535.23)   | 867.69<br>(351.14)  | 22.83   |
| Ponds/Tidal Marsh                  | 5,620.06<br>(2,270.51)   | 104.94<br>(42.47)   | 1.87  |
| Village/Town                       | 1,694.94<br>(684.76)   | 9.73<br>(3.94)  | 0.57  |
| Ocean Character Type               |  |   | •   |
| Open Ocean                         | 5,200,000<br>(2,100,000)   | 5,200,000<br>(2,100,000)  | -   |

Source: COP Appendix T, Table 5-5; Mayflower Wind 2022

Distances from beach KOPs to the Proposed Action WTG and OSP array would range from the following.

• 37.2 miles (59.9 kilometers) from KOP-16-MV Squibnocket Beach on the western extent of the geographic analysis area.

- 23.3 miles (37.5 kilometers) from KOP-11-N Miacomet Beach, which is the closest KOP to the front edge of the WTG array,
- 26.5 miles (42.6 kilometers) from KOP-6-N Tom Nevers Beach on the eastern extent of the geographic analysis area.

The noticeable daytime and nighttime elements of the Project's WTGs and OSP and their viewshed distances are listed in Table H-3. Each WTG would have two L-864 flashing-red obstruction lights on the top of the nacelle, one of which is required to be lit (BOEM 2021). WTGs would have additional intermediate lighting on the tower utilizing low-intensity red-flashing (L-810) obstruction lighting. Line-of-sight calculations for onshore viewers (5.9-foot [1.8-meter] eye level) are based on intervening EC screening (7.98 inches [20.3 centimeters] height per mile). Heights of WTG and substation components are stated relative to MLLW and highest astronomical tide.

Atmospheric refraction of light rays causes fluctuations in the extents and appearances of offshore and onshore facilities. It results from the bending of light rays between viewers and objects due to current air temperature, water vapor, and barometric pressure (Bislins 2022). Based on the average sea level refraction calculation coefficient of 0.17 (Bislins 2022) applied to the turbine blade tip viewshed distance of 42.8 miles (68.9 kilometers), the 1,066.3-foot (325.0-meter) turbines may be projected upward to increased visibility from 0.0 feet (0.0 meters) to 192 feet (58.5 meters) above the horizon. The nearest beach viewers, located at 23.3 miles (37.5 kilometers) from the Lease Area, may see increased visibility of the 1,066.3-foot (325.0-meter) turbines from 790 feet (240.8 meters) to 844 feet (257.3 meters) above the horizon. Variability of daytime and nighttime atmospheric refraction-based visibility occurs with sea level's continuous increases and decreases in temperature, water vapor, and barometric pressure.

Table H-4 and Table H-5 indicate the Proposed Action's effects based on horizontal FOV and vertical FOV, respectively, defined as the earth curvature-based extent of the observable landscape seen at any given moment, usually measured in degrees (BOEM 2021). The horizontal FOV for each KOP is listed in COP Appendix T (Mayflower Wind 2022). FOVs are valid and reliable indicators of the magnitude of view occupation by Proposed Action facilities. Typical human perception extends to 124° in the horizontal axis and 55° in the vertical axis. The nearest shoreline viewers would be 23.3 miles (37.5 kilometers) from the Wind Farm Area. EC, at this distance, reduces the observable height above the horizon of the nearest WTG from 1,066 feet (324.9 meters) mean lower low water (MLLW) to 788 feet (244 meters), resulting in occupation of 0.4° and 0.7 percent of the vertical view. WTGs would further diminish in perceived size with distance and EC.

Table H-3. Heights of Noticeable a WTG Elements and Substations and Visible Distances b

| Noticeable Element      | Height in Feet (meters) | Visible Distance <sup>b</sup> in Miles (kilometers) |
|-------------------------|-------------------------|---|
| Rotor Blade Tip         | 1,066.3 (325.0) MLLW    | 0–42.8 (68.9)                                       |
| Aviation Light          | 624 (190.2) MLLW        | 0–33.5 (53.9)                                       |
| Nacelle                 | 614 (187.1) MLLW        | 0–33.3 (53.6)                                       |
| Hub                     | 605.1 (184.4) MLLW      | 0–30.0 (48.3)                                       |
| OSP                     | 344.5 (105) MLLW        | 0–25.5 (41.0)                                       |
| Mid-tower Light         | 302 (92) MLLW           | 0–24.2 (38.9)                                       |
| Yellow Tower Base Color | 50 (15) HAT             | 0–11.4 (18.3)                                       |

<sup>&</sup>lt;sup>a</sup> Perception of Project elements, from 5.5 feet (1.7 meters) human eye level while standing at mean sea level, involves static distance-related sizes, forms, lines, colors, and textures; variable daytime lighting conditions; variable nighttime light conditions; and variable meteorological conditions.

HAT = highest astronomical tide

Table H-4. Horizontal FOV Occupied by the Proposed Action

| Noticeable<br>Element | Width<br>miles<br>(kilometers) | Distance<br>miles<br>(kilometers) | Horizontal FOV | Human FOV | Percent of FOV |
|-----------------------|--------------------------------|-----------------------------------|----------------|-----------|----------------|
| Wind Farm             | 9.8 (15.8)                     | 23.3 (37.5)                       | 22.8°          | 124°      | 18%            |

Table H-5. Vertical FOV Occupied by the Proposed Action

| Noticeable<br>Element | Height<br>feet (meters)    | Distance<br>miles<br>(kilometers) | Height Above<br>Horizon <sup>a</sup><br>feet (meters) | Vertical<br>FOV | Human<br>FOV | Percent of<br>FOV |
|-----------------------|----------------------------|-----------------------------------|---|-----------------|--------------|-------------------|
| Rotor Blade Tip       | 1,066 feet<br>(324.9) MLLW | 23.3 (37.5)                       | 788 (244)   | 0.4°            | 55°          | 0.7%              |

<sup>&</sup>lt;sup>a</sup> Based on intervening EC and clear-day conditions.

Table H-6 lists the wind farm's distances, horizontal FOVs, noticeable features based on their heights and EC, and visual contrasts. The analysis considers the introduction of WTGs and OSP to an open ocean baseline. The scale, size, contrast, and prominence of change focuses on the following.

- Arrangement of WTGs and OSP in the view.
- Horizontal FOV and vertical FOV scale of the wind farm array, based on WTG and OSP size and number.
- Position of the array in the open ocean.
- Position of the array in the view.
- Turbine array's distance from the viewer.

Visibility, character-changing effects, and visual contrasts reduce steadily with distance from the observation point. Visibility, character-changing effects, scale, prominence, and visual contrasts increase with elevated observer position in comparison with the wind farm. Distance and observer elevation

<sup>&</sup>lt;sup>b</sup> Based on intervening EC and clear-day conditions.

considerations are informed by the VIA simulations (COP Appendix T; Mayflower Wind 2022), EC calculations, horizontal FOV, and vertical FOV in undeveloped open ocean. The wind farm and nearest WTGs would be:

- Unavoidably dominant features in the offshore view between 0 and 5 miles (0–8 kilometers) distance.
- Strongly pervasive features in the onshore to offshore view between 5 and 12 miles (8–19.3 kilometers) distance.
- Clearly visible features in the onshore to offshore view between 12 and 28 miles (19.3–45.1 kilometers) distance.
- Low on the horizon, but persistent features in the onshore to offshore view between 28 and 31 miles (45.1–49.9 kilometers) distance.
- Intermittently noticed features in the onshore to offshore view between 31 and 42.8 miles (49.9–68.9 kilometers) distance.
- Below the horizon beyond 42.8 miles (68.9 kilometers) distance.

Visual contrast determinations involve comparisons of characteristics of the seascape, open ocean, and landscape before and after Project implementation. The range of potential contrasts includes strong, moderate, weak, and none (BOEM 2021). The strongest daytime contrasts would result from tranquil and flat seas combined with sunlit WTG towers, nacelles, flickering rotors, and a yellow tower base color against a dark background sky and an undifferentiated foreground. There would be daily variation in WTG color contrast as sun angles change from back-lit to front-lit (sunrise to sunset) and the backdrop would vary under different lighting and atmospheric conditions. The weakest daytime contrasts would result from turbulent seas combined with overcast daylight conditions on WTG towers, nacelles, and rotors against an overcast background sky and a foreground modulated by varied landscape elements. The strongest nighttime contrasts would result from dark skies (absent moonlight) combined with aviation lights, activated lighting on the OSP, mid-tower lights, and Project lighting reflections on low clouds and active (non-reflective) surf, and the dark-sky light dome. The weakest nighttime contrasts would result from moonlit, cloudless skies; tranquil (reflective) seas; Aircraft Detection Lighting System (ADLS) activation; and only mid-tower lights.

The seascape character units, open ocean character unit, landscape character units, and viewer experiences would be affected by the Proposed Action's noticeable features; applicable distances and FOV extents; open views versus view framing and intervening foregrounds; form, line, color, and texture contrasts; scale of change; and prominence in the characteristic seascape and landscape. Higher impact levels would stem from unique, extensive, and long-term appearance of strongly contrasting, large, and prominent vertical structures in the otherwise horizontal seascape environment, where structures are an unexpected element and viewer experience is of formerly open views of high-sensitivity seascape, open ocean, and landscape and from high sensitivity view receptors.

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Table H-6. Wind Farm Distances, FOVs, Noticeable Elements, Visual Contrasts, Scale of Change, and Prominence (Magnitude of Change)

|                        |                    | Distance in Miles (kilometers) |                    |                    |                    |                    |   |  |                            |                            | Cor                         | trast, Scale of               | f Change, and Pro        | ominence                                      |                                |                               |
|------------------------|--------------------|--------------------------------|--------------------|--------------------|--------------------|--------------------|---|--|----------------------------|----------------------------|-----------------------------|-------------------------------|--------------------------|---|--------------------------------|-------------------------------|
| KOP ª                  | Proposed<br>Action | Alternative<br>C-1             | Alternative<br>C-2 | Alternative<br>D   | Alternative<br>E   | Alternative F      | Proposed Action<br>FOV Degrees<br>(% of 124°) | Noticeable<br>Elements <sup>g</sup> &<br>Impact Level    | Proposed<br>Action<br>Form | Proposed<br>Action<br>Line | Proposed<br>Action<br>Color | Proposed<br>Action<br>Texture | Proposed<br>Action Scale | Proposed<br>Action<br>Prominence <sup>h</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D              |
| KOP-1-O b              | 0–42.8<br>(0–68.9) | 0–42.8<br>(0–68.9)             | 0–42.8<br>(0–68.9) | 0–42.8<br>(0–68.9) | 0–42.8<br>(0–68.9) | 0–42.8<br>(0–68.9) | 124° (100%)                                   | R, AL, N, H, O,<br>M, and Y <sup>g</sup><br><b>Major</b> | Strong                     | Strong                     | Strong                      | Strong                        | Large                    | 6   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-2_O                | 5–42.8<br>(0–68.9) | 5–42.8<br>(0–68.9)             | 5–42.8<br>(0–68.9) | 5–42.8<br>(0–68.9) | 5–42.8<br>(0–68.9) | 5–42.8<br>(0–68.9) | 124° (100%)                                   | R, AL, N, H, O,<br>M, and Y<br><b>Major</b>              | Strong                     | Strong                     | Strong                      | Strong                        | Large                    | 6   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-1-MV <sup>c</sup>  | 30.9 (49.7)        | 30.9 (49.7)                    | 30.9 (49.7)        | 30.9 (49.7)        | 30.9 (49.7)        | 30.9 (49.7)        | 27° (22%)                                     | R, AL, and N<br><b>Minor</b>                             | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-2-MV               | 31.0 (49.8)        | 31.0 (49.8)                    | 31.0 (49.8)        | 31.0 (49.8)        | 31.0 (49.8)        | 31.0 (49.8)        | 27° (22%)                                     | R, AL, N, and H<br><b>Minor</b>                          | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 1   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-3-MV               | 31.4 (50.5)        | 31.4 (50.5)                    | 31.4 (50.5)        | 31.4 (50.5)        | 31.4 (50.5)        | 31.4 (50.5)        | 27° (22%)                                     | R, AL, and N<br><b>Minor</b>                             | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-4-MV               | 32.2 (51.8)        | 32.2 (51.8)                    | 32.2 (51.8)        | 32.2 (51.8)        | 32.2 (51.8)        | 32.2 (51.8)        | 29° (24%)                                     | R, AL, and N<br><b>Minor</b>                             | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-6-MV               | 33.6 (54.1)        | 33.6 (54.1)                    | 33.6 (54.1)        | 33.6 (54.1)        | 33.6 (54.1)        | 33.6 (54.1)        | 32° (26%)                                     | R<br><b>Mino</b> r                                       | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-9-MV               | 36.9 (59.4)        | 36.9 (59.4)                    | 36.9 (59.4)        | 36.9 (59.4)        | 36.9 (59.4)        | 36.9 (59.4)        | 30° (24%)                                     | R<br><b>Mino</b> r                                       | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 1   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-16-MV              | 37.2 (59.9)        | 37.2 (59.9)                    | 37.2 (59.9)        | 37.2 (59.9)        | 37.2 (59.9)        | 37.2 (59.9)        | 32° (26%)                                     | R<br><b>Mino</b> r                                       | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-19-MV <sup>i</sup> | 41.2 (66.3)        | 41.2 (66.3)                    | 41.2 (66.3)        | 41.2 (66.3)        | 41.2 (66.3)        | 41.2 (66.3)        | 30° (24%)                                     | R, AL, N, and H<br>Minor                                 | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-2-N <sup>d</sup>   | 24.4 (42.6)        | 24.4 (42.6)                    | 24.4 (42.6)        | 24.7 (39.7)        | 24.4 (42.6)        | 24.4 (42.6)        | 24° (19%)                                     | R, AL, N, H, and<br>O<br>Moderate                        | Weak                       | Moderate                   | Moderate                    | Weak                          | Medium                   | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-3-N                | 24.3 (39.1)        | 24.3 (39.1)                    | 24.3 (39.1)        | 24.4 (39.3)        | 24.3 (39.1)        | 24.3 (39.1)        | 24° (19%)                                     | R, AL, N, H, and<br>O<br>Moderate                        | Weak                       | Weak                       | Moderate                    | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-6-N                | 26.5 (42.6)        | 26.5 (42.6)                    | 26.5 (42.6)        | 27.2 (43.8)        | 26.5 (42.6)        | 26.5 (42.6)        | 17° (14%)                                     | R, AL, N, and H<br>Moderate                              | Weak                       | Weak                       | Moderate                    | Weak                          | Medium                   | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |

|                       |                    | Distance in Miles (kilometers) |                    |                  |                  |               |   | Noticeable                                  |                            |                            | Con                         | trast, Scale of               | Change, and Pro          | ominence                                      |                                |                               |
|-----------------------|--------------------|--------------------------------|--------------------|------------------|------------------|---------------|---|---|----------------------------|----------------------------|-----------------------------|-------------------------------|--------------------------|---|--------------------------------|-------------------------------|
| KOP <sup>a</sup>      | Proposed<br>Action | Alternative<br>C-1             | Alternative<br>C-2 | Alternative<br>D | Alternative<br>E | Alternative F | Proposed Action<br>FOV Degrees<br>(% of 124°) | Elements <sup>g</sup> & Impact Level        | Proposed<br>Action<br>Form | Proposed<br>Action<br>Line | Proposed<br>Action<br>Color | Proposed<br>Action<br>Texture | Proposed<br>Action Scale | Proposed<br>Action<br>Prominence <sup>h</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D              |
| KOP-8-N (Day)         | 25.6 (41.2)        | 25.6 (41.2)                    | 25.6 (41.2)        | 26.2 (42.2)      | 25.6 (41.2)      | 25.6 (41.2)   | 19° (15%)                                     | R, AL, N, and H<br><b>Moderate</b>          | Weak                       | Weak                       | Weak                        | Weak                          | Medium                   | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-8-N<br>(Night)    | 25.6 (41.2)        | 25.6 (41.2)                    | 25.6 (41.2)        | 26.2 (42.2)      | 25.6 (41.2)      | 25.6 (41.2)   | 19° (15%)                                     | R, AL, N, and H<br>Moderate                 | Weak                       | Weak                       | Strong                      | Weak                          | Medium                   | 5   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-10-N              | 24.2 (38.9)        | 24.2 (38.9)                    | 24.2 (38.9)        | 24.7 (39.7)      | 24.2 (38.9)      | 24.2 (38.9)   | 22° (18%)                                     | R, AL, N, H, O,<br>and M<br>Moderate        | Moderate                   | Moderate                   | Moderate                    | Weak                          | Medium                   | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-11-N              | 23.3 (37.5)        | 23.3 (37.5)                    | 23.3 (37.5)        | 23.7 (38.1)      | 23.3 (37.5)      | 23.3 (37.5)   | 23° (19%)                                     | R, AL, N, H, O,<br>and M<br>Moderate        | Moderate                   | Weak                       | Moderate                    | Weak                          |                          | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-12-N (Day)        | 23.5 (37.8)        | 23.5 (37.8)                    | 23.5 (37.8)        | 23.8 (38.3)      | 23.5 (37.8)      | 23.5 (37.8)   | 24° (19%)                                     | R, AL, N, H, O,<br>and M<br>Moderate        | Moderate                   | Moderate                   | Moderate                    | Weak                          | Medium                   | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-12-N<br>(Night)   | 23.5 (37.8)        | 23.5 (37.8)                    | 23.5 (37.8)        | 23.8 (38.3)      | 23.5 (37.8)      | 23.5 (37.8)   | 24° (19%)                                     | R, AL, N, H, O,<br>and M<br>Moderate        | Moderate                   | Moderate                   | Strong                      | Weak                          | Medium                   | 5   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-13-N              | 23.6 (38.0)        | 23.6 (38.0)                    | 23.6 (38.0)        | 24.0 (38.6)      | 23.6 (38.0)      | 23.6 (38.0)   | 26° (21%)                                     | R, AL, N, H, O,<br>and M<br>Moderate        | Moderate                   | Moderate                   | Moderate                    | Weak                          | Medium                   | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-16-N              | 23.8 (38.3)        | 23.8 (38.3)                    | 23.8 (38.3)        | 24.0 (38.6)      | 23.8 (38.3)      | 23.8 (38.3)   | 26° (21%)                                     | R, AL, N, H, O,<br>and M<br><b>Moderate</b> | Moderate                   | Weak                       | Moderate                    | Weak                          | Medium                   | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-17-N              | 24.0 (38.6)        | 24.0 (38.6)                    | 24.0 (38.6)        | 24.4 (39.3)      | 24.0 (38.6)      | 24.0 (38.6)   | 24° (19%)                                     | R, AL, N, H, O,<br>and M<br><b>Moderate</b> | Moderate                   | Weak                       | Moderate                    | Weak                          | Medium                   | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-18-N              | 23.4 (37.7)        | 23.4 (37.7)                    | 23.4 (37.7)        | 23.8 (38.3)      | 23.4 (37.7)      | 23.4 (37.7)   | 24° (19%)                                     | R, AL, N, H, O,<br>and M<br><b>Moderate</b> | Moderate                   | Weak                       | Moderate                    | Weak                          | Small                    | 4   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-20-N              | 24.8 (39.9)        | 24.8 (39.9)                    | 24.8 (39.9)        | 25.4 (40.9)      | 24.8 (39.9)      | 24.8 (39.9)   | 21° (17%)                                     | R, AL, N, H, and<br>O<br>Moderate           | Moderate                   | Weak                       | Moderate                    | Weak                          | Medium                   | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-21-N              | 29.4 (47.3)        | 29.4 (47.3)                    | 29.4 (47.3)        | 29.9 (48.1)      | 29.4 (47.3)      | 29.4 (47.3)   | 17° (14%)                                     | R, AL, N, H, O,<br>and M<br><b>Minor</b>    | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 2   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-22-N              | 24.2 (38.9)        | 24.2 (38.9)                    | 24.2 (38.9)        | 24.4 (39.3)      | 24.2 (38.9)      | 24.2 (38.9)   | 26° (21%)                                     | R, AL, N, H, O,<br>and M<br><b>Moderate</b> | Moderate                   | Weak                       | Moderate                    | Weak                          | Small                    | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| KOP-1-BP <sup>e</sup> | 0.4 (0.7)          | NA                             | NA                 | NA               | NA               | NA            | NA  | Unseen<br><b>Negligible</b>                 | Weak                       | Weak                       | Weak                        | Weak                          | Small                    | 3   | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |

|                       |                    | Distance in Miles (kilometers) |                    |                  |                  |               |                            | Noticeable                    |   | Contrast, Scale of Change, and Prominence |                            |                             |                               |                          |   |                                |                  |
|-----------------------|--------------------|--------------------------------|--------------------|------------------|------------------|---------------|----------------------------|-------------------------------|---|---|----------------------------|-----------------------------|-------------------------------|--------------------------|---|--------------------------------|------------------|
| KOP <sup>a</sup>      | Proposed<br>Action | Alternative<br>C-1             | Alternative<br>C-2 | Alternative<br>D | Alternative<br>E | Alternative F | FOV Degrees<br>(% of 124°) | _                             | Noticeable<br>Elements <sup>g</sup> &<br>Impact Level | Proposed<br>Action<br>Form                | Proposed<br>Action<br>Line | Proposed<br>Action<br>Color | Proposed<br>Action<br>Texture | Proposed<br>Action Scale | Proposed<br>Action<br>Prominence <sup>h</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D |
| КОР-3-ВР              | 0.5 (0.8)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Unseen<br><b>Negligible</b>   | Weak  | Weak                                      | Weak                       | Weak                        | Small                         | 3                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |
| KOP-4-BP              | 0.8 (1.3)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Unseen<br><b>Negligible</b>   | Weak  | Weak                                      | Weak                       | Weak                        | Small                         | 3                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |
| KOP-44-C <sup>f</sup> | 0.1 (0.2)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Structures<br><b>Major</b>    | Strong  | Strong                                    | Strong                     | Strong                      | Large                         | 6                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |
| KOP-46-C              | 0.2 (0.3)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Structures<br><b>Major</b>    | Strong  | Strong                                    | Strong                     | Moderate                    | Large                         | 5                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |
| KOP-47-C              | 0.2 (0.3)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Structures<br><b>Major</b>    | Strong  | Strong                                    | Strong                     | Moderate                    | Large                         | 5                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |
| КОР-49-С              | 0.3 (0.4)          | NA                             | NA                 | NA               | NA               | NA            | NA                         | Structures<br><b>Moderate</b> | Moderate  | Weak                                      | Moderate                   | Weak                        | Medium                        | 3                        | Same as<br>Proposed<br>Action                 | Same as<br>Proposed<br>Action  |                  |

<sup>&</sup>lt;sup>a</sup> KOP-1-MV = Wasque Point. KOP-2-MV = Wasque Point Reservation. KOP-3-MV = Wasque Avenue, KOP-4-MV = South Beach, KOP-6-MV = Long Point Beach, KOP-9-MV = 322 South Road,

KOP-16-MV = Squibnocket Beach, KOP-19-MV Gay Head Lighthouse, KOP-2-N = Sanford Farm Barn Overlook, KOP-3-N = Madaket Beach, KOP-6-N = Tom Nevers Field, KOP-10-N = Nobadeer Beach, KOP-11-N = Miacomet Beach and Pond, KOP-12-N = Cisco Beach, KOP-13-N = Hummock Pond Road Bike Path, KOP-16-N = Head of Plains, KOP-17-N Bartlett's Farm, KOP-18-N = Ladies Beach, KOP-20-N = Madaket Beach at Sunset, KOP-12-N = Madaket Beach at Sunset, KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area, KOP-2-O Commercial and Cruise Ship Shipping Lanes, KOP-1-BP = Brayton Point Beach, KOP-3-BP = Sycamore Street, KOP-4-BP = Route 103 at Anthony Bridge, KOP-44-C = Oak Grove Cemetery, KOP-46-C = Goodwill Park, KOP-47-C = Lawrence Lynch Site Road - Gifford Street Substation Road, and KOP-49-C = Two Ponds

<sup>&</sup>lt;sup>b</sup> O = Ocean

<sup>&</sup>lt;sup>c</sup> MV = Martha's Vineyard

<sup>&</sup>lt;sup>d</sup> N = Nantucket

e BP - Brayton Point

f C= Cape Cod

g Noticeable elements: R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color

h WTGs and OSP visibility: 0 = Not visible. 1 = Visible only after extended study; otherwise not visible. 2 = Visible when viewing in general direction of the wind farm; otherwise likely to be missed by casual observer. 3 = Visible after brief glance in general direction of the wind farm; unlikely to be missed by casual observer. 4 = Plainly visible; could not be missed by casual observer, but does not strongly attract viewers' attention to the wind farm; moderate to strong contrasts in form, line, color, or texture, luminance, or motion. 6 = Dominates view; strong contrasts in form, line, color, texture, luminance, or motion fill most of the horizontal FOV or vertical FOV (NAEP 2012).

<sup>&</sup>lt;sup>i</sup> Elevated lighthouse viewpoint

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Construction involving moving and stationary visual feature contrasts to forms, lines, colors, textures, scale, and prominence in formerly open ocean may have more effect on viewers than operational and decommissioning impacts, where the viewing context is existing WTGs and substations. Construction impacts would be temporary and would include the following.

- Daytime and nighttime movement of installation vessels, cranes, and other equipment visible in the open ocean in and around the Lease Area.
- Dawn, dusk, and nighttime construction lighting on WTGs and OSP.
- Beach, other sensitive land-based, and boat and cruise ship views of WTGs and OSP under construction.
- Laying of the offshore and onshore buried export cables and the connections between offshore and onshore export cables at landing sites.
- Activities along the onshore landfalls, export cable routes, and Brayton Point and Falmouth onshore converter station and substation sites.

Operational effects would be similar to those of end-stage construction and would be long term and fully reversible.

Proposed Action impacts on high-sensitivity open ocean character would be **major**. The daytime and nighttime (lighting) presence of the WTGs, OSP, and construction and O&M vessel traffic would change perception of this area from natural, undeveloped open ocean to a developed wind energy environment characterized by visually dominant WTGs and OSP.

Maintenance activities would cause **minor** effects on open ocean character by increased O&M vessel traffic to and from the Wind Farm Area. Increases in these vessel movements would be noticeable to offshore viewers but are unlikely to have a significant effect.

Decommissioning would involve the removal of all offshore structures and is expected to follow the reverse of the construction activity. Decommissioning activities would cause effects similar to those of construction activities.

Daytime lighting of WTGs is not required. ADLS would reduce nighttime impact levels from **major** or **moderate** to **negligible**, due to substantially limited hours of lighting. Residual impacts would result from the presence of continuously flashing lights, a sky light dome, and reflections on clouds during those limited hours. Lights of the up to five OSPs, when lit for maintenance, potentially would be visible from beaches and adjoining land and the built environment during hours of darkness. The nighttime sky light dome and cloud lighting caused by reflections from the water surface may be seen from distances beyond the 42.8-mile (68.9-kilometer) geographic analysis area, depending on variable ocean surface and meteorological reflectivity. The onshore substation and converter station's nighttime lighting would be visible in their immediate neighborhoods during the hours of darkness and similar in magnitude and extent to existing conditions.

Table H-7 lists the Proposed Action's noticeable features based on their heights, distances, and EC.

Table H-7. Noticeable Elements and Impacts by Seascape Character Unit, Open Ocean Character Unit, Landscape Character Unit, and KOP for the Proposed Action

| Noticeable Elements <sup>a</sup><br>Impacts | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key Observation Points  |
|---|--|
| R, AL, N, H, O, M, and Y<br><b>Major</b>    | Open Ocean Character Unit KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area KOP-2-O Commercial and Cruise Ship Shipping Lanes   |
| R, AL, N, H, O, and M<br><b>Major</b>       | KOP-8-N Tom Nevers Field-Nighttime <sup>b</sup><br>KOP-12-N Cisco Beach-Nighttime <sup>b</sup>   |
| R, AL, N, H, O, and M  Moderate             | Seascape and Landscape Character Units KOP-8-N Tom Nevers Field-Daytime KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-13-N Hummock Pond Road Bike Path KOP-16-N Head of Plains KOP-17-N Bartlett's Farm KOP-18-N Ladies Beach KOP-22-N Madaket Beach at Sunset |
| R, AL, N, H, O, and M<br>Minor              | KOP-19-MV Gay Head Lighthouse (Elevated viewpoint)   |
| R, AL, N, H, and O<br>Moderate              | KOP-2-N Sanford Farm Barn Overlook<br>KOP-3-N Madaket Beach<br>KOP-20-N Madequecham 1  |
| R, AL, N, H, and O<br>Minor                 | KOP-21-N Sankaty Head Lighthouse (Elevated viewpoint)  |
| R, AL, N, and H<br>Minor                    | KOP-2-MV Wasque Point Reservation<br>KOP-6-N Tom Nevers Beach  |
| R, AL, and N<br>Minor                       | Landscape Character Units KOP-1-MV Wasque Point KOP-3-MV Wasque Avenue KOP-4-MV South Beach  |
| R<br>Minor                                  | KOP-6-MV Long Point Beach<br>KOP-9-MV 322 South Road<br>KOP-16-MV Squibnocket Beach  |
| R, AL, N, H, O, and M<br>Negligible         | KOP-8-N Tom Nevers Field-Nighttime <sup>c</sup><br>KOP-12-N Cisco Beach-Nighttime <sup>c</sup>   |
| Onshore substation structures  Major        | KOP-44-C Oak Grove Cemetery<br>KOP-46-C Goodwill Park<br>KOP-47-C Lawrence Lynch Site Road - Gifford Street Substation Road  |
| Onshore substation structures  Moderate     | KOP-49-C Two Ponds   |
| Onshore substation structures  Negligible   | KOP-1-BP Brayton Point Beach<br>KOP-3-BP Sycamore Street<br>KOP-4-BP Route 103 at Anthony Bridge   |

<sup>&</sup>lt;sup>a</sup> R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color

 $<sup>^{\</sup>rm b}\,\text{Major}$  impacts when ADLS is activated.

<sup>&</sup>lt;sup>c</sup> Negligible impacts when ADLS is not activated.

Table H-8 summarizes the Proposed Action's wind farm distance, percent of FOV occupied by the wind farm, and effects on the seascape units, open ocean unit, landscape units, and KOPs.

Table H-8. Wind Farm Distance Effects by Seascape Character Unit, Open Ocean Character Unit, Landscape Character Unit, and KOP for the Proposed Action

| Distance in Miles (km)<br>Effects                               | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key Observation Points   |
|---|---|
| 0–40.0 (0–64.4)<br>Dominant/Major to Minor<br>Noticeability     | Open Ocean Character Unit<br>KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area   |
| 5.0–40.0 (8.0–64.4)<br>Dominant/Major to Minor<br>Noticeability | Open Ocean Character Unit<br>KOP-2-O Cruise Ship Shipping Lanes   |
| 23.5-25.6 (37.8-41.2)<br>Dominant/Major<br>Noticeability        | KOP-8-N Tom Nevers Field-Nighttime<br>KOP-12-N Cisco Beach-Nighttime  |
| 23.3–24.2 (37.5–38.9)<br>Moderate Noticeability                 | Seascape Character Units:  Ocean Sound Beachfront Coastal Bluff Coastal Dune Boardwalk Coastal Scrub Commercial Forests/Woodlands Institutional Park Preserve Residential Salt Pond Transportation Village/Town  KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-13-N Hummock Pond Road Bike Path KOP-18-N Ladies Beach KOP-18-N Ladies Beach KOP-18-N Ladies Beach KOP-18-N Madequecham 1 KOP-20-N Madequecham 1 KOP-20-N Madequecham 1 KOP-22-N Madaket Beach at Sunset |

| Distance in Miles (km)<br>Effects            | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key Observation Points   |
|--|---|
| 24.3–33.6 (39.1–54.1)<br>Minor Noticeability | Seascape Character Units:  Ocean Sound Beachfront Coastal Bluff Coastal Dune Boardwalk Coastal Scrub Commercial Forests/Woodlands Institutional Park Preserve Residential Salt Pond Transportation Village/Town  Landscape Character Units: Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Uglage/Town  Landscape Character Units: Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Light Industrial Marshland Park Preserve Residential Salt Pond Park Preserve Residential Salt Pond Village/Town  KOPs: KOP-1-MV Wasque Point Reservation KOP-3-MV Wasque Point Reservation KOP-3-MV Wasque Point Reservation KOP-3-MV Wasque Point Reservation KOP-3-MV Wasque Point Reach KOP-6-MV Long Point Beach KOP-6-MV Squibnocket Beach KOP-6-MV Squibnocket Beach KOP-6-MV Squibnocket Beach KOP-6-N Tom Nevers Beach KOP-8-N Tom Nevers Field-Daytime |

| Distance in Miles (km)<br>Effects                             | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key<br>Observation Points   |
|---|--|
| 29.4-41.2 (47.3-66.3)<br>Minor Noticeability                  | KOP-21-N Sankaty Head Lighthouse (elevated viewpoint) KOP-19-MV Gay Head Lighthouse (elevated viewpoint)   |
| 31.1–42.8 (50.1–68.9)<br>Minor to Negligible<br>Noticeability | Landscape Character Units:  Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Light Industrial Marshland Park Preserve Residential Salt Pond Pond Shoreline Transportation Village/Town |

km = kilometers

Table H-9 summarizes the Proposed Action's wind farm distance, percent of FOV occupied by the wind farm, and effects on the seascape units, landscape units, and KOPs' viewer experience. FOV measures consider size, horizontal extent, and vertical extent of the facilities and indicate the scale of impact in comparison with the typical 124-degree human view cone. The WTG array's configuration results in narrower angles and shorter distances from Nantucket and wider angles from Martha's Vineyard's greater distances. Thus, moderate to minor effects involve both distance's noticeable elements and FOV measures.

Table H-9. Wind Farm Percent of FOV and Effects by Seascape Character Unit, Open Ocean Character Unit, Landscape Character Unit, and KOP for the Proposed Action

| Percent (°) of 124° FOV<br>POV <sup>a</sup> Effects <sup>b</sup> | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key<br>Observation Points                              |
|--|---|
| 100% (124°) to 16% (20°)<br>Dominant/Major to Minor              | Open Ocean Character Unit<br>KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area<br>KOP-2-O Cruise Ship Shipping Lanes     |
| 21% (26°) to 17% (19°)<br>Moderate                               | Seascape Character Units:  Ocean Sound Beachfront Coastal Bluff Coastal Dune Boardwalk Coastal Scrub Commercial Forests/Woodlands |

| Percent (°) of 124° FOV<br>POV <sup>a</sup> Effects <sup>b</sup> | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key Observation Points  |
|--|--|
|  | <ul> <li>Institutional</li> <li>Park</li> <li>Preserve</li> <li>Residential</li> <li>Salt Pond</li> <li>Transportation</li> <li>Village/Town</li> </ul>  |
|  | Landscape Character Units:  Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Light Industrial Marshland Park Preserve Residential Salt Pond Pond Shoreline Transportation Village/Town   |
|  | KOP-8-N Tom Nevers Field-Daytime KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-13-N Hummock Pond Road Bike Path KOP-16-N Head of Plains KOP-17-N Bartlett's Farm KOP-18-N Ladies Beach KOP-20-N Madequecham 1 KOP-22-N Madaket Beach at Sunset |
| 26% (32°) to 14% (17°)<br>Minor to Moderate                      | Seascape Character Units:  Ocean Sound Beachfront Coastal Bluff Coastal Dune Boardwalk Coastal Scrub Commercial Forests/Woodlands Institutional Park Preserve  |

| Percent (°) of 124° FOV<br>POV <sup>a</sup> Effects <sup>b</sup> | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key<br>Observation Points   |
|--|--|
|  | <ul> <li>Residential</li> <li>Salt Pond</li> <li>Transportation</li> <li>Village/Town</li> </ul>   |
|  | Landscape Character Units:  Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Light Industrial Marshland Park Preserve Residential Salt Pond Pond Shoreline Transportation Village/Town   |
|  | KOP-1-MV Wasque Point KOP-2-MV Wasque Point Reservation KOP-3-MV Wasque Avenue KOP-4-MV South Beach KOP-6-MV Long Point Beach KOP-9-MV 322 South Road KOP-16-MV Squibnocket Beach KOP-19-MV Gay Head Lighthouse (elevated viewpoint) KOP-2-N Sanford Farm Barn Overlook KOP-3-N Madaket Beach KOP-6-N Tom Nevers Beach KOP-21-N Sankaty Head Lighthouse (elevated viewpoint) |

<sup>&</sup>lt;sup>a</sup> Percent of view

Foreground influence assessments, involving the presence of intervening or framing elements and their influence on effects of Project characteristics, are based on each KOP's locale photography and visual simulations (Attachment 3 of Appendix T; Mayflower Wind 2022) and summarized in Table H-10.

<sup>&</sup>lt;sup>b</sup> Wind farm array configuration results in narrower angles from Nantucket and wider angles from Martha's Vineyard's greater distances. Thus, overall moderate to minor effects involve distance and noticeable elements.

Table H-10. Foreground View Framing and Intervening Elements for the Proposed Action

| Foreground Element(s)<br>Influence  | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key<br>Observation Points  |
|---|---|
| Open Ocean<br>Negligible Influence  | Open Ocean Character Unit<br>KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area<br>KOP-2-O Cruise Ship Shipping Lanes   |
| Beach, Dunes, and Ocean<br>Minor Influence                                    | Seascape Character Units:  Ocean Sound Beachfront Coastal Bluff Coastal Dune Boardwalk Coastal Scrub Commercial Forests/Woodlands Institutional Park Preserve Residential Salt Pond Transportation Village/Town  KOP-1-MV Wasque Point KOP-4-MV South Beach KOP-6-MV Long Point Beach KOP-6-NV Squibnocket Beach KOP-6-N Tom Nevers Beach KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-18-N Ladies Beach KOP-20-N Madequecham 1 KOP-22-N Madaket Beach at Sunset |
| Buildings, Vegetation, and<br>Topography<br>Moderate to Dominant<br>Influence | Landscape Character Units:  Agriculture Coastal Scrub Commercial Estuary Forests/Woodlands Institutional Light Industrial Marshland Park Preserve Residential Salt Pond Pond Shoreline Transportation   |

| Foreground Element(s)<br>Influence | Seascape Units, Open Ocean Unit, Landscape Units, and Offshore and Onshore Key Observation Points |
|------------------------------------|---|
|                                    | Village/Town  |
|                                    | KOP-2-N Sanford Farm Barn Overlook<br>KOP-3-N Madaket Beach                                       |

Proposed Action contrasts in the characteristic seascape and landscape, as perceived in views from each KOP, are based on visual simulations (COP Appendix T, Attachment 3; Mayflower Wind 2022). Seascape unit view contrasts are estimated based on similar open view conditions in ocean environments. Landscape and seascape compatibility and photography conditions for each viewpoint are presented in COP Appendix T, Table 5-6 and Table 5-7, and Attachment T.1, Table 3-1 (Mayflower Wind 2022). The COP landscape and seascape evaluation scale ranges from faint, apparent, conspicuous, and prominent to dominant. Onshore viewpoints Oak Grove Cemetery, Goodwill Park, and Lawrence Lynch site road would result in prominent and dominant conditions. Offshore potential viewpoints' evaluations range from faint to dominant. Visual contrast determinations involve comparisons of characteristics of the seascape and landscape before and after Proposed Action implementation. The range of potential contrasts includes strong, moderate, weak, and none. The strongest daytime contrasts would result from tranquil and flat seas combined with sunlit WTG towers, nacelles, flickering rotors, and the yellow tower base color against a dark background sky and an undifferentiated foreground. The weakest daytime contrasts would result from turbulent seas combined with overcast daylight conditions on WTG towers, nacelles, and rotors against an overcast background sky and a foreground modulated by varied landscape elements. The strongest nighttime contrasts would result from dark skies (absent moonlight) combined with aviation lights, activated lighting on the OSP mid-tower lights, and Project lighting reflections on low clouds and active (non-reflective) surf, and the dark-sky light dome. The weakest nighttime contrasts would result from moonlit, cloudless skies, tranquil (reflective) seas, ADLS activation, and only mid-tower lights.

Photographic comparisons of characteristics of the seascape's and landscape's existing conditions and Proposed Action implementation are included in COP Appendix T, Attachment 3 (Mayflower Wind 2022) for each of the KOPs in the following summary tables. Visual contrast determinations are listed in Table H-11.

Table H-11. Visual Contrasts to Seascape, Open Ocean, Landscape, and KOPs for the Proposed Action

| Contrast Rating<br>Effects | Seascape, Open Ocean, Landscape, and Offshore and Onshore Key Observation Points                         |
|----------------------------|--|
| Strong Contrasts Major     | Open Ocean KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area KOP-2-O Cruise Ship Shipping Lanes |

| Contrast Rating<br>Effects                          | Seascape, Open Ocean, Landscape, and Offshore and Onshore Key Observation Points   |
|---|--|
| Strong Contrasts<br>(Limited Timeframe)<br>Moderate | KOP-8-N Tom Nevers Field-Nighttime (the limited timeframe due to ADLS results in downward rating from Major to Negligible) KOP-12-N Cisco Beach-Nighttime (the limited timeframe due to ADLS results in downward rating from Major to Negligible)  |
| Moderate Contrasts  Moderate                        | Seascapes and Landscapes within 28 miles (kilometers) in the Wind Farm Area viewshed KOP-3-N Madaket Beach KOP-6-N Tom Nevers Beach KOP-8-N Tom Nevers Field-Daytime KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-13-N Hummock Pond Road Bike Path KOP-16-N Head of Plains KOP-17-N Bartlett's Farm KOP-18-N Ladies Beach KOP-20-N Madequecham 1 KOP-22-N Madaket Beach |
| Weak Contrasts<br>Minor                             | Seascapes and Landscapes beyond 28 miles (kilometers) in the Wind Farm Area viewshed KOP-1-MV Wasque Point KOP-2-MV Wasque Point Reservation KOP-3-MV Wasque Avenue KOP-4-MV South Beach KOP-6-MV Long Point Beach KOP-9-MV 322 South Road KOP-16-MV Squibnocket Beach KOP-19-MV Gay Head Lighthouse (Elevated viewpoint) KOP-2-N Sanford Farm Barn Overlook KOP-21-N Sankaty Head Lighthouse (Elevated viewpoint)   |
| None to very weak  Negligible                       | Seascapes, Landscapes, and viewer locations not in the Wind Farm Development Area viewshed   |

Table H-12 summarizes sensitivity, susceptibility, and magnitude of change in consideration of Proposed Action impacts on the seascape character units, open ocean character unit, and landscape character units throughout the geographic analysis area. The seascape, open ocean, and landscape criteria listed in Table H-1 and consideration of the preceding assessments would result in impact levels for character units as shown in Table H-12.

Table H-12. Proposed Action Impact on Seascape Character, Open Ocean Character, and Landscape Character

| Level of Impact | Seascape Character Units, Open Ocean Character Unit, and Landscape Character Units                           |
|-----------------|--|
| Major           | SLIA: Open Ocean Character Unit  |
| Moderate        | SLIA: Seascape Character Units and Landscape Character Units within the viewshed and within 28 miles of WTGs |

| Level of Impact | Seascape Character Units, Open Ocean Character Unit, and Landscape Character Units                           |
|-----------------|--|
| Minor           | SLIA: Seascape Character Units and Landscape Character Units within the viewshed and beyond 28 miles of WTGs |
| Negligible      | SLIA: Seascape Character Units and Landscape Character Units outside of the WTG viewshed                     |

SLIA = seascape, open ocean, and landscape impact assessment

Table H-13 summarizes Proposed Action impacts on viewer experience (KOP locations) throughout the geographic analysis area. The viewer experience criteria listed in Table H-1 and consideration of the preceding assessments would result in impact levels for KOPs as shown in Table H-13.

Table H-13. Impact Levels on Viewer Experience for the Proposed Action

| Impact Level | Offshore and Onshore Key Observation Points   |
|--------------|---|
| Major        | VIA: KOP-1-O Recreational Fishing, Pleasure, and Tour Boat Area KOP-2-O Commercial and Cruise Ship Shipping Lanes KOP-8-N Tom Nevers Field-Nighttime a KOP-12-N Cisco Beach-Nighttime a KOP-44-C Oak Grove Cemetery KOP-46-C Goodwill Park KOP-47-C Lawrence Lynch Site   |
| Moderate     | VIA: KOP-8-N Tom Nevers Field-Daytime KOP-10-N Nobadeer Beach KOP-11-N Miacomet Beach and Pond KOP-12-N Cisco Beach-Daytime KOP-13-N Hummock Pond Road Bike Path KOP-16-N Head of Plains KOP-17-N Bartlett's Farm KOP-18-N Ladies Beach KOP-20-N Madequecham 1 KOP-22-N Madaket Beach at Sunset KOP-49-C Two Ponds  |
| Minor        | VIA: KOP-1-MV Wasque Point KOP-2-MV Wasque Point Reservation KOP-3-MV Wasque Avenue KOP-4-MV South Beach KOP-6-MV Long Point Beach KOP-9-MV 322 South Road KOP-16-MV Squibnocket Beach KOP-19-MV Gay Head Lighthouse (Elevated viewpoint) KOP-2-N Sanford Farm Barn Overlook KOP-3-N Madaket Beach KOP-6-N Tom Nevers Beach KOP-21-N Sankaty Head Lighthouse (Elevated viewpoint) |

| Impact Level | Offshore and Onshore Key Observation Points  |
|--------------|--|
| Negligible   | KOP-8-N Tom Nevers Field-Nighttime <sup>b</sup> KOP-12-N Cisco Beach-Nighttime <sup>b</sup> KOP-1-BP Brayton Point Beach KOP-3-BP Sycamore Street KOP-4-BP Route 103 at Anthony Bridge |

<sup>&</sup>lt;sup>a</sup> Major impacts when ADLS is activated.

## H.3.1.1 Cumulative Impacts of the Proposed Action

NEPA requires consideration of other reasonably foreseeable activities in the Project's viewshed and the Project's incremental effects on seascape character, open ocean character, landscape character, and viewer experience. These effects include direct physical effects on the seascape, open ocean, and landscape or changes to the distinct character of the seascape, open ocean, and landscape.

Effects on seascape character, open ocean character, and landscape character can occur in the following conditions (SLVIA Chapter 8; BOEM 2021).

- Multi-project WTGs and OSPs visible within or from the open ocean character unit as overlapping or adjacent features and elements.
- Multi-project WTGs and OSPs visible from seascape character units as overlapping or adjacent features and elements.
- Multi-project WTGs and OSPs visible from landscape character units as overlapping or adjacent features and elements.

Effects on viewer experience can occur in the following conditions (SLVIA Chapter 8; BOEM 2021).

- Multi-project WTGs and OSPs visible as overlapping features and elements.
- Multi-project WTGs and OSPs visible as adjacent features and elements.
- Multi-project WTGs and OSPs visible as viewers move through the seascape, open ocean, and landscape.

Attachment H-1 portrays simulations of the incremental effects of the Project in the context of other offshore wind projects, from a total of eight KOPs: five KOPs on Nantucket Island; an additional nighttime simulation for one of these KOPs (Cisco Beach); and two KOPs on Martha's Vineyard.

The visual simulations portray five incremental construction scenarios, as follows.

- Scenario 1: 2023–2025 Project Construction (Vineyard Wind, South Fork Wind, Revolution Wind, Sunrise Wind and New England Wind).
- Scenario 2: Mayflower Wind Project Construction with prior 2023–2025 Project Construction (from Scenario 1).

<sup>&</sup>lt;sup>b</sup> Negligible impacts when ADLS is not activated.

- Scenario 3: 2024–2030 Project Construction (New England Wind II, Vineyard Wind Northeast
  [formerly Liberty Wind], Beacon Wind and Bay State Wind) with prior 2023–2025 Project
  Construction (Vineyard Wind, South Fork Wind, Revolution Wind, Sunrise Wind and New England
  Wind) and Mayflower Wind Project Construction.
- Scenario 4 (full buildout): 2023–2025 Project Construction (Vineyard Wind, South Fork Wind, Revolution Wind, Sunrise Wind and New England Wind) and 2024–2030 Project Construction (New England Wind II, Vineyard Wind Northeast [formerly Liberty Wind], Beacon Wind and Bay State Wind) without Mayflower Wind Project Construction.
- Scenario 5: The Project without other foreseeable planned activities.

The number of offshore wind structures simulated in Attachment H-1 differs slightly from the number of structures assumed in Appendix D, *Planned Activities Scenario*. This is due to the timing of when these documents were developed and the assumptions used in developing the layouts for the simulations. While the number of structures in the individual lease areas vary, the total number of structures assumed across the Massachusetts and Rhode Island lease areas is very similar between the two documents, with Appendix D assuming development of 1,069 structures and the cumulative visual simulations assuming development of 1,063 structures, a difference of only six structures. The number of offshore structures identified in both documents are estimates of reasonably foreseeable offshore wind development and are subject to change as lessees submit COPs and refine their development plans. BOEM believes the simulations presented in Attachment H-1 provide a reasonable approximation of the scale of visual impacts that would occur from development of the Proposed Action in combination with other ongoing and planned offshore wind projects.

Consideration of effects of other wind farms on seascape character, open ocean character, and landscape character is listed in Table H-14.

Consideration of effects on viewer experience of other wind farms is listed in Table H-15.

Consideration of effects on seascape character, open ocean character, and landscape character of other wind farms in combination with the Proposed Action is listed in Table H-16.

Consideration of effects on viewer experience of other wind farms in combination with the Proposed Action is listed in Table H-17.

Table H-14. Other Wind Farms' Seascape, Open Ocean, and Landscape Units Cumulative Wind Farm Distances, FOVs, Noticeable Elements, Visual Contrasts, Scale of Change, and Prominence

| Chausatau III.                                       |                          |                          | C                        | istance in mile          | s (kilometers) °         | :                        |                          |                          | FOV Degrees              | Noticeable Elements <sup>d</sup> &               |                                  | Visual Cor                       | ntrast, Scale o               | f Change, and                    | Prominer       | ice                     |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|----------------------------------|----------------------------------|-------------------------------|----------------------------------|----------------|-------------------------|
| Character Unit                                       | BSW <sup>a</sup>         | BW <sup>a</sup>          | VWN <sup>a</sup>         | NEW <sup>a</sup>         | SFW <sup>a</sup>         | SW <sup>a</sup>          | RW <sup>a</sup>          | VW <sup>a</sup>          | (% of 124°)              | Impact Level                                     | Form                             | Line                             | Color                         | Texture                          | Scale          | Prominence <sup>e</sup> |
| Martha's Vineyard<br>Seascape (Beaches) <sup>b</sup> | 15.0 (24.1)              | 29.2 (47.0)              | 45.6 (73.4)              | 22.9 (36.8)              | 21.9 (35.2)              | 16.8 (27.0)              | 12.2 (19.6)              | 19.2 (30.9)              | 134° (109%)              | R, AL, N, H, O, and M<br><b>Major</b>            | Strong                           | Strong                           | Strong                        | Strong                           | Large          | 6 to 0                  |
| Open Ocean   | 0 to 42.8 (0<br>to 68.9) | 82° to 360° (66 to 290%) | R, AL, N, H, O, M, and Y to<br>R<br><b>Major</b> | Strong to<br>Weak to<br>Screened | Strong to<br>Weak to<br>Screened | Strong to<br>Weak<br>Screened | Strong to<br>Weak to<br>Screened | Large<br>to NA | 6 to 0                  |
| Martha's Vineyard<br>Landscape <sup>f</sup>          | 15.2 (24.4)              | 29.4 (47.3)              | 45.8 (73.7)              | 23.1 (37.1)              | 22.1 (35.5)              | 17.0 (27.3)              | 12.4 (19.9)              | 19.4 (31.2)              | 134° (109%)              | R, AL, N, H, O, and M<br><b>Major</b>            | Strong                           | Strong                           | Strong                        | Strong                           | Large          | 6 to 0                  |
| Nantucket Seascape<br>(Beaches) <sup>b</sup>         | 17.4 (28.0)              | 19.4 (31.2)              | 32.0 (51.5)              | 29.1 (46.8)              | 47.2 (76.0)              | 35.2 (56.6)              | 34.6 (55.7)              | 15.5 (24.9)              | 104° (84%)               | R, AL, N, H, O, and M<br><b>Major</b>            | Strong                           | Strong                           | Strong                        | Strong                           | Large<br>to NA | 6 to 0                  |
| Nantucket Landscape <sup>f</sup>                     | 17.6 (28.3)              | 19.6 (31.5)              | 32.2 (51.8)              | 29.3 (47.1)              | 47.4 (76.3)              | 35.4 (56.9)              | 34.8 (56.0)              | 15.7 (25.2)              | 104° (84%)               | R, AL, N, H, O, and M<br><b>Major</b>            | Strong                           | Strong                           | Strong                        | Strong                           | Large<br>to NA | 6 to 0                  |

<sup>&</sup>lt;sup>a</sup> BSW = Bay State Wind, BW = Beacon Wind, VWN = Vineyard Wind Northeast, NEW = New England Wind, SFW = South Fork Wind, SW = Sunrise Wind, RW = Revolution Wind, and VW = Vineyard Wind

Table H-15. Other Wind Farms' Cumulative Viewer Experience Wind Farm Distances, FOVs, Noticeable Elements, Visual Contrasts, Scale of Change, and Prominence

| \(i=a               |                  |                 | ı                | Distance in mile | es (kilometers)  | d               |                 |             | FOV Degrees | Noticeable Elements <sup>c</sup> &    |                         | Visual (                | Contrast, Scale o       | f Change, and Pr        | ominence |                         |
|---------------------|------------------|-----------------|------------------|------------------|------------------|-----------------|-----------------|-------------|-------------|---------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------|-------------------------|
| Viewer <sup>a</sup> | BSW <sup>b</sup> | BW <sup>b</sup> | VWN <sup>b</sup> | NEW <sup>b</sup> | SFW <sup>b</sup> | SW <sup>b</sup> | RW <sup>b</sup> | VW b        | (% of 124°) | Impact Level                          | Form                    | Line                    | Color                   | Texture                 | Scale    | Prominence <sup>e</sup> |
| KOP-1-MV            | 14.9 (24.0)      | 23.2 (37.3)     | 39.7 (63.9)      | 25.9 (40.7)      | 36.6 (58.9)      | 27.3 (43.9)     | 25.1 (40.4)     | 14.8 (23.8) | 114° (92%)  | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-2-N             | 19.7 (31.7)      | 20.5 (33.0)     | 31.9 (51.3)      | 30.9 (49.7)      | 49.7 (80.0)      | 38.1 (61,3)     | 37.1 (59.7)     | 16.9 (27.2) | 96° (77%)   | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-22-N            | 17.4 (28.0)      | 19.4 (31.2)     | 32.0 (51.5)      | 29.1 (46.8)      | 47.2 (76.0)      | 35.2 (56.6)     | 34.6 (55.7)     | 15.5 (24.9) | 104° (84%)  | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-6-N             | 27.2 (43.8)      | 26.2 (42.2)     | 32.6 (52.5)      | 33.7 (54.2)      | 57.9 (93.2)      | 45.9 (73.9)     | 45.4 (73.1)     | 23.0 (37.0) | 89° (72%)   | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-12-N<br>Day     | 19.1 (30.7)      | 19.7 (31.7)     | 31.2 (50.2)      | 27.6 (44.4)      | 49.4 (79.5)      | 37.6 (60.5)     | 37.0 (59.5)     | 16.2 (26.1) | 99° (80%)   | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong to<br>Weak to NA | Strong to<br>Weak to NA | Strong to<br>Weak to NA | Large    | 6                       |
| KOP-12-N<br>Night   | 19.1 (30.7)      | 19.7 (31.7)     | 31.2 (50.2)      | 27.6 (44.4)      | 49.4 (79.5)      | 37.6 (60.5)     | 37.0 (59.5)     | 16.2 (26.1) | 99° (80%)   | AL<br><b>Moderate</b> <sup>e</sup>    | Strong                  | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-16-MV           | 15.0 (24.1)      | 29.2 (47.0)     | 45.6 (73.4)      | 22.9 (36.8)      | 21.9 (35.2)      | 16.8 (27.0)     | 13.4 (21.6)     | 19.2 (30.9) | 134° (109%) | R, AL, N, H, O, and M<br><b>Major</b> | Strong to<br>Weak to NA | Large    | 6                       |
| KOP-16-N            | 18.2 (29.3)      | 19.4 (31.2)     | 31.5 (50.7)      | 29.5 (47.5)      | 48.7 (78.4)      | 36.5 (58.7)     | 35.5 (57.1)     | 15.7 (25.3) | 101° (81%)  | R, AL, N, H, O, and M<br><b>Major</b> | Strong to<br>Weak       | Strong                  | Strong                  | Strong                  | Large    | 6                       |
| KOP-19-MV           | 17.3 (27.8)      | 32.9 (52.9)     | 49.4 (79.5)      | 25.9 (41.7)      | 20.6 (33.1)      | 18.2 (29.3)     | 13.7 (22.0)     | 23.9 (38.5) | 127° (102%) | R, AL, N, H, O, and M<br><b>Major</b> | Strong                  | Strong                  | Strong                  | Moderate                | Large    | 6                       |

<sup>&</sup>lt;sup>a</sup> KOP-1-MV Wasque Point, KOP-2-N Sanford Barn Overlook, KOP-22-N Madaket Beach at Sunset, KOP-6-N Tom Nevers Beach, KOP-12-N Cisco Beach, KOP-16-MV Squibnocket Beach, KOP-16-N Head of Plains, and KOP-19-MV Gay Head Lighthouse

<sup>&</sup>lt;sup>b</sup> The most conservative onshore case involves the seaward edge of the beach nearest the projects. The seascape unit edge is 3.45 miles (kilometers) offshore (Massachusetts jurisdictional boundary).

<sup>&</sup>lt;sup>c</sup> Due to Earth's curvature and known WTG heights, those WTGs beyond 42.8 miles (68.9 kilometers) would not be visible from ground level plus 5.5 feet (1.7meters).

<sup>&</sup>lt;sup>d</sup> Noticeable elements: R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color.

e WTGs and OSP Prominence (visibility): 0 = Not visible. 1 = Visible only after extended study; otherwise not visible. 2 = Visible when viewing in general direction of the wind farm; otherwise likely to be missed by casual observer. 3 = Visible after brief glance in general direction of the wind farm; unlikely to be missed by casual observer. 4 = Plainly visible; could not be missed by casual observer, but does not strongly attracts viewers' attention to the wind farm; moderate to strong contrasts in form, line, color, or texture, luminance, or motion. 6 = Dominates view; strong contrasts in form, line, color, texture, luminance, or motion fill most of the horizontal FOV or vertical FOV (NAEP 2012).

<sup>&</sup>lt;sup>f</sup>The seaward edge between landscape and seascape varies. The most conservative case is 0.2-mile (0.3-kilometer) landward distance from seaward beach edge.

<sup>&</sup>lt;sup>b</sup> BSW = Bay State Wind, BW = Beacon Wind, VWN = Vineyard Wind Northeast, NEW = New England Wind, SFW = South Fork Wind, SW = Sunrise Wind, RW = Revolution Wind, and VW = Vineyard Wind

<sup>&</sup>lt;sup>c</sup> Noticeable elements: R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color

<sup>&</sup>lt;sup>d</sup> Due to earth's curvature and known WTG heights, those WTGs beyond 42.8 miles (68.9 kilometers) would not be visible from ground level plus 5.5 feet (1.7meters).

eWTGs and OSP (onshore) visibility: 0 = Not visible. 1 = Visible only after extended study; otherwise not visible. 2 = Visible when viewing in general direction of the wind farm; otherwise likely to be missed by casual observer. 3 = Visible after brief glance in general direction of the wind farm; unlikely to be missed by casual observer. 4 = Plainly visible; could not be missed by casual observer, but does not strongly attract viewers' attention to the wind farm; moderate to strong contrasts in form, line, color, or texture, luminance, or motion. 6 = Dominates view; strong contrasts in form, line, color, texture, luminance, or motion fill most of the horizontal FOV or vertical FOV (NAEP 2012).

Table H-16. Mayflower Wind and Other Wind Farms' Seascape, Open Ocean, and Landscape Units Cumulative Wind Farm Distances, FOVs, Noticeable Elements, Visual Contrasts, Scale of Change, and Prominence

|  |                          |                          |                          | Distance                 | in miles (kilo           | ometers) <sup>c</sup>    |                          |                          |                          |                            | Noticeable                                  |                      |                     | Cor               | trast, Scale o      | f Change | , and Prominence        | e                              |                               |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|---|----------------------|---------------------|-------------------|---------------------|----------|-------------------------|--------------------------------|-------------------------------|
| Character<br>Unit  | BSW <sup>b</sup>         | BW <sup>b</sup>          | VWN <sup>b</sup>         | MW <sup>b</sup>          | NEW <sup>b</sup>         | SFW <sup>b</sup>         | SW <sup>b</sup>          | RW <sup>b</sup>          | VW <sup>b</sup>          | FOV Degrees<br>(% of 124°) | Elements <sup>d</sup> &<br>Impact Level     | Form                 | Line                | Color             | Texture             | Scale    | Prominence <sup>e</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D              |
| Martha's<br>Vineyard<br>Seascape<br>(Beaches) <sup>a</sup> | 15.0<br>(24.1)           | 29.2<br>(47.0)           | 45.6<br>(73.4)           | 37.2<br>(59.9)           | 22.9<br>(36.8)           | 21.9<br>(35.2)           | 16.8<br>(27.0)           | 12.2<br>(19.6)           | 19.2 (30.9)              | 134° (109%)                | R, AL, N, H, O,<br>M<br><b>Majo</b> r       | Strong<br>to<br>Weak | Moderate<br>to Weak | Strong to<br>Weak | Moderate<br>to Weak | Large    | 6                       | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| Open Ocean   | 0 to 42.8<br>(0 to 68.9) | 82° to 360°<br>(66to 290%) | R, AL, N, H, O,<br>M, and Y<br><b>Major</b> | Strong               | Strong              | Strong            | Strong              | Large    | 6                       | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| Martha's<br>Vineyard<br>Landscape <sup>f</sup>             | 15.2<br>(24.4)           | 29.4<br>(47.3)           | 45.8<br>(73.7)           | 37.2<br>(60.2)           | 23.1<br>(37.1)           | 22.1<br>(35.5)           | 17.0<br>(27.3)           | 12.4<br>(19.9)           | 19.4 (31.2)              | 134° (109%)                | R, AL, N, H, O,<br>M<br><b>Major</b>        | Strong               | Moderate            | Strong            | Moderate            | Large    | 6                       | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| Nantucket<br>Seascape<br>(Beaches) <sup>a</sup>            | 17.4<br>(28.0)           | 19.4<br>(31.2)           | 32.0<br>(51.5)           | 24.3<br>(39.1)           | 29.1<br>(46.8)           | 47.2<br>(76.0)           | 35.2<br>(56.6)           | 34.6<br>(55.7)           | 15.5 (24.9)              | 104° (84%)                 | R, AL, N, H, O,<br>M<br><b>Major</b>        | Strong               | Moderate            | Strong            | Moderate            | Large    | 6                       | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |
| Nantucket<br>Landscape <sup>f</sup>                        | 17.6<br>(28.0)           | 19.6<br>(31.2)           | 32.2<br>(51.5)           | 24.5<br>(39.1)           | 29.3<br>(47.1)           | 47.4<br>(76.3)           | 35.4<br>(56.9)           | 34.8<br>(56.0)           | 15.7 (25.2)              | 104° (84%)                 | R, AL, N, H, O,<br>M<br><b>Major</b>        | Strong               | Moderate            | Strong            | Moderate            | Large    | 6                       | Same as<br>Proposed<br>Action  | Same as<br>Proposed<br>Action |

<sup>&</sup>lt;sup>a</sup> The most conservative onshore case involves the seaward edge of the beach nearest the projects. The seascape unit edge is 3.45 miles (kilometers) offshore, (Massachusetts jurisdictional boundary).

Table H-17. Mayflower Wind and Other Wind Farms' Cumulative Viewer Experience Wind Farm Distances, FOVs, Noticeable Elements, Visual Contrasts, Scale of Change, and Prominence

|                     |                  |                 |                  | Distance        | in miles (kilo   | meters) <sup>c</sup> |                 |                 |                 | FOV Dograas                | Noticeable                            |        |          | Cor    | ntrast, Scale o | of Change | , and Prominenc         | ce                             |                               |
|---------------------|------------------|-----------------|------------------|-----------------|------------------|----------------------|-----------------|-----------------|-----------------|----------------------------|---------------------------------------|--------|----------|--------|-----------------|-----------|-------------------------|--------------------------------|-------------------------------|
| Viewer <sup>a</sup> | BSW <sup>b</sup> | BW <sup>b</sup> | VWN <sup>b</sup> | MW <sup>b</sup> | NEW <sup>b</sup> | SFW <sup>b</sup>     | SW <sup>b</sup> | RW <sup>b</sup> | VW <sup>b</sup> | FOV Degrees<br>(% of 124°) | Elements <sup>d</sup> & Impact Level  | Form   | Line     | Color  | Texture         | Scale     | Prominence <sup>e</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D              |
| KOP-1-<br>MV        | 14.9<br>(24.0)   | 23.2<br>(37.3)  | 39.7 (63.9)      | 30.9 (49.7)     | 25.9 (40.7)      | 36.6 (58.9)          | 27.3<br>(43.9)  | 25.1<br>(40.4)  | 14.8<br>(23.8)  | 114° (92%)                 | R, AL, N, H, O,<br>and M <b>Major</b> | Strong | Moderate | Strong | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-2-N             | 19.7<br>(31.7)   | 20.5<br>(33.0)  | 31.9 (51.3)      | 24.4 (42.6)     | 30.9 (49.7)      | 49.7 (80.0)          | 38.1<br>(61,3)  | 37.1<br>(59.7)  | 16.9<br>(27.2)  | 96° (77%)                  | R, AL, N, H, O,<br>and M <b>Major</b> | Strong | Moderate | Strong | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-22-N            | 17.4<br>(28.0)   | 19.4<br>(31.2)  | 32.0 (51.5)      | 24.3 (39.1)     | 29.1 (46.8)      | 47.2 (76.0)          | 35.2<br>(56.6)  | 34.6<br>(55.7)  | 15.5<br>(24.9)  | 104° (84%)                 | R, AL, N, H, O,<br>and M <b>Major</b> | Strong | Moderate | Strong | Moderate        | Large     | 6                       | Same as Proposed Action        | Same as<br>Proposed<br>Action |
| KOP-6-N             | 27.2<br>(43.8)   | 26.2<br>(42.2)  | 32.6 (52.5)      | 26.5 (42.6)     | 33.7 (54.2)      | 57.9 (93.2)          | 45.9<br>(73.9)  | 45.4<br>(73.1)  | 23.0<br>(37.0)  | 89° (72%)                  | R, AL, N, H, O,<br>and M <b>Major</b> | Strong | Moderate | Strong | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-12-N<br>Day     | 19.1<br>(30.7)   | 19.7<br>(31.7)  | 31.2 (50.2)      | 23.5 (37.8)     | 27.6 (44.4)      | 49.4 (79.5)          | 37.6<br>(60.5)  | 37.0<br>(59.5)  | 16.2<br>(26.1)  | 99° (80%)                  | R, AL, N, H, O,<br>and M <b>Major</b> | Strong | Moderate | Strong | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |

<sup>&</sup>lt;sup>b</sup> BSW = Bay State Wind, BW = Beacon Wind, VWN = Vineyard Wind Northeast, MW = Mayflower Wind, NEW = New England Wind, SFW = South Fork Wind, SW = Sunrise Wind, RW = Revolution Wind, and VW = Vineyard Wind

<sup>&</sup>lt;sup>c</sup> Due to earth's curvature and known WTG heights, those WTGs beyond 42.8 miles (68.9 kilometers) would not be visible from ground level plus 5.5 feet (1.7meters).

d Noticeable elements: R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color

e WTGs and OSP (onshore) visibility: 0 = Not visible. 1 = Visible only after extended study; otherwise not visible. 2 = Visible when viewing in general direction of the wind farm; otherwise likely to be missed by casual observer. 3 = Visible after brief glance in general direction of the wind farm; unlikely to be missed by casual observer. 4 = Plainly visible; could not be missed by casual observer, but does not strongly attract visual attention or dominate view. 5 = Strongly attracts viewers' attention to the wind farm; moderate to strong contrasts in form, line, color, or texture, luminance, or motion. 6 = Dominates view; strong contrasts in form, line, color, texture, luminance, or motion fill most of the horizontal FOV or vertical FOV (NAEP 2012).

<sup>&</sup>lt;sup>f</sup> The seaward edge between landscape and seascape varies. The most conservative case is 1.0-mile (1.6-kilometer) distance from seaward beach edge.

|                     |                  |                 |                  | Distance        | in miles (kilo   | ometers) <sup>c</sup> |                 |                 |                 | FOV Darman                 | Noticeable                               |              |          | Cor      | ntrast, Scale c | of Change | e, and Prominen         | ce                             |                               |
|---------------------|------------------|-----------------|------------------|-----------------|------------------|-----------------------|-----------------|-----------------|-----------------|----------------------------|--|--------------|----------|----------|-----------------|-----------|-------------------------|--------------------------------|-------------------------------|
| Viewer <sup>a</sup> | BSW <sup>b</sup> | BW <sup>b</sup> | VWN <sup>b</sup> | MW <sup>b</sup> | NEW <sup>b</sup> | SFW <sup>b</sup>      | SW <sup>b</sup> | RW <sup>b</sup> | VW <sup>b</sup> | FOV Degrees<br>(% of 124°) | Elements <sup>d</sup> & Impact Level     | Form         | Line     | Color    | Texture         | Scale     | Prominence <sup>e</sup> | Alternatives<br>C-1, C-2, E, F | Alternative<br>D              |
| KOP-12-N<br>Night   | 19.1<br>(30.7)   | 19.7<br>(31.7)  | 31.2 (50.2)      | 23.5 (37.8)     | 27.6 (44.4)      | 49.4 (79.5)           | 37.6<br>(60.5)  | 37.0<br>(59.5)  | 16.2<br>(26.1)  | 99° (80%)                  | AL<br><b>Major</b>                       | Moderat<br>e | Moderate | Moderate | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-16-<br>MV       | 15.0<br>(24.1)   | 29.2<br>(47.0)  | 45.6 (73.4)      | 37.2 (59.9)     | 22.9 (36.8)      | 21.9 (35.2)           | 16.8<br>(27.0)  | 13.4<br>(21.6)  | 19.2<br>(30.9)  | 134° (109%)                | R, AL, N, H, O,<br>and M<br><b>Major</b> | Strong       | Moderate | Strong   | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-16-N            | 18.2<br>(29.3)   | 19.4<br>(31.2)  | 31.5 (50.7)      | 23.8 (38.3)     | 29.5 (47.5)      | 48.7 (78.4)           | 36.5<br>(58.7)  | 35.5<br>(57.1)  | 15.7<br>(25.3)  | 101° (81%)                 | R, AL, N, H, O,<br>and M<br><b>Major</b> | Strong       | Moderate | Strong   | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |
| KOP-19-<br>MV       | 17.3<br>(27.8)   | 32.9<br>(52.9)  | 49.4 (79.5)      | 41.2 (66.3)     | 25.9 (41.7)      | 20.6 (33.1)           | 18.2<br>(29.3)  | 13.7<br>(22.0)  | 23.9<br>(38.5)  | 127° (102%)                | R, AL, N, H, O,<br>and M<br><b>Major</b> | Strong       | Moderate | Strong   | Moderate        | Large     | 6                       | Same as Proposed<br>Action     | Same as<br>Proposed<br>Action |

a KOP-1-MV Wasque Point, KOP-2-N Sanford Barn Overlook, KOP-22-N Madaket Beach at Sunset, KOP-6-N Tom Nevers Beach, KOP-12-N Cisco Beach, KOP-16-MV Squibnocket Beach, KOP-16-N Head of Plains, and KOP-19-MV Gay Head Lighthouse.

<sup>&</sup>lt;sup>b</sup> BSW = Bay State Wind, BW = Beacon Wind, VWN = Vineyard Wind Northeast, MW = Mayflower Wind, NEW = New England Wind, SFW = South Fork Wind, SW = Sunrise Wind, RW = Revolution Wind, and VW = Vineyard Wind.

<sup>&</sup>lt;sup>c</sup> Due to earth's curvature and known WTG heights, those WTGs beyond 42.8 miles (68.9 kilometers) would not be visible from ground level plus 5.5 feet (1.7meters).

<sup>&</sup>lt;sup>d</sup> Noticeable elements: R = rotor, AL = aviation light, N = nacelle, H = hub, O = OSP, M = mid-tower light, Y = yellow tower base color.

e WTGs and OSP (onshore) visibility: 0 = Not visible. 1 = Visible only after extended study; otherwise not visible. 2 = Visible when viewing in general direction of the wind farm; otherwise likely to be missed by casual observer. 3 = Visible after brief glance in general direction of the wind farm; unlikely to be missed by casual observer. 4 = Plainly visible; could not be missed by casual observer, but does not strongly attracts viewers' attention to the wind farm; moderate to strong contrasts in form, line, color, or texture, luminance, or motion. 6 = Dominates view; strong contrasts in form, line, color, texture, luminance, or motion fill most of the horizontal FOV or vertical FOV (NAEP 2012).

#### H.3.2 Alternative C

Under Alternative C, the export cable route to Brayton Point would be rerouted onshore and follow one of two alternative corridors to avoid sensitive fish habitat in the Sakonnet River. Installation of these onshore export cables and infrastructure would result in localized, temporary visual impacts near construction sites due to land disturbance for vegetation clearing, site grading or trenching, and construction staging. These impacts would last through construction and continue until disturbed areas are restored.

#### H.3.3 Alternative D

Table H-18 and Table H-19 list Alternative D wind farm width-, height-, and distance-related occupation of views from the nearest shoreline area. These results indicate slight changes to the FOV results compared to the Proposed Action (Table H-4 and Table H-5).

Table H-18 Horizontal FOV Occupied by Alternative D

| Noticeable<br>Element | Width<br>miles (kilometers) | Distance<br>miles (kilometers) | Horizontal<br>FOV | Human FOV | Percent of FOV |
|-----------------------|-----------------------------|--------------------------------|-------------------|-----------|----------------|
| D WTGs                | 12.3 (19.8)                 | 23.6 (37.9)                    | 26.2°             | 124°      | 21%            |

Table H-19 Vertical FOV Occupied by Alternative D

|     | Noticeable<br>Element | Height<br>feet (m) MLLW | Distance<br>miles (kilometers) | Visible Height <sup>a</sup><br>feet (m) | Vertical<br>FOV | Human<br>FOV | Percent of FOV |
|-----|-----------------------|-------------------------|--------------------------------|---|-----------------|--------------|----------------|
| D R | otor Blade Tip        | 1,066.3 (325.0)         | 23.6 (37.9)                    | 779 (237)                               | 0.3°            | 55°          | 0.5%           |

<sup>&</sup>lt;sup>1</sup> Based on intervening EC and clear-day conditions.

M = meters; km = kilometers; MLLW = mean lower low water.

#### H.3.4 Alternatives E and F

Installation of different foundation types under Alternatives E-1, E-2, and E-3 would not change the most prominent visible aspects of WTGs and OSPs (e.g., blade height, hub height) and, therefore, would have no meaningful difference in impacts on seascape, open ocean, and landscape character units and viewer experience compared to the Proposed Action. The reduction in the number of cables installed along the Falmouth offshore export cable route under Alternative F may reduce the number of vessel trips required to install the cables, but this slight reduction in vessel activity would have no meaningful difference in impacts compared to the Proposed Action.

## H.4 Seascape, Open Ocean, and Landscape Impact Assessment Summary

The SLIA considers the impacts on the physical elements and features that make up a seascape, open ocean, or landscape and the aesthetic, perceptual, and experiential aspects of the seascape, open ocean, or landscape that contribute to its distinctive character. These impacts affect the feel, character,

or sense of place of an area of seascape, open ocean, or landscape. Table H-20 summarizes the effects of the character of the offshore and onshore components of the Project with the aspects that contribute to the distinctive character of the seascape, open ocean, and landscape areas from which the Project would be visible (BOEM 2021).

# **H.5** Visual Impact Assessment Summary

The VIA considers the characteristics of the view receptor, characteristics of the view toward the Project facilities, and the experiential impacts of the Projects. Table H-21 summarizes the viewer sensitivity, view receptor susceptibility, view value, and summary of the measures of effects from the visible character and magnitude of the offshore and onshore components of the Project (BOEM 2021).

Table H-20. Seascape Character, Open Ocean Character, Landscape Character and Impact Levels

|                                  |      |          |         | Affe | ected En  | vironme | nt       |             |            |        |      |                     |     | Prop | osed A               | ction |      |                       |     |       |          |          | Imp        | act Levels                  |
|----------------------------------|------|----------|---------|------|-----------|---------|----------|-------------|------------|--------|------|---------------------|-----|------|----------------------|-------|------|-----------------------|-----|-------|----------|----------|------------|-----------------------------|
|                                  | Unit | Suscepti | ibility | U    | Jnit Valu | e       | F        | Project '   | Visibility | ′      |      | racter I<br>ure Cha |     |      | aracter I<br>ent Cha |       |      | aracter I<br>lity Cha |     |       | Propose  | d Action | ı          | Alternatives C, D, E, and F |
| Character Unit                   | High | Medium   | Low     | High | Medium    | Low     | Dominant | Substantial | Low        | Unseen | High | Medium              | Low | High | Medium               | Low   | High | Medium                | Low | Major | Moderate | Minor    | Negligible | Impact Level                |
| Open Ocean                       | Х    |          |         | Х    |           |         | Х        |             |            |        | Х    |                     |     | Х    |                      |       | Х    |                       |     | Х     |          |          |            | Same as Proposed Action     |
| Martha's Vineyard Seascape Ocean |      |          |         | Х    |           |         |          |             | Х          |        |      |                     | Х   |      | Х                    |       |      | Х                     |     |       | Х        |          |            | Same as Proposed Action     |
| Martha's Vineyard Seascape Beach |      |          |         | Х    |           |         |          |             | Х          |        |      | Х                   |     |      | Х                    |       |      | Х                     |     |       |          | Х        |            | Same as Proposed Action     |
| Nantucket Seascape Ocean         | Х    |          |         | Х    |           |         |          | Х           |            |        |      | Х                   |     |      | Х                    |       | Х    |                       |     | Х     |          |          |            | Same as Proposed Action     |
| Nantucket Seascape Beach         | Х    |          | ĺ       | Х    |           |         |          | Х           |            |        |      | Х                   |     |      | Х                    |       | Х    |                       |     | Х     |          |          |            | Same as Proposed Action     |
| Martha's Vineyard Landscape      |      | Х        |         | Х    |           |         |          |             | Х          |        |      |                     | Х   |      |                      | Х     |      |                       | Х   |       |          | Х        |            | Same as Proposed Action     |
| Nantucket Landscape              | Х    |          |         | Х    |           |         |          | Х           |            |        |      | Х                   |     |      | Х                    |       |      | Х                     |     |       |          | Х        |            | Same as Proposed Action     |

<sup>&</sup>lt;sup>a</sup> Key Features = The distinctive visual attributes of the seascape, open ocean, or landscape character area.

Table H-21. Viewer Sensitivity, Receptor Susceptibility, View Value, Viewer Experience, and Impact Levels

|                        |      |             |       | Affec | ted Enviror | nment    |      |            |     | l           | Viewer E                       | xperience     |              |       |          | lm       | pact Levels |                             |
|------------------------|------|-------------|-------|-------|-------------|----------|------|------------|-----|-------------|--------------------------------|---------------|--------------|-------|----------|----------|-------------|-----------------------------|
| KOP <sup>a</sup>       | Vie  | wer Sensiti | ivity | Recep | otor Suscep | tibility |      | View Value | :   | Distance-No | oticeable Eleme<br>Scale-Promi | ents-HFOV-VFC | OV-Contrast- |       | Propose  | d Action |             | Alternatives C, D, E, and F |
|                        | High | Medium      | Low   | High  | Medium      | Low      | High | Medium     | Low | Dominant    | Substantial                    | Low           | Unseen       | Major | Moderate | Minor    | Negligible  | Impact Levels               |
| KOP-1-O                | х    |             |       | х     |             |          | х    |            |     | Х           |                                |               |              | Х     |          |          |             | Same as Proposed Action     |
| KOP-2_O                | х    |             |       | х     |             |          | х    |            |     | Х           |                                |               |              | Х     |          |          |             | Same as Proposed Action     |
| KOP-1-MV               | Х    |             |       | Х     |             |          | х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-2-MV               | х    |             |       | х     |             |          | х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-3-MV               | Х    |             |       | Х     |             |          | х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-4-MV               | Х    |             |       | Х     |             |          | Х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-6-MV               | Х    |             |       | Х     |             |          | х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-9-MV               | Х    |             |       | Х     |             |          | Х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-16-MV              | Х    |             |       | Х     |             |          | Х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-19-MV <sup>b</sup> | Х    |             |       | Х     |             |          | Х    |            |     |             |                                | Х             |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-2-N                | Х    |             |       | Х     |             |          | Х    |            |     |             | Х                              |               |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-3-N                | Х    |             |       | Х     |             |          | Х    |            |     |             | Х                              |               |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-6-N                | Х    |             |       | Х     |             |          | Х    |            |     |             | Х                              |               |              |       | Х        |          |             | Same as Proposed Action     |

<sup>&</sup>lt;sup>b</sup> Key Elements = The essential visual components of the seascape, open ocean, or landscape character area.

<sup>&</sup>lt;sup>c</sup> Key Quality = The main value factor of the seascape, open ocean, or landscape character area.

|                  |      |             |      | Affec | ted Enviro  | nment    |      |            |     |             | Viewer Ex                       | kperience |              |       |          | lm       | pact Levels |                             |
|------------------|------|-------------|------|-------|-------------|----------|------|------------|-----|-------------|---------------------------------|-----------|--------------|-------|----------|----------|-------------|-----------------------------|
| KOP <sup>a</sup> | Vie  | wer Sensiti | vity | Recep | otor Suscep | tibility |      | View Value | :   | Distance-No | oticeable Eleme<br>Scale-Promir |           | OV-Contrast- |       | Propose  | d Action |             | Alternatives C, D, E, and F |
|                  | High | Medium      | Low  | High  | Medium      | Low      | High | Medium     | Low | Dominant    | Substantial                     | Low       | Unseen       | Major | Moderate | Minor    | Negligible  | Impact Levels               |
| KOP-8-N (Day)    | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-8-N (Night)  | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-10-N         | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-11-N         | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-12-N (Day)   | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-12-N (Night) | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-13-N         | Х    |             |      | х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-16-N         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-17-N         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-18-N         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-20-N         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-21-N         | Х    |             |      | Х     |             |          | Х    |            |     |             |                                 | Х         |              |       |          | Х        |             | Same as Proposed Action     |
| KOP-22-N         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |
| KOP-1-BP         | Х    |             |      | х     |             |          | Х    |            |     |             |                                 |           | Х            |       |          |          | Х           | Same as Proposed Action     |
| KOP-3-BP         | Х    |             |      | х     |             |          | Х    |            |     |             |                                 |           | Х            |       |          |          | Х           | Same as Proposed Action     |
| KOP-4-BP         | Х    |             |      | х     |             |          | Х    |            |     |             |                                 |           | Х            |       |          |          | Х           | Same as Proposed Action     |
| KOP-44-C         | Х    |             |      | х     |             |          | Х    |            |     | Х           |                                 |           |              | Х     |          |          |             | Same as Proposed Action     |
| KOP-46-C         | Х    |             |      | Х     |             |          | х    |            |     | Х           |                                 |           |              | Х     |          |          |             | Same as Proposed Action     |
| KOP-47-C         | Х    |             |      | Х     |             |          | х    |            |     | Х           |                                 |           |              | Х     |          |          |             | Same as Proposed Action     |
| KOP-49-C         | Х    |             |      | Х     |             |          | Х    |            |     |             | Х                               |           |              |       | Х        |          |             | Same as Proposed Action     |

HFOV = horizontal field of view; VFOV = vertical field of view

KOP-16-MV = Squibnocket Beach, KOP-19-MV Gay Head Lighthouse, KOP-2-N = Sanford Farm Barn Overlook, KOP-3-N = Madaket Beach, KOP-6-N = Tom Nevers Field, KOP-10-N = Nobadeer Beach, KOP-11-N = Miacomet Beach and Pond, KOP-12-N = Cisco Beach, KOP-13-N = Hummock Pond Road Bike Path, KOP-16-N = Head of Plains, KOP-17-N Bartlett's Farm, KOP-18-N = Ladies Beach, KOP-20-N = Madaket Beach at Sunset, KOP-10-N = Madaket Beach, KOP-10-N = Madaket Bea

<sup>&</sup>lt;sup>a</sup> KOP-1-MV = Wasque Point. KOP-2-MV = Wasque Point Reservation. KOP-3-MV = Wasque Avenue, KOP-4-MV = South Beach, KOP-6-MV = Long Point Beach, KOP-9-MV = 322 South Road,

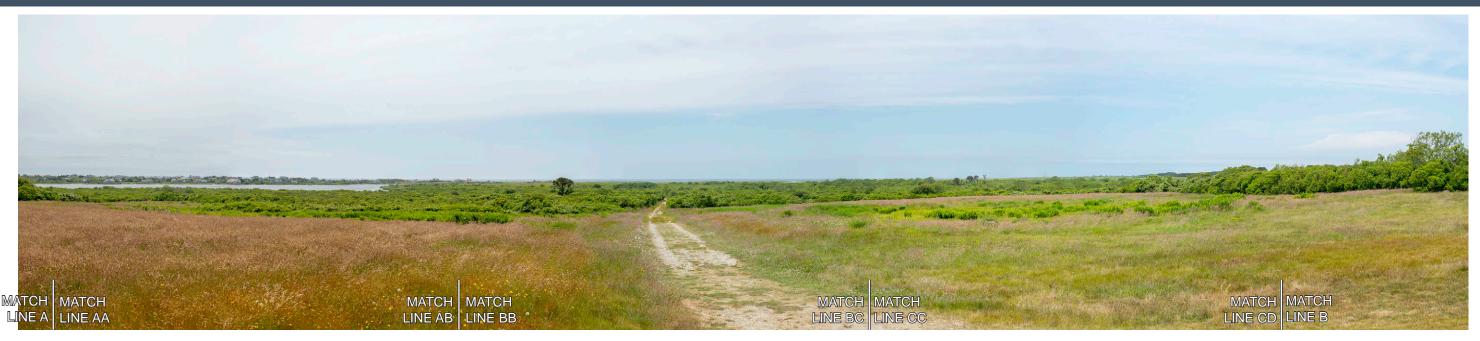
<sup>&</sup>lt;sup>b</sup> Elevated observation deck or lighthouse.

## H.6 References

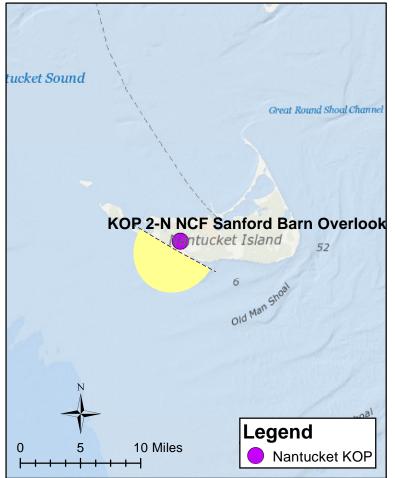
- Bislins, Walter. 2022. Advanced Earth Curvature Calculator. Available: http://walter.bislins.ch/bloge/index.asp?page=Advanced+Earth+Curvature+Calculator.
- Bureau of Ocean Energy Management (BOEM). 2021. Assessment of Seascape, Landscape, and Visual Impacts of Offshore Wind Energy Developments on the Outer Continental Shelf of the United States. OCS Study BOEM 2021-032. April.
- Mayflower Wind Energy, LLC (Mayflower Wind). 2022. Mayflower Wind Construction and Operations Plan. Available: https://www.boem.gov/renewable-energy/state-activities/mayflower-wind.
- National Association of Environmental Professionals (NAEP). 2012. Offshore Wind Turbine Visibility and Visual Impact Thresholds. Available: https://blmwyomingvisual.anl.gov/docs/EnvPractice\_
  Offshore%20Wind%20Turbine%20Visibility%20and%20Visual%20Impact%20Threshold%20Distances .pdf.

**Attachment H-1: Mayflower Wind Cumulative Visual Simulations** 

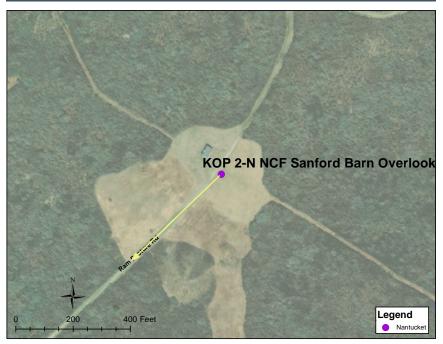
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 182° Furthest Visible WTG: 62 mi / 100 km

Vertical Field of View: 40° Potential Number of Structures Visible: 237

Nearest WTG: 17 mi / 27 km Potential Number of Structures Not Visible:

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM

Date of photograph: 6-26-20

L/SCA: Ocean beach

Viewing direction: South (230°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

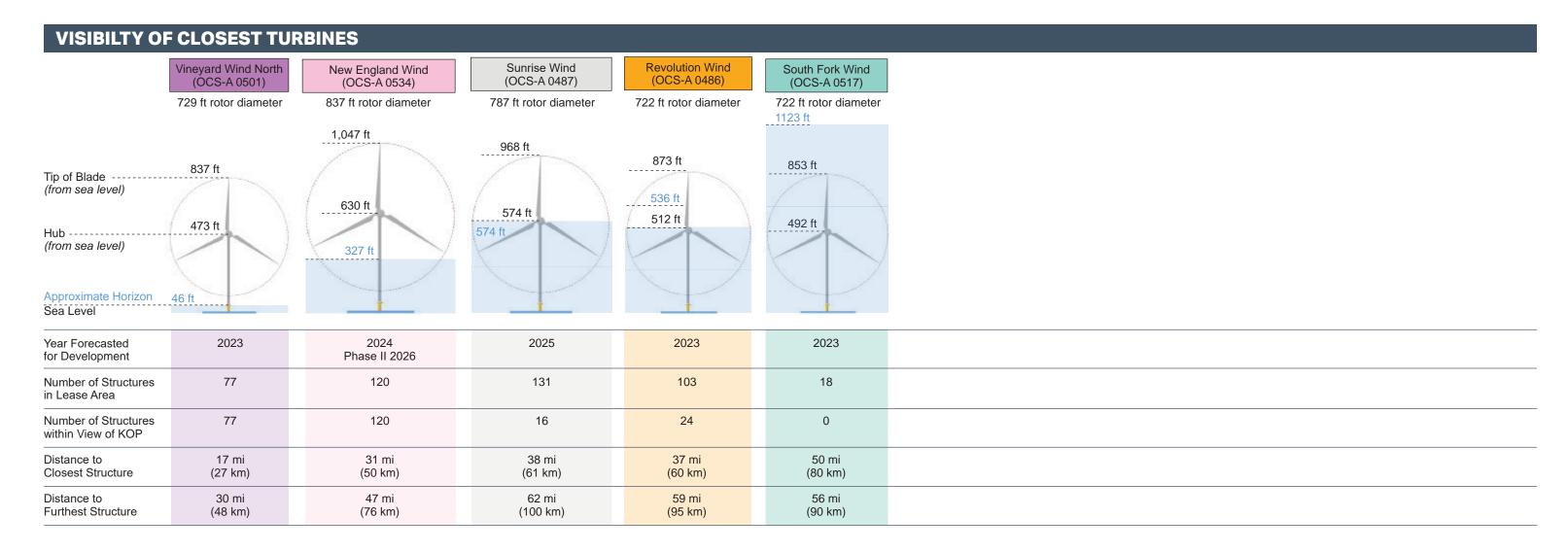
Wind Dir & Speed: S 12 mph Weather Condition: Hazy

### **CAMERA**

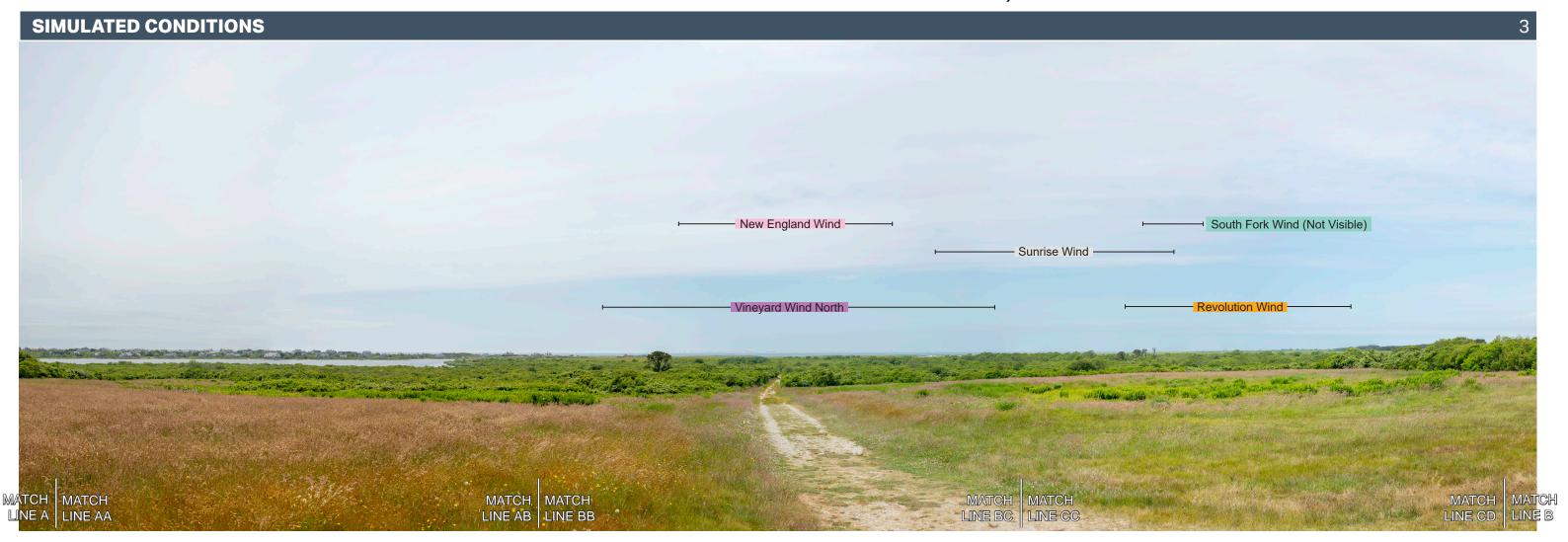
Camera Elevation: 50 ft /15.2 m

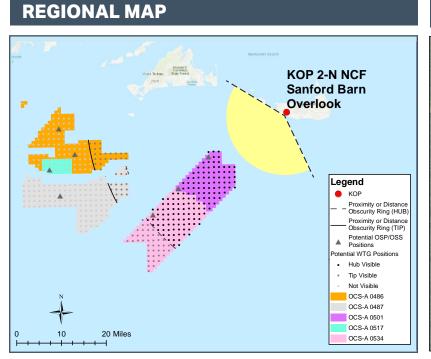
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 2-N Sanford Farm Barn - Scenario 1 (Human Field of View - 124°)







# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 17 mi/27 km

24° Furthest Visible WTG: 62 mi / 100 km
 Potential Number of Structures Visible: 237
 Potential Number of Structures Not Visible: 212

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM Date of photograph: 6-26-20 L/SCA: Ocean beach Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

# CAMERA

Camera Elevation: 50 ft /15.2 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Sunrise Wind Vineyard Wind North

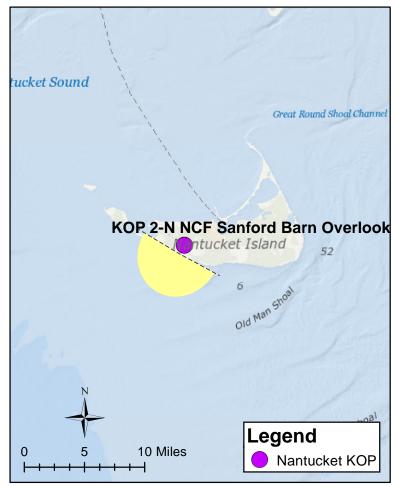
MATCH MATCH LINE AB LINE BB

South Fork Wind (Not Visible) Sunrise Wind LINE BC LINE CC

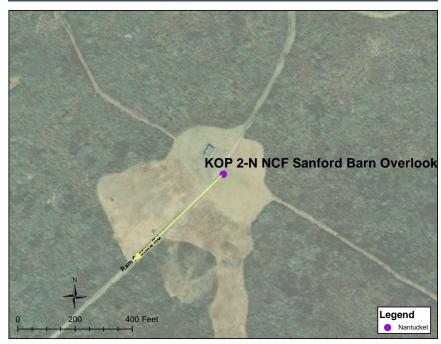
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 182° Furthest Visible WTG: 62 mi / 100 km

Vertical Field of View: 40° Potential Number of Structures Visible: 379

Nearest WTG: 17 mi / 27 km Potential Number of Structures Not Visible: 219

\_-.-

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Latitude: 41.265608°N
Longitude: 70.150001°W
Lighting Direction: Backlit diffus

Viewing direction: South (230°)

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

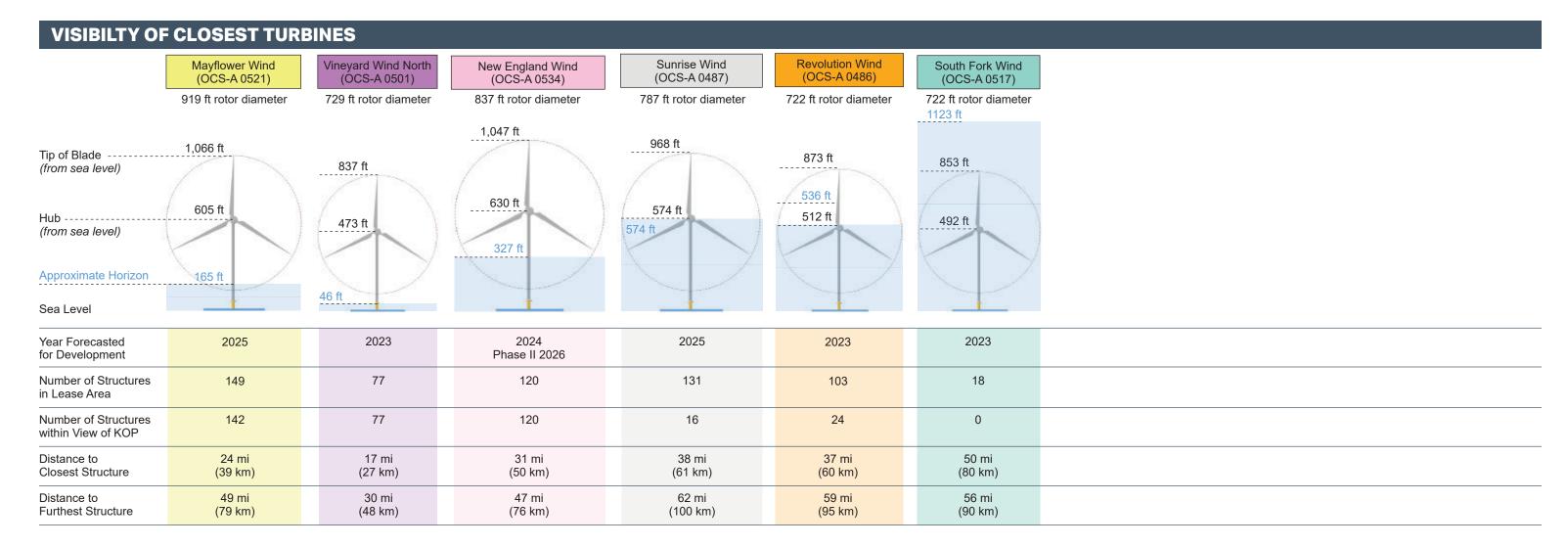
### CAMERA

Camera Elevation: 50 ft /15.2 m

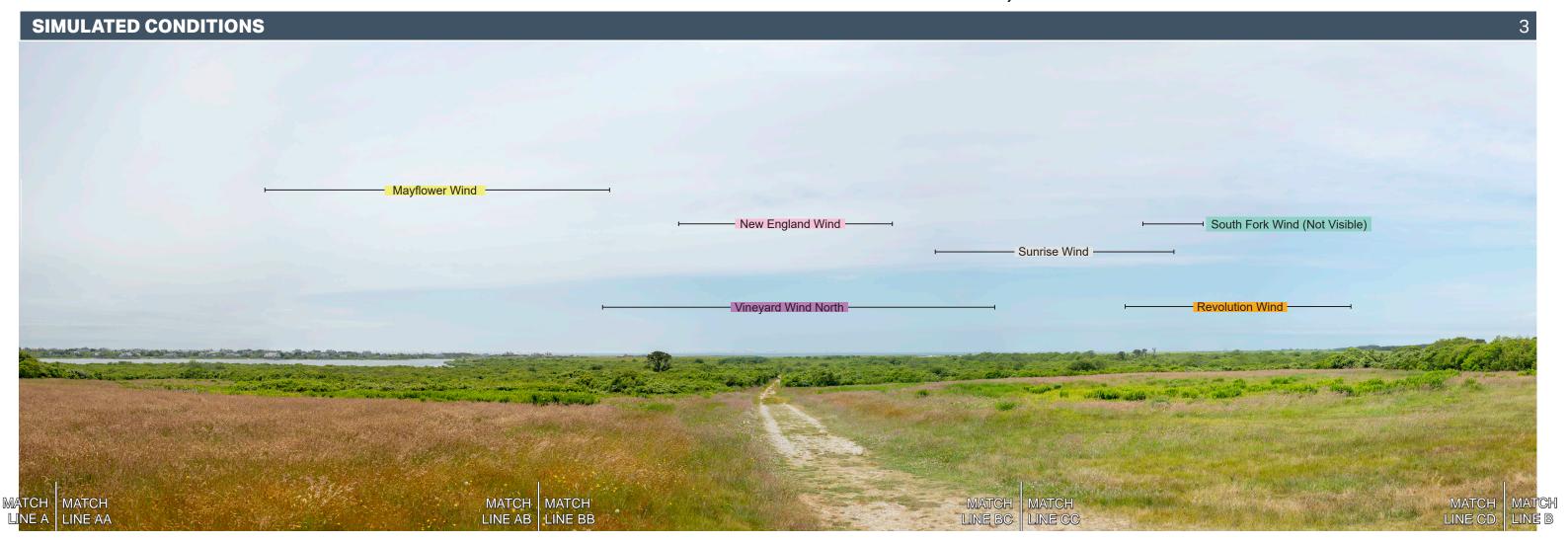
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

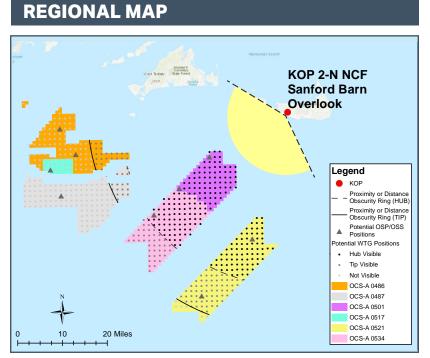
# KOP 2-N Sanford Farm Barn - Scenario 2





# KOP 2-N Sanford Farm Barn - Scenario 2 (Human Field of View - 124°)





# KOP 2-N NCF Sanford Barn Overlook

# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 17 mi / 27 km

Furthest Visible WTG: 62 mi / 100 km Potential Number of Structures Visible: 379 Potential Number of Structures Not Visible:

219

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM

Date of photograph: 6-26-20

L/SCA: Ocean beach

Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F

Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

# CAMERA

Camera Elevation: 50 ft /15.2 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Sunrise Wind Vineyard Wind North Mayflower Wind MATCH MATCH LINE AB LINE BB

MATCH LINE CC

South Fork Wind (Not Visible)

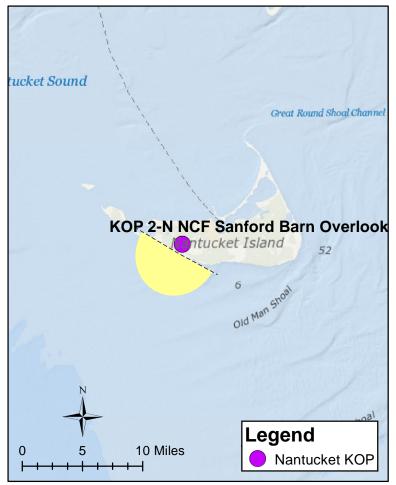
# SIMULATED CONDITIONS

Sunrise Wind

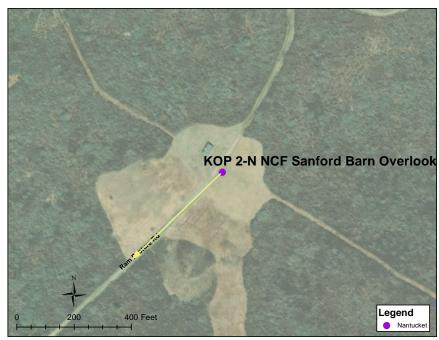
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# REGIONAL MAP



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 182° Furthest Visible WTG: 49 mi / 79 km

Vertical Field of View: 40° Potential Number of Structures Visible: 392

Nearest WTG: 20 mi / 33 km Potential Number of Structures Not Visible:

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Longitude: 70.150001°W Lighting Direction: Backlit diffused

Viewing direction: South (230°)

Latitude: 41.265608°N

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

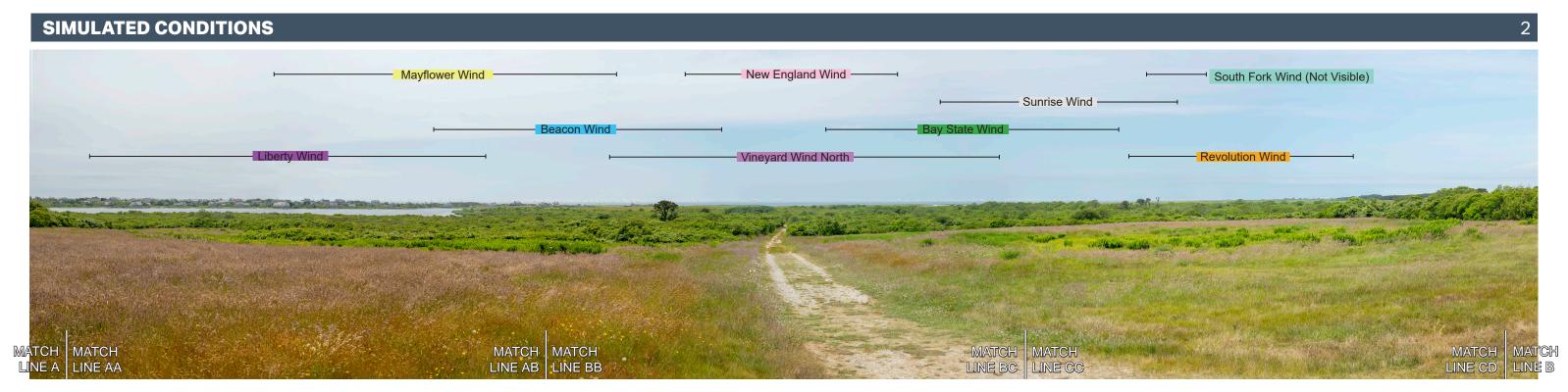
Wind Dir & Speed: S 12 mph Weather Condition: Hazy

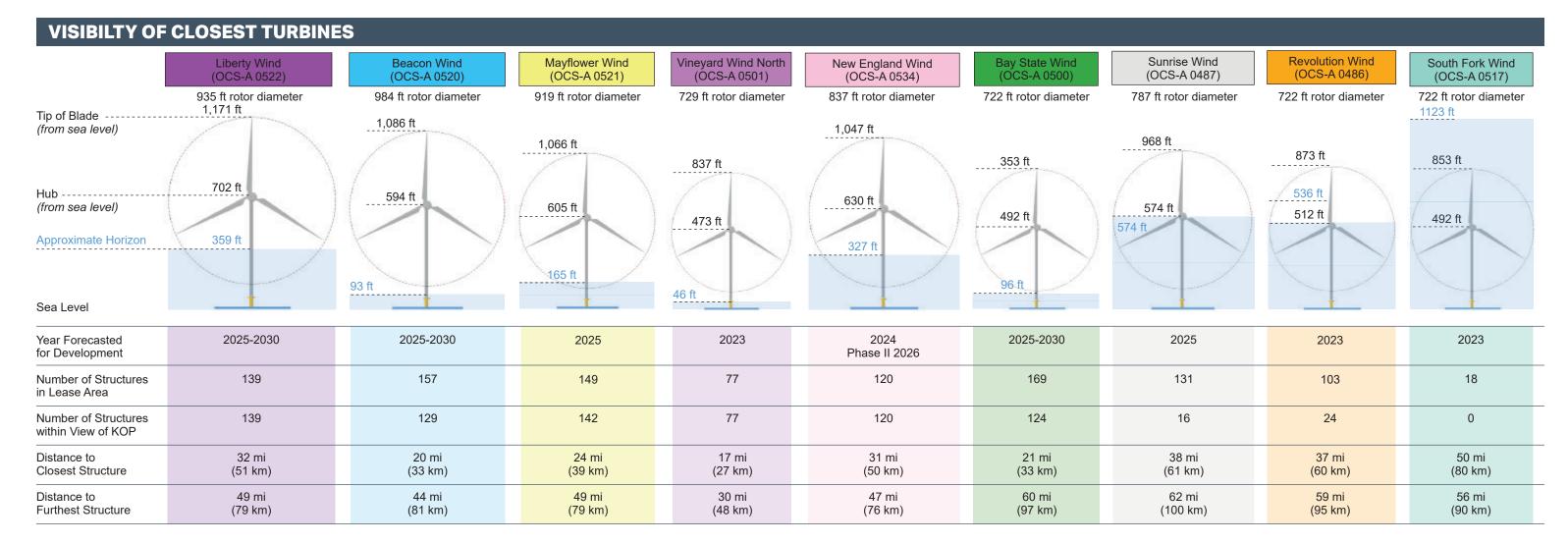
### CAMERA

Camera Elevation: 50 ft /15.2 m

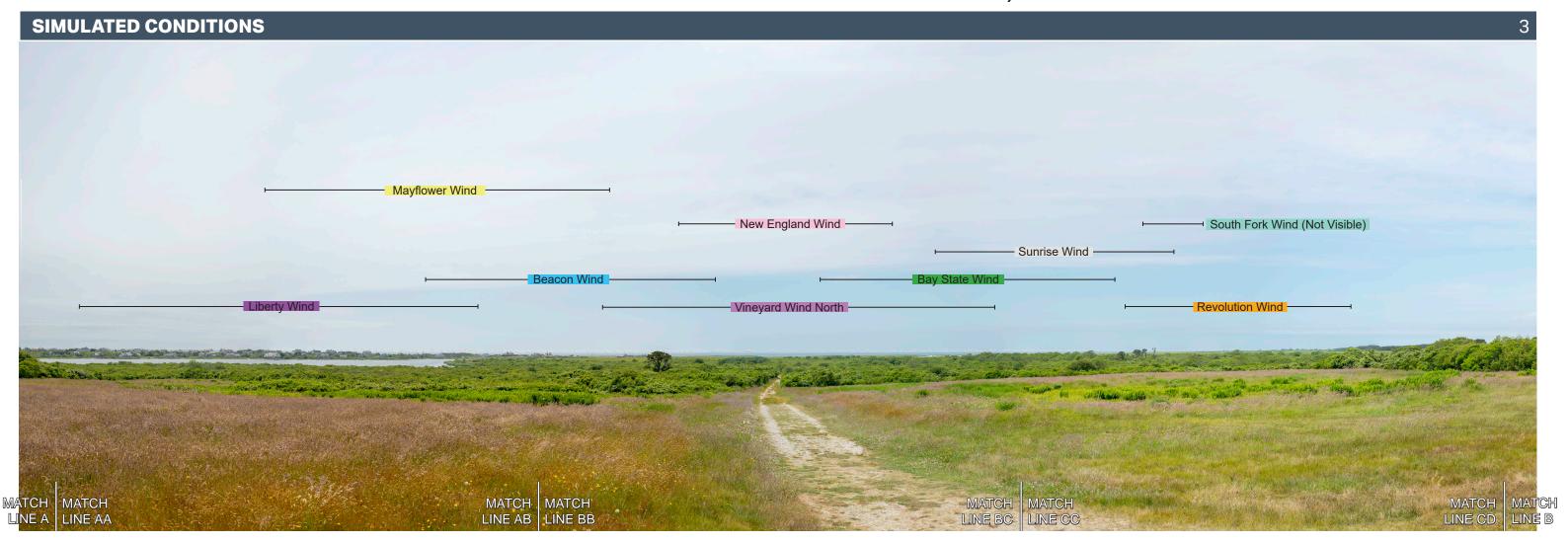
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

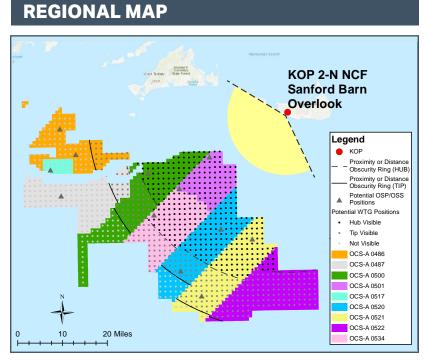
# KOP 2-N Sanford Farm Barn - Scenario 3

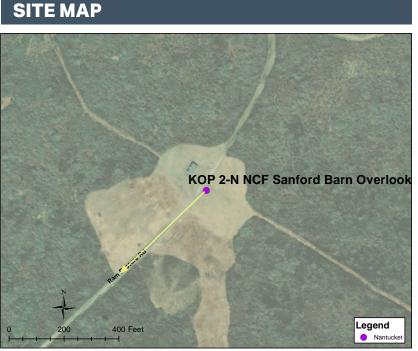




# KOP 2-N Sanford Farm Barn - Scenario 3 (Human Field of View - 124°)







# **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 49 mi / 79 km Vertical Field of View: 40° Nearest WTG: 20.mi/33 km

Potential Number of Structures Visible: 392 Potential Number of Structures Not Visible:

73

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

# **CAMERA**

Camera Elevation: 50 ft /15.2 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

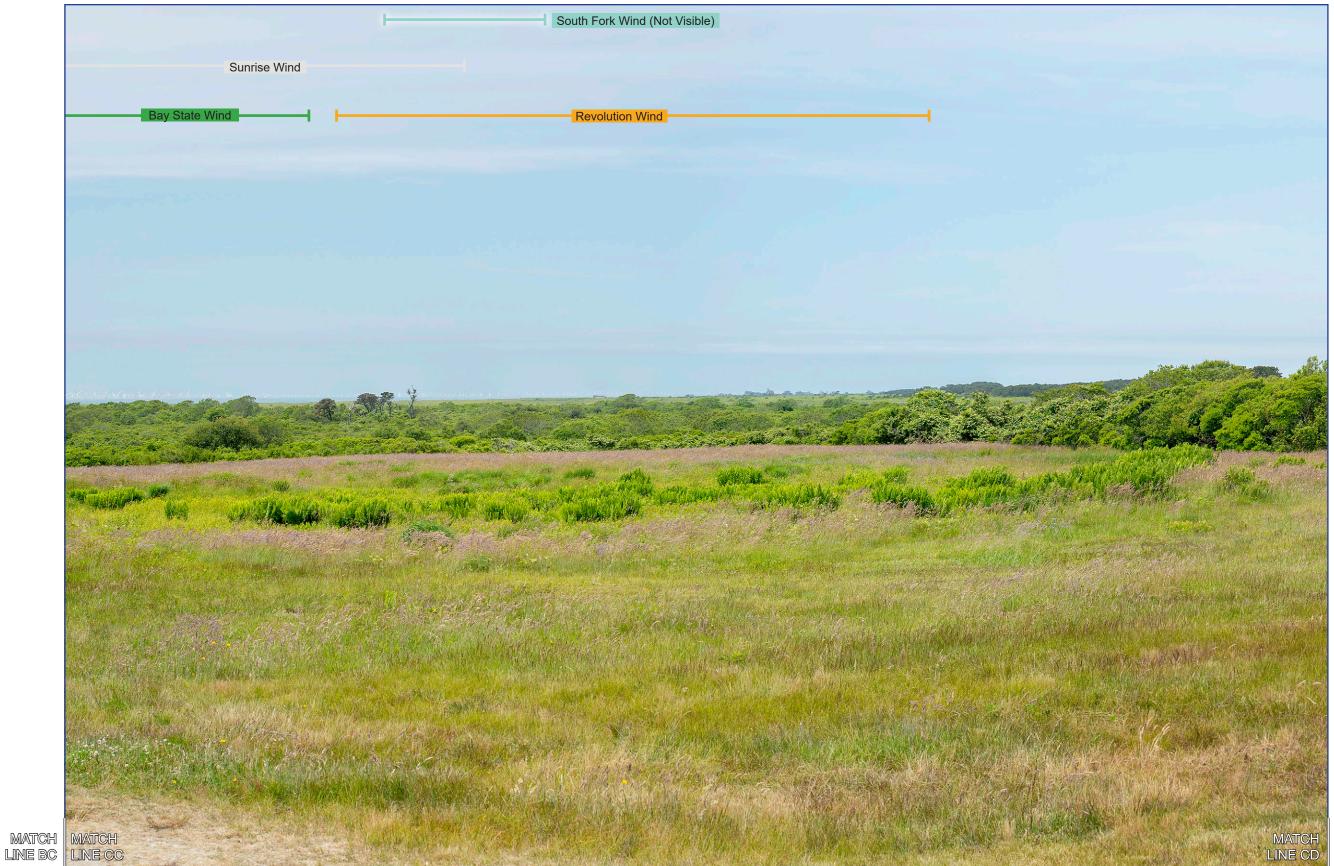
1



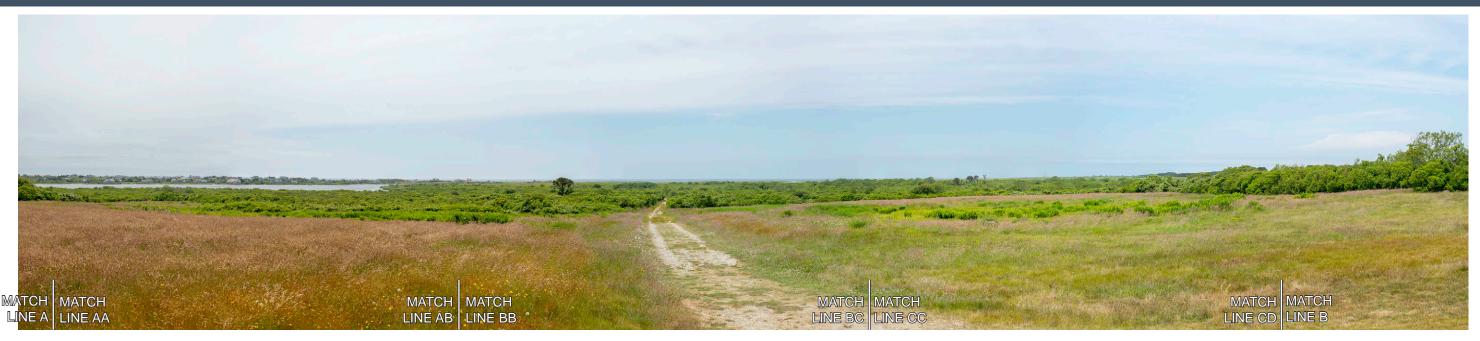
The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

MATCH

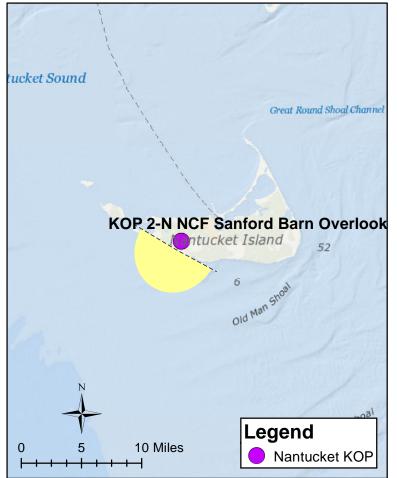
New England Wind Sunrise Wind Beacon Wind Vineyard Wind North Mayflower Wind MATCH MATCH LINE AB LINE BB



# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 182.3° Furthest Visible WTG: 60 mi / 96 km

Vertical Field of View: 40° Potential Number of Structures isible: 534

Nearest WTG: 20 mi / 33 km Potential Number of Structures Not Visible: 80

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54 AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Latitude: 41.265608°N
Longitude: 70.150001°W

Viewing direction: South (230°)

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph

Weather Condition: Hazy

### **CAMERA**

Camera Elevation: 50 ft /15.2 m

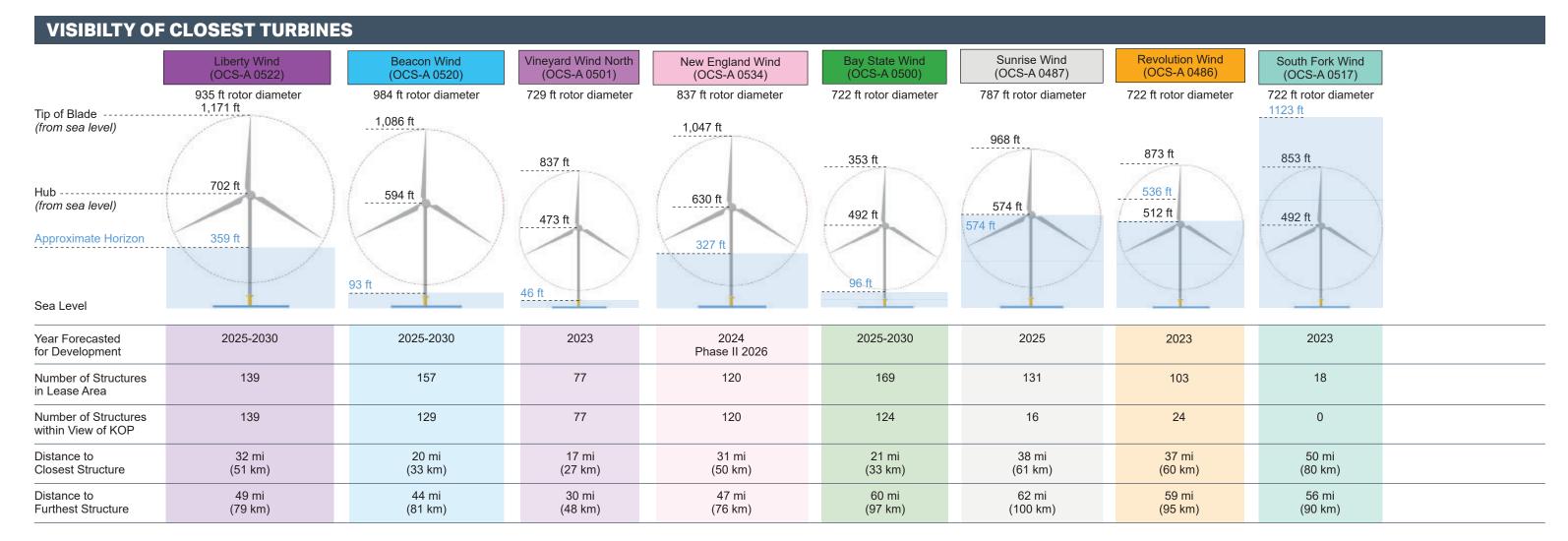
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Shutter: 1/1250 sec

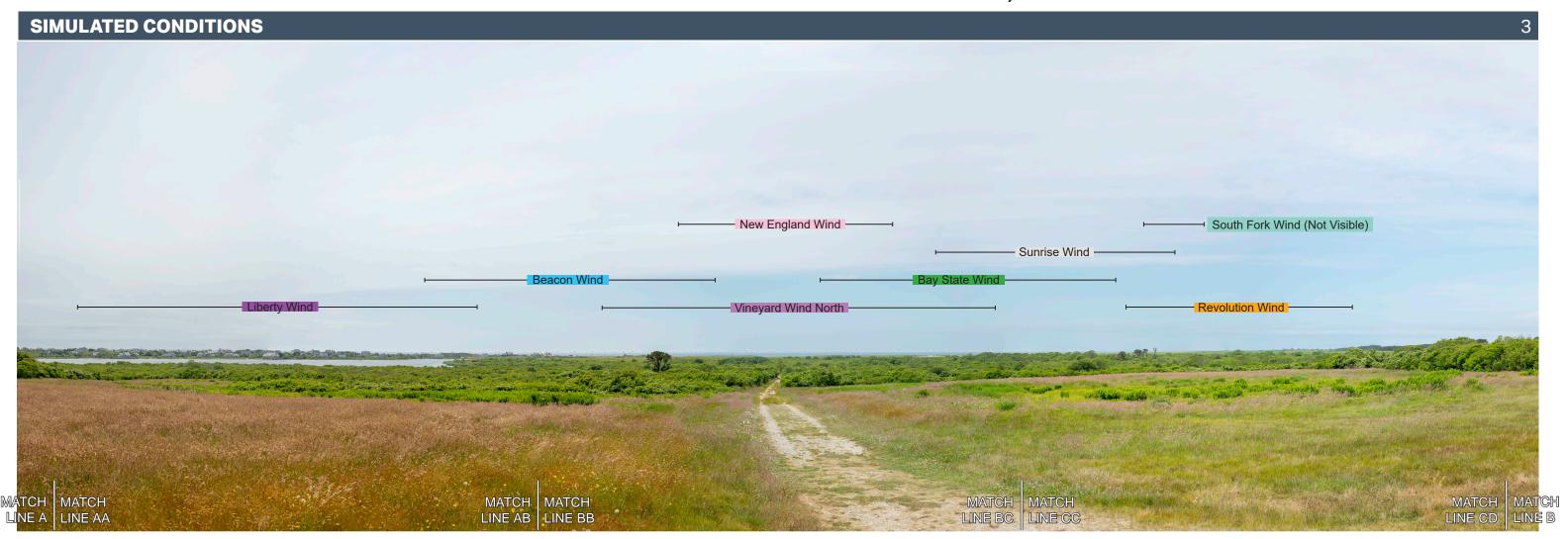
Exposure bias: -0.7 step

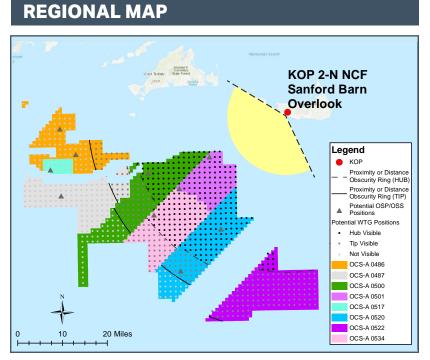
# KOP 2-N Sanford Farm Barn - Scenario 4





# KOP 2-N Sanford Farm Barn - Scenario 4 (Human Field of View - 124°)





# KOP 2-N NCF Sanford Barn Overlook

# **PROJECT VIEW**

Horizontal Field of View: 182.3° Furthest Visible WTG: 60 mi / 96 km

Vertical Field of View: 40° Potential Number of Structures isible: 534

Nearest WTG: 20 mi / 33 km Potential Number of Structures Not Visible:

80

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54 AM

Date of photograph: 6-26-20

L/SCA: Ocean beach

Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

# CAMERA

Camera Elevation: 50 ft /15.2 m

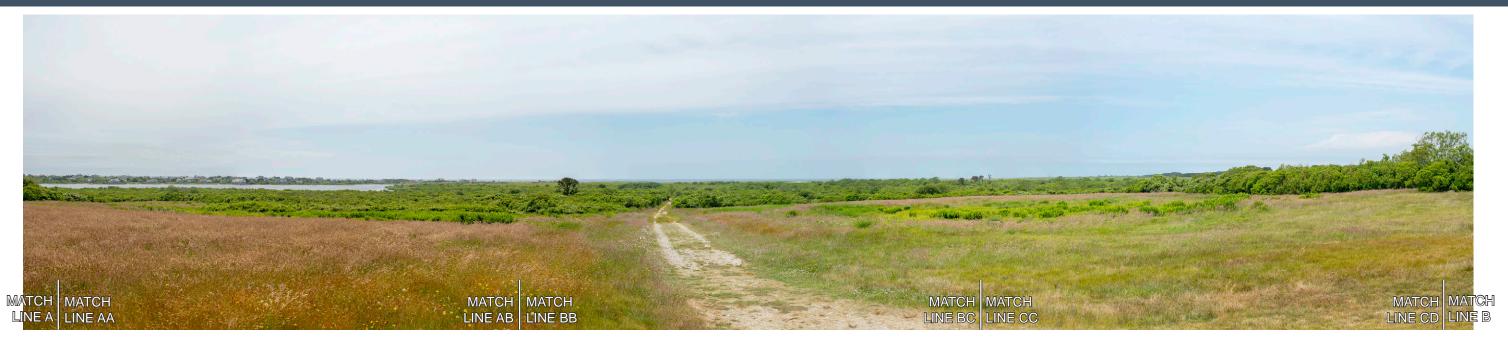
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

MATCH MATCH

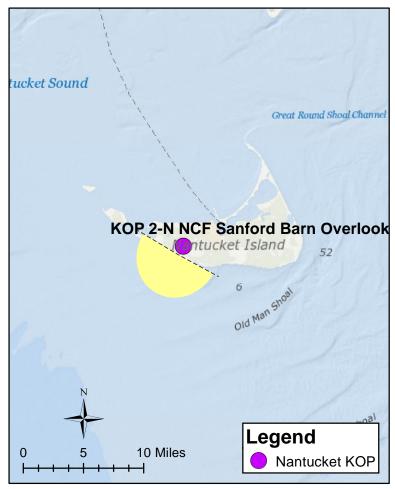
New England Wind Sunrise Wind Beacon Wind Vineyard Wind North MATCH MATCH LINE AB LINE BB

South Fork Wind (Not Visible) Sunrise Wind

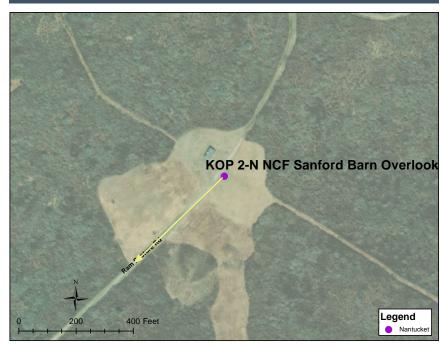
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 182.3° Furthest Visible WTG: 62.4 mi / 100.42 km

Vertical Field of View: 39.6° Potential Number of WTGs Visible: 629

Nearest WTG: 17 mi / 27.35 km Potential Number of WTGs Not Visible: 285

### **PHOTOGRAPH AND SITE**

Time of photograph: 10:54 AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

### CAMERA

Camera Elevation: 50.5 ft /15.4 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Shutter: 1/1250 sec

Exposure bias: -0.7 step

# SIMULATED CONDITIONS Maylower Wind MATCH MATCH

# **VISIBILTY OF CLOSEST TURBINES**

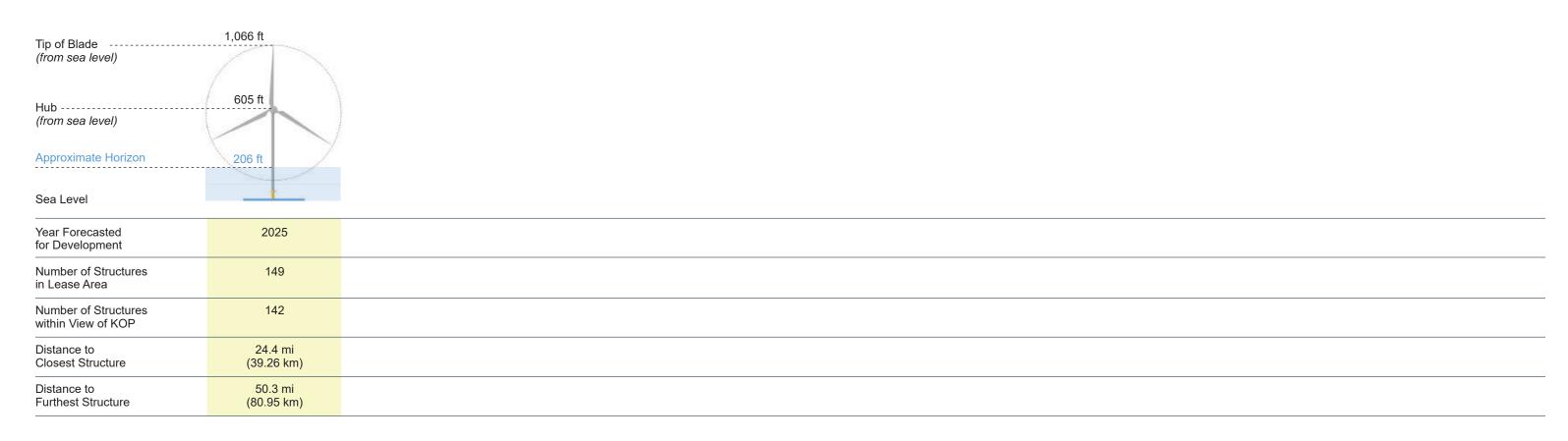
LINE AA

Mayflower Wind (OCS-A 0521)

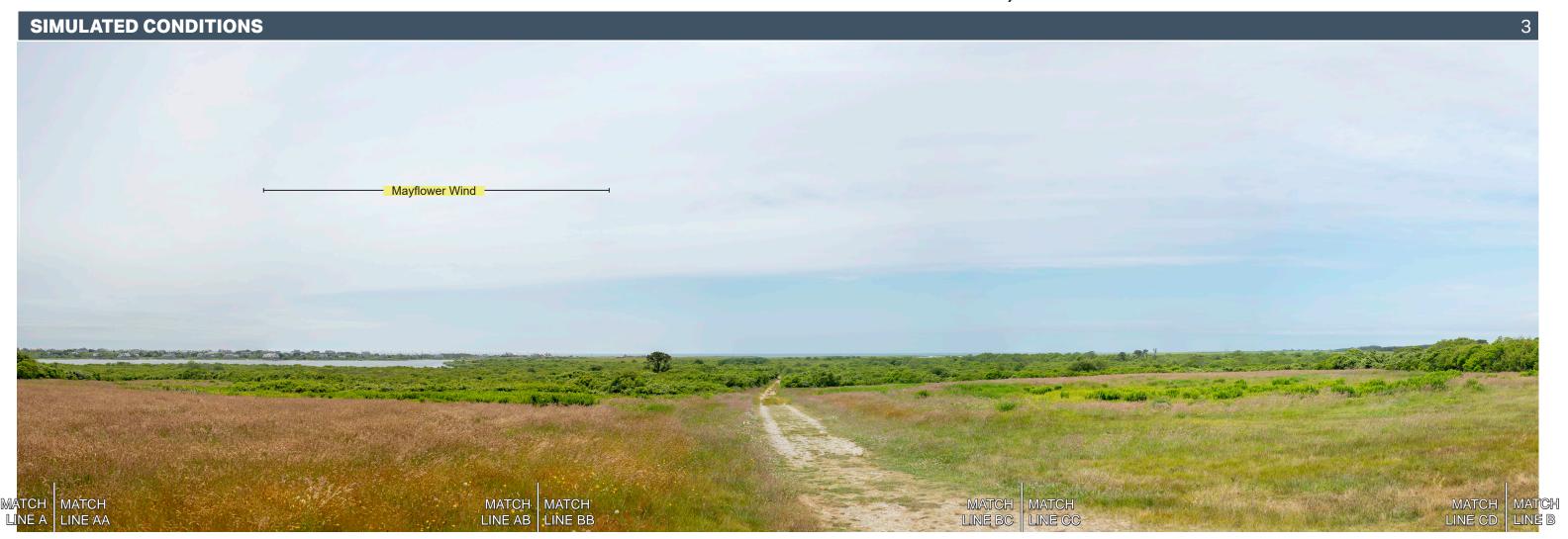
LINE AB

LINE BB

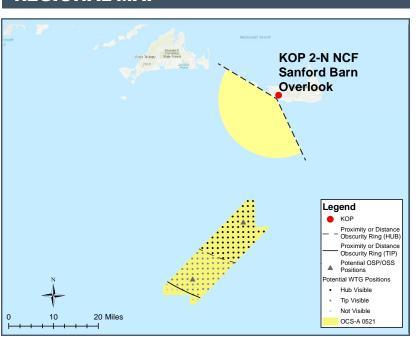
919 ft rotor



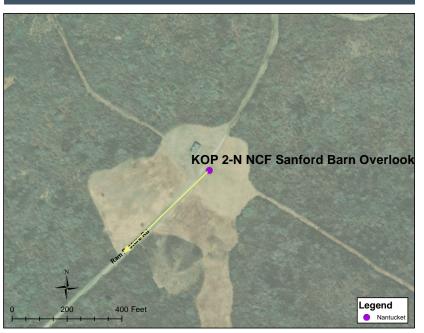
# KOP 2-N Sanford Farm Barn - Scenario 5 (Human Field of View - 124°)



# **REGIONAL MAP**



# SITE MAP



# **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 62.4 mi / 100.42 km

Vertical Field of View: 39.6° Potential Number of WTGs Visible: 629

Nearest WTG: 17 mi / 27.35 km Potential Number of WTGs Not Visible: 285

# **PHOTOGRAPH AND SITE**

Time of photograph: 10:54 AM Date of photograph: 6-26-20 L/SCA: Ocean beach

Viewing direction: South (194°) Latitude: 41.265608°N Longitude: 70.150001°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 81%

Wind Dir & Speed: S 12 mph Weather Condition: Hazy

# CAMERA

Camera Elevation: 50.5 ft /15.4 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



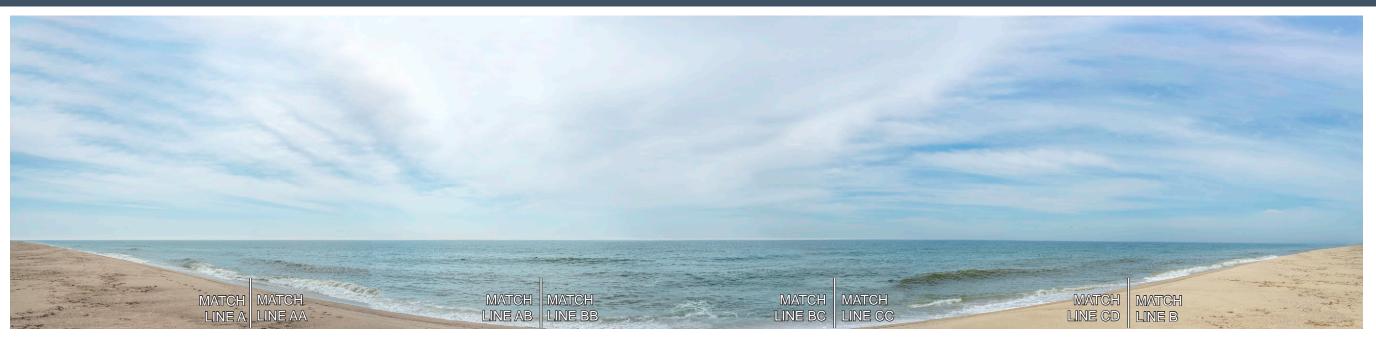




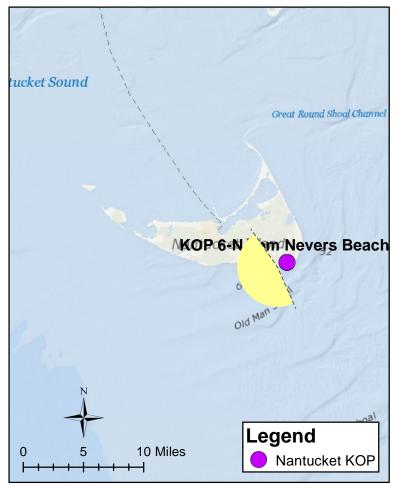
MATCH LINE BC

LINE B

# PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS



# **REGIONAL MAP**



# **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 169° Furthest Visible WTG: 70 mi / 113 km

Vertical Field of View: 40° Potential Number of Structures Visible: 136

Nearest WTG: 23 mi / 37 km Potential Number of Structures Not Visible: 313

# **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes Viewing direction: South (242°) Latitude: 41.244577°N Longitude: 69.985046°W

Lighting Direction: Sidelit diffused

# **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

Wind Dir & Speed: S 10 mph

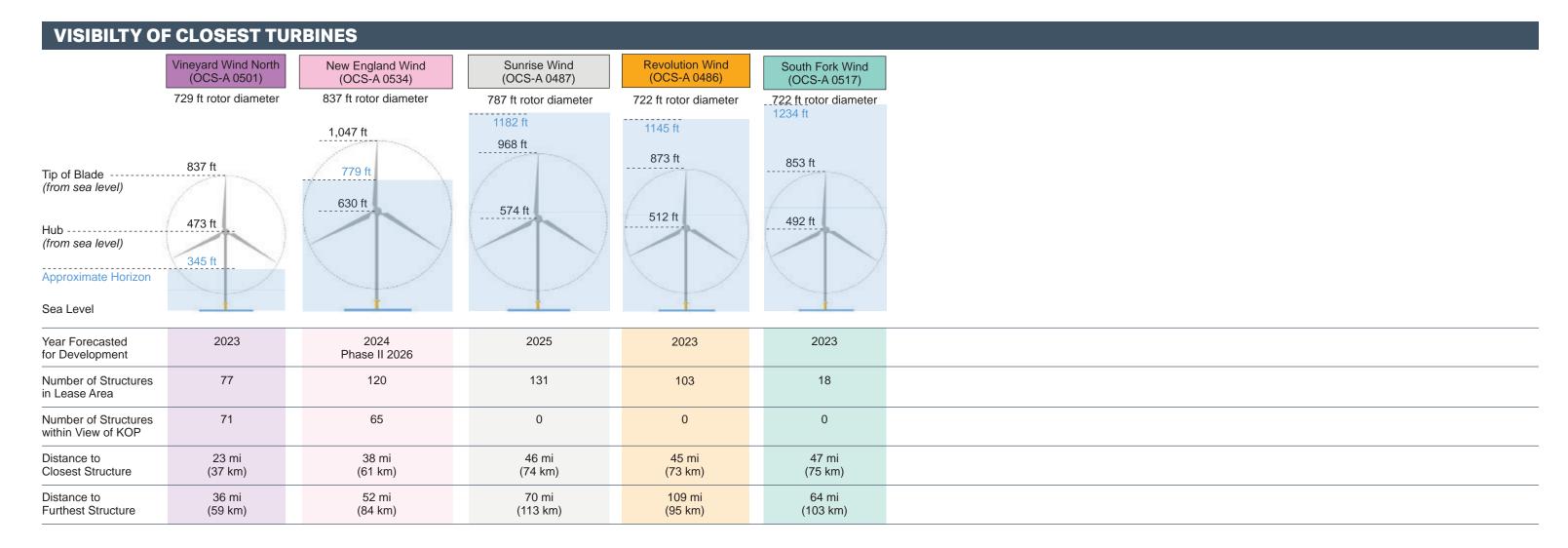
Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

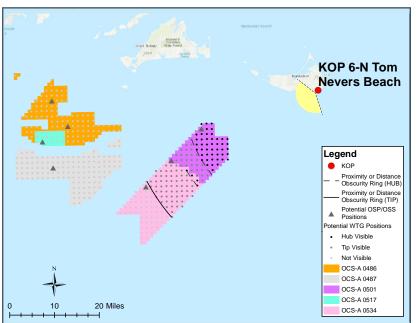




# KOP 6-N Tom Nevers Beach - Scenario 1 (Human Field of View - 124°)



# **REGIONAL MAP**



# **SITE MAP**



# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 23 mi / 37 km Furthest Visible WTG: 70 mi / 113 km

Potential Number of Structures Visible: 136

Potential Number of Structures Not Visible:

Viewing direction: South (242°)

Latitude: 41.244577°N

313

# **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes

: Ocean Beach, Open Longitude: 69.985046°W Lighting Direction: Sidelit diffused

# CAMERA

Temperature: 68° F

Humidity: 90%

**ENVIRONMENT** 

Wind Dir & Speed: S 10 mph

Weather Condition: Partly Cloudy

Camera Elevation: 6.5 ft /1.7 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1

B LINE



New England Wind Sunrise Wind (Not Visible) Vineyard Wind North

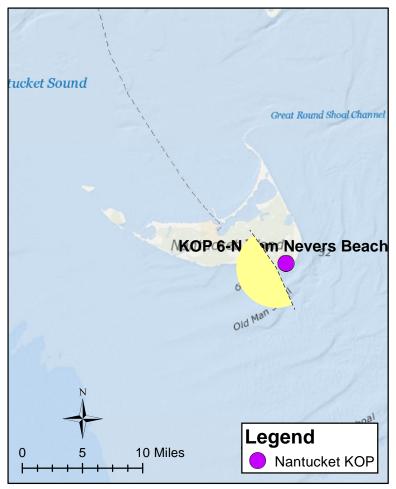
MATCH LINE BC LINE CC

The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

MATCH



#### **REGIONAL MAP**



#### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 169° Furthest Visible WTG: 70 mi / 113 km

Vertical Field of View: 40° Potential Number of Structures Visible: 228

Nearest WTG: 23 mi / 37 km Potential Number of Structures Not Visible: 370

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM

Date of photograph: 6-27-20

L/SCA: Ocean Beach, Open
Ocean, Dunes

Viewing direction: South (242°) Latitude: 41.244577°N Longitude: 69.985046°W

Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

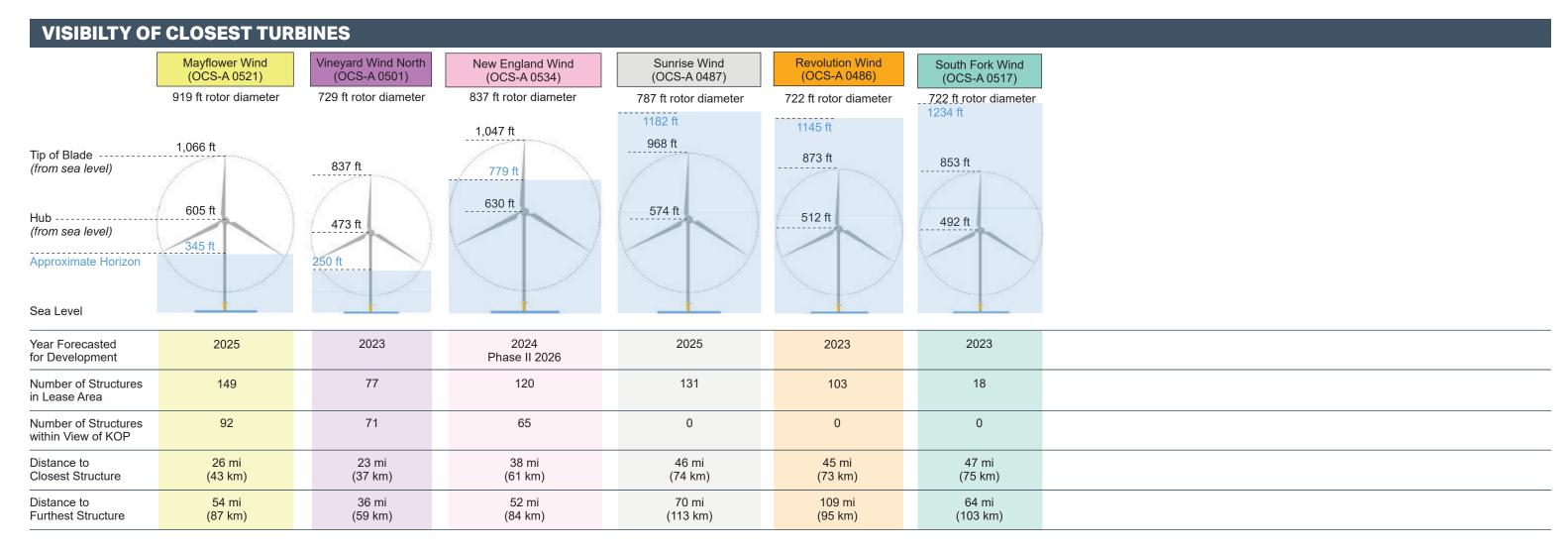
Wind Dir & Speed: S 10 mph
Weather Condition: Partly Cloudy

#### CAMERA

Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

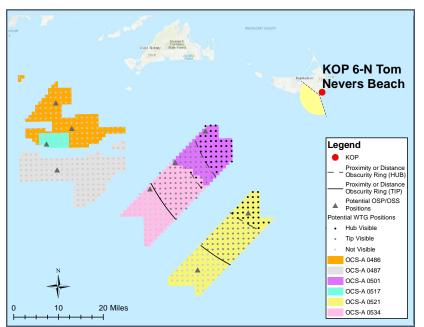




# KOP 6-N Tom Nevers Beach - Scenario 2 (Human Field of View - 124°)



#### **REGIONAL MAP**



#### **SITE MAP**



#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 70 mi / 113 km Vertical Field of View: 40° Potential Number of Structures Visible: 228 Nearest WTG: 23 mi / 37 km Potential Number of Structures Not Visible:

370

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Viewing direction: South (242°) Latitude: 41.244577°N Date of photograph: 6-27-20 Longitude: 69.985046°W L/SCA: Ocean Beach, Open Ocean, Dunes Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

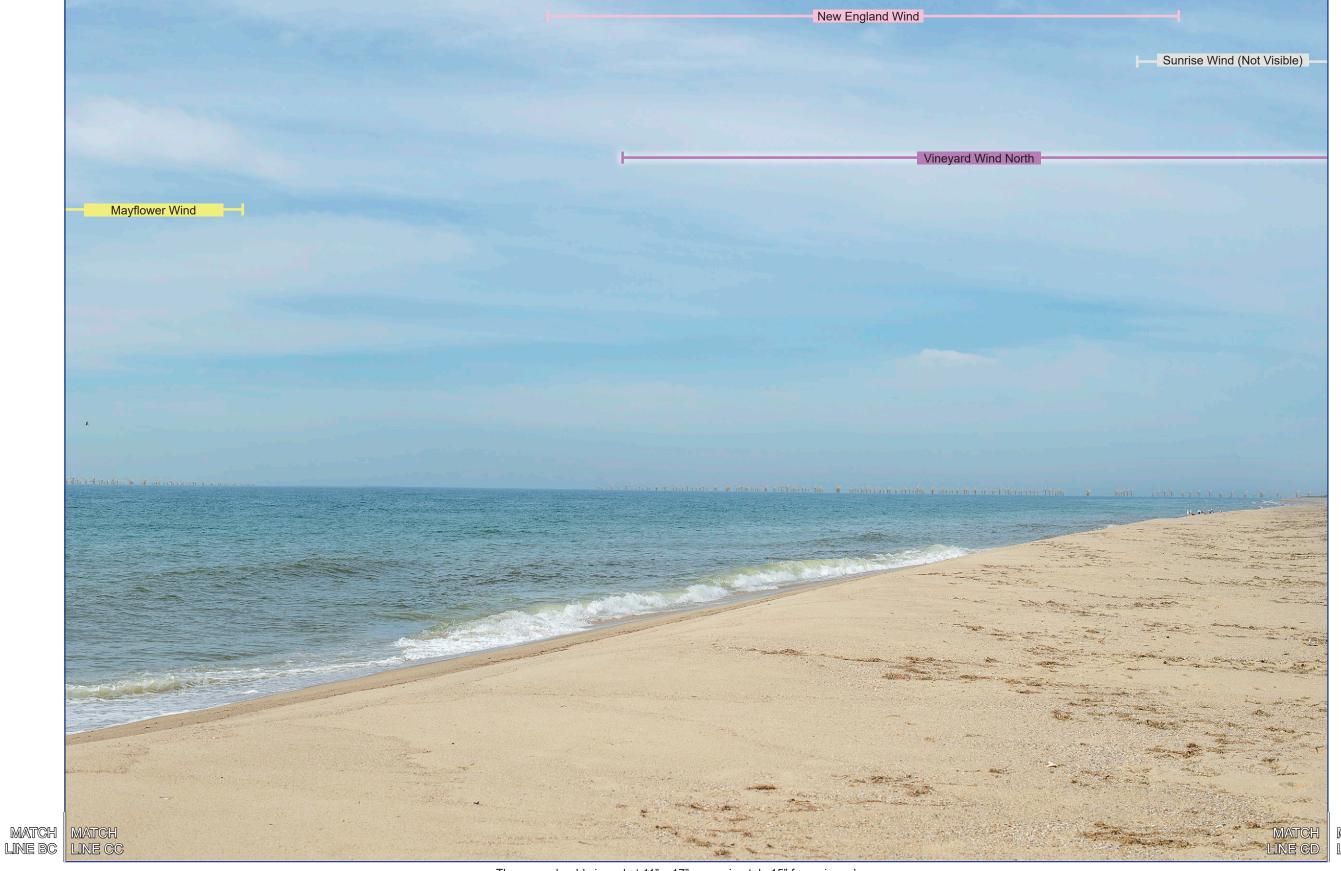
Wind Dir & Speed: S 10 mph Weather Condition: Partly Cloudy

#### **CAMERA**

Camera Elevation: 6.5 ft /1.7 m

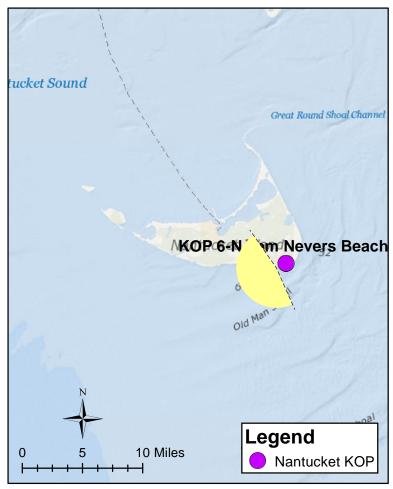
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1







#### **REGIONAL MAP**



#### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 169° Furthest Visible WTG: 70 mi / 113 km Vertical Field of View: 40° Potential Number of WTGs Visible: 463 Nearest WTG: 23 mi / 37 km Potential Number of WTGs Not Visible: 600

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes

Latitude: 41.244577°N Longitude: 69.985046°W Lighting Direction: Sidelit diffused

Viewing direction: South (242°)

#### Wind Dir & Speed: S 10 mph Weather Condition: Partly Cloudy

Humidity: 90%

Temperature: 68° F

**ENVIRONMENT** 

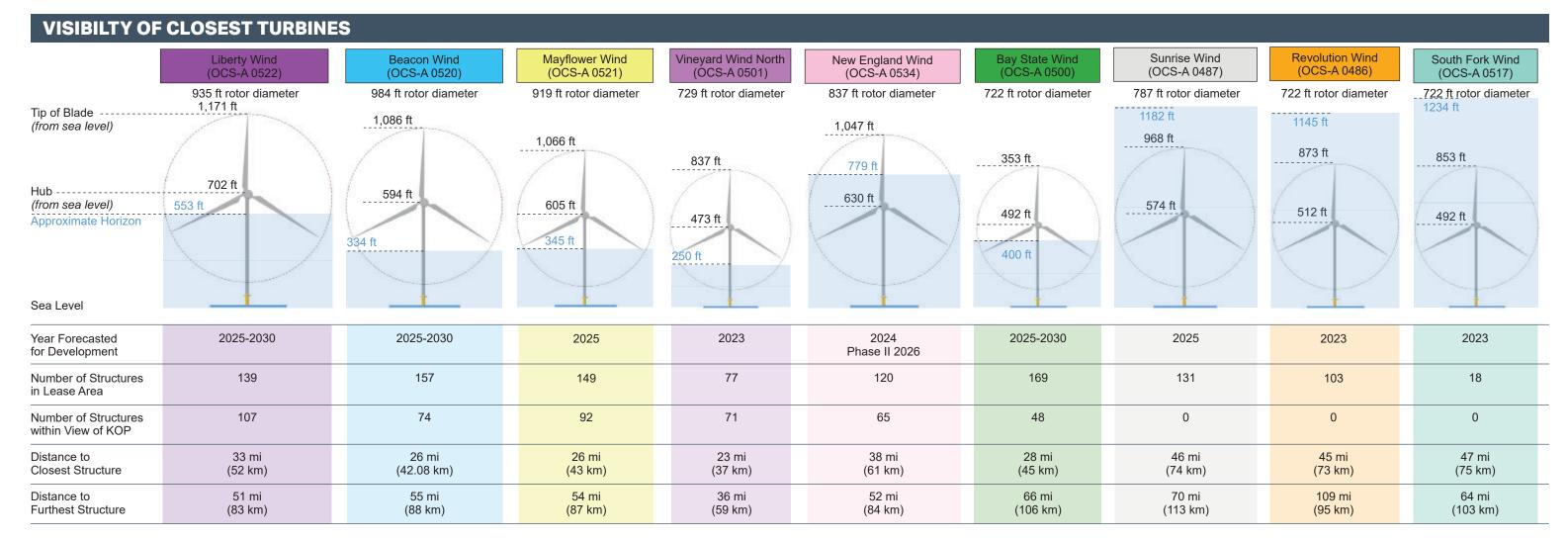
Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Shutter: 1/1250 sec Exposure bias: -0.7 step

#### **CAMERA**

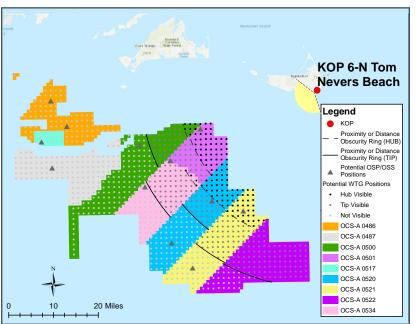




# KOP 6-N Tom Nevers Beach - Scenario 3 (Human Field of View - 124°)



#### **REGIONAL MAP**



#### **SITE MAP**



#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 70 mi / 113 km Vertical Field of View: 40° Potential Number of WTGs Visible: 463 Potential Number of WTGs Not Visible: 600 Nearest WTG: 23 mi / 37 km

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Viewing direction: South (242°) Latitude: 41.244577°N Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes

Longitude: 69.985046°W Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

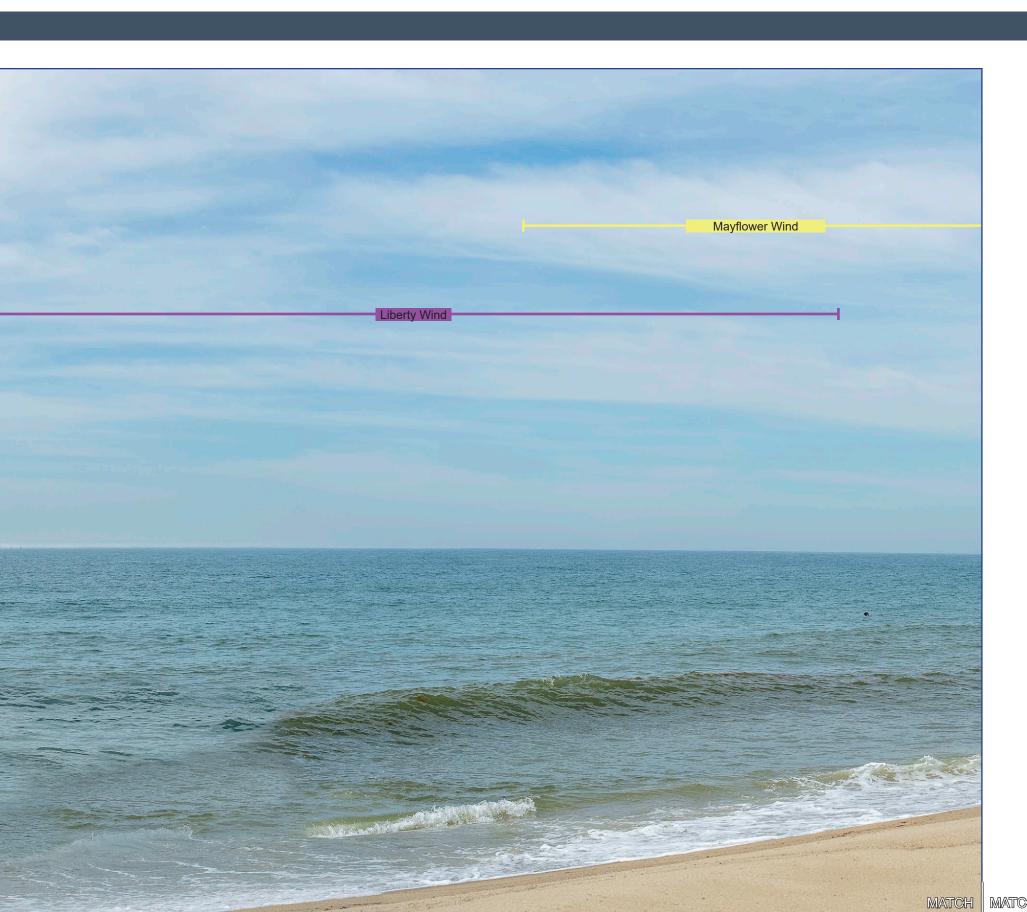
Wind Dir & Speed: S 10 mph Weather Condition: Partly Cloudy

#### **CAMERA**

Camera Elevation: 6.5 ft /1.7 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1

MATCH LINE BB



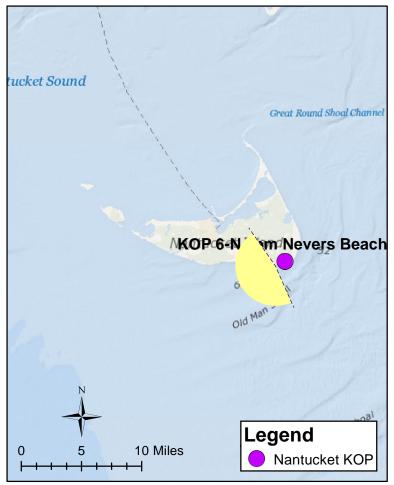
MATCH MATCH LINE AB LINE BB

New England Wind Sunrise Wind (Not Visible) Beacon Wind Vineyard Wind North Mayflower Wind LINE BC LINE CC

MATCH LINE B



#### **REGIONAL MAP**



#### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 169° Furthest Visible WTG: 70 mi / 113 km

Vertical Field of View: 40° Potential Number of Structures Visible: 365

Nearest WTG: 23 mi / 37 km Potential Number of Structures Not Visible: 549

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes Viewing direction: South (242°) Latitude: 41.244577°N Longitude: 69.985046°W

Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

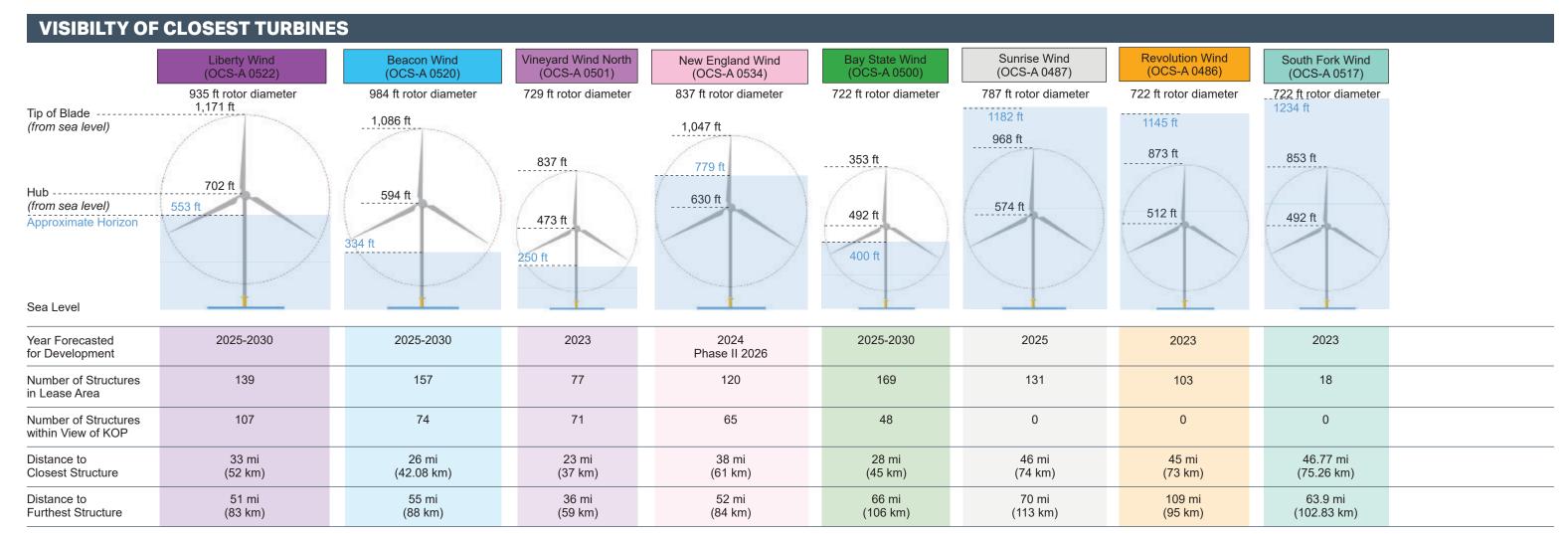
Wind Dir & Speed: S 10 mph
Weather Condition: Partly Cloudy

#### CAMERA

Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

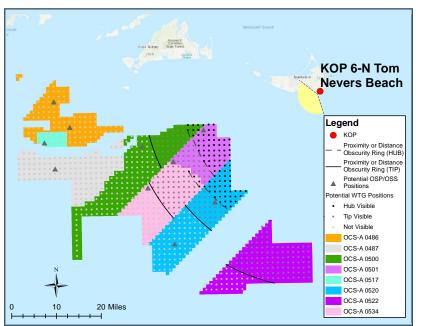




# KOP 6-N Tom Nevers Beach - Scenario 4 (Human Field of View - 124°)



#### **REGIONAL MAP**



#### **SITE MAP**



#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 70 mi / 113 km Vertical Field of View: 40° Potential Number of WTGs Visible: 371 Nearest WTG: 23 mi / 37 km Potential Number of WTGs Not Visible: 543

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Viewing direction: South (242°) Date of photograph: 6-27-20 Latitude: 41.244577°N L/SCA: Ocean Beach, Open Longitude: 69.985046°W Ocean, Dunes

Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

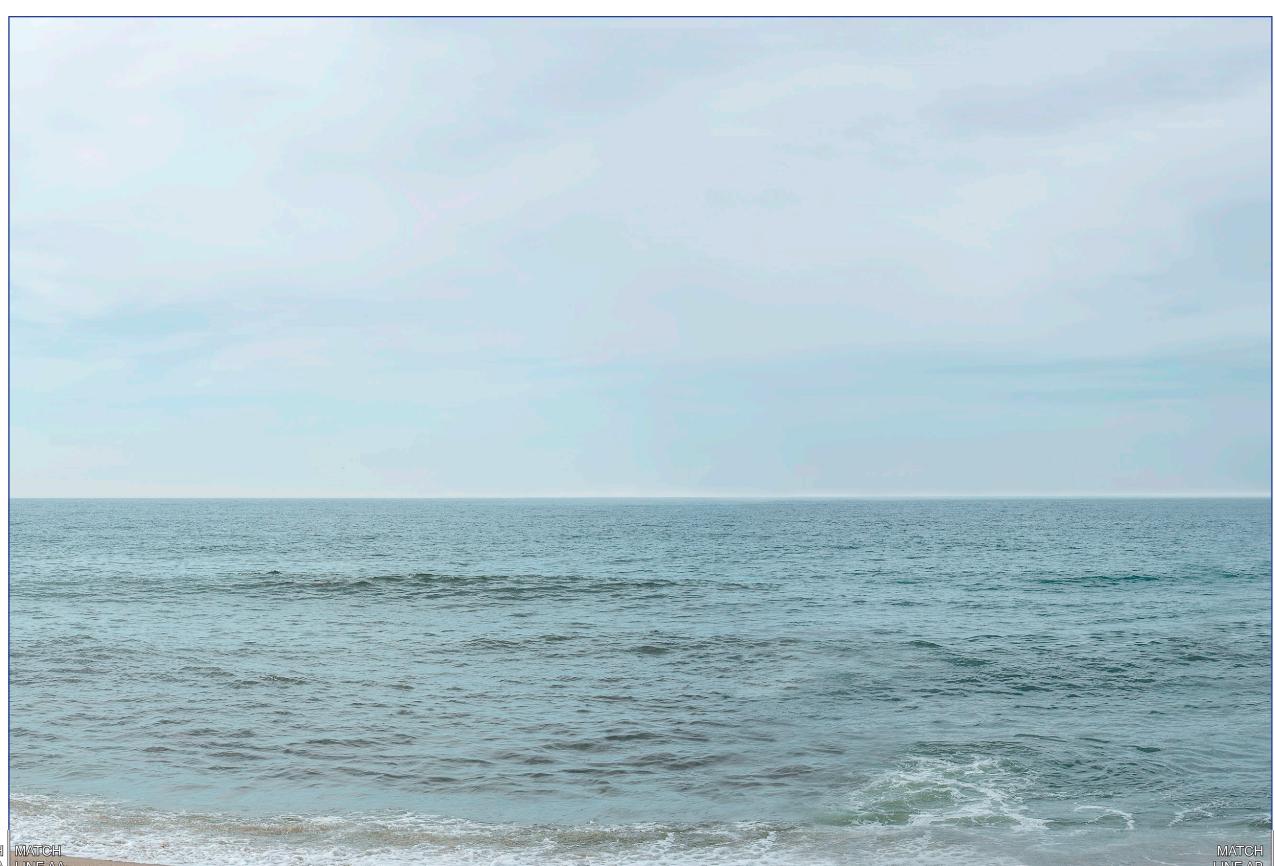
Temperature: 68° F Humidity: 90%

Wind Dir & Speed: S 10 mph Weather Condition: Partly Cloudy

#### **CAMERA**

Camera Elevation: 6.5 ft /1.7 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1



The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

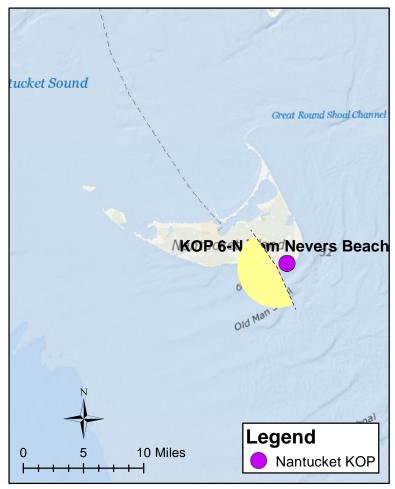
MATCH LINE BE



New England Wind Sunrise Wind (Not Visible) Beacon Wind Vineyard Wind North LINE BC LINE CC



#### **REGIONAL MAP**



#### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 169° Furthest Visible WTG: 54 mi / 87 km

Vertical Field of View: 40° Potential Number of Structures Visible: 92

Nearest WTG: 26 mi / 43 km Potential Number of Structures Not Visible: 57

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM

Date of photograph: 6-27-20

L/SCA: Ocean Beach, Open
Ocean, Dunes

Viewing direction: South (242°) Latitude: 41.244577°N Longitude: 69.985046°W

Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

Wind Dir & Speed: S 10 mph
Weather Condition: Partly Cloudy

#### CAMERA

Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



### **VISIBILTY OF CLOSEST TURBINES**

Mayflower Wind (OCS-A 0521)

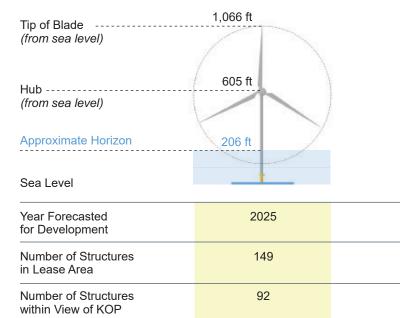
919 ft rotor diameter

26 mi

(43 km)

54 mi

(87 km)



Distance to Closest Structure

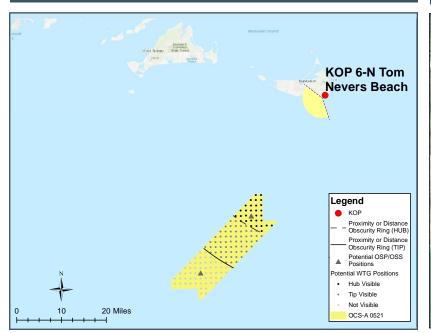
Distance to

Furthest Structure

# KOP 6-N Tom Nevers Beach - Scenario 5 (Human Field of View - 124°)



### **REGIONAL MAP**



#### **SITE MAP**



#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 54 mi / 87 km Vertical Field of View: 40° Potential Number of WTGs Visible: 92 Nearest WTG: 26 mi / 43 km Potential Number of WTGs Not Visible: 57

#### **PHOTOGRAPH AND SITE**

Time of photograph: 8:44AM Viewing direction: South (242°) Date of photograph: 6-27-20 L/SCA: Ocean Beach, Open Ocean, Dunes

Latitude: 41.244577°N Longitude: 69.985046°W

Lighting Direction: Sidelit diffused

#### **ENVIRONMENT**

Temperature: 68° F Humidity: 90%

Wind Dir & Speed: S 10 mph Weather Condition: Partly Cloudy

#### **CAMERA**

Camera Elevation: 6.5 ft /1.7 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



AB LI



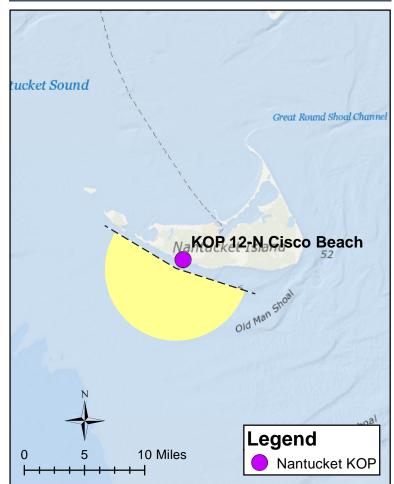


The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

MATCH



#### **REGIONAL MAP**



### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Residential

Horizontal Field of View: 193.2° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

#### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM Viewing direction: South (226°)

Date of photograph: 8-20-20 Latitude: 41.252490°N

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

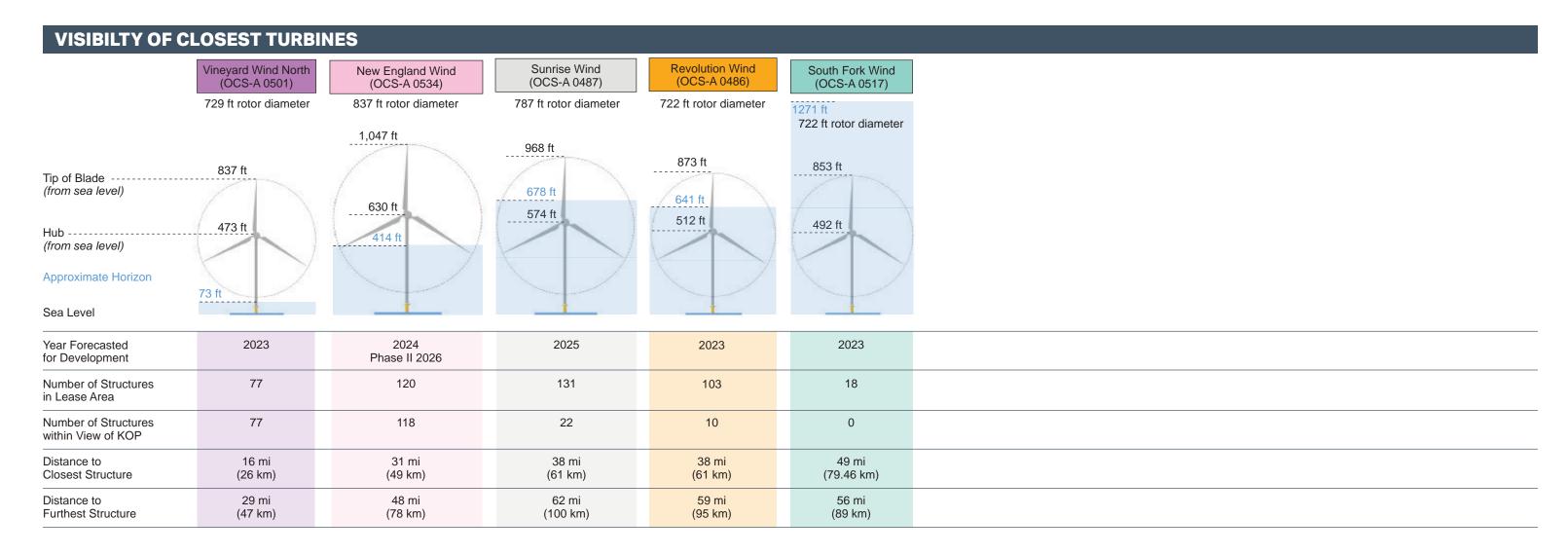
Temperature: 61° F
Humidity: 90%
Wind Dir & Speed: N 6 mph
Weather Condition: Partly Cloudy

### CAMERA

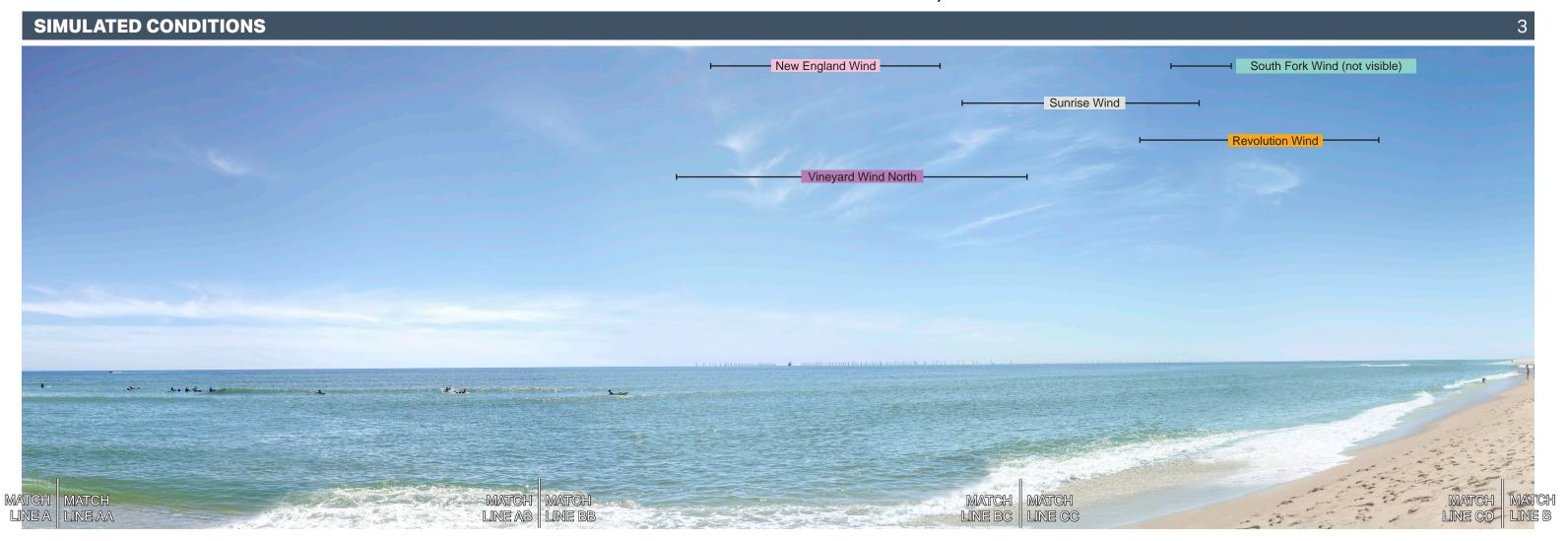
Camera Elevation: 23.0 ft / 7.0 m

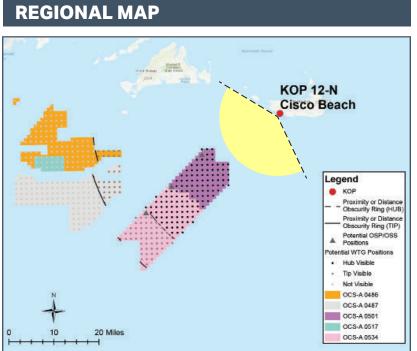
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach - Scenario 1 (Human Field of View - 124°)







#### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

Furthest Visible WTG: 46 mi / 74 km
Potential Number of Structures Visible: 577
Potential Number of Structures Not Visible:

33

#### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

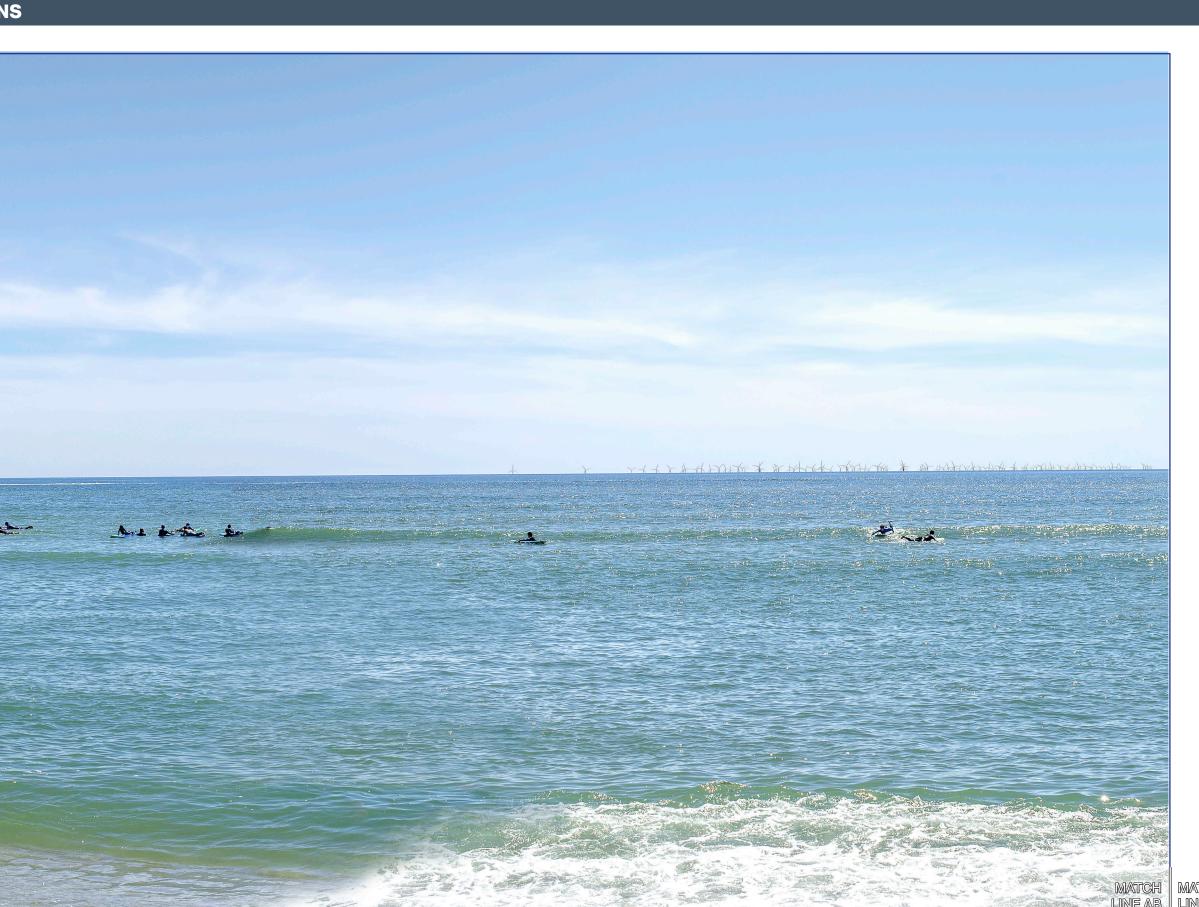
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

#### CAMERA

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

MATCH MATCH LINE A LINE AA

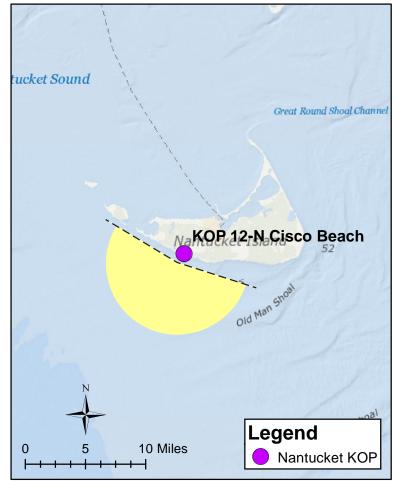








#### **REGIONAL MAP**



### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km Vertical Field of View: 40° Potential Number of Structures Visible: 577 Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

#### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM Viewing direction: South (226°) Latitude: 41.252490°N Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Longitude: 70.154080°W Dunes, Salt Ponds/Tidal Marsh, Lighting Direction: Backlit diffused

Residential

#### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph

Weather Condition: Partly Cloudy

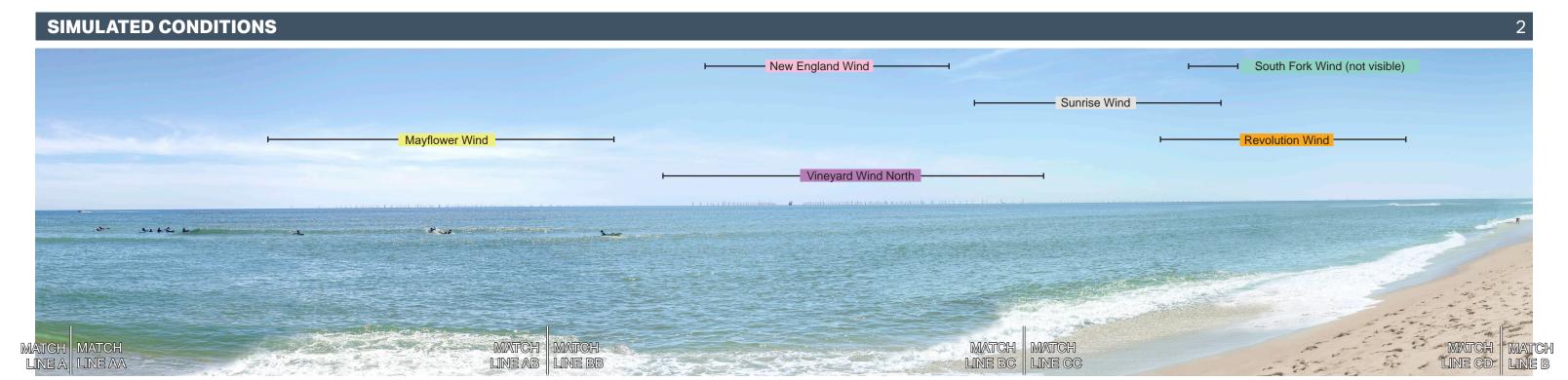
### **CAMERA**

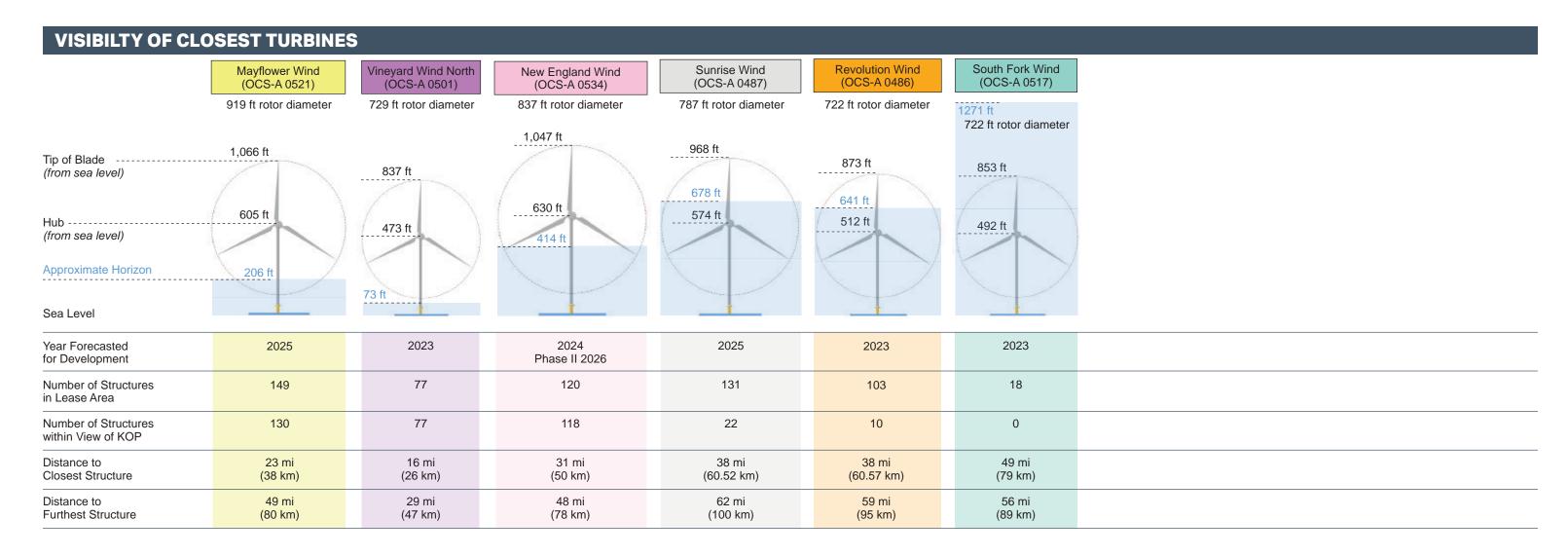
Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

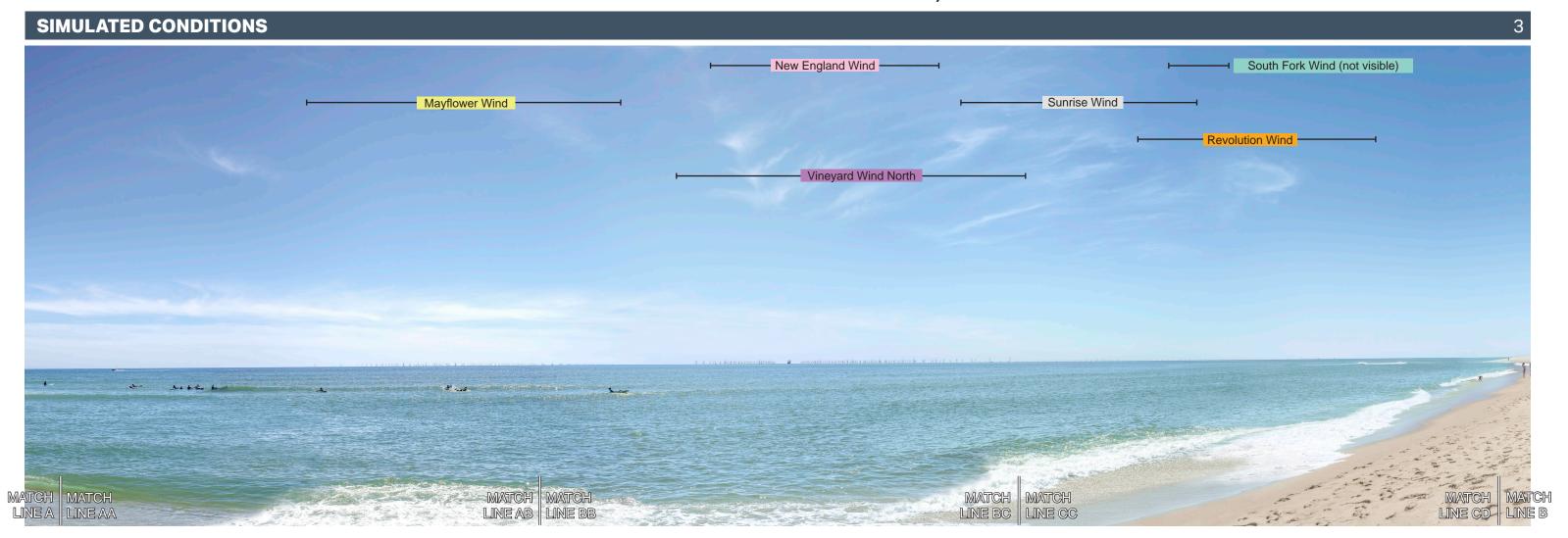
Shutter: 1/1250 sec

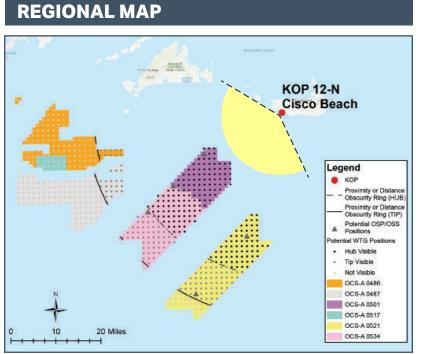
Exposure bias: -0.7 step





# KOP 12-N Cisco Beach - Scenario 2 (Human Field of View - 124°)







#### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16.2 mi / 26 km

24° Furthest Visible WTG: 46 mi / 74 km
 Potential Number of Structures Visible: 577
 km Potential Number of Structures Not Visible: 337

#### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°)

Latitude: 41.252490°N Longitude: 70.154080°W

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

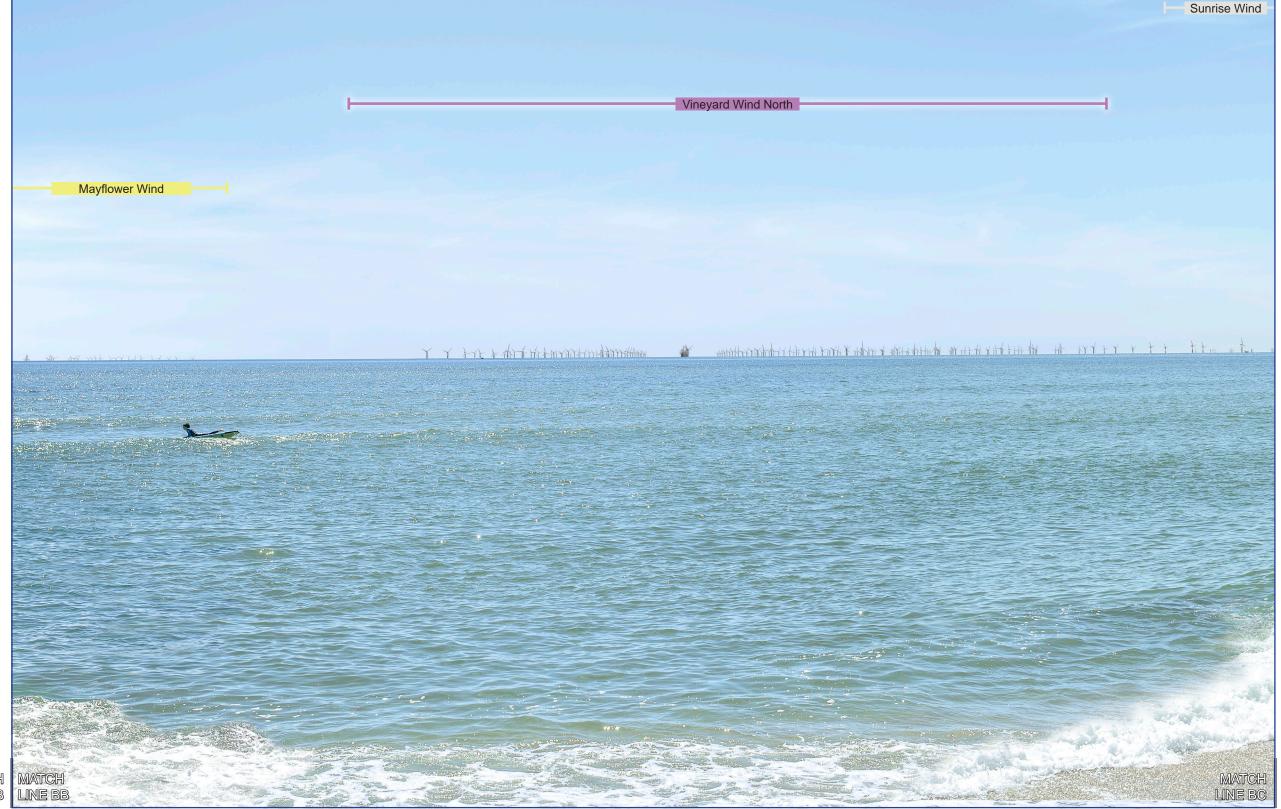
#### CAMERA

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

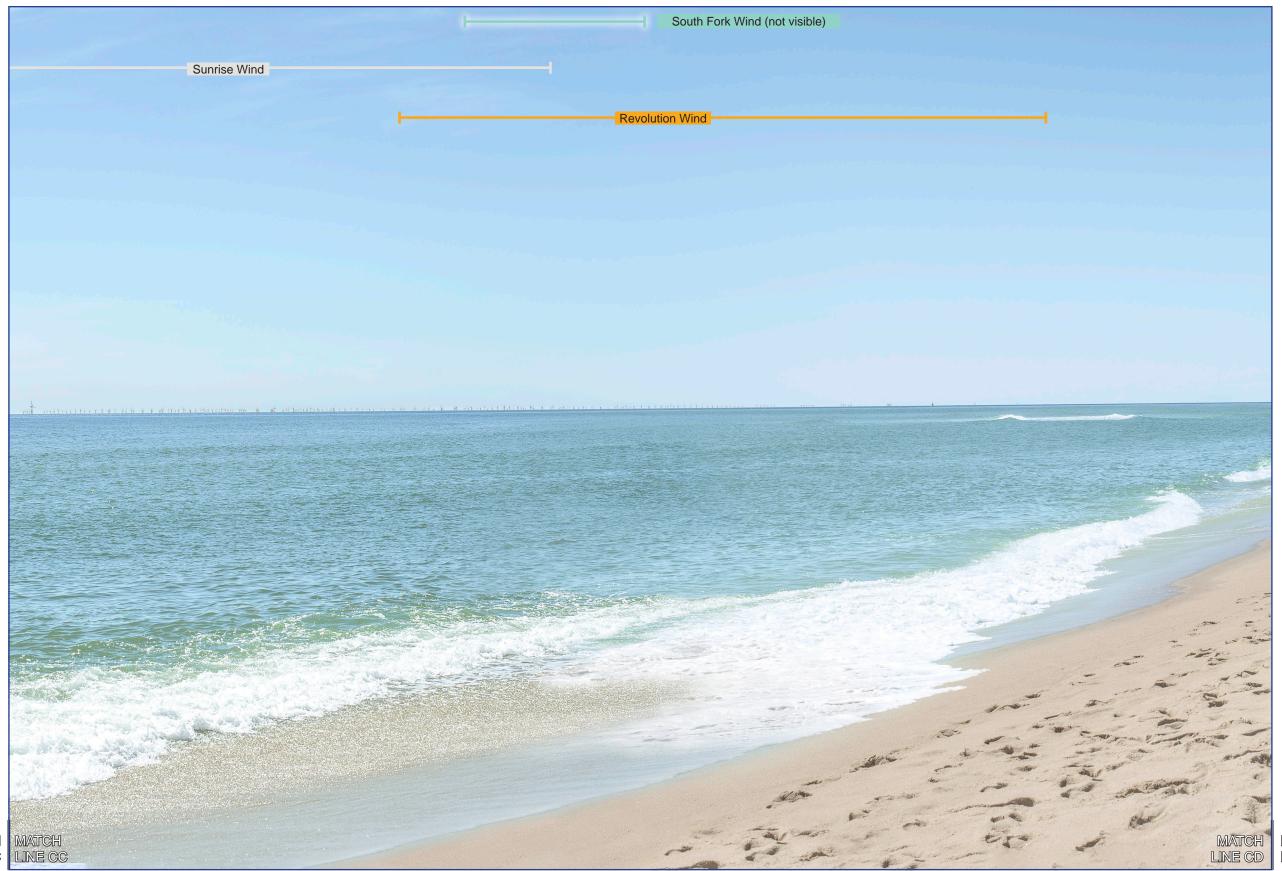


Nantucket



New England Wind

6



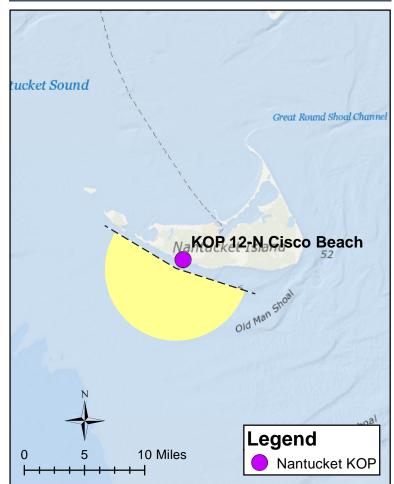
The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

MATCH LINE B

### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



### **REGIONAL MAP**



### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM Viewing direction: South (226°)

Date of photograph: 8-20-20 Latitude: 41.252490°N

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential Lighting Direction: Backlit diffused

### ENVIRONMENT

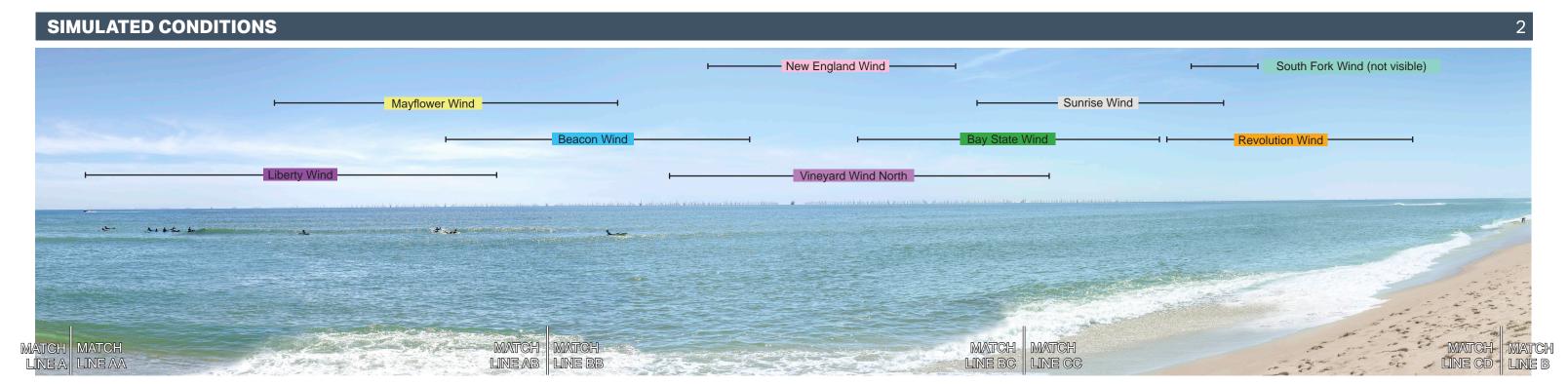
Temperature: 61° F
Humidity: 90%
Wind Dir & Speed: N 6 mph

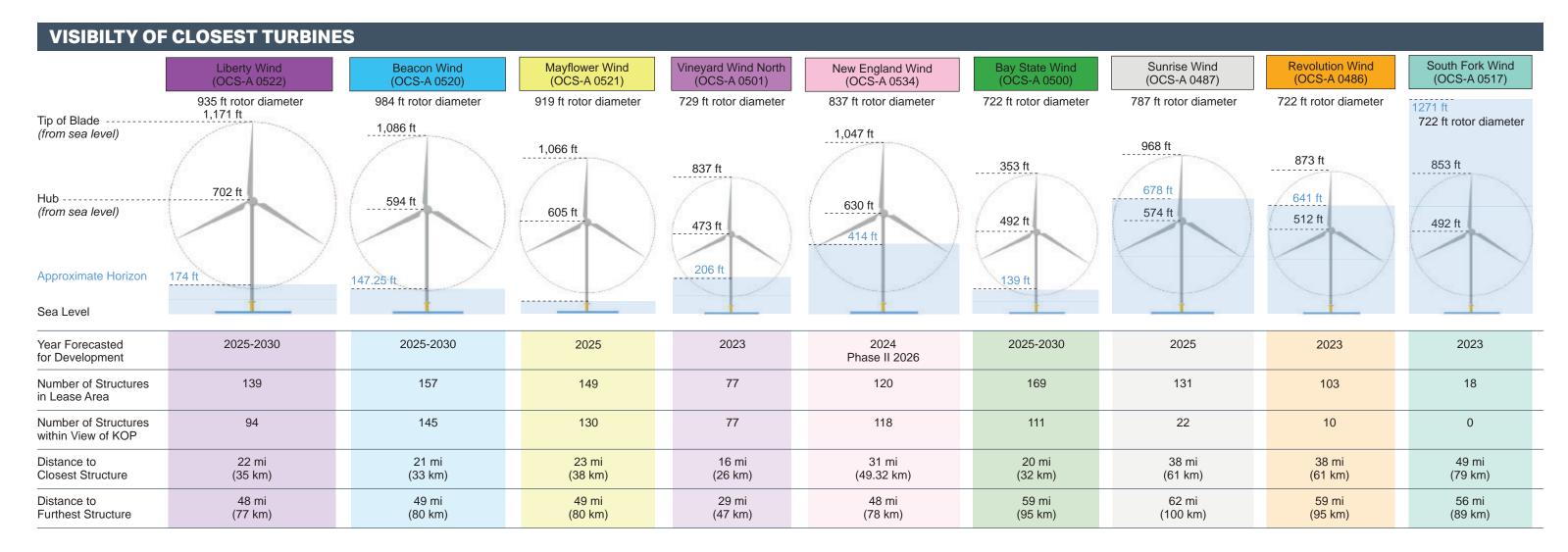
Weather Condition: Partly Cloudy

# CAMERA

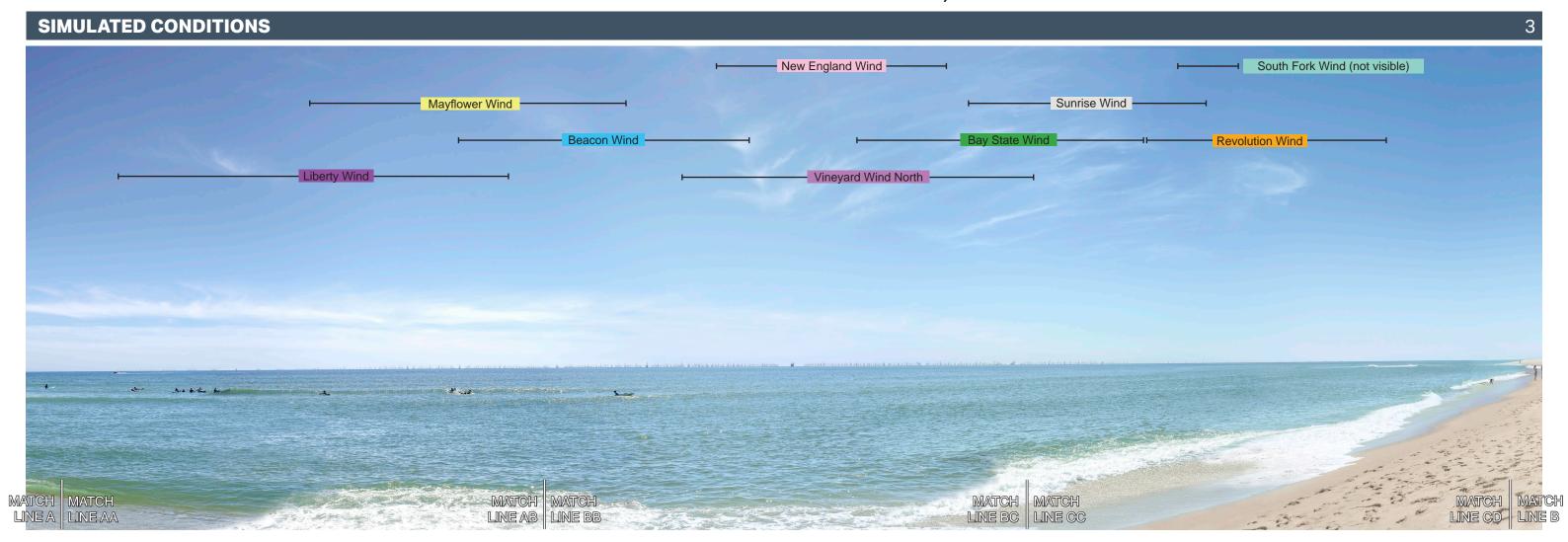
Camera Elevation: 23.0 ft / 7.0 m

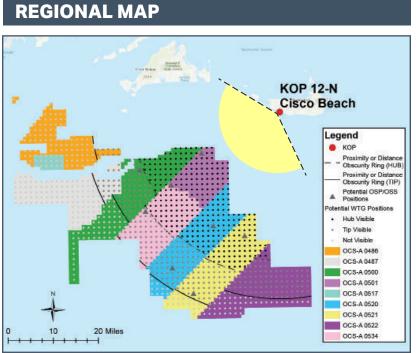
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach - Scenario 3 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

Furthest Visible WTG: 46 mi / 74 km
 Potential Number of Structures Visible: 577
 Potential Number of Structures Not Visible:

337

### **PHOTOGRAPH AND SITE**

Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Dunes, Salt Ponds/Tidal Marsh, Residential

Time of photograph: 1:25PM

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

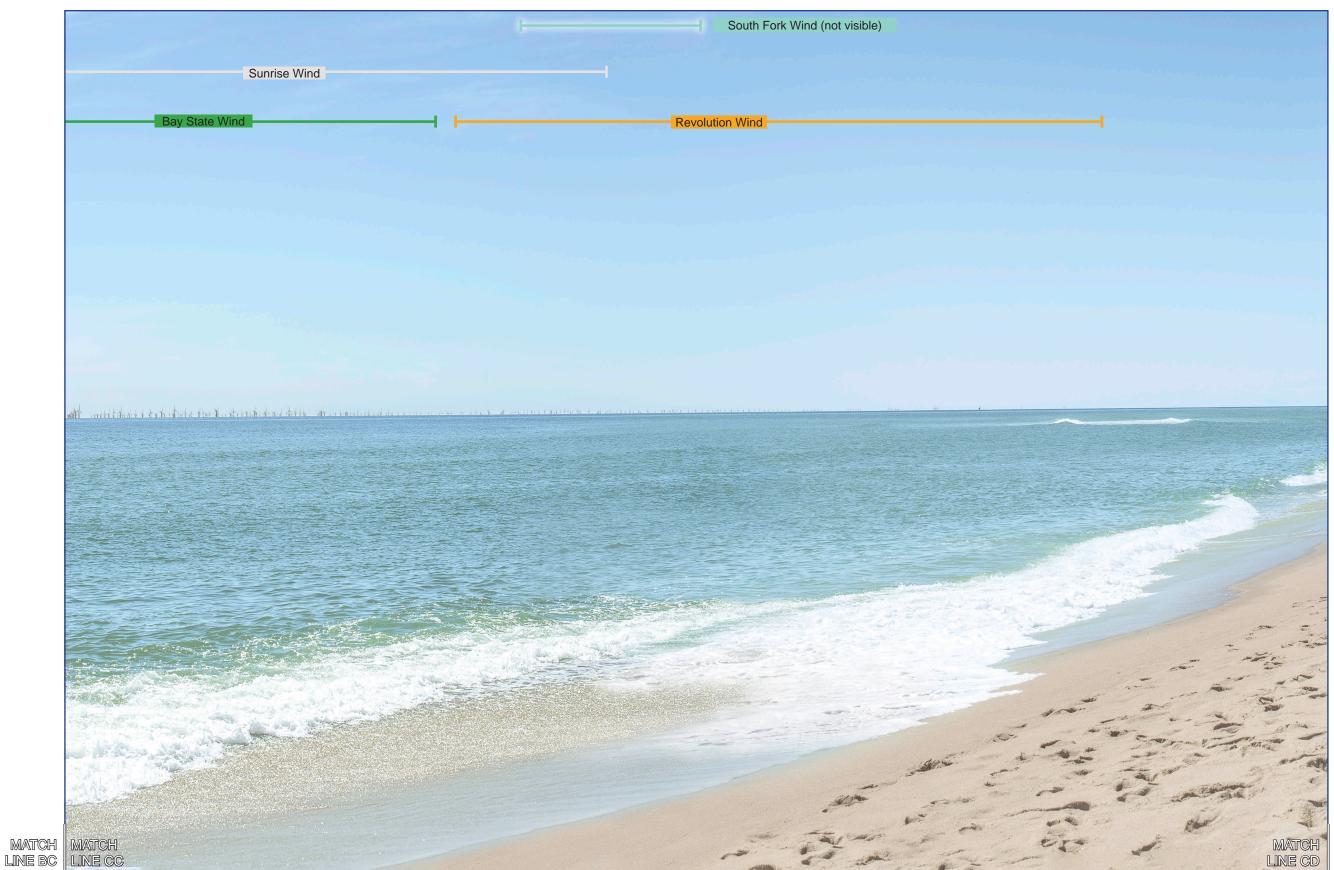
### CAMERA

Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



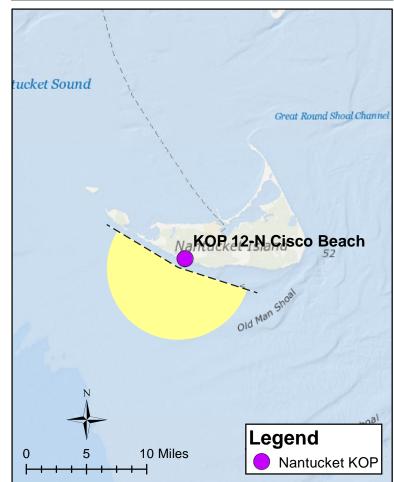
New England Wind Sunrise Wind Beacon Wind Vineyard Wind North Mayflower Wind 



### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



### **REGIONAL MAP**



### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km Vertical Field of View: 40° Potential Number of Structures Visible: 577 Nearest WTG: 16.2 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM Viewing direction: South (226°) Latitude: 41.252490°N Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Longitude: 70.154080°W Dunes, Salt Ponds/Tidal Marsh, Residential

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

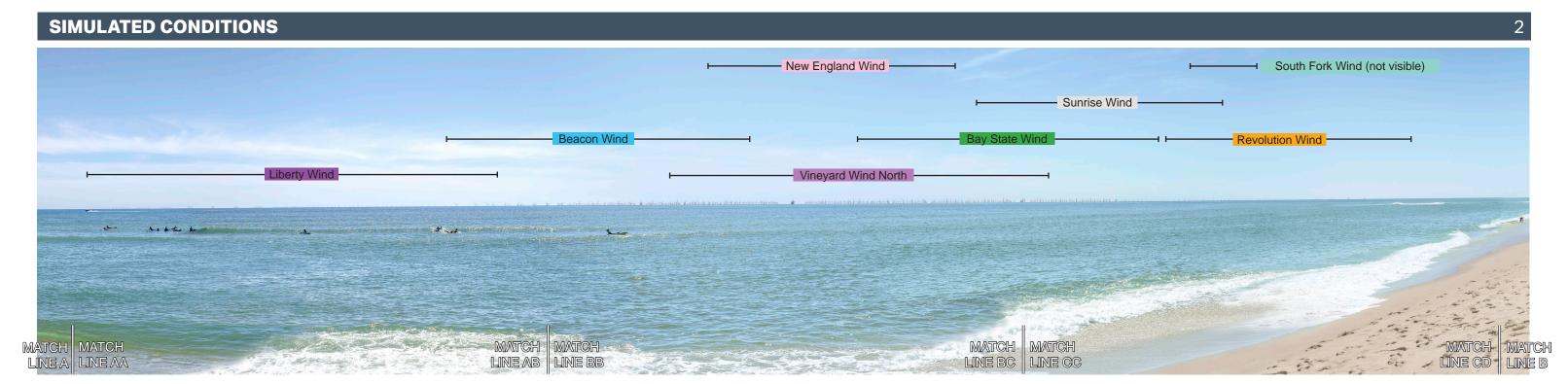
Wind Dir & Speed: N 6 mph

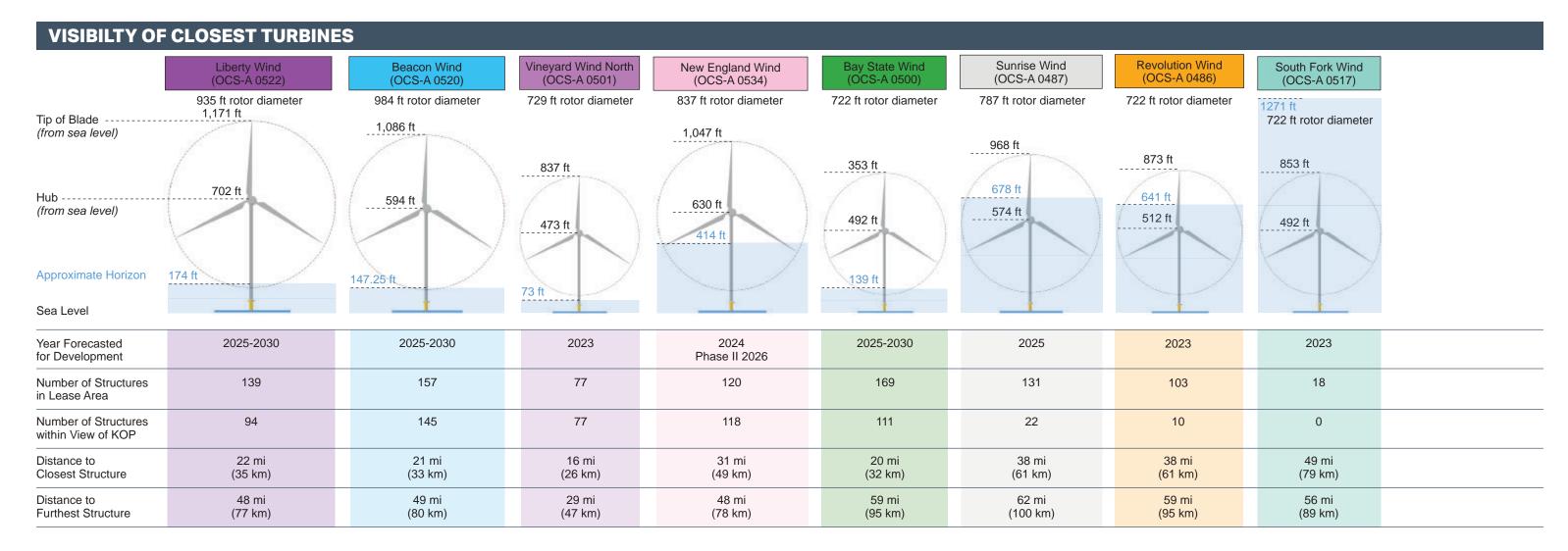
Weather Condition: Partly Cloudy

### **CAMERA**

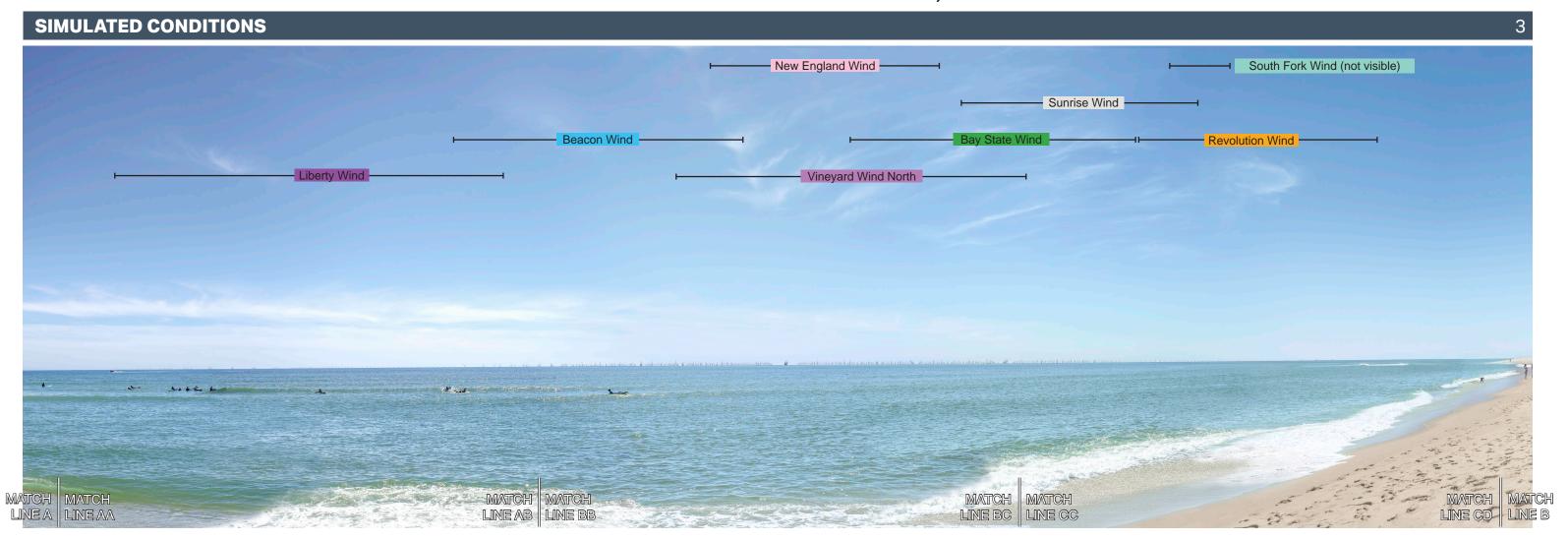
Camera Elevation: 23.0 ft / 7.0 m

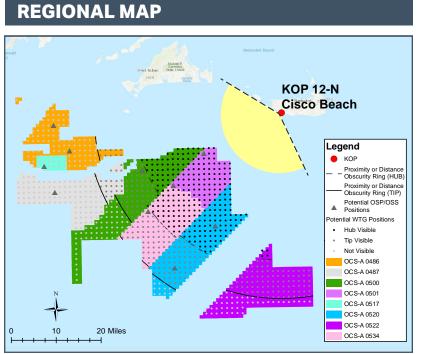
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach - Scenario 4 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi/26 km Furthest Visible WTG: 46 mi / 74 km

Potential Number of Structures Visible: 577

Potential Number of Structures Not Visible:

337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

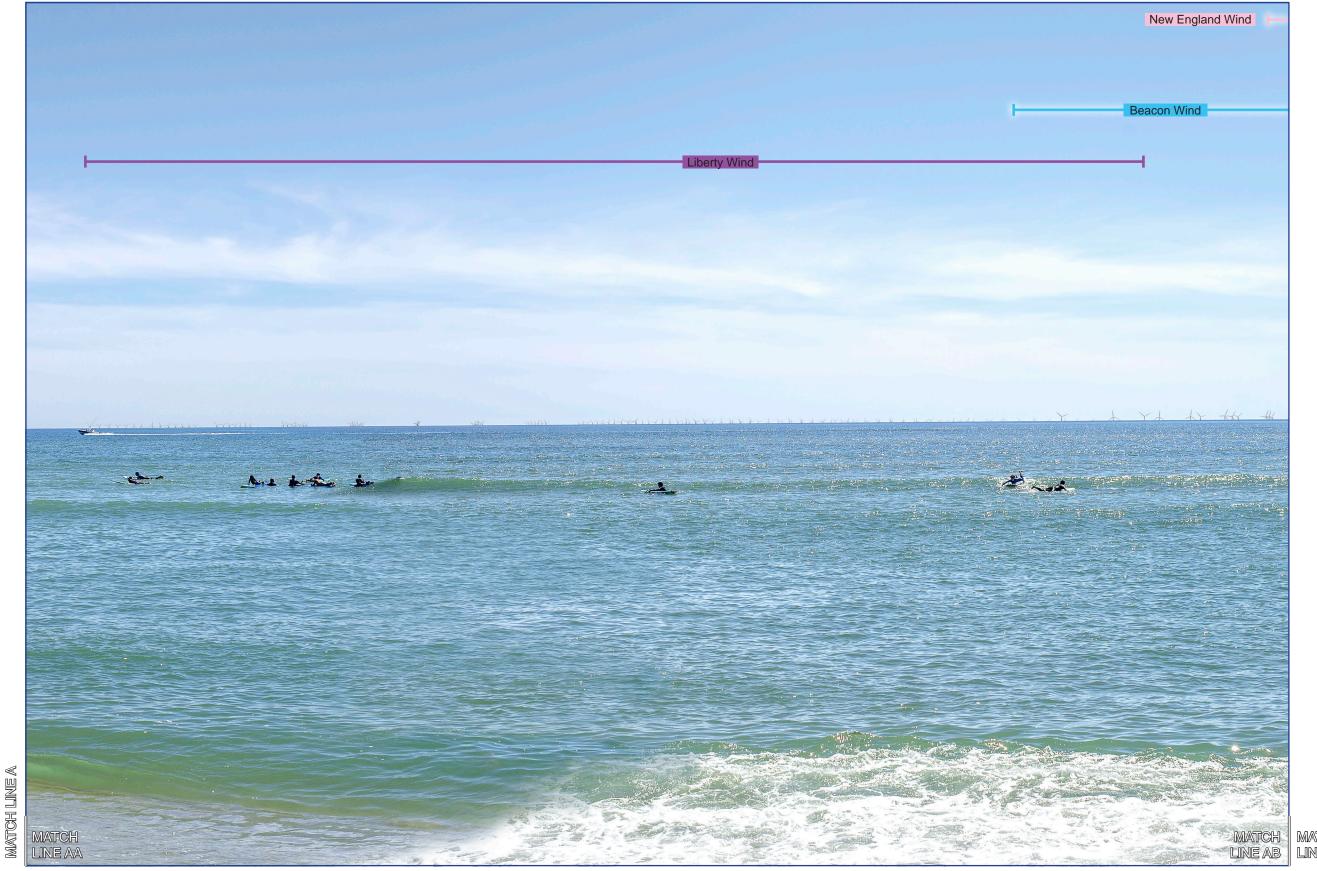
Temperature: 61° F Humidity: 90%

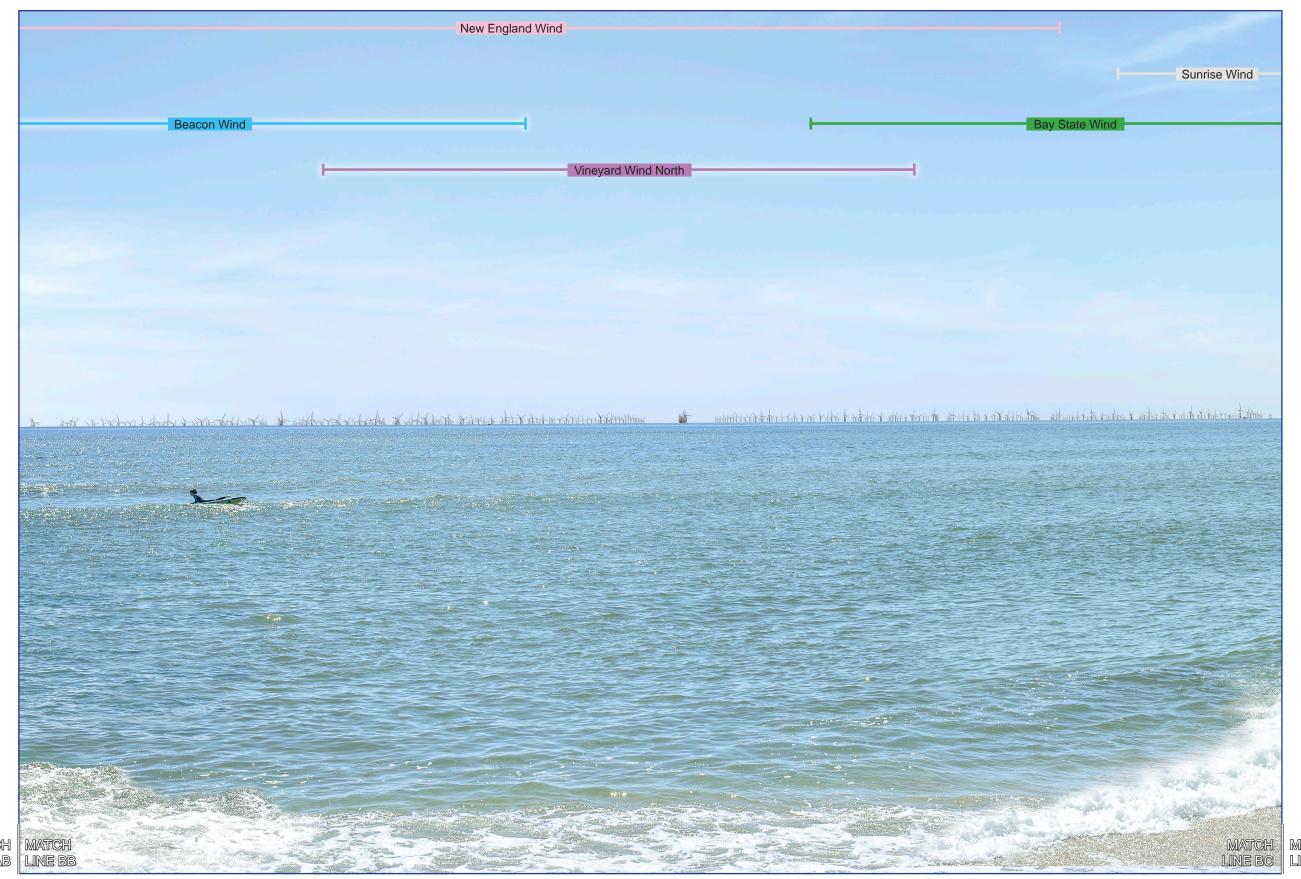
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





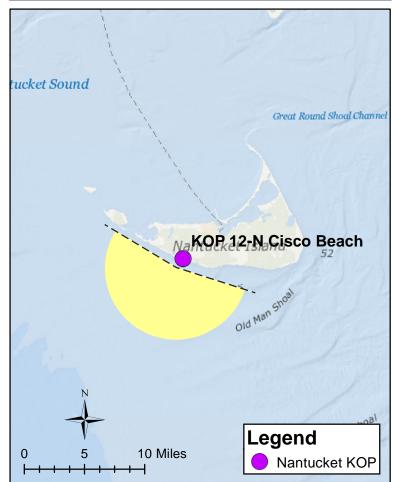
South Fork Wind (not visible) Sunrise Wind MATCH MATCH LINE BC LINE CC

MATCH LINE B

### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



### **REGIONAL MAP**



### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km Vertical Field of View: 40° Potential Number of Structures Visible: 577 Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM Viewing direction: South (226°) Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Dunes, Salt Ponds/Tidal Marsh,

Residential

Latitude: 41.252490°N Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F

Humidity: 90%

Wind Dir & Speed: N 6 mph

Weather Condition: Partly Cloudy

### **CAMERA**

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100

Fstop: f/7.1

Shutter: 1/1250 sec

Exposure bias: -0.7 step



### **VISIBILTY OF CLOSEST TURBINES**

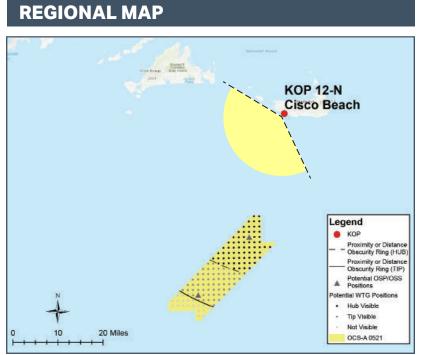
Mayflower Wind (OCS-A 0521)

919 ft rotor diameter



# KOP 12-N Cisco Beach - Scenario 5 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi/26 km

Furthest Visible WTG: 46 mi / 74 km

Potential Number of Structures Visible: 577

Potential Number of Structures Not Visible: 337

### PHOTOGRAPH AND SITE

Time of photograph: 1:25PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°)

Latitude: 41.252490°N Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

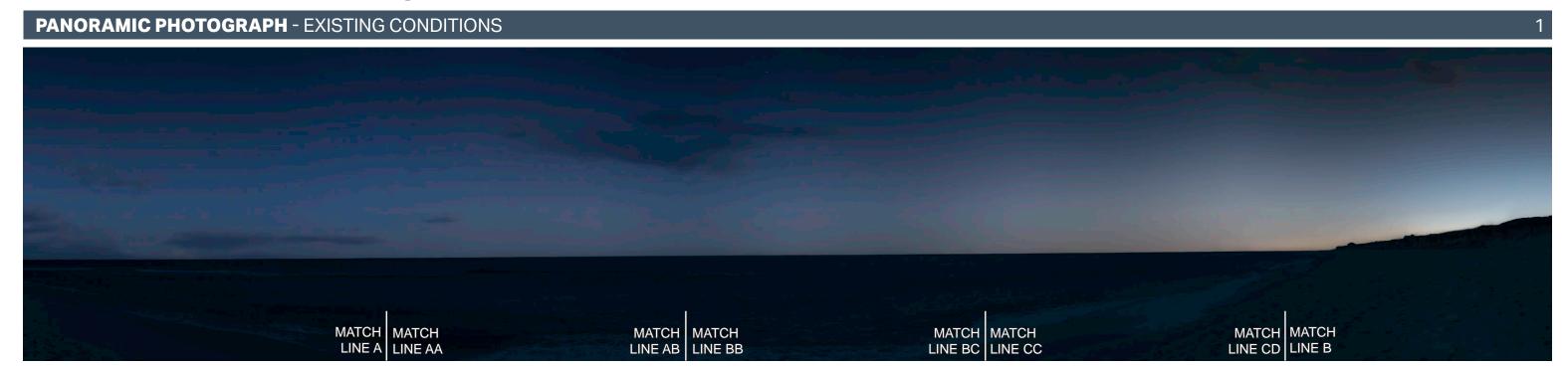




MATCH LINE CC



MATCH LINE B



# Tucket Sound Great Round Shoal Channel Na KOP 12 - Na Cisco Beach Old Man Shoal Legend Nantucket KOP

# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 9:00PM Viewing direction: South (226°)

Date of photograph: 8-20-20 Latitude: 41.252490°N

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential Lighting Direction: Backlit diffused

### Temperature: 61° F

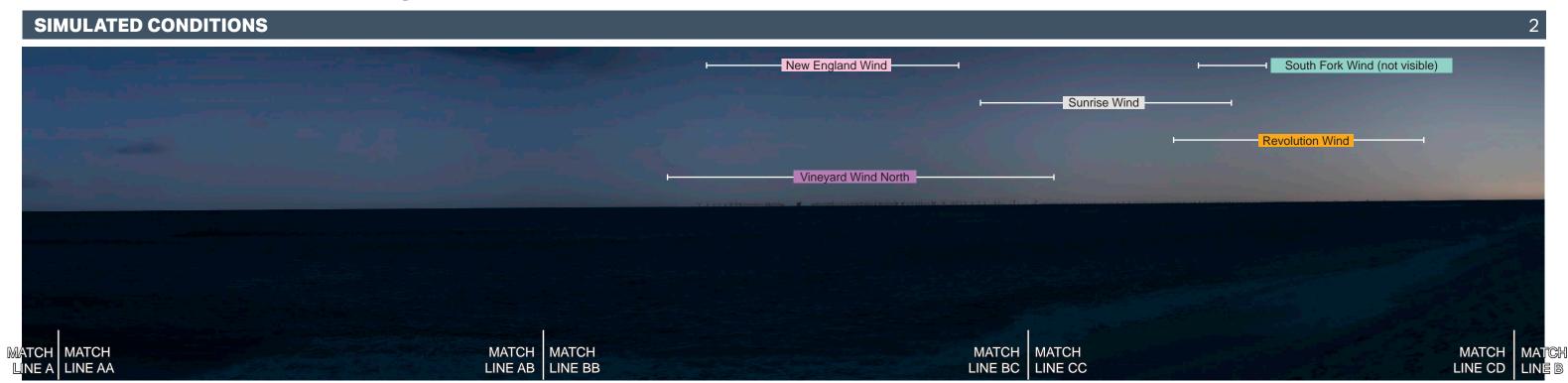
**ENVIRONMENT** 

Humidity: 90%
Wind Dir & Speed: N 6 mph
Weather Condition: Partly Cloudy

# CAMERA

Camera Elevation: 23.0 ft / 7.0 m

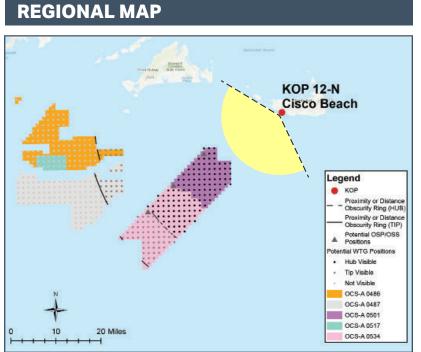
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach Night - Scenario 1 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km Furthest Visible WTG: 46 mi / 74 km

Potential Number of Structures Visible: 577

Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM

Date of photograph: 8-20-20

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

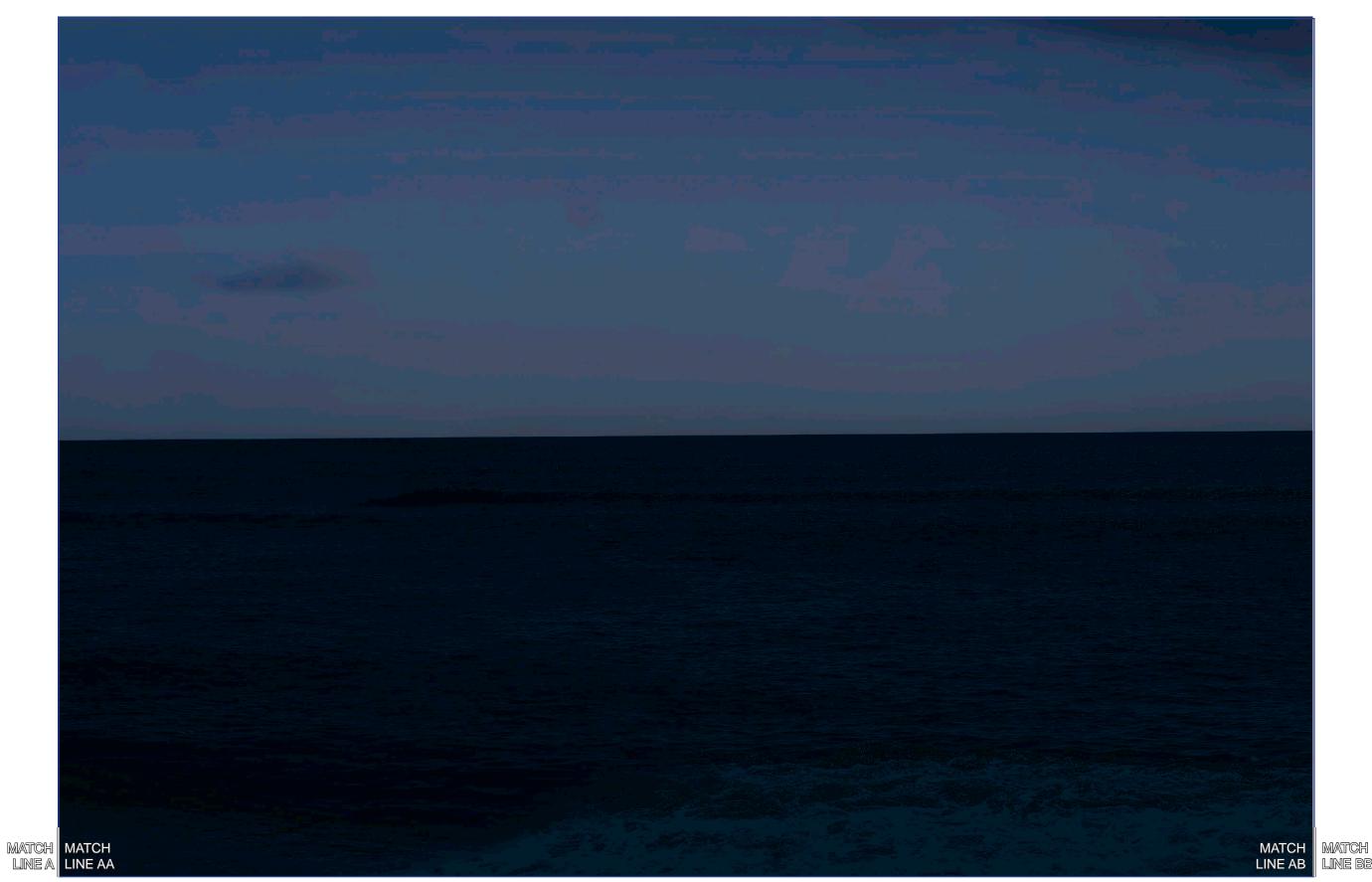
Temperature: 61° F Humidity: 90%

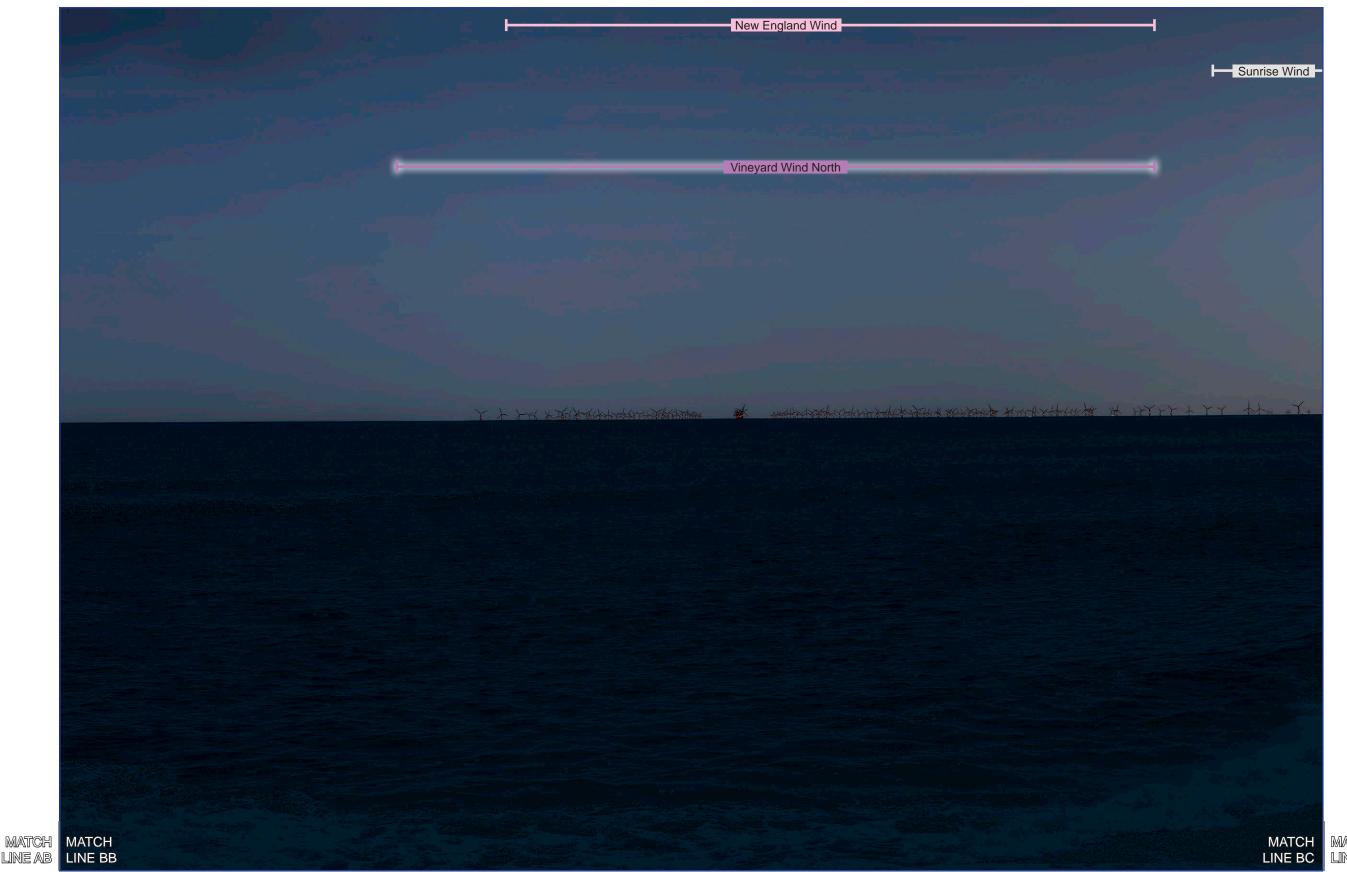
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1 Shutter: 1/1250





South Fork Wind (not visible) Sunrise Wind MATCH MATCH LINE BC LINE CC MATCH MATCH LINE CD LINE B



# Tucket Sound Great Round Shoal Channel Old Man Shoal Old Man Shoal Old Man Shoal Nantucket KOP

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 9:00PM Viewing direction: South (226°)

Date of photograph: 8-20-20 Latitude: 41.252490°N

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential Lighting Direction: Backlit diffused

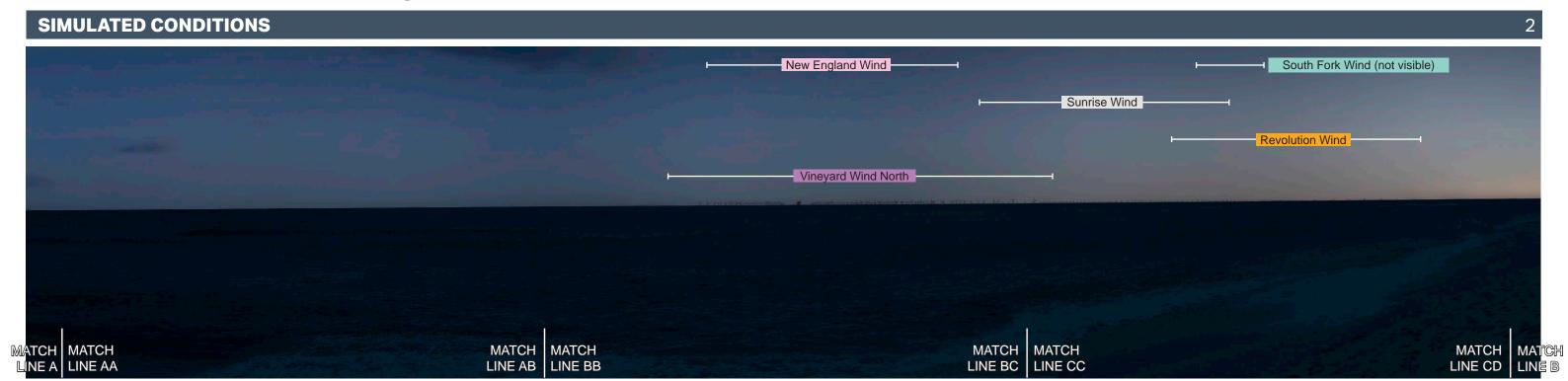
### **ENVIRONMENT**

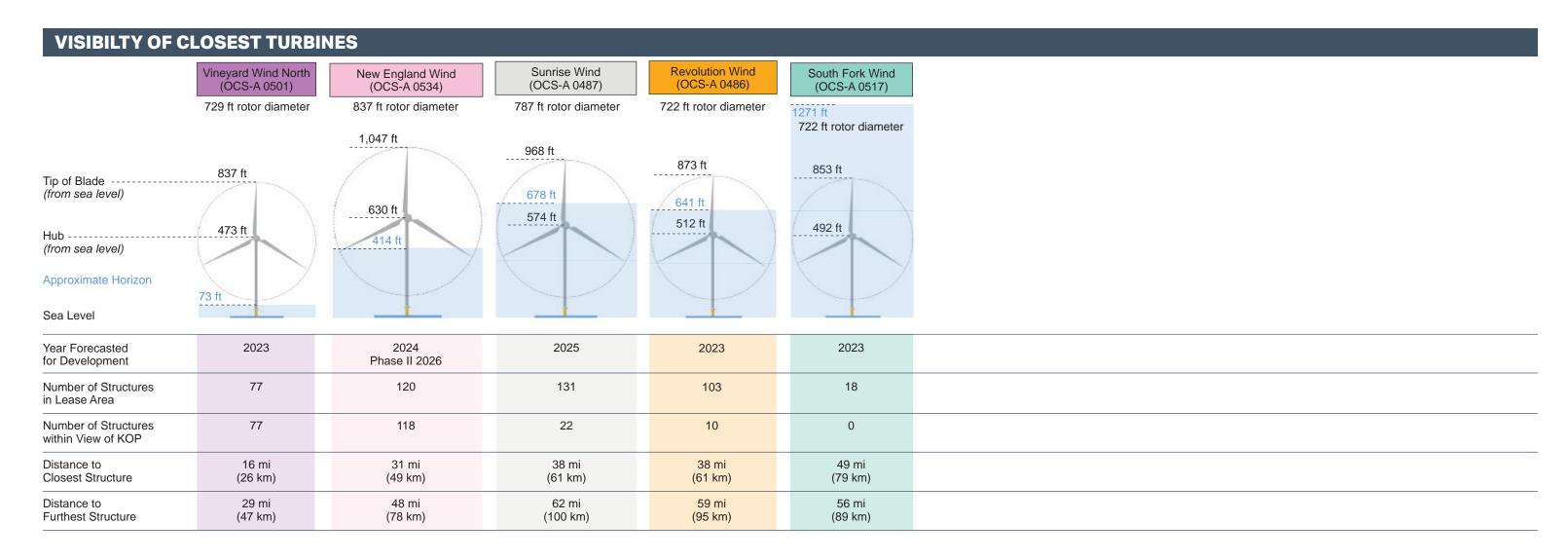
Temperature: 61° F
Humidity: 90%
Wind Dir & Speed: N 6 mph
Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 23.0 ft / 7.0 m

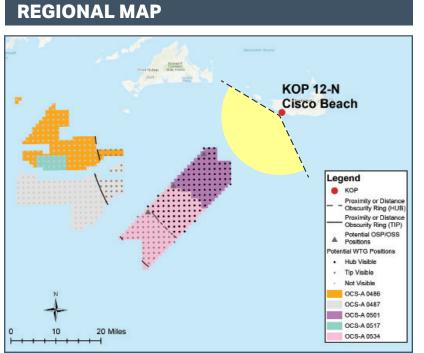
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach Night - Scenario 1 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

Purthest Visible WTG: 46 mi / 74 km
Potential Number of Structures Visible: 577
Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM

Date of photograph: 8-20-20

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

### CAMERA

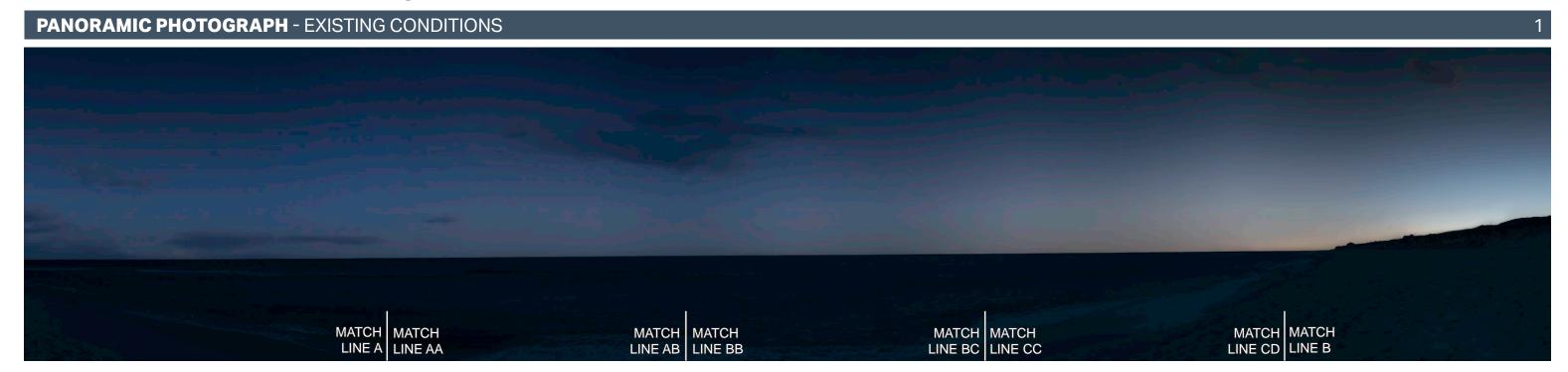
Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Sunrise Wind Vineyard Wind North MATCH MATCH

South Fork Wind (not visible) Sunrise Wind MATCH MATCH LINE BC LINE CC MATCH MATCH LINE CD LINE B



# O 5 10 Miles National Map Great Round Shoal Channel Old Man Snow Nantucket KOP

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible: 337

### **PHOTOGRAPH AND SITE**

Time of photograph: 9:00 PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°)
Latitude: 41.252490°N
Longitude: 70.154080°W
Lighting Direction: Backlit diffused

### **ENVIRONMENT**

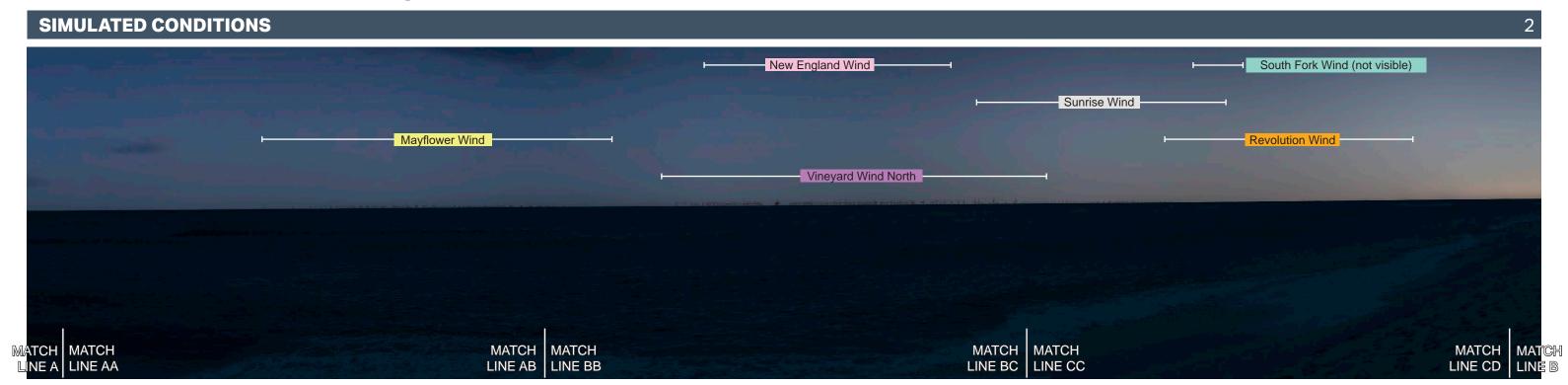
Temperature: 61° F Humidity: 90%

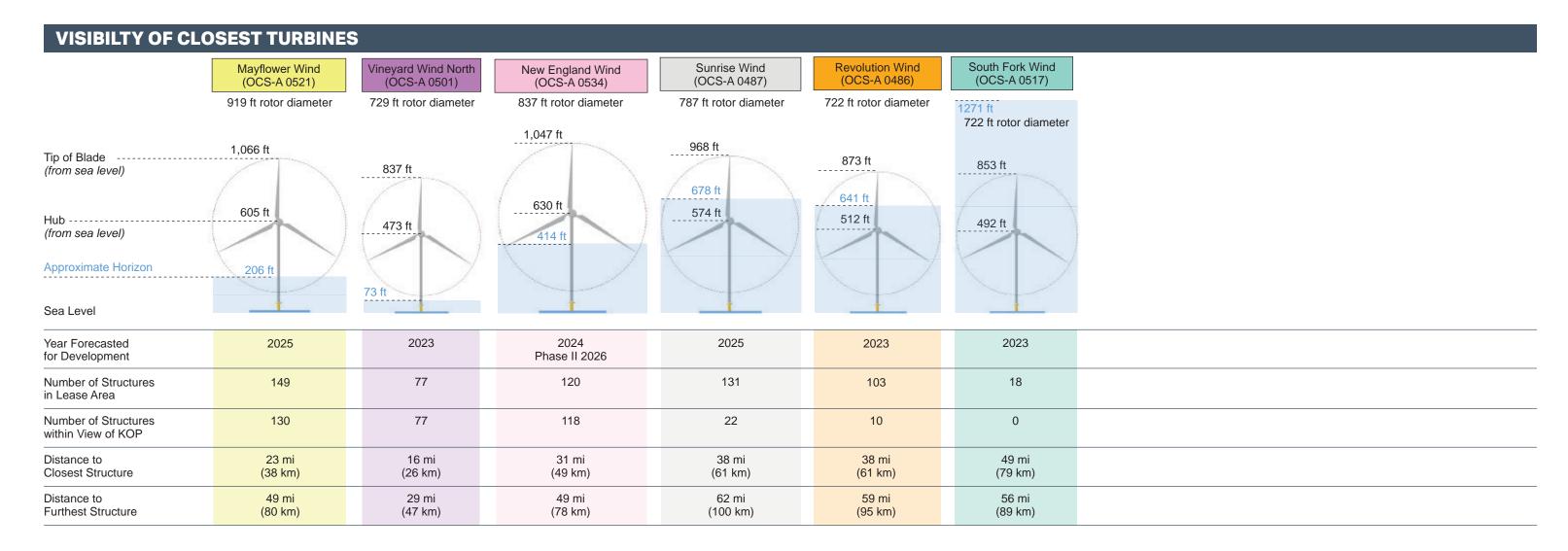
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

## CAMERA

Camera Elevation: 23.0 ft / 7.0 m

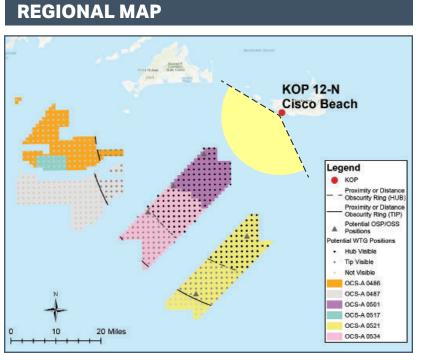
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





# KOP 12-N Cisco Beach Night - Scenario 2 (Human Field of View - 124°)







### PROJECT VIEW

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

Furthest Visible WTG: 46 mi / 74 km
Potential Number of Structures Visible: 577
Potential Number of Structures Not Visible:
337

### **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

### CAMERA

Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Sunrise Wind Vineyard Wind North Mayflower Wind MATCH MATCH

South Fork Wind (not visible) Sunrise Wind MATCH MATCH LINE BC LINE CC MATCH MATCH LINE CD LINE B

# KOP 12-N Cisco Beach Night - Scenario 3

# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS MATCH MATCH MATCH MATCH **MATCH** MATCH MATCH MATCH LINE A LINE AA LINE CD LINE B LINE AB LINE BB LINE BC LINE CC

# **REGIONAL MAP** ucket Sound Great Round Shoal Chann KOP 12-N Cisco Beach Legend 10 Miles Nantucket KOP

# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

# **PROJECT VIEW**

Furthest Visible WTG: 46 mi / 74 km Horizontal Field of View: 193° Vertical Field of View: 40° Potential Number of Structures Visible: 577 Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible:

# **PHOTOGRAPH AND SITE**

Time of photograph: 9:00 PM Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Dunes, Salt Ponds/Tidal Marsh, Residential

Latitude: 41.252490°N Longitude: 70.154080°W

Viewing direction: South (226°)

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

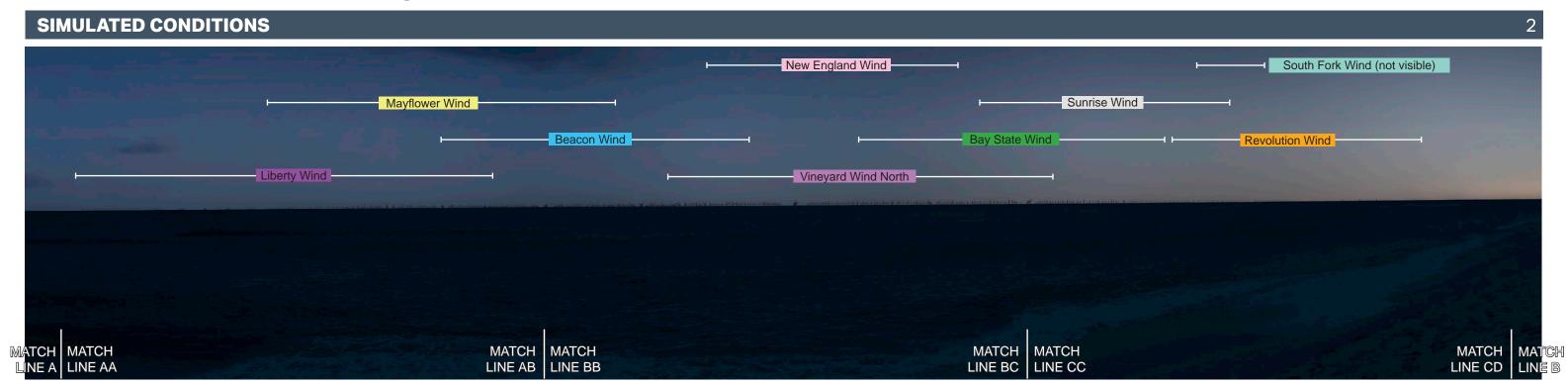
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

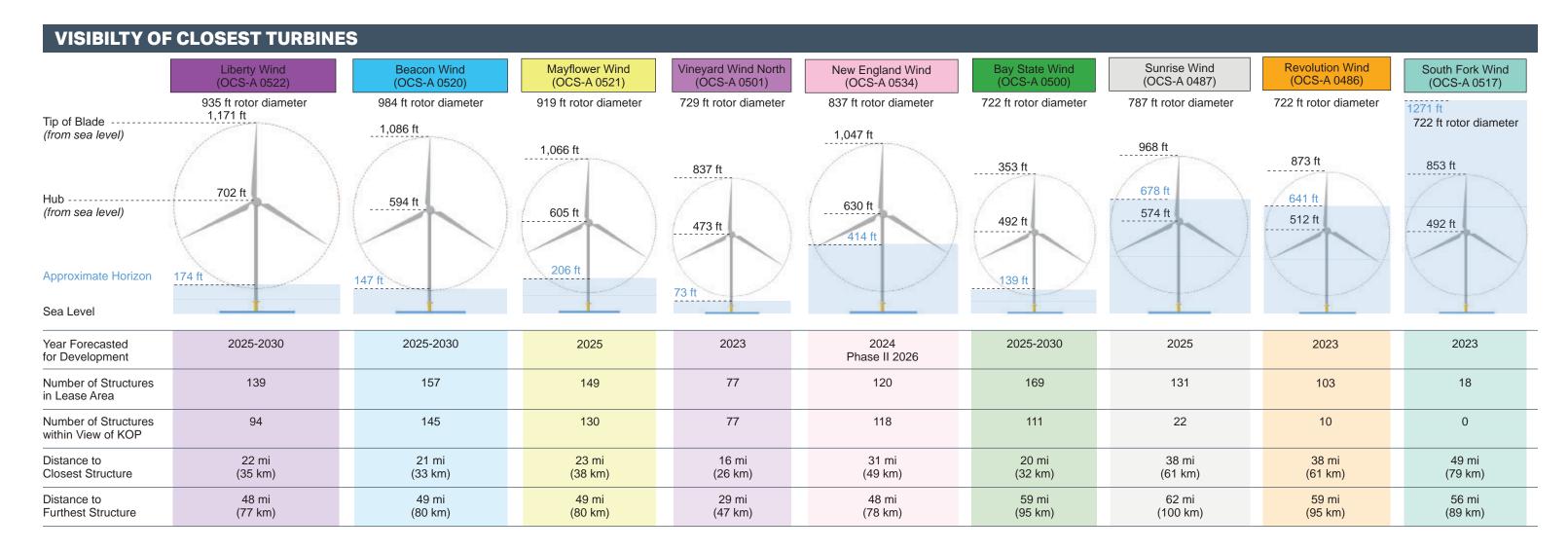
## **CAMERA**

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

# KOP 12-N Cisco Beach Night - Scenario 3

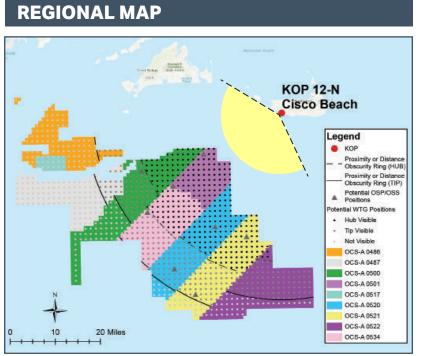




# KOP 12-N Cisco Beach Night - Scenario 3 (Human Field of View - 124°)

**SITE MAP** 







# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

Furthest Visible WTG: 46 mi / 74 km
Potential Number of Structures Visible: 577
Potential Number of Structures Not Visible: 337

# **PHOTOGRAPH AND SITE**

Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Dunes, Salt Ponds/Tidal Marsh, Residential

Time of photograph: 1:25PM

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

# CAMERA

Camera Elevation: 23.0 ft / 7.0 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Sunrise Wind Beacon Wind Bay State Wind Vineyard Wind North Mayflower Wind MATCH MATCH

South Fork Wind (not visible) Sunrise Wind Bay State Wind MATCH MATCH LINE BC LINE CC MATCH MATCH LINE CD LINE B

# KOP 12-N Cisco Beach Night - Scenario 4

# PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS 1 MATCH MATCH MATCH MATCH MATCH MATCH MATCH LINE A LINE AB LINE BB LINE BC LINE CC LINE CD LINE B

# One of the state o

**REGIONAL MAP** 

# KOP 12-N Cisco Beach Falmouth Ave

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 577

Nearest WTG: 16.2 mi / 26 km Potential Number of Structures Not Visible: 337

# **PHOTOGRAPH AND SITE**

Time of photograph: 9:00PM
Date of photograph: 8-20-20
L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°)
Latitude: 41.252490°N
Longitude: 70.154080°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 61° F
Humidity: 90%
Wind Dir & Speed: N 6 mph

Weather Condition: Partly Cloudy

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

**CAMERA** 

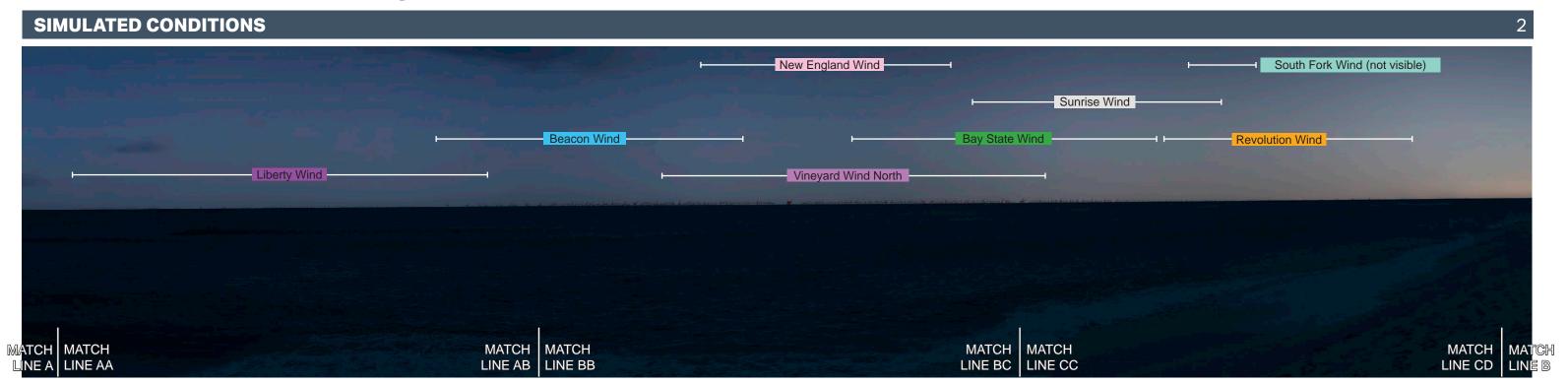
Shutter: 1/1250 sec Exposure bias: -0.7 step

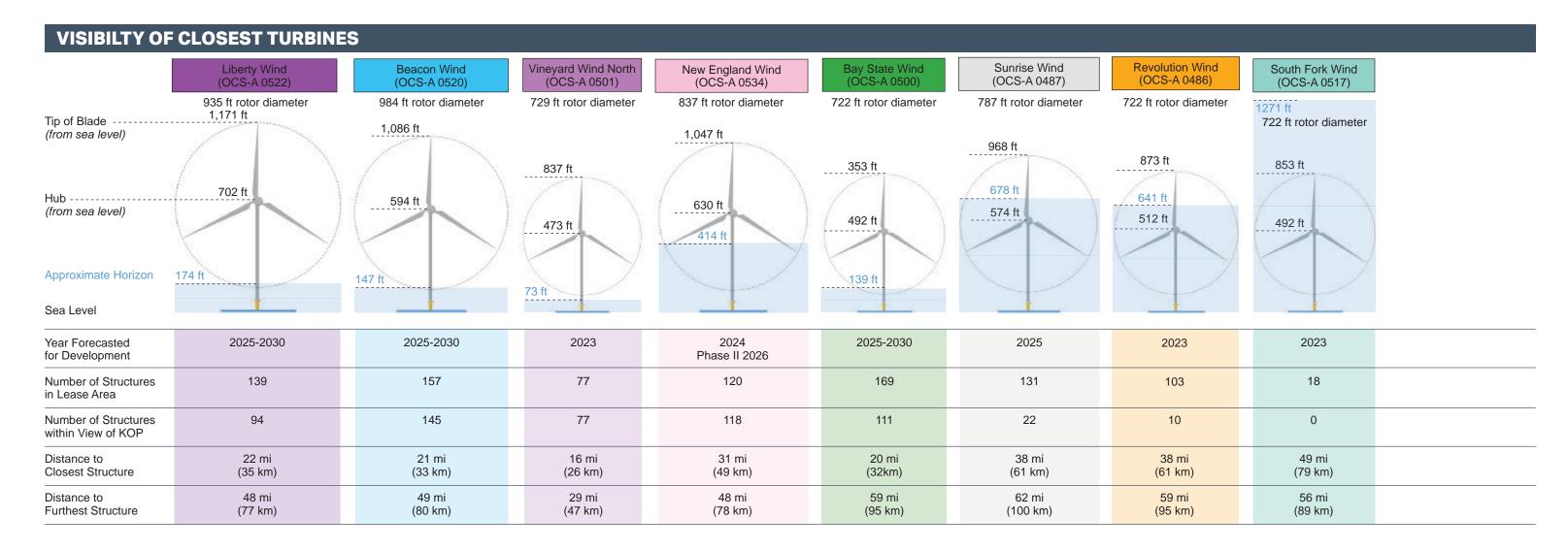
MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

Nantucket KOP

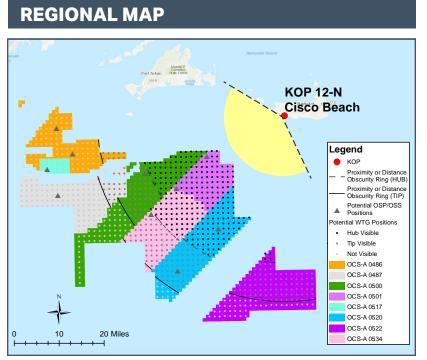
# KOP 12-N Cisco Beach Night - Scenario 4





# KOP 12-N Cisco Beach Night - Scenario 4 (Human Field of View - 124°)







# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km Furthest Visible WTG: 46 mi / 74 km
Potential Number of Structures Visible: 577
Potential Number of Structures Not Visible: 337

# **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM

Date of photograph: 8-20-20

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N

Longitude: 70.154080°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

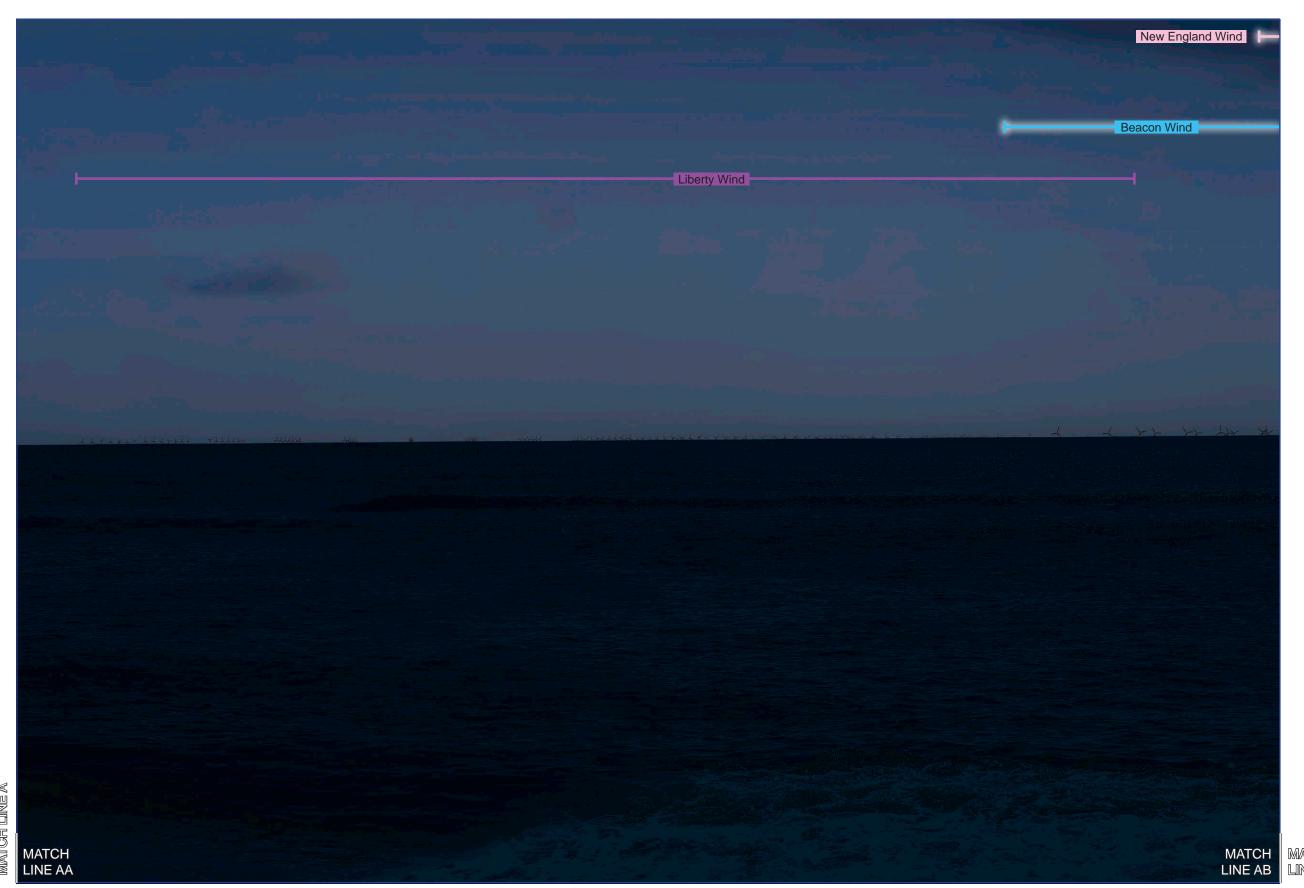
Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

# CAMERA

Camera Elevation: 23.0 ft / 7.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



5



South Fork Wind (not visible) Sunrise Wind Bay State Wind MATCH MATCH LINE BC LINE CC MATCH LINE CD

# KOP 12-N Cisco Beach Night - Scenario 5



Legend

Nantucke

# ucket Sound Great Round Shoal Chann KOP 12-N Cisco Beach Legend

10 Miles

Nantucket KOP

**REGIONAL MAP** 

# KOP 12-N Cisco Beach

# **PROJECT VIEW**

Furthest Visible WTG: 46 mi / 74 km Horizontal Field of View: 193° Vertical Field of View: 40° Potential Number of Structures Visible: 577 Nearest WTG: 16 mi / 26 km Potential Number of Structures Not Visible:

# **PHOTOGRAPH AND SITE**

Time of photograph: 9:00PM Viewing direction: South (226°) Date of photograph: 8-20-20 L/SCA: Open Ocean, Ocean Beach, Dunes, Salt Ponds/Tidal Marsh, Residential

Latitude: 41.252490°N Longitude: 70.154080°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

Temperature: 61° F Humidity: 90%

Wind Dir & Speed: N 6 mph

Weather Condition: Partly Cloudy

## **CAMERA**

Camera Elevation: 23.0 ft / 7.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Shutter: 1/1250 sec Exposure bias: -0.7 step

MATCH LINES define visual simulation detail areas

400 Feet

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

SITE MAP



# **VISIBILTY OF CLOSEST TURBINES**

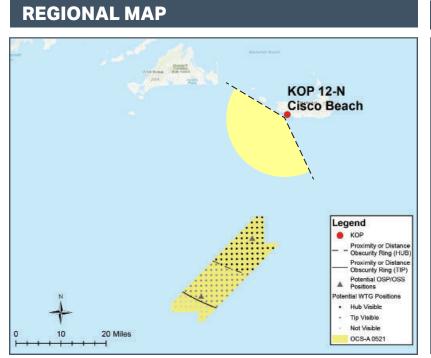
Mayflower Wind (OCS-A 0521)

919 ft rotor diameter



# KOP 12-N Cisco Beach Night - Scenario 5 (Human Field of View - 124°)





# KOP 12-N Cisco Beach Falmouth Ave

# PROJECT VIEW

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi / 26 km

24° Furthest Visible WTG: 46 mi / 74 km
 Potential Number of Structures Visible: 577
 Potential Number of Structures Not Visible: 337

# **PHOTOGRAPH AND SITE**

Time of photograph: 1:25PM

Date of photograph: 8-20-20

L/SCA: Open Ocean, Ocean Beach,
Dunes, Salt Ponds/Tidal Marsh,
Residential

Viewing direction: South (226°) Latitude: 41.252490°N Longitude: 70.154080°W

Lighting Direction: Backlit diffused

# **ENVIRONMENT**

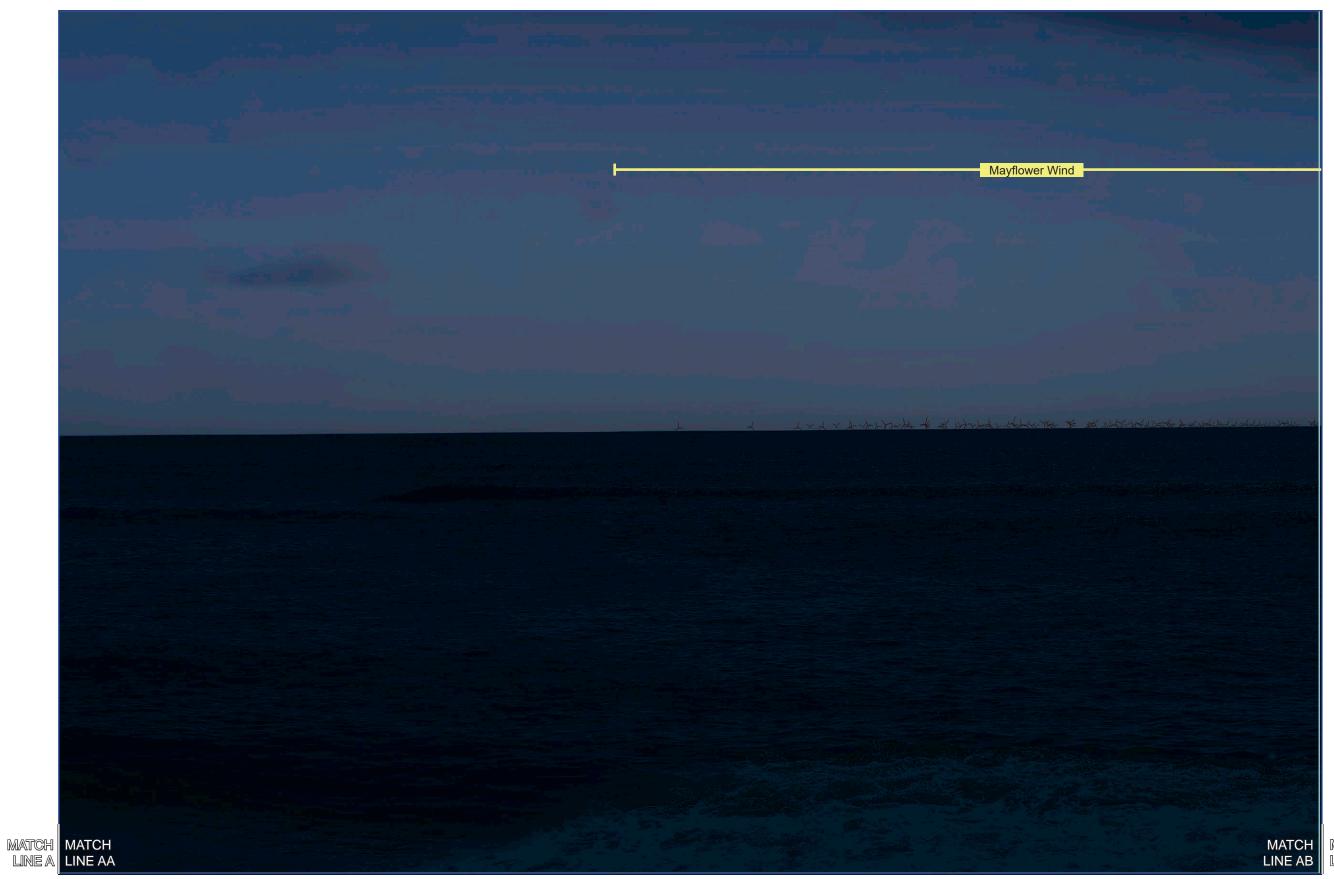
Temperature: 61° F Humidity: 90%

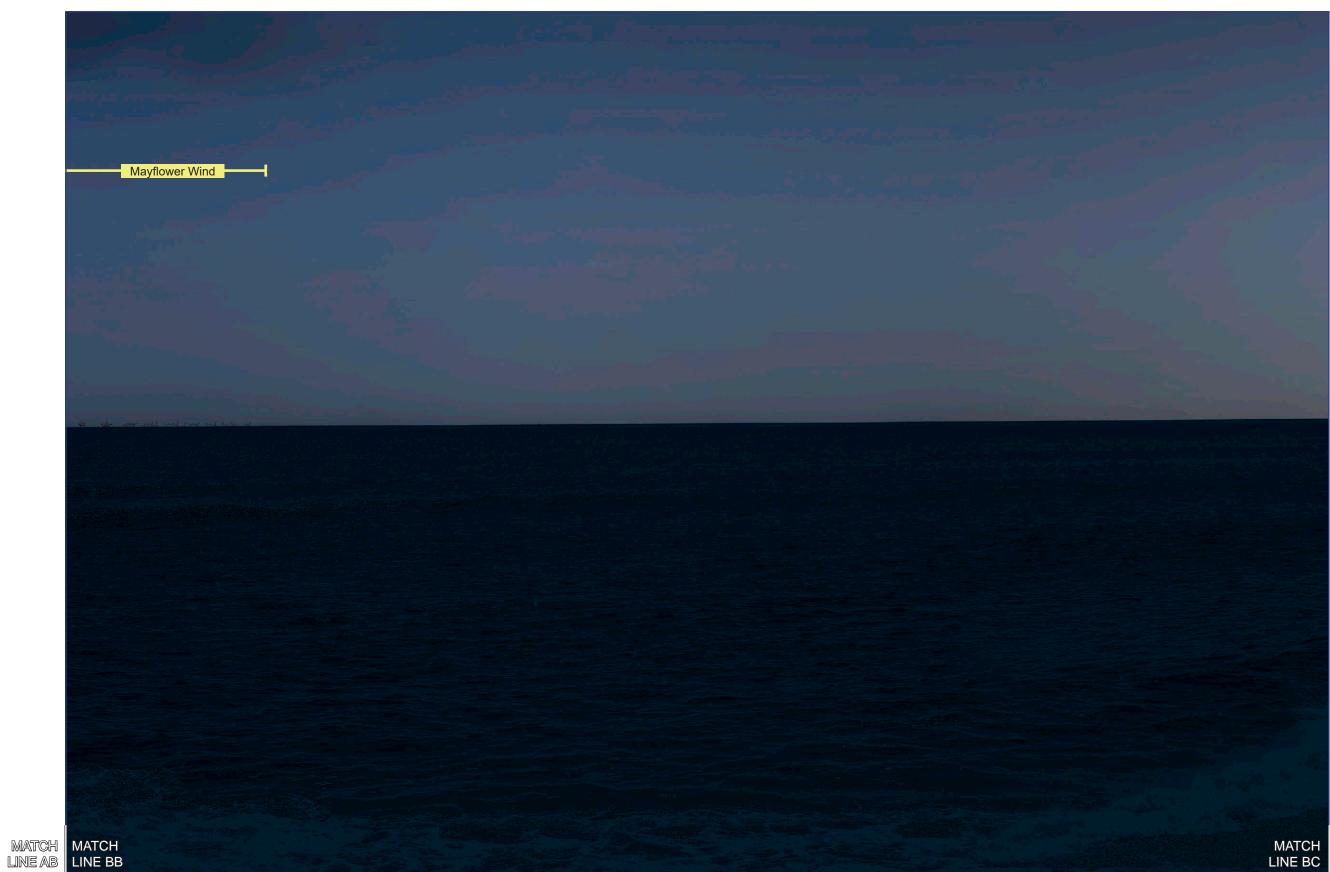
Wind Dir & Speed: N 6 mph Weather Condition: Partly Cloudy

# CAMERA

Camera Elevation: 23.0 ft / 7.0 m Nikon D4

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1 Shutter: 1/125



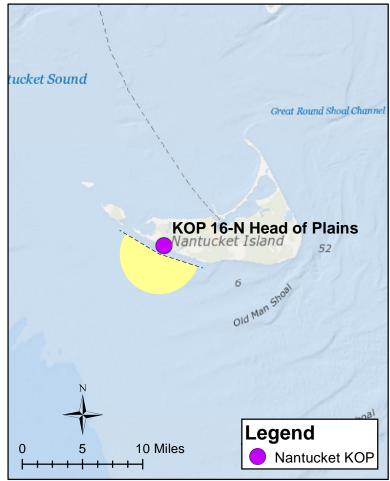




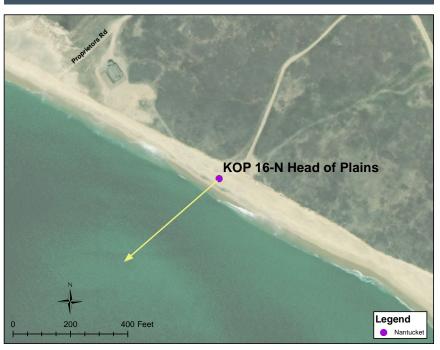
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 244

Nearest WTG: 16 mi /25 km Potential Number of WTGs Not Visible: 205

# PHOTOGRAPH AND SITE

Time of photograph: 3:54 PM Viewing direction: South (229°)

Date of photograph: 10-7-20 Latitude: 41.341724°N

L/SCA: Ocean Beach, Open Ocean, Dunes Lighting Direction: Sidelit

Humidity: 81%

umidity: 81%

Temperature: 66° F

**ENVIRONMENT** 

Wind Dir & Speed: SW 21 mph Weather Condition: Clear

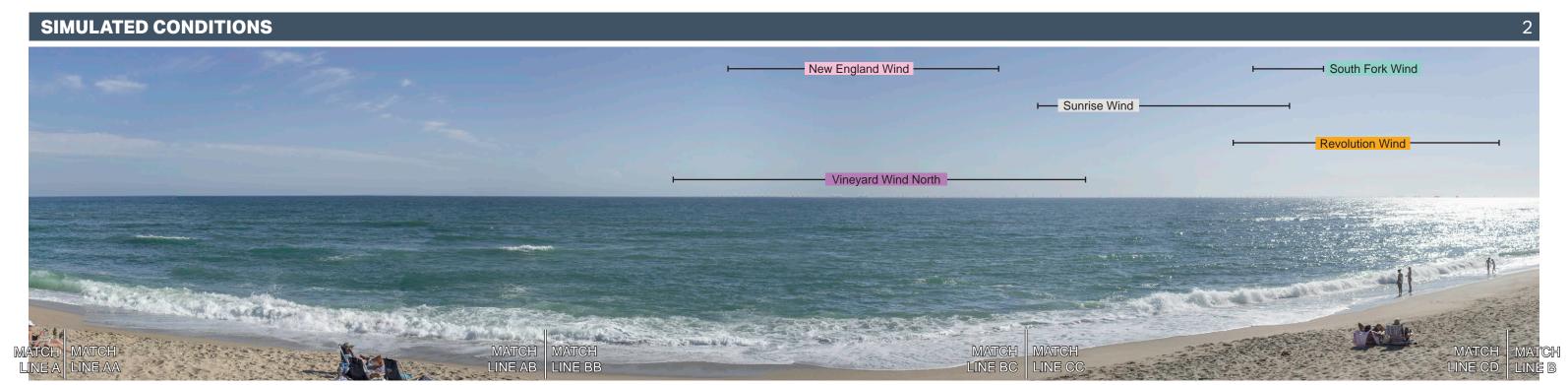
Camera Elevation: 20.5 ft / 6.3 m

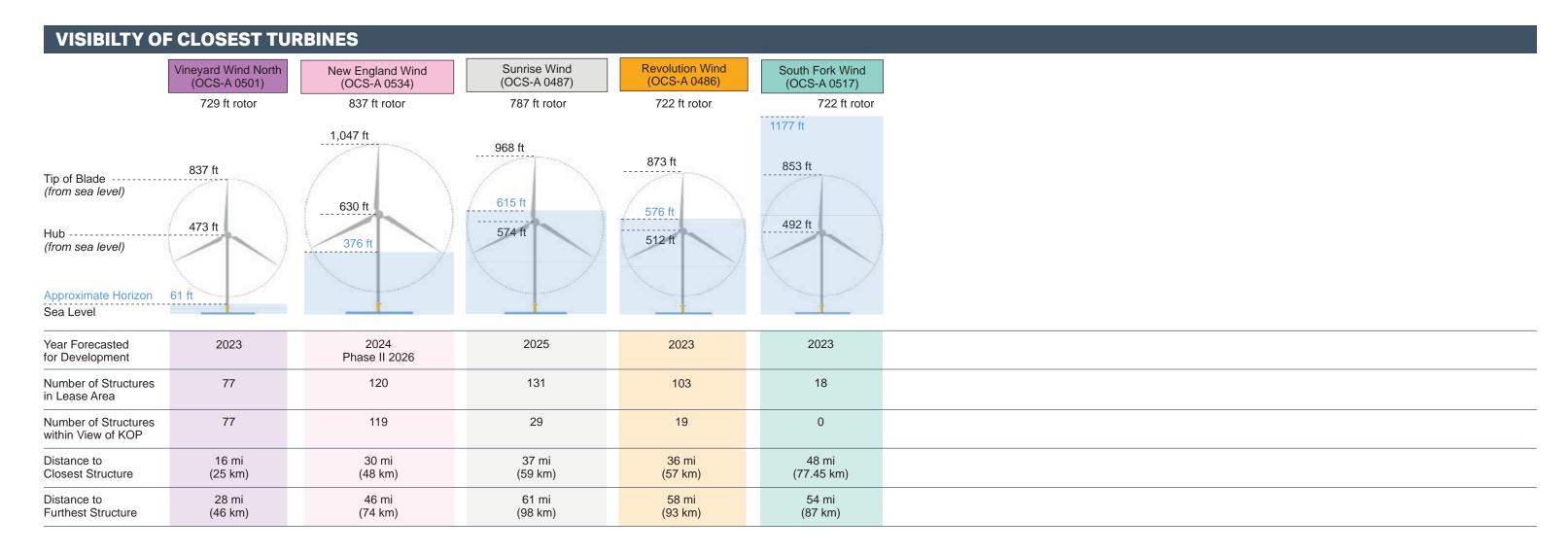
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

**CAMERA** 

Shutter: 1/1250 sec

Exposure bias: -0.7 step

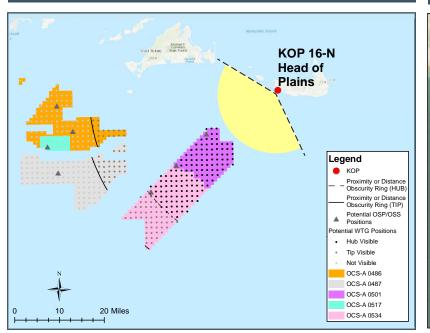




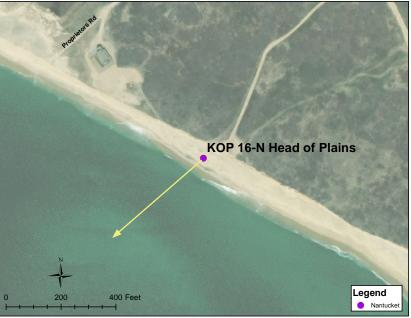
# KOP 16-N Head of Plains - Scenario 1 (Human Field of View - 124°)



# **REGIONAL MAP**



# SITE MAP



# **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 16 mi/25 km

Furthest Visible WTG: 46 mi / 74 km

Potential Number of WTGs Visible: 244

Potential Number of WTGs Not Visible: 205

Viewing direction: South (229°)

# **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM Date of photograph: 10-7-20 L/SCA: Ocean Beach, Open Ocean, Dunes

-7-20 Latitude: 41.341724°N

Den Longitude: 70.179524°W

Lighting Direction: Sidelit

# **ENVIRONMENT**

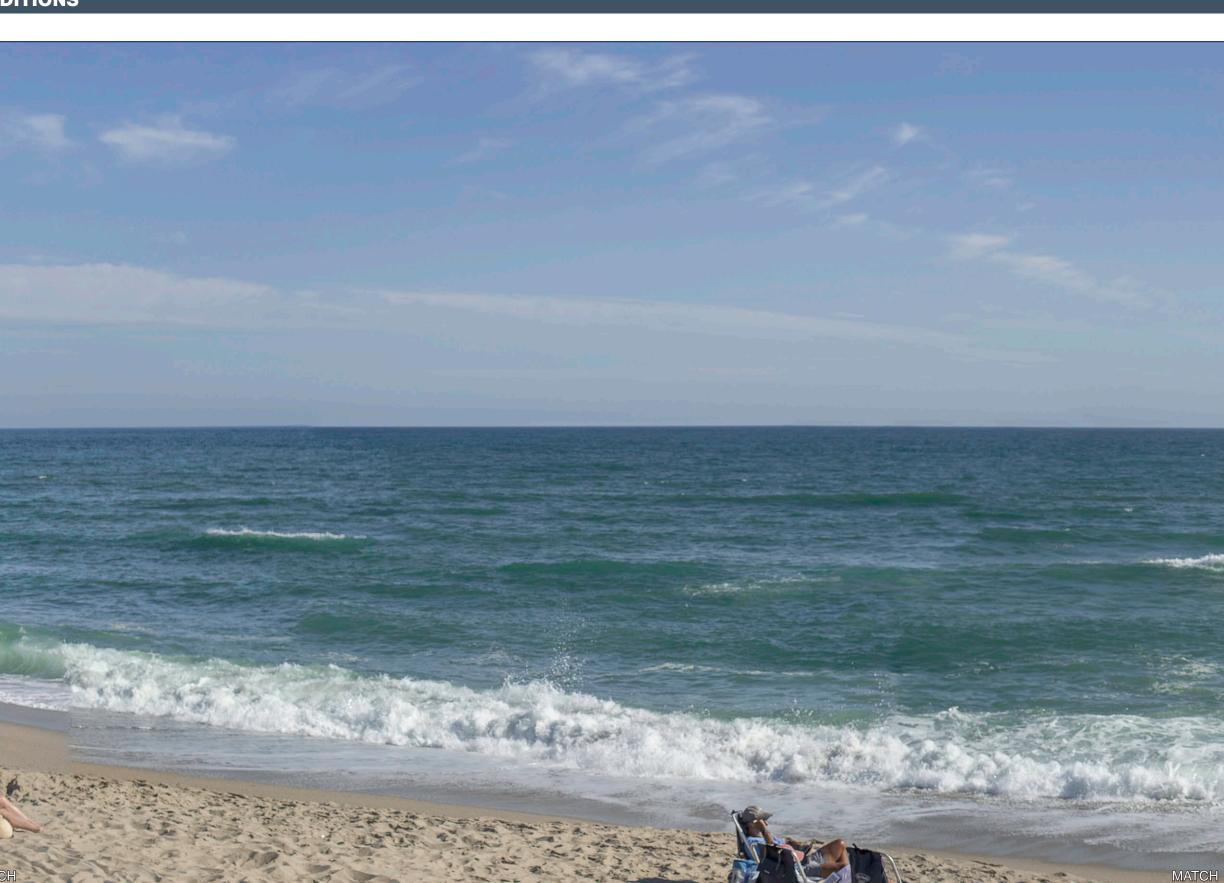
Temperature: 66° F Humidity: 81%

Wind Dir & Speed: SW 21 mph Weather Condition: Clear

# CAMERA

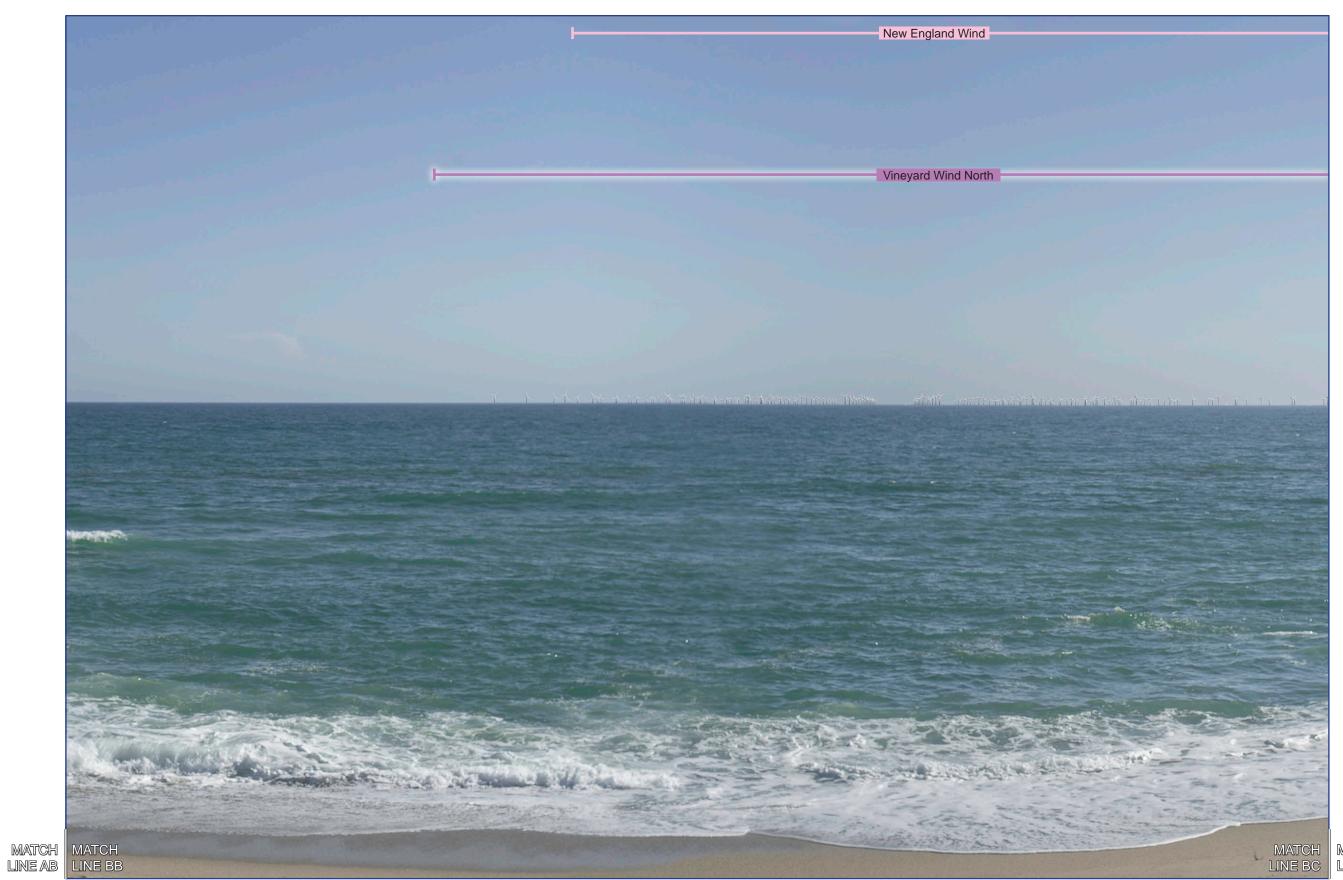
Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



MATCH LINE A

LINE AB LINE BB



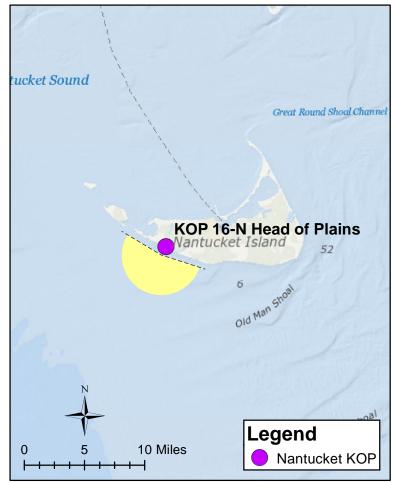
South Fork Wind Sunrise Wind Vineyard Wind North MATCH MATCH

LINE B

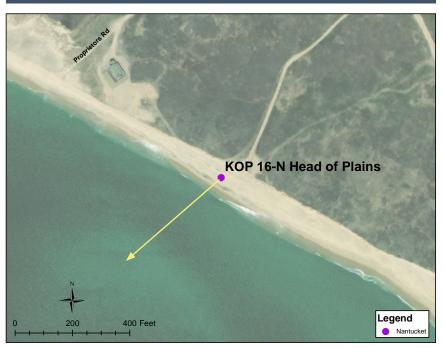
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 376

Nearest WTG: 16 mi / 25 km Potential Number of WTGs Not Visible: 222

# **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM
Date of photograph: 10-7-20
L/SCA: Ocean Beach, Open
Ocean, Dunes

Viewing direction: South (229°)
Latitude: 41.341724°N
Longitude: 70.179524°W
Lighting Direction: Sidelit

# **ENVIRONMENT**

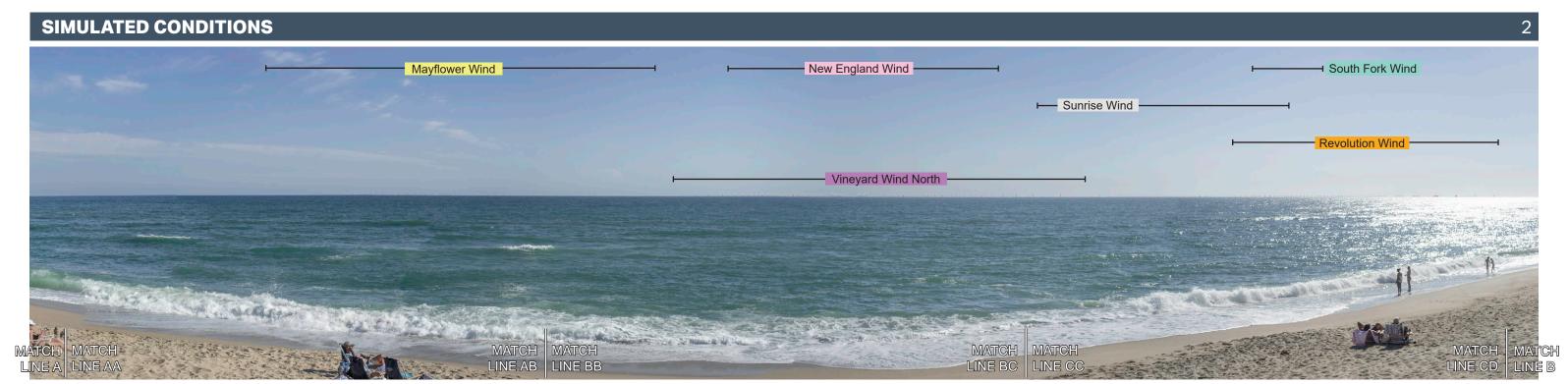
Temperature: 66° F Humidity: 81%

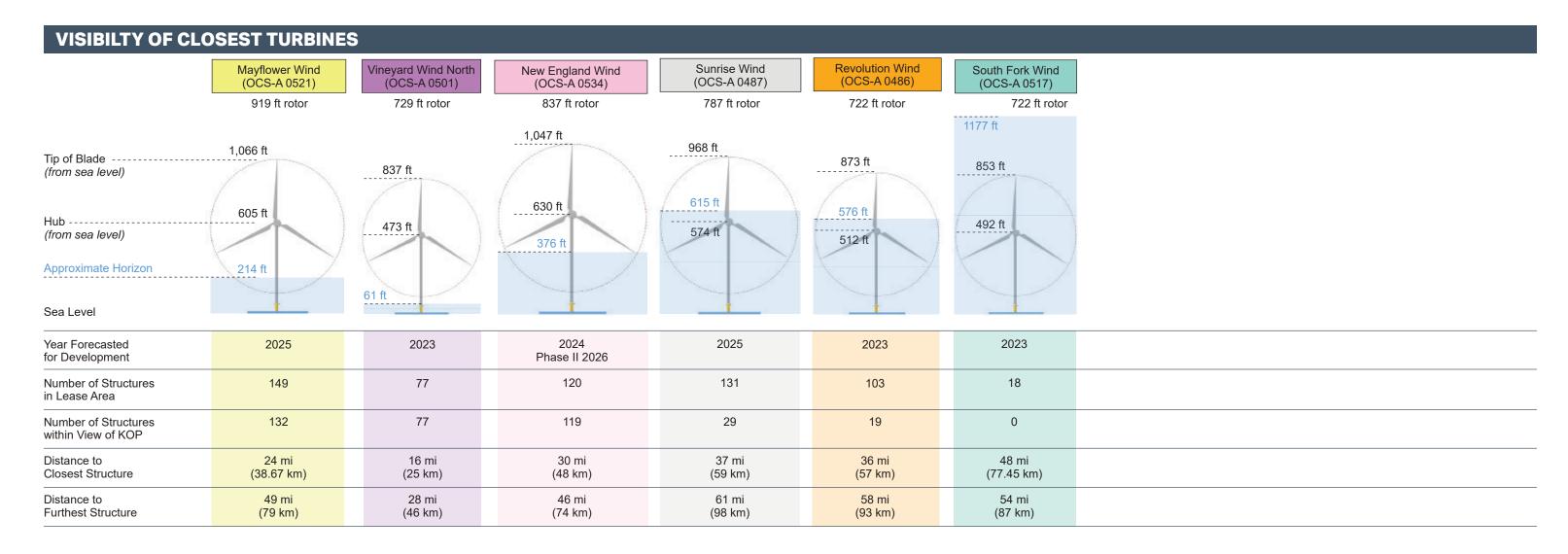
Wind Dir & Speed: SW 21 mph Weather Condition: Clear

# CAMERA

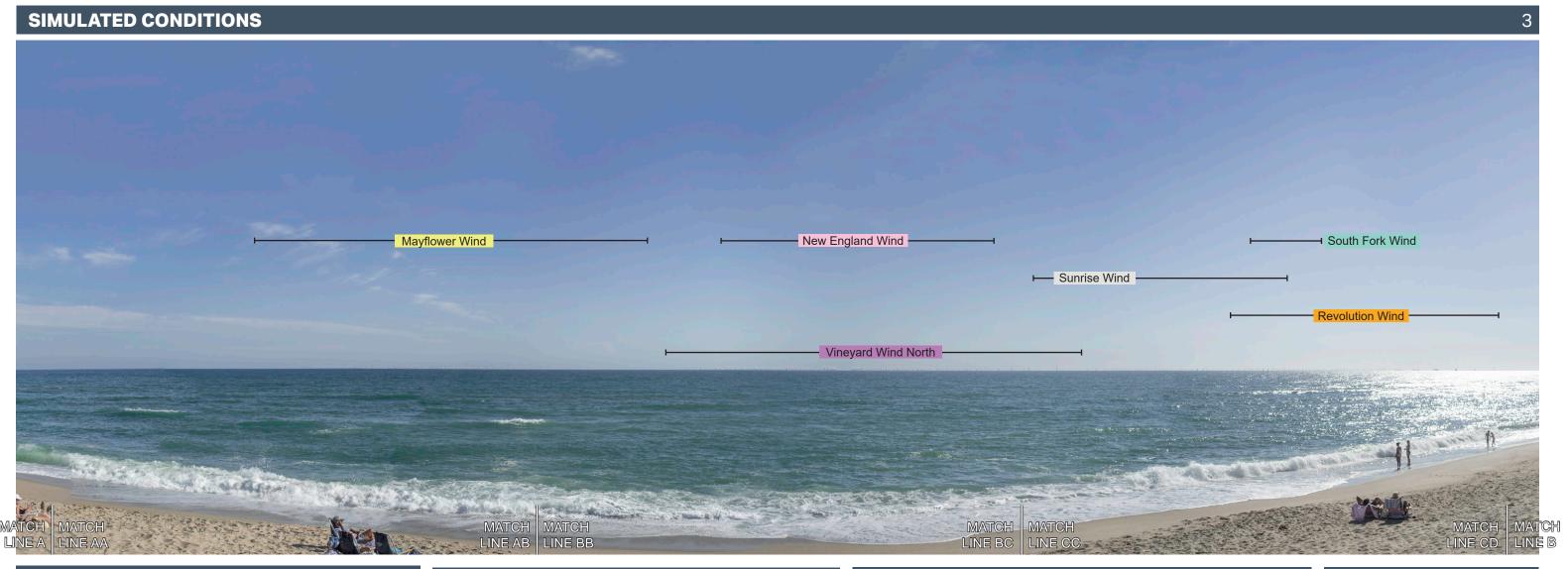
Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

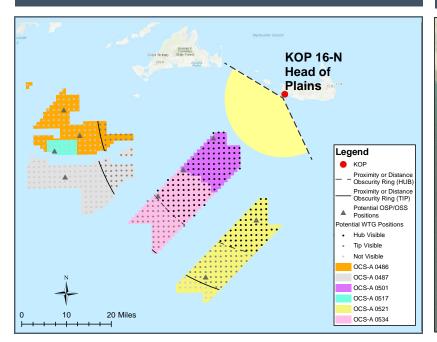




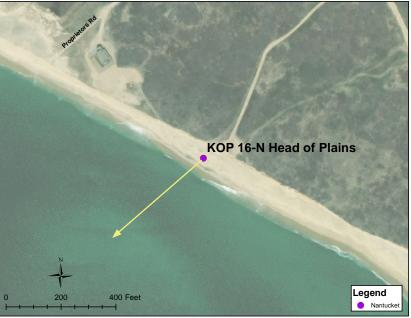
# KOP 16-N Head of Plains - Scenario 2 (Human Field of View - 124°)



# **REGIONAL MAP**



## **SITE MAP**



# **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 376

Nearest WTG: 16 mi /25 km Potential Number of WTGs Not Visible: 222

# **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM
Date of photograph: 10-7-20
L/SCA: Ocean Beach, Open
Ocean, Dunes

Viewing direction: South (229°)
Latitude: 41.341724°N
Longitude: 70.179524°W
Lighting Direction: Sidelit

# **ENVIRONMENT**

Temperature: 66° F Humidity: 81%

Wind Dir & Speed: SW 21 mph Weather Condition: Clear

# CAMERA

Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Mayflower Wind

MATCH LINE BB

New England Wind Mayflower Wind Vineyard Wind North MATCH MATCH

LINE AB LINE BB

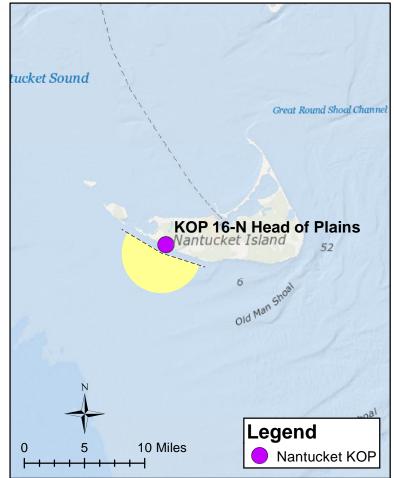
South Fork Wind Sunrise Wind Vineyard Wind North MATCH MATCH

LINE B

# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 746

Nearest WTG: 16 mi / 25 km Potential Number of WTGs Not Visible: 317

# **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM Viewing direction: South (229°)

Date of photograph: 10-7-20 Latitude: 41.341724°N

L/SCA: Ocean Beach, Open Ocean, Dunes Lighting Direction: Sidelit

# **ENVIRONMENT**

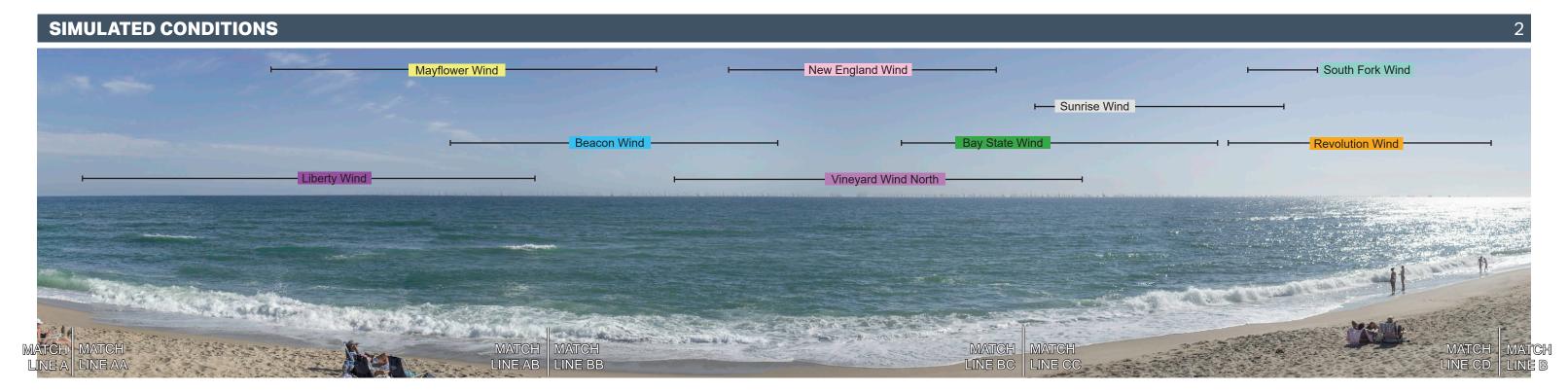
Temperature: 66° F
Humidity: 81%
Wind Dir & Speed: SW 21 p

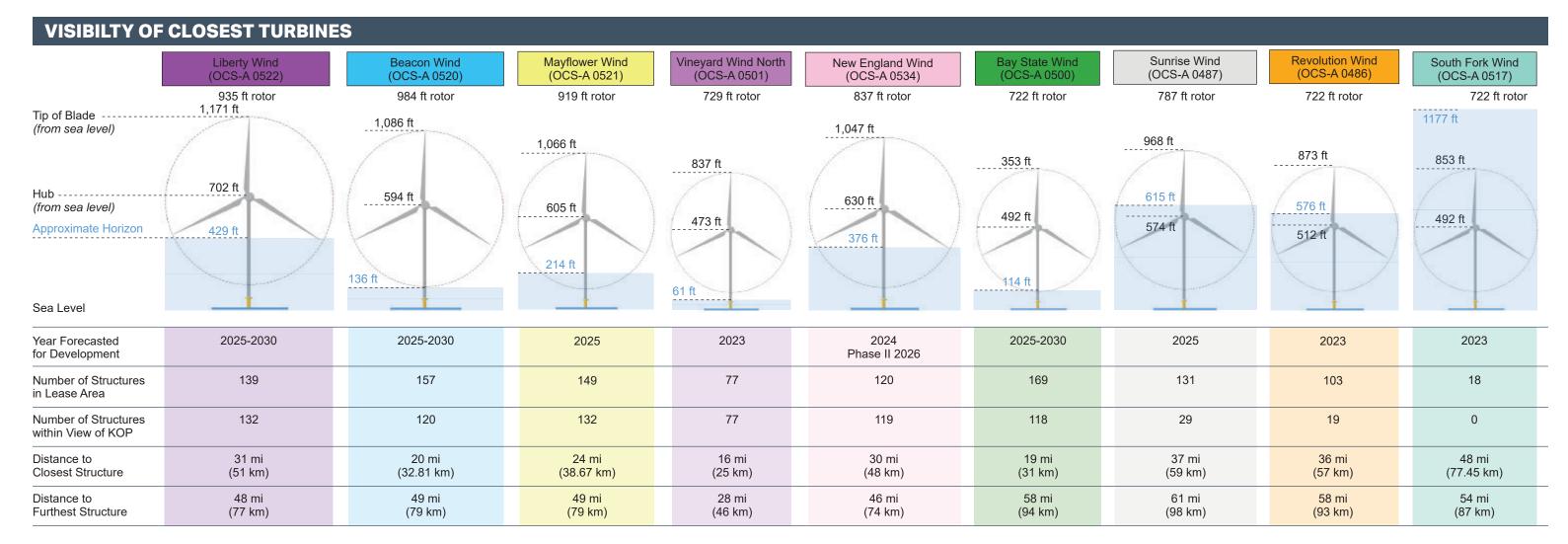
Wind Dir & Speed: SW 21 mph Weather Condition: Clear

# **CAMERA**

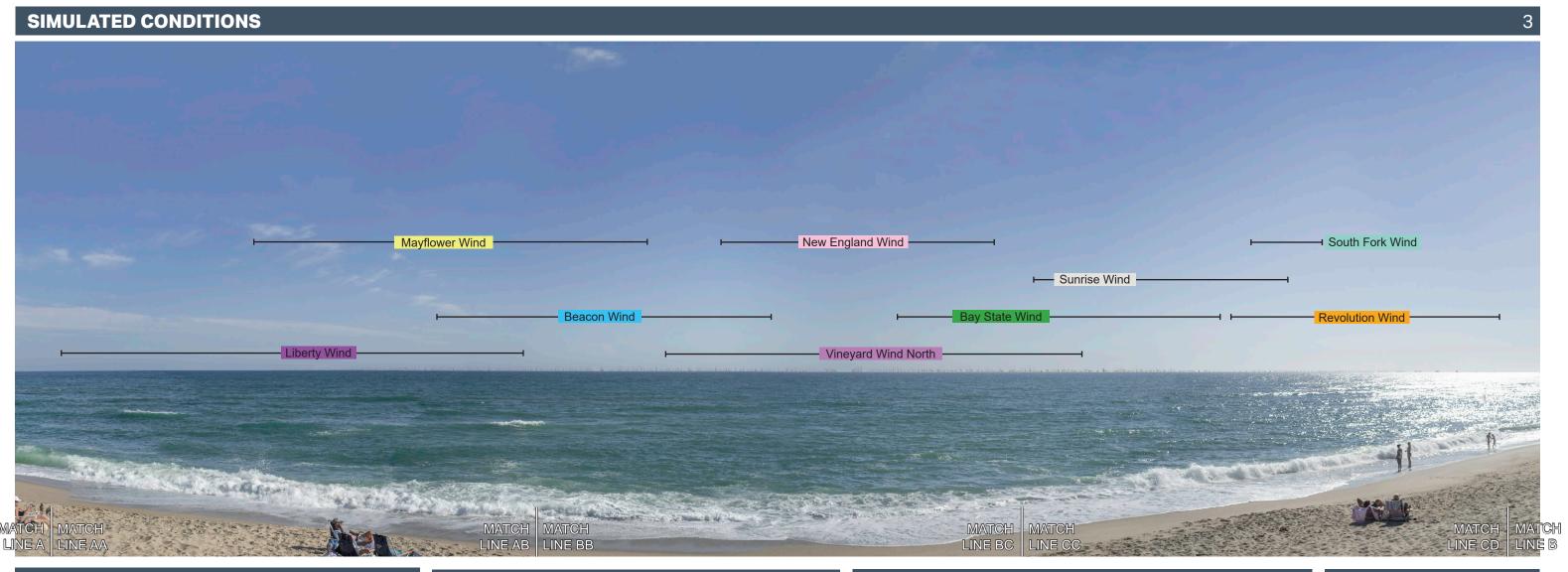
Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

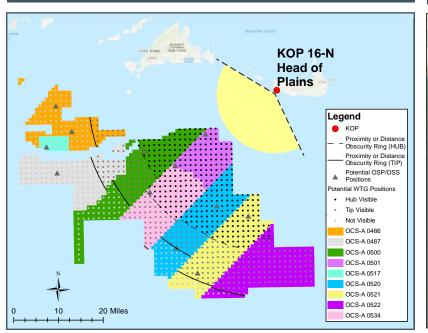




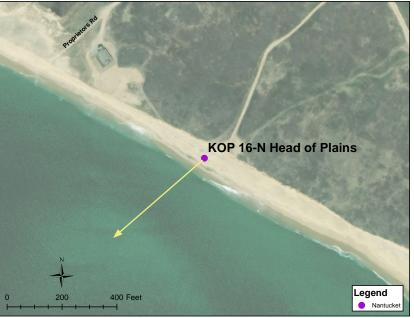
# KOP 16-N Head of Plains - Scenario 3 (Human Field of View - 124°)



## **REGIONAL MAP**



# **SITE MAP**



# **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 746

Nearest WTG: 16 mi /25 km Potential Number of WTGs Not Visible: 317

# **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM
Date of photograph: 10-7-20
L/SCA: Ocean Beach, Open
Ocean, Dunes

Viewing direction: South (229°)
Latitude: 41.341724°N
Longitude: 70.179524°W
Lighting Direction: Sidelit

# CAMERA

Temperature: 66° F

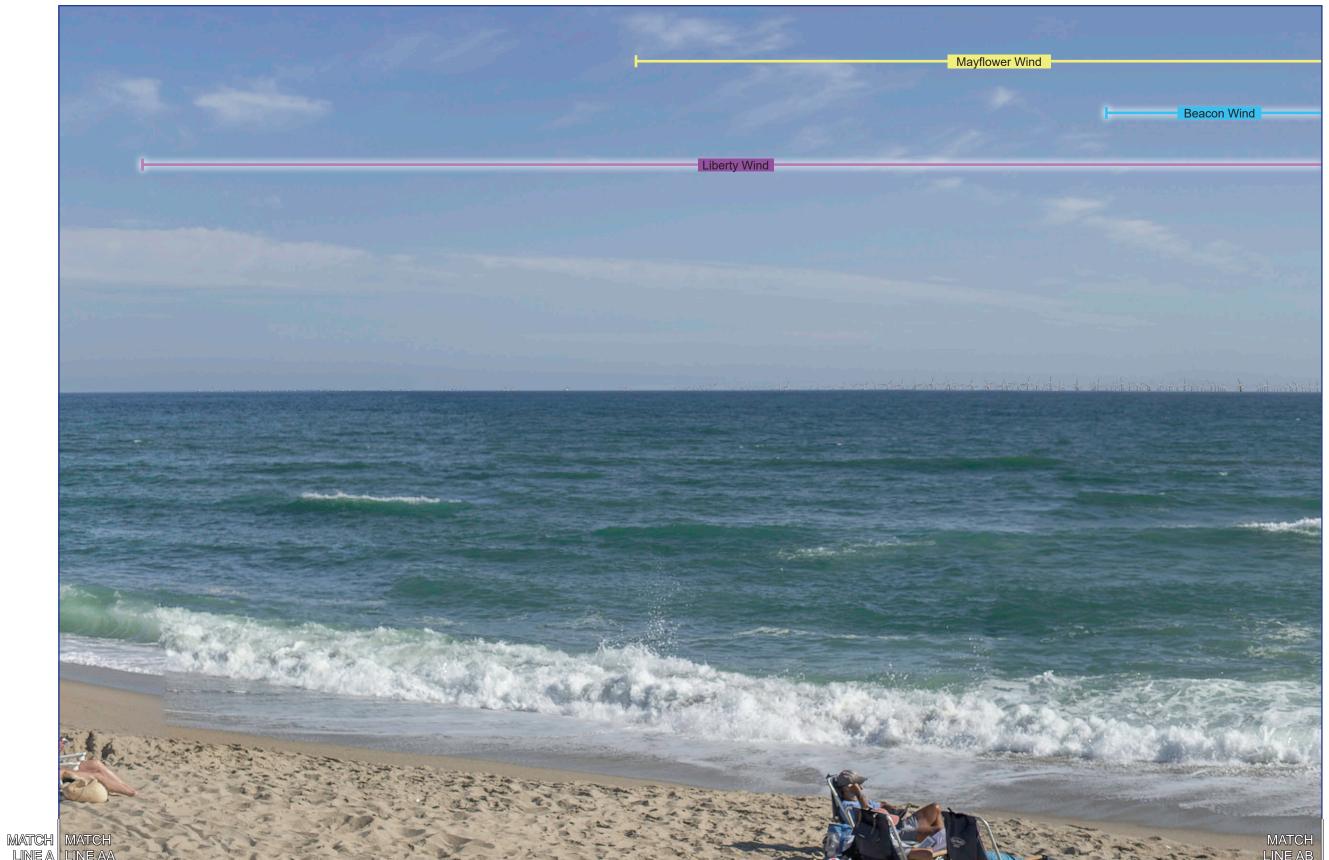
Humidity: 81%

**ENVIRONMENT** 

Weather Condition: Clear

Camera Elevation: 20.5 ft / 6.3 m Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Wind Dir & Speed: SW 21 mph



MATCH LINE BB

The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

New England Wind Mayflower Wind Beacon Wind Bay State Wind Vineyard Wind North The work of the fact of man provide more than a still diff it this is the MATCH LINE BB

MATCH LINE AB

Sunrise Wind

# SIMULATED CONDITIONS

Vineyard Wind North

South Fork Wind

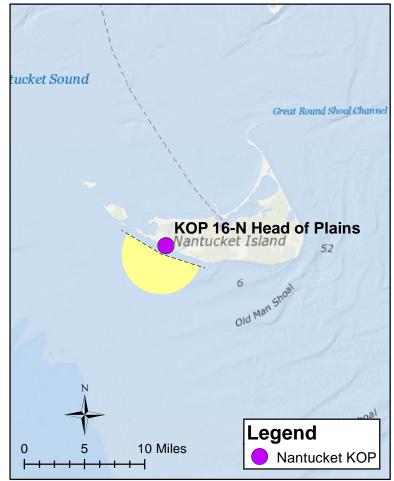
MATCH MATCH LINE BC LINE CO

LINEB

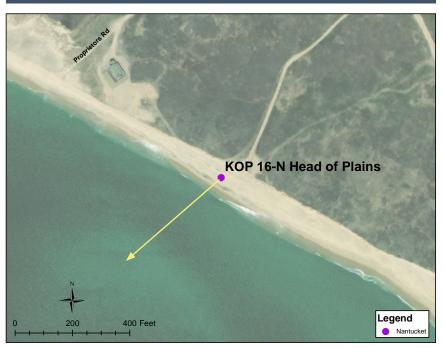
### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



### **REGIONAL MAP**



### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 614

Nearest WTG: 16 mi / 25 km Potential Number of WTGs Not Visible: 300

### **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM Viewing direction: South (229°)

Date of photograph: 10-7-20 Latitude: 41.341724°N

L/SCA: Ocean Beach, Open Ocean, Dunes Lighting Direction: Sidelit

### **ENVIRONMENT**

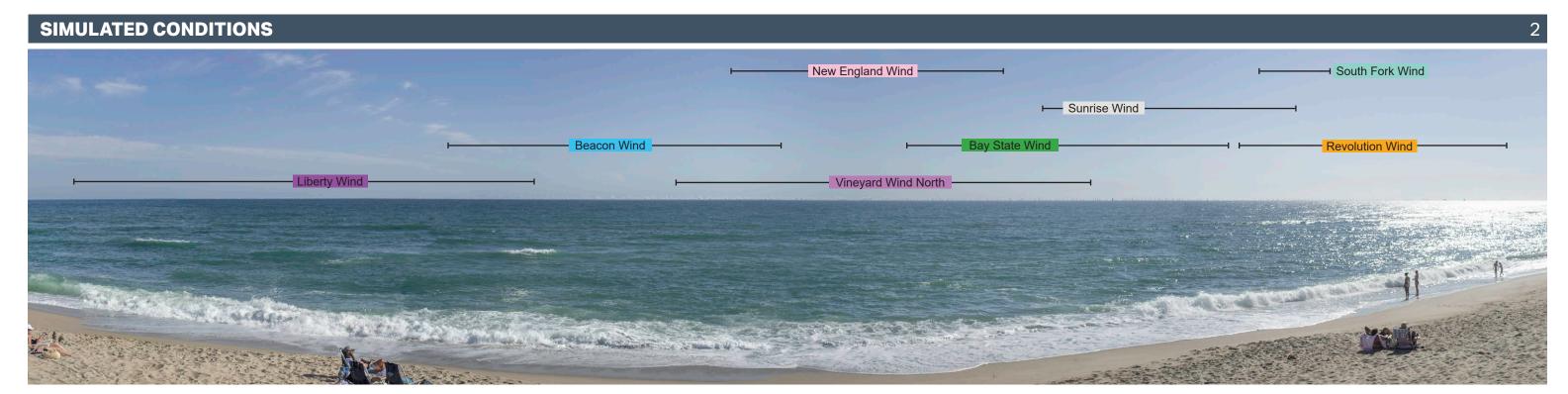
Temperature: 66° F
Humidity: 81%

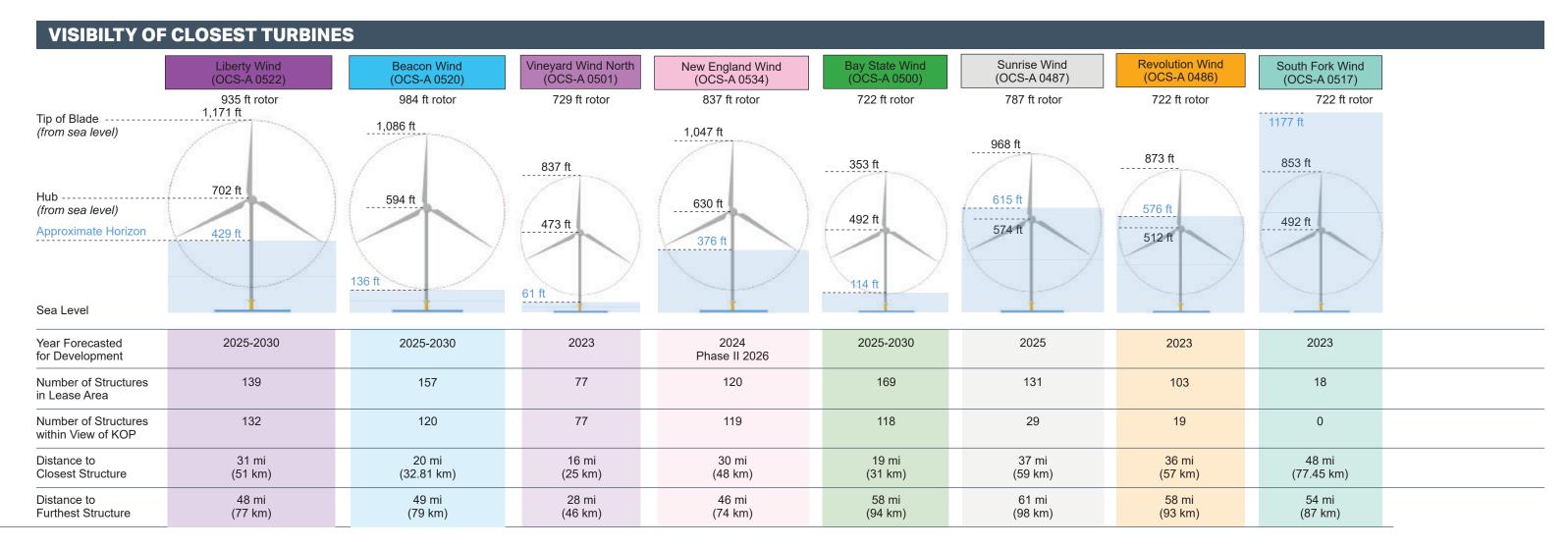
Wind Dir & Speed: SW 21 mph Weather Condition: Clear

### CAMERA

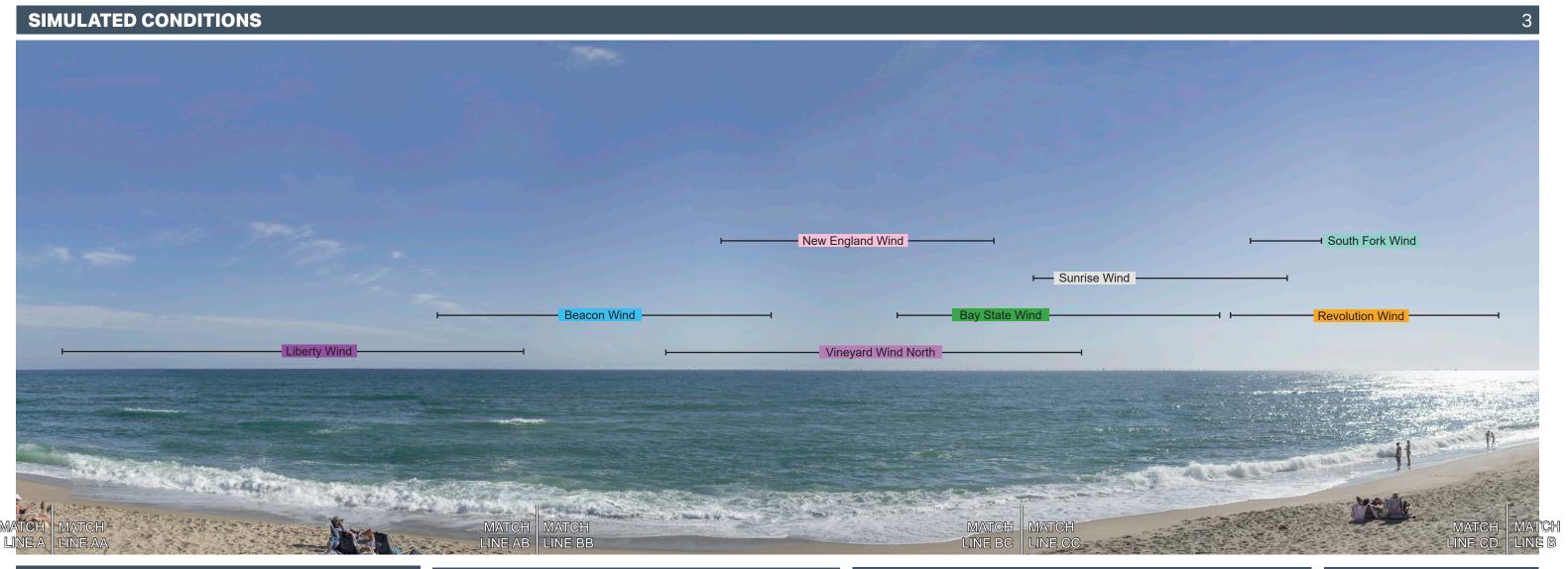
Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

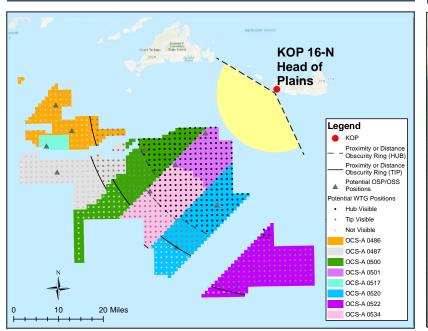




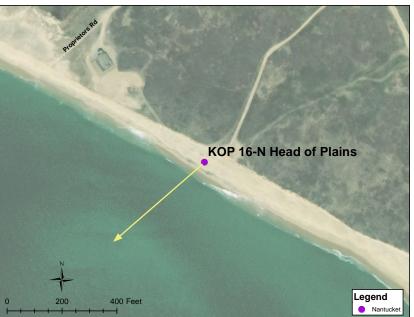
### KOP 16-N Head of Plains - Scenario 4 (Human Field of View - 124°)



### **REGIONAL MAP**



### SITE MAP



### **PROJECT VIEW**

Horizontal Field of View: 124° Furthes:
Vertical Field of View: 40° Potential
Nearest WTG: 16 mi / 25 km Potential

Furthest Visible WTG: 46 mi / 74 km
Potential Number of WTGs Visible: 614
Potential Number of WTGs Not Visible: 300

Viewing direction: South (229°)

### **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM Date of photograph: 10-7-20 L/SCA: Ocean Beach, Open Ocean, Dunes

Latitude: 41.341724°N Longitude: 70.179524°W Lighting Direction: Sidelit

### **ENVIRONMENT**

Temperature: 66° F Humidity: 81%

Wind Dir & Speed: SW 21 mph Weather Condition: Clear

### CAMERA

Camera Elevation: 20.5 ft / 6.3 m Nikon D4

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





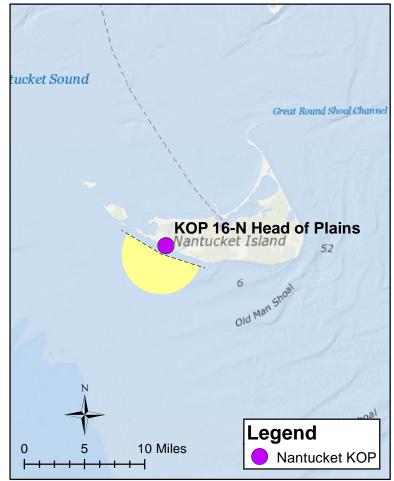
South Fork Wind Sunrise Wind Vineyard Wind North MATCH MATCH

MATCH LINE B

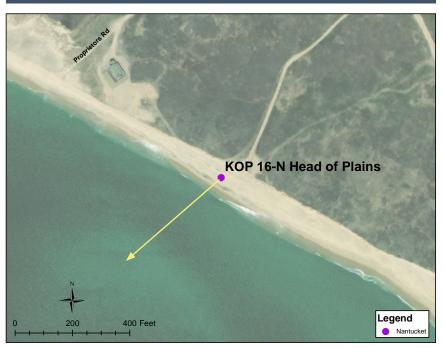
### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



### **REGIONAL MAP**



### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 132

Nearest WTG: 24 mi / 38 km Potential Number of WTGs Not Visible: 17

### **PHOTOGRAPH AND SITE**

Time of photograph: 3:54 PM Viewing direction: South (229°)

Date of photograph: 10-7-20 Latitude: 41.341724°N

L/SCA: Ocean Beach, Open Ocean, Dunes Lighting Direction: Sidelit

### **ENVIRONMENT**

Temperature: 66° F Humidity: 81% Wind Dir & Speed: SW 21 mph Weather Condition: Clear

### CAMERA

Camera Elevation: 20.5 ft / 6.3 m

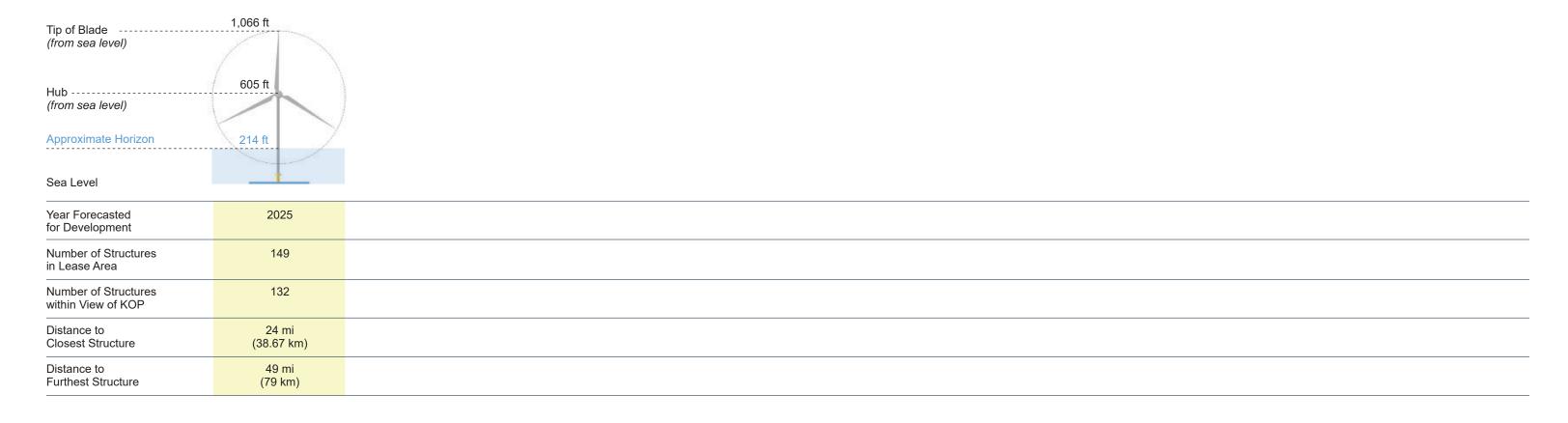
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



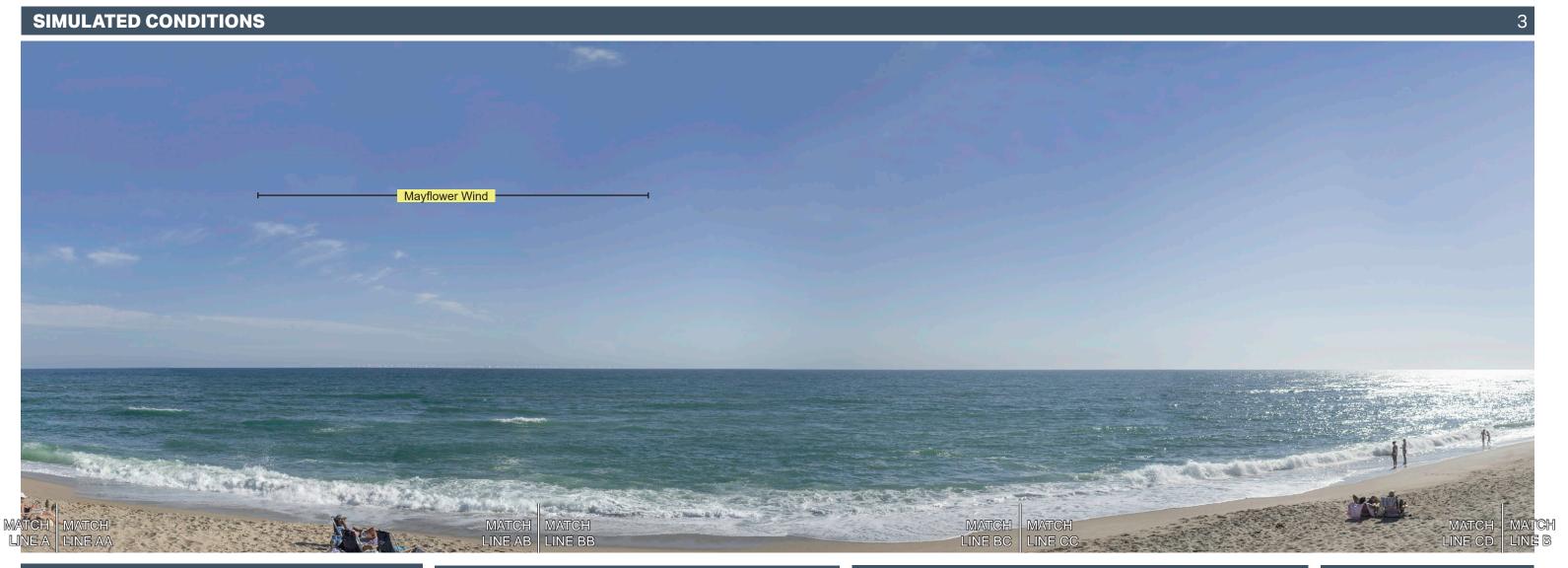
### **VISIBILTY OF CLOSEST TURBINES**

Mayflower Wind (OCS-A 0521)

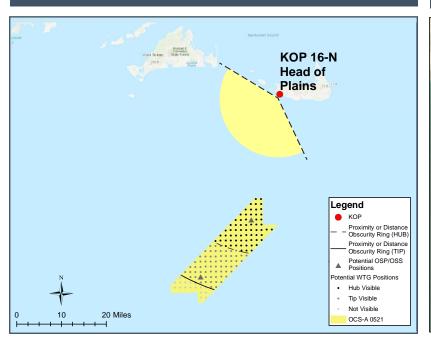
919 ft rotor



### KOP 16-N Head of Plains - Scenario 5 (Human Field of View - 124°)



### **REGIONAL MAP**



### **SITE MAP**



### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 49 mi / 79 km

Vertical Field of View: 40° Potential Number of WTGs Visible: 132

Nearest WTG: 24 mi / 39 km Potential Number of WTGs Not Visible: 17

### **PHOTOGRAPH AND SITE**

Time of photograph: 3:54PM Date of photograph: 10-7-20 L/SCA: Ocean Beach, Open Ocean, Dunes Viewing direction: South (229°)
Latitude: 41.341724°N
Longitude: 70.179524°W
Lighting Direction: Sidelit

### **ENVIRONMENT**

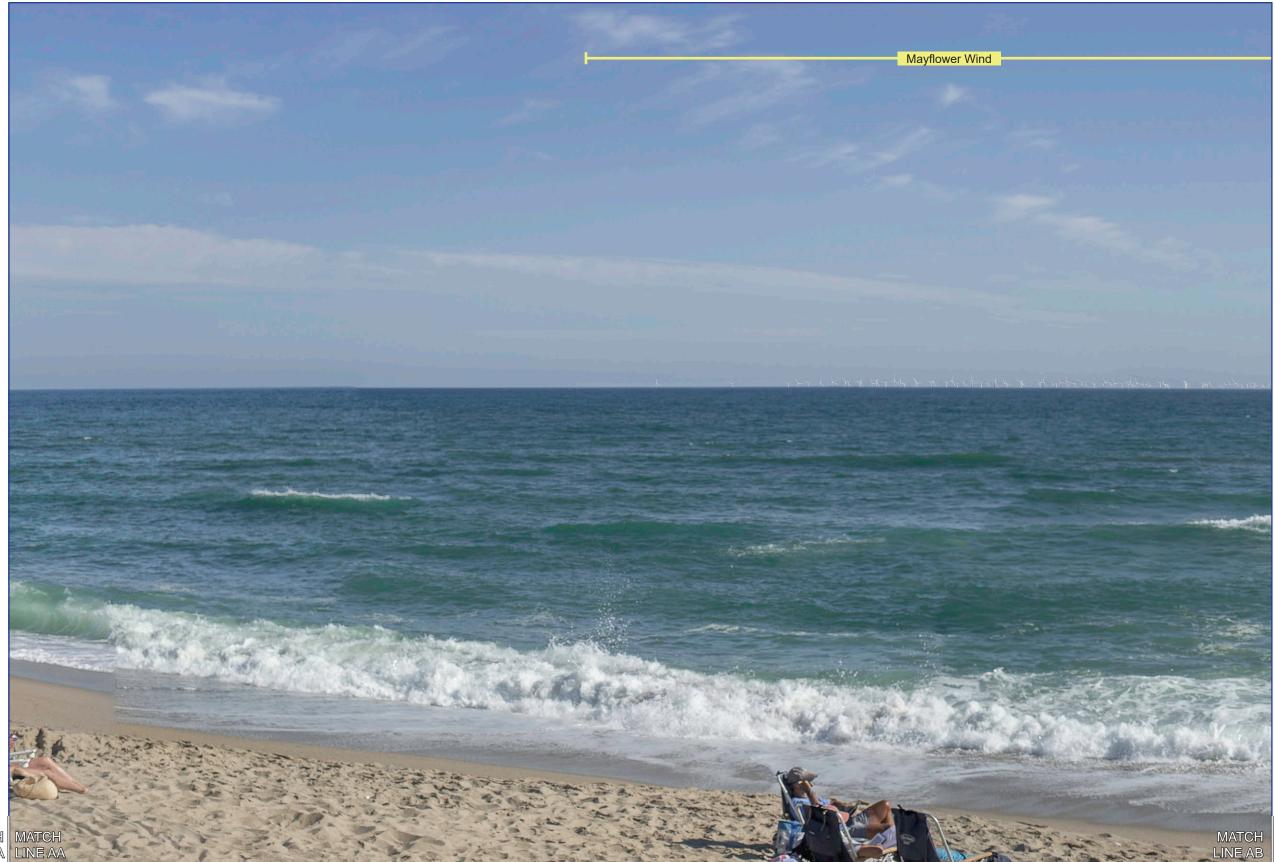
Temperature: 66° F Humidity: 81%

Wind Dir & Speed: SW 21 mph Weather Condition: Clear

### CAMERA

Camera Elevation: 20.5 ft / 6.3 m Nikon D4 Nikon 50mm

Nikon 50mm ISO: 100 Fstop: f/7.1







## PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS 1 MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH LINE AB LINE BE L

# Creat Round Shoal Channel KOP 22-N Madaket Beach Sunset Nantucket Island 52 6 Old Man Shoal Nantucket KOP Nantucket KOP

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 249

Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible: 200

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM

Date of photograph: 7-29-20

L/SCA: Ocean beach

Longitude: 70.201719°W

Lighting Direction: Backlit diffused

Viewing direction: South (228°)

Latitude: 41.270282°N

### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

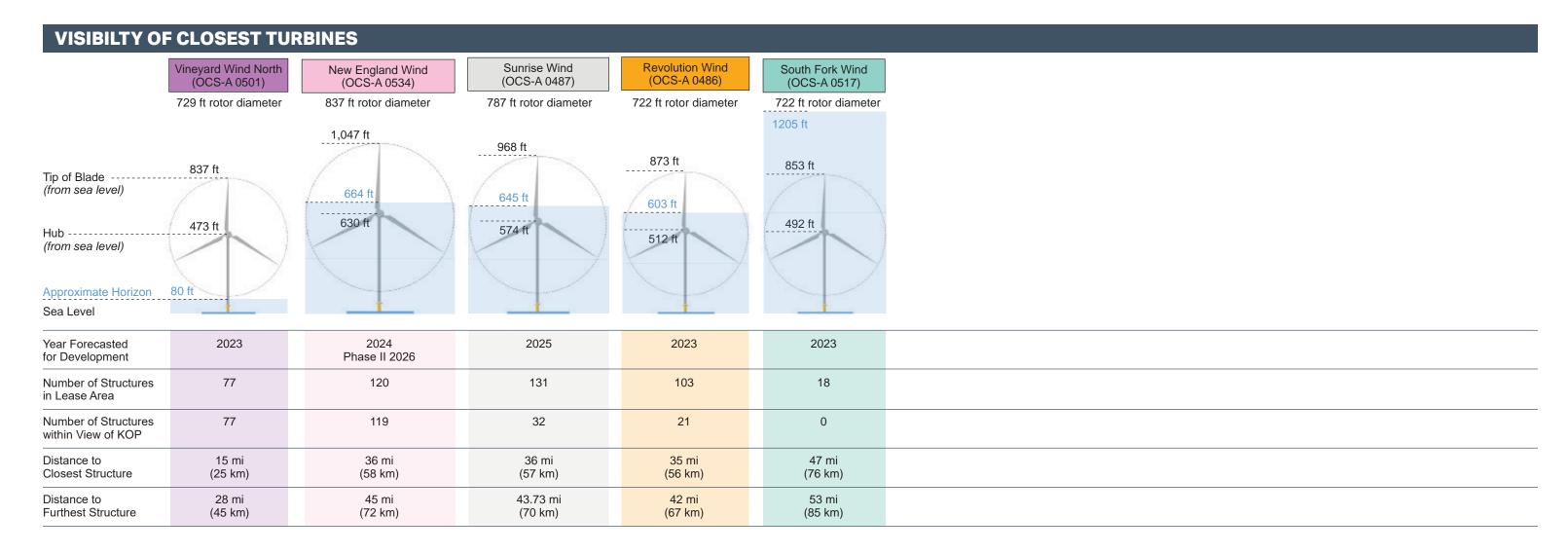
Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

Camera Elevation: 13.5 ft / 4.1 m

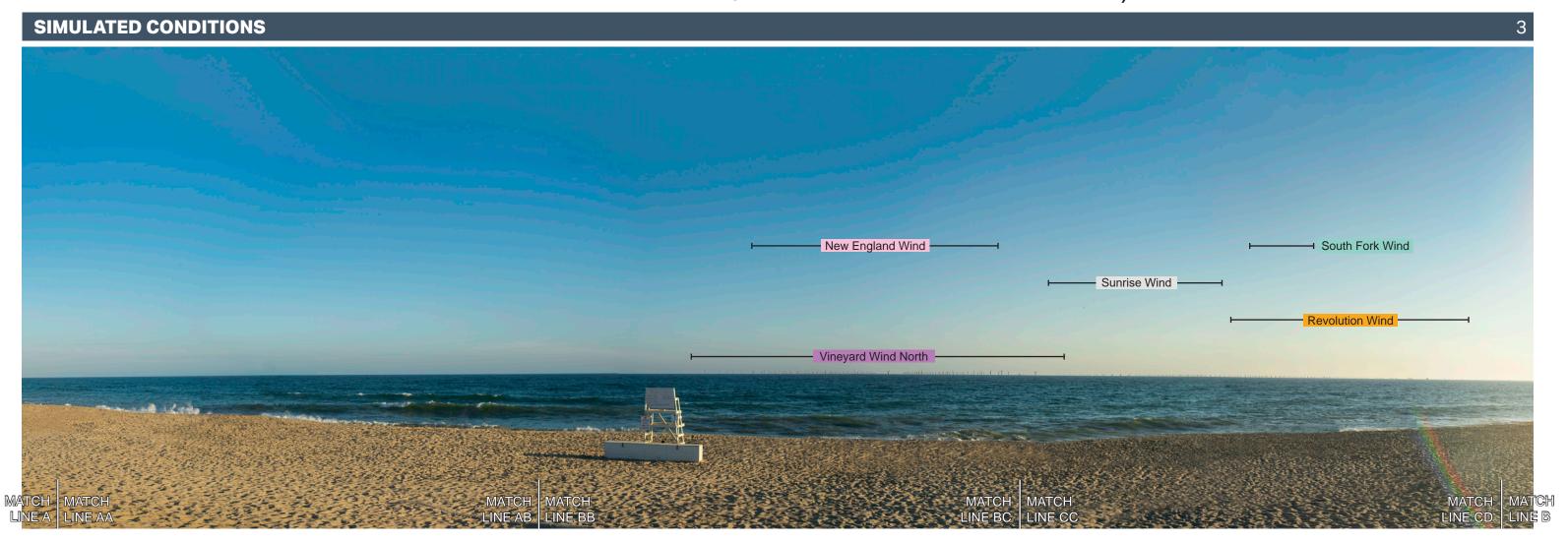
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

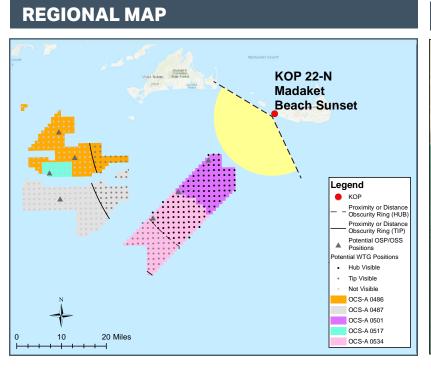
**CAMERA** 





### KOP 22-N Madaket Beach at Sunset - Scenario 1 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 15 mi / 25 km Furthest Visible WTG: 45 mi / 72 km
Potential Number of Structures Visible: 249
Potential Number of Structures Not Visible: 200

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Date of photograph: 7-29-20 L/SCA: Ocean beach Viewing direction: South (228°) Latitude: 41.270282°N Longitude: 70.201719°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

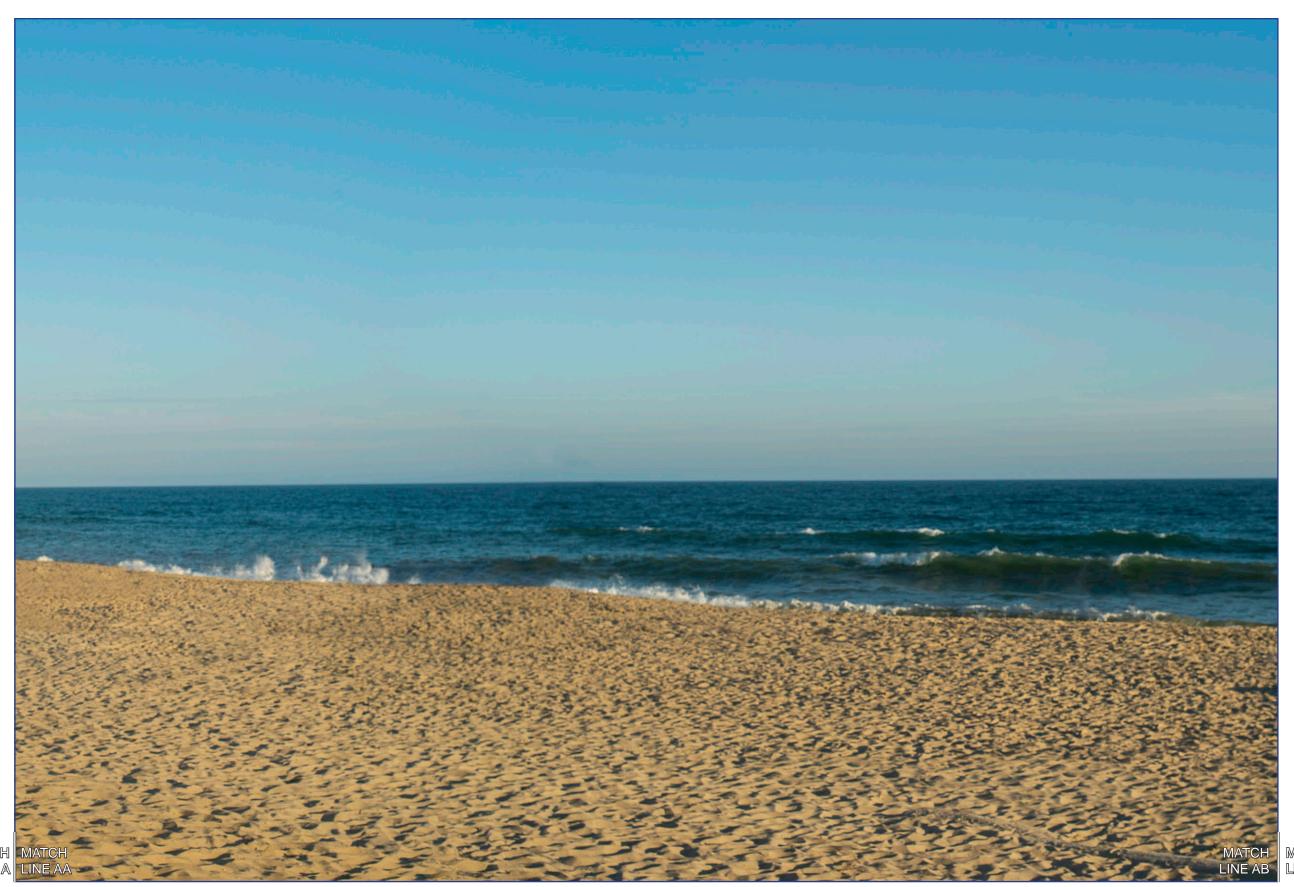
Temperature: 74° F Humidity: 79%

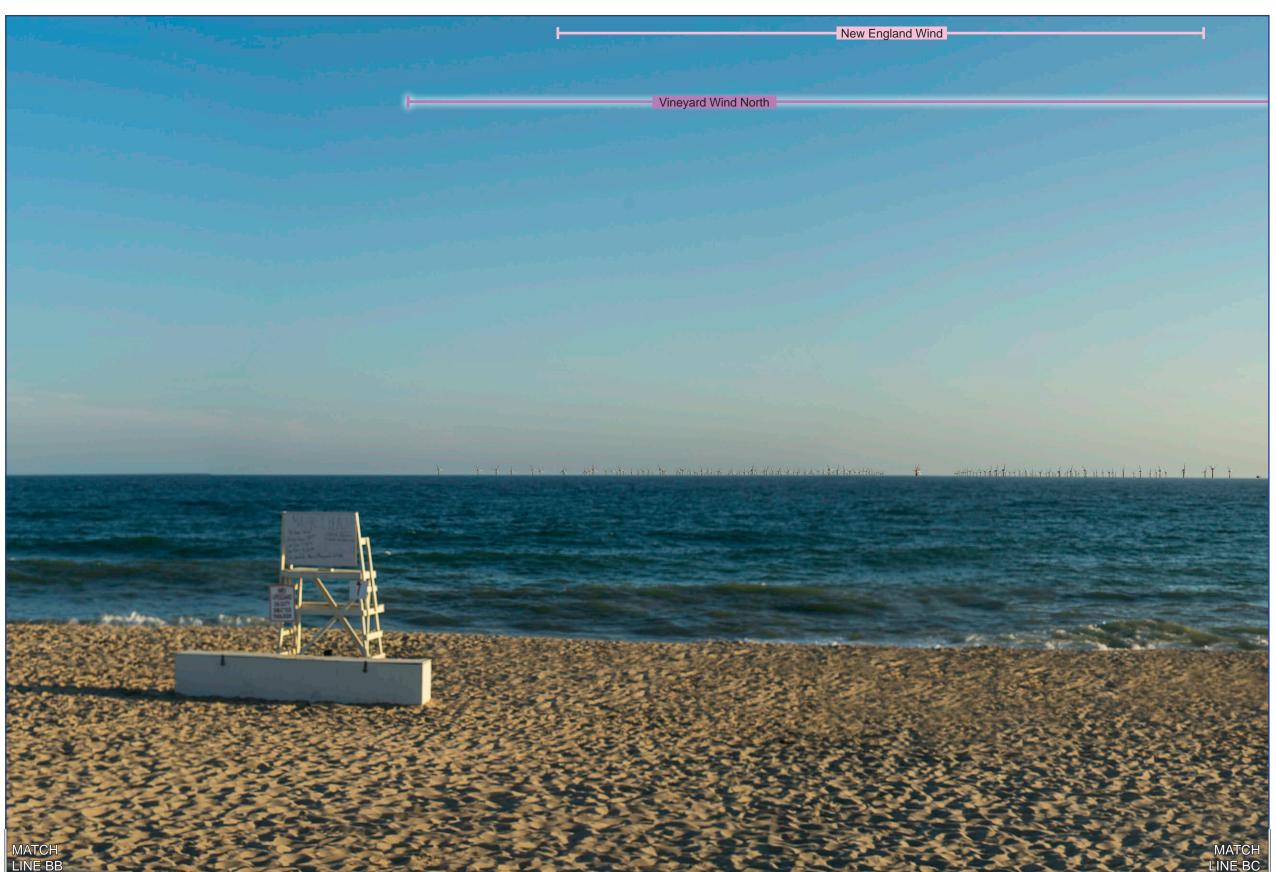
Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

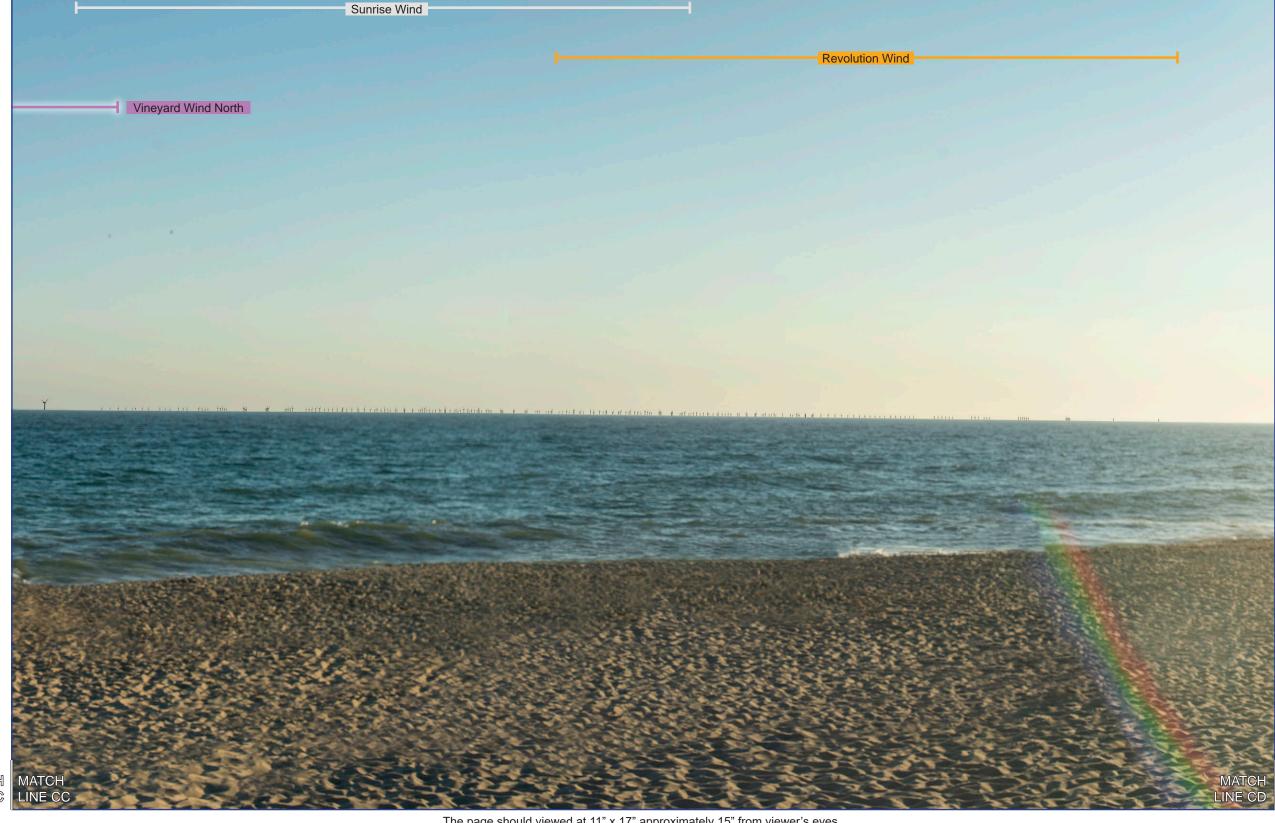
### CAMERA

Camera Elevation: 13.5 ft / 4.1 m Nikon D4

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1







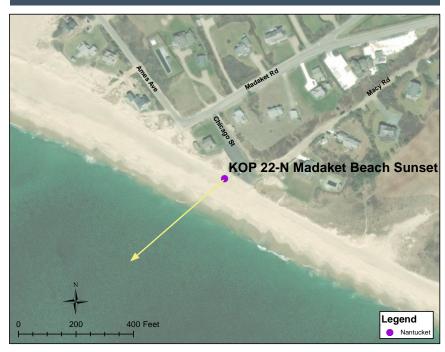
South Fork Wind

## PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS 1 MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH LINE AB LINE BE LINE BC LINE GC LINE BE LINE BE

## KOP 22-N Madaket Beach Sunset Nantucket Island Old Man Sproad Old Man Sproad Nantucket KOP

**REGIONAL MAP** 

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 73 km

Vertical Field of View: 40° Potential Number of Structures Visible: 378

Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible: 220

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11 PM Viewing direction: South (228°)

Date of photograph: 7-29-20 Latitude: 41.270282°N

L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

Wind Dir & Speed: WNW 3 mph

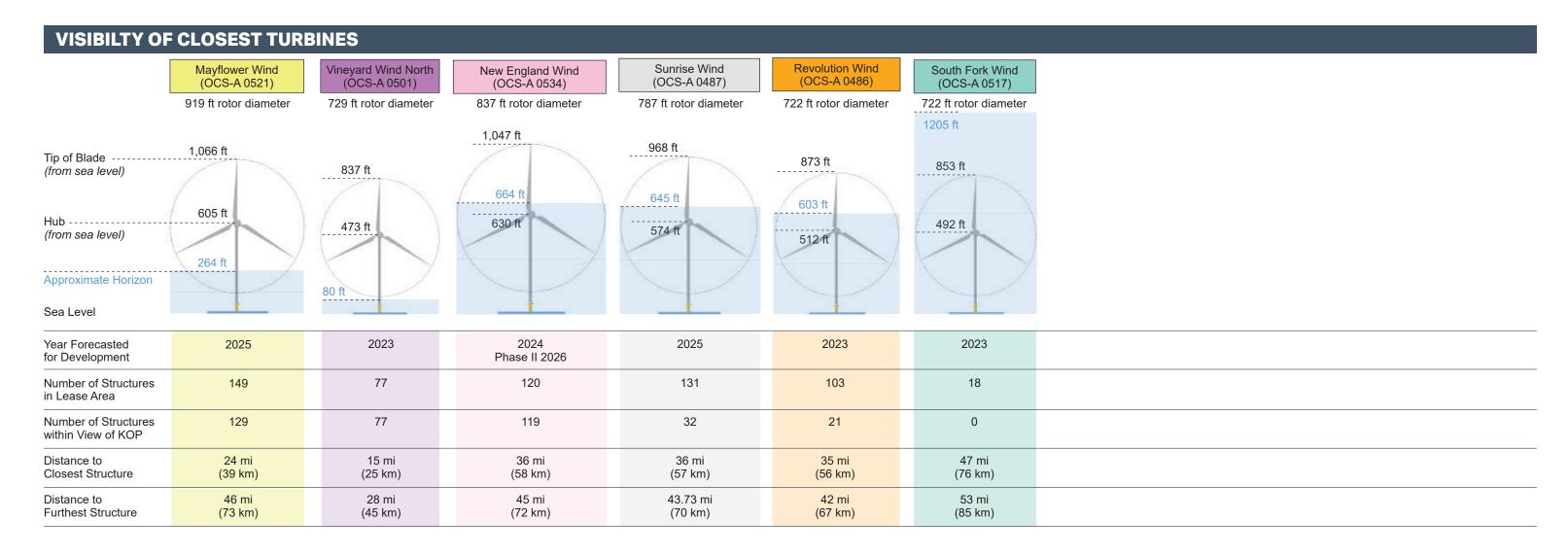
Weather Condition: Clear

### **CAMERA**

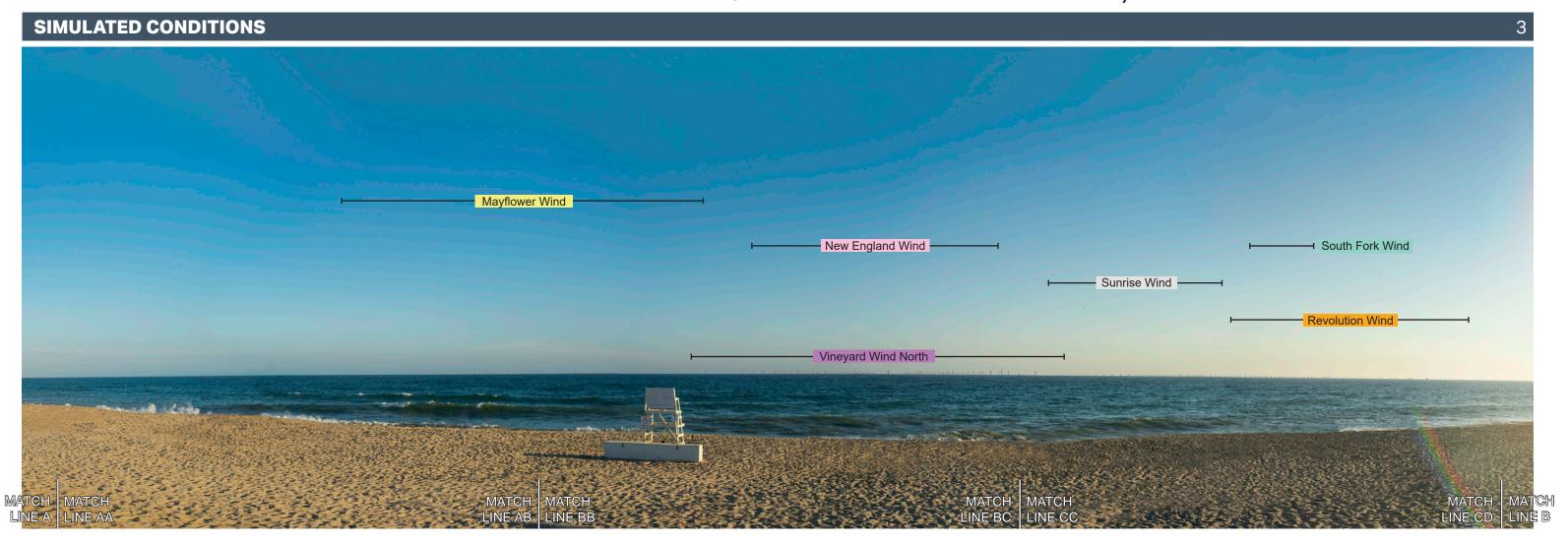
Camera Elevation: 13.5 ft / 4.1 m

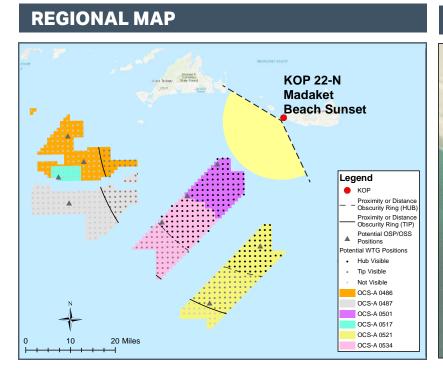
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

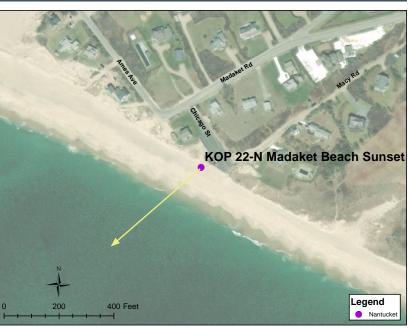




### KOP 22-N Madaket Beach at Sunset - Scenario 2 (Human Field of View - 124°)







**SITE MAP** 

### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 46 mi / 73 km Vertical Field of View: 40° Potential Number of Structures Visible: 378 Nearest WTG: 15 mi / 25 km

Potential Number of Structures Not Visible: 220

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Viewing direction: South (228°) Latitude: 41.270282°N Date of photograph: 7-29-20 L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

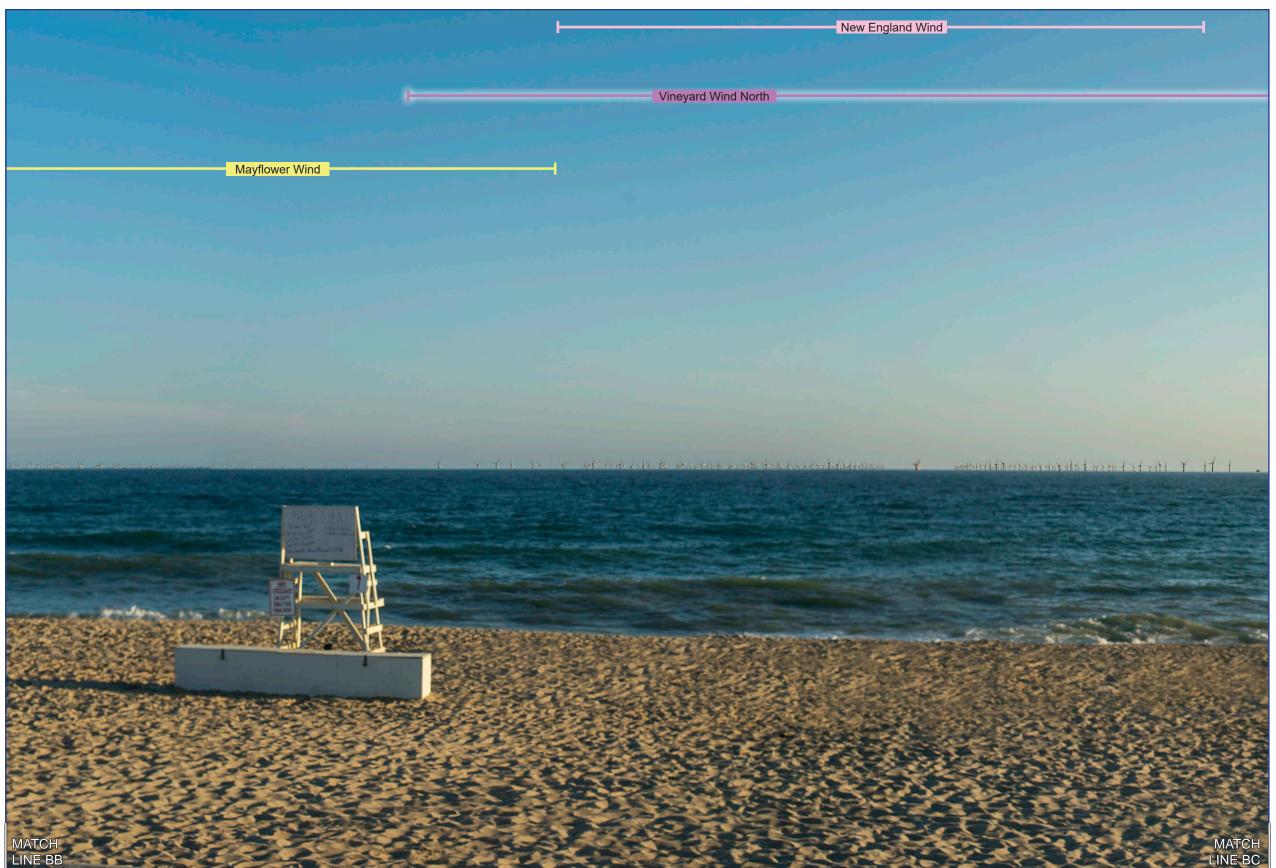
Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

### **CAMERA**

Camera Elevation: 13.5 ft / 4.1 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





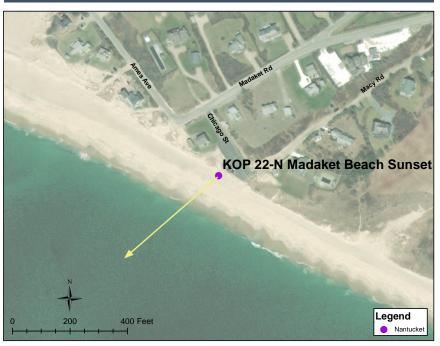
MATCH LINE AB

South Fork Wind Sunrise Wind Vineyard Wind North

### PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS MATCH MATCH LINE AB LINE BB MATCH MATCH MATCH MATCH LINE BC LINE CC

### **REGIONAL MAP** ucket Sound Great Round Shoal Chann **KOP 22-N Madaket Beach Sunset** Nantucket Island Legend 10 Miles Nantucket KOP

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km Vertical Field of View: 40° Potential Number of Structures Visible: 743 Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible:

320

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11 PM Date of photograph: 7-29-20 L/SCA: Ocean beach

Longitude: 70.201719°W

Viewing direction: South (228°)

Latitude: 41.270282°N

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

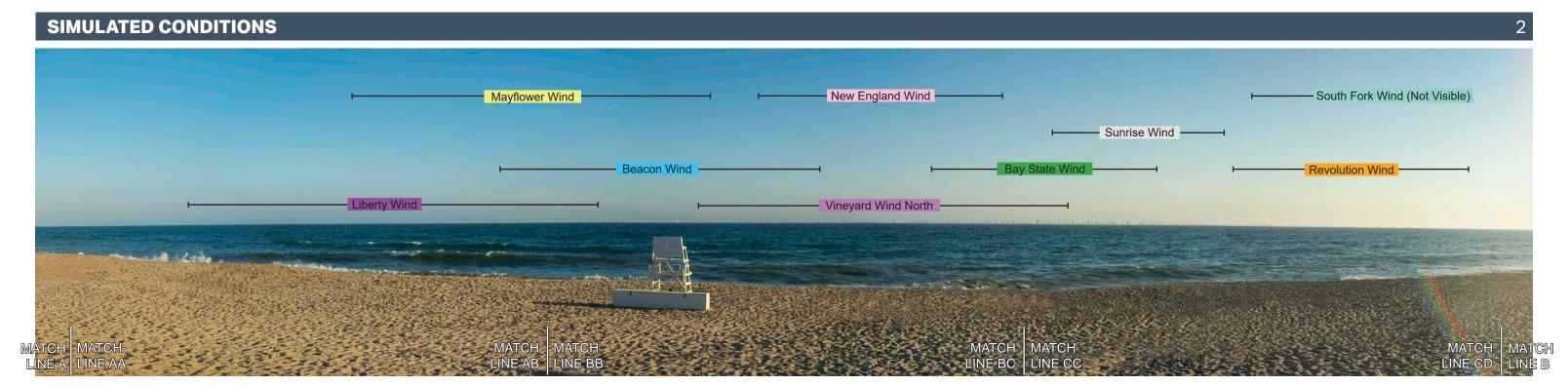
Temperature: 74° F Humidity: 79%

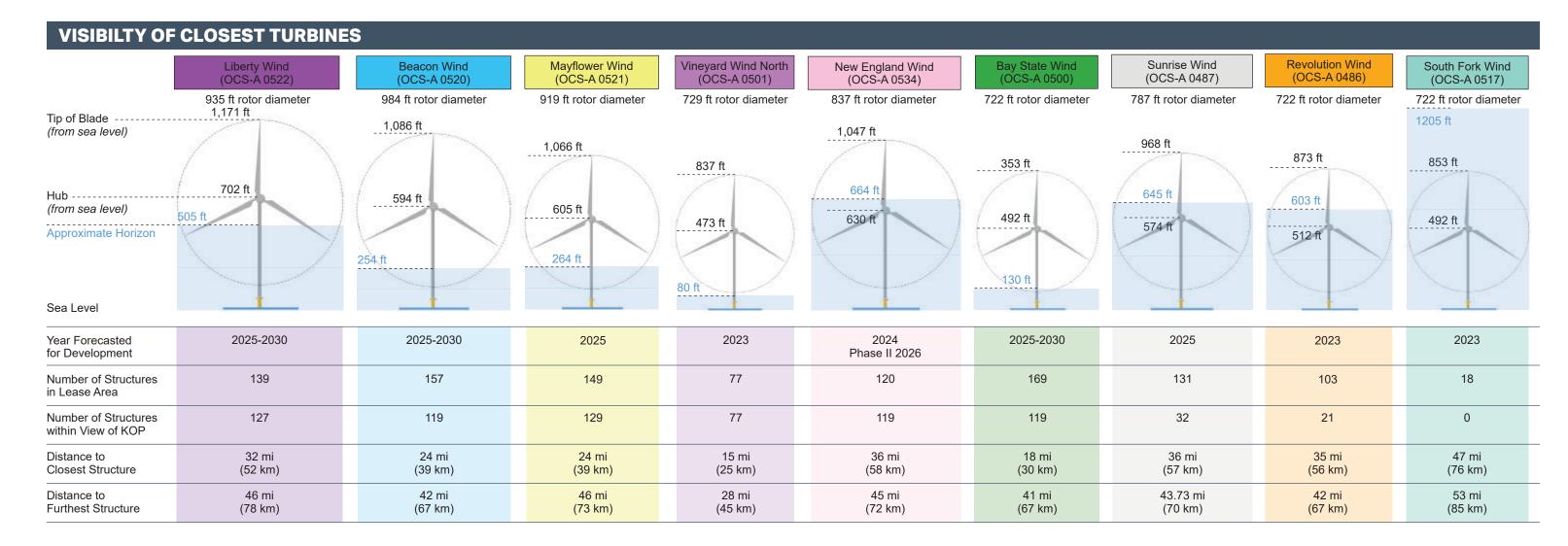
Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

### **CAMERA**

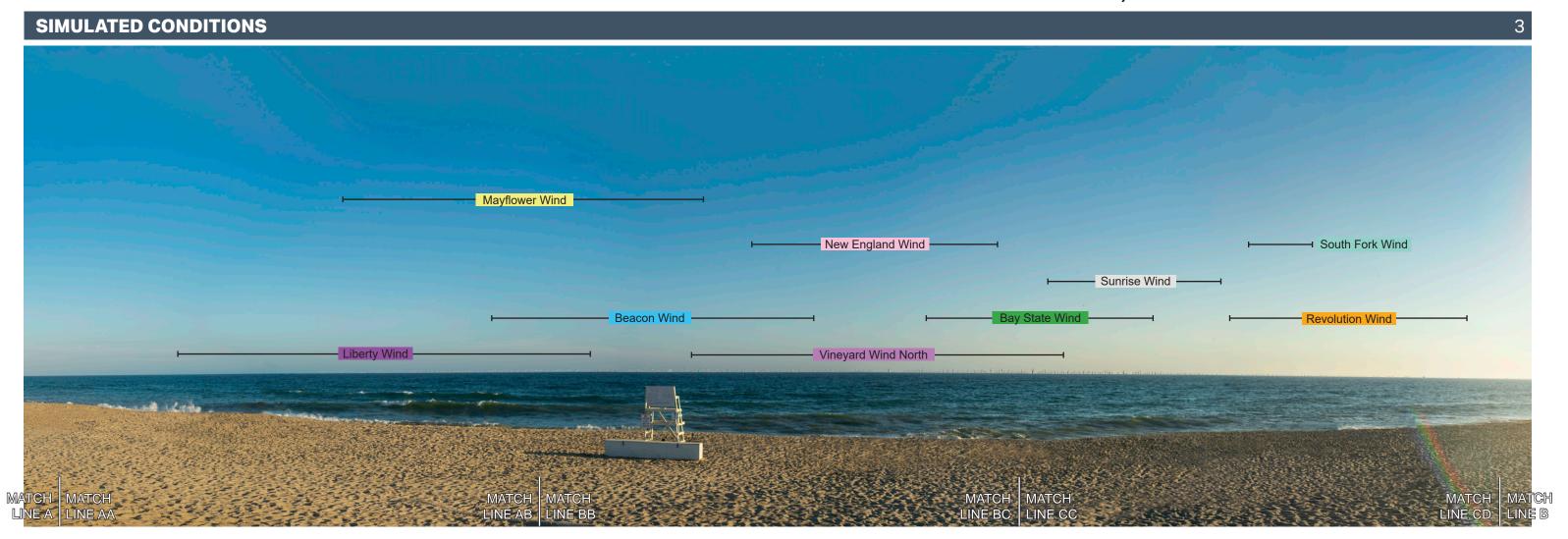
Camera Elevation: 13.5 ft / 4.1 m

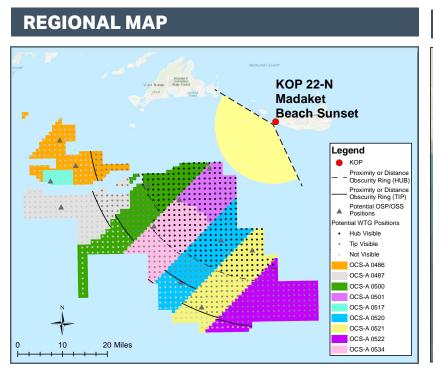
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





### KOP 22-N Madaket Beach at Sunset - Scenario 3 (Human Field of View - 124°)







### PROJECT VIEW

Horizontal Field of View: 124° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 743

Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible: 320

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Viewing direction: South (228°)

Date of photograph: 7-29-20 Latitude: 41.270282°N

L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

### CAMERA

Camera Elevation: 13.5 ft / 4.1 m Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

Beacon Wind Mayflower Wind

New England Wind Beacon Wind Liberty Wind Vineyard Wind North Mayflower Wind

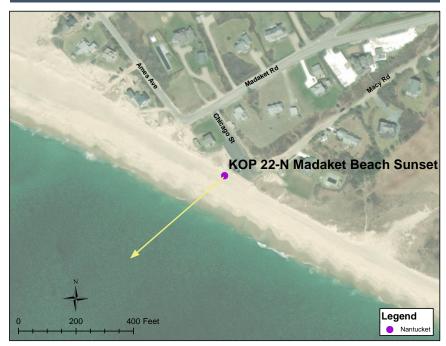
MATCH LINE AB



## PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS 1 WATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH LINE AB L

# KOP 22-N Madaket Beach Sunset Nantucket Island Old Man Shoal Nantucket KOP Nantucket KOP

### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 614

Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible: 300

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Viewing direction: South (228°)

Date of photograph: 7-29-20 Latitude: 41.270282°N

L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

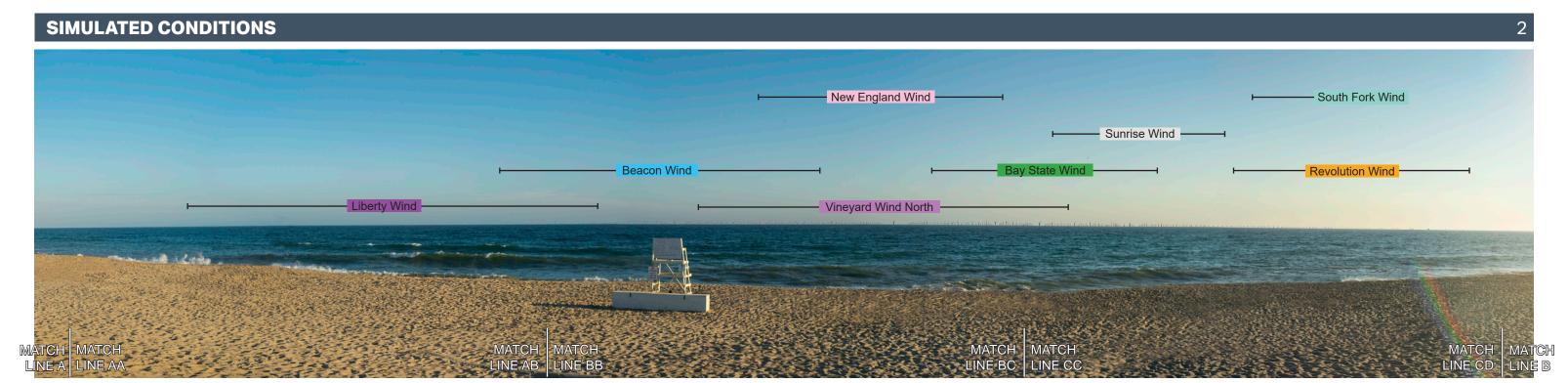
Wind Dir & Speed: WNW 3 mph

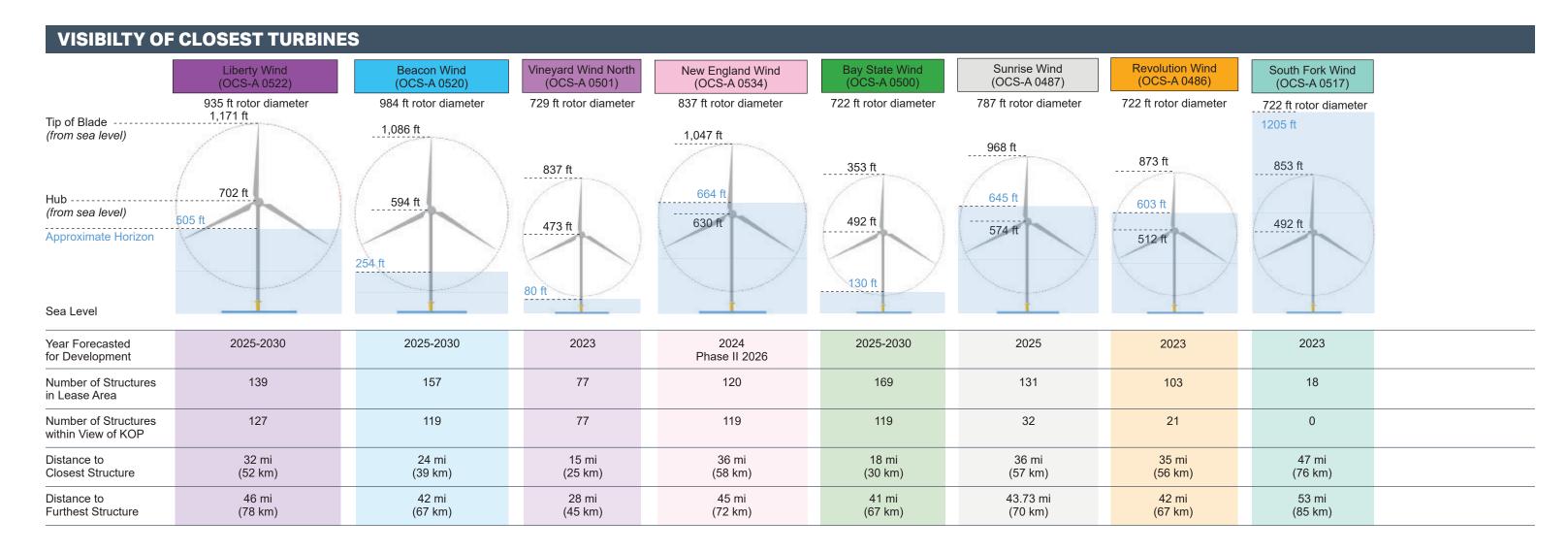
Weather Condition: Clear

### **CAMERA**

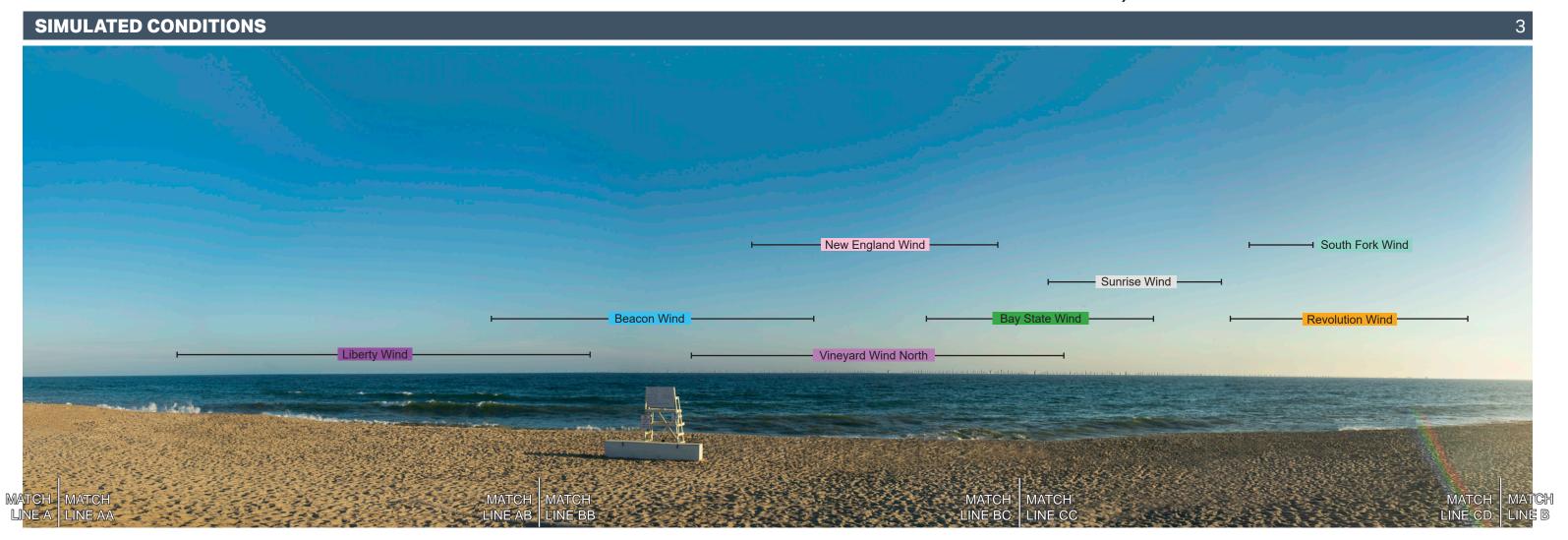
Camera Elevation: 13.5 ft / 4.1 m

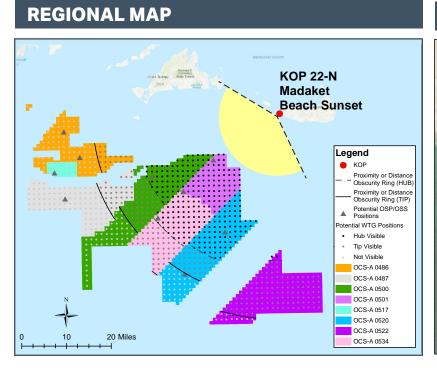
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





### KOP 22-N Madaket Beach at Sunset - Scenario 4 (Human Field of View - 124°)







### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 46 mi / 74 km

Vertical Field of View: 40° Potential Number of Structures Visible: 614

Nearest WTG: 15 mi / 25 km Potential Number of Structures Not Visible:

300

### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Viewing direction: South (228°)

Date of photograph: 7-29-20 Latitude: 41.270282°N

L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

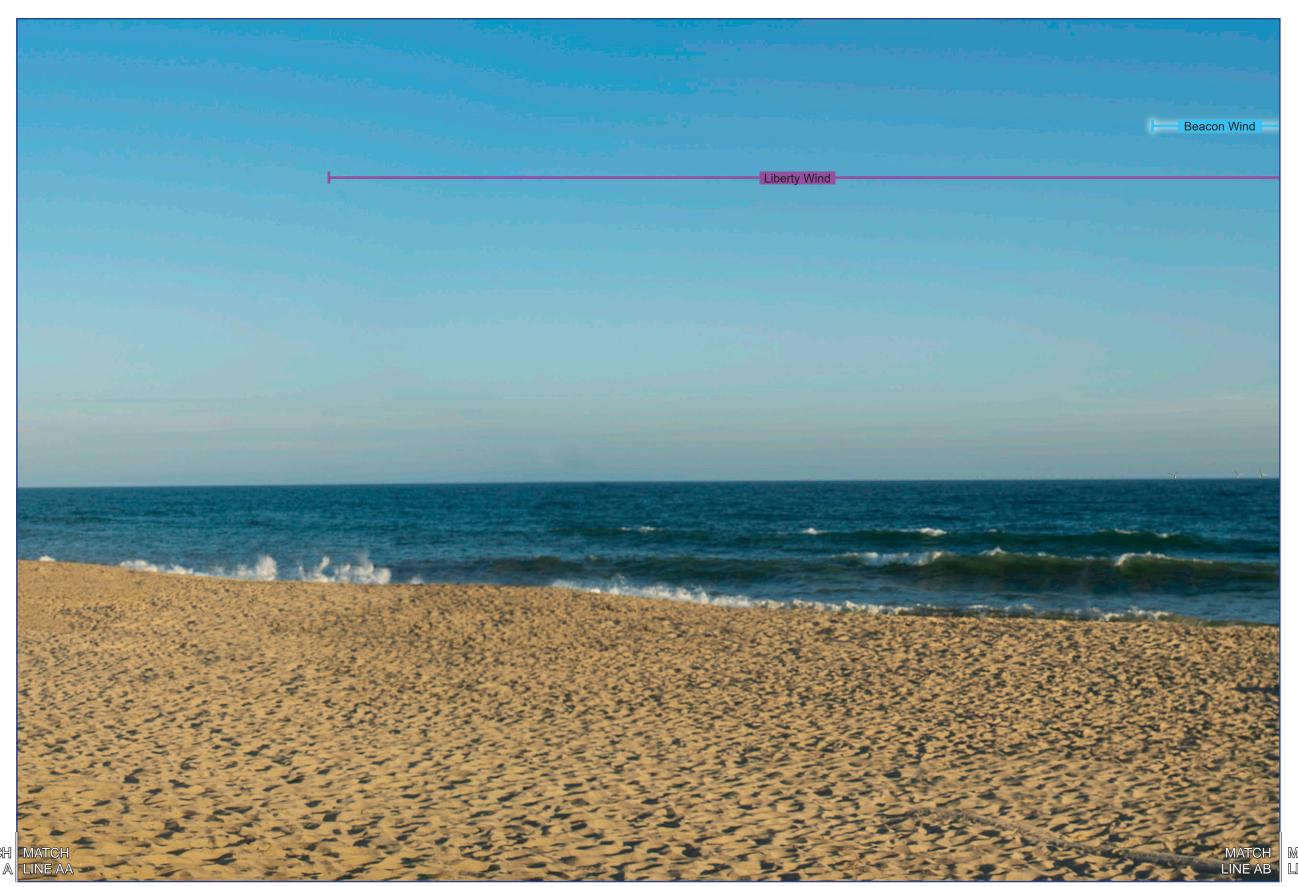
### **ENVIRONMENT**

Temperature: 74° F Humidity: 79%

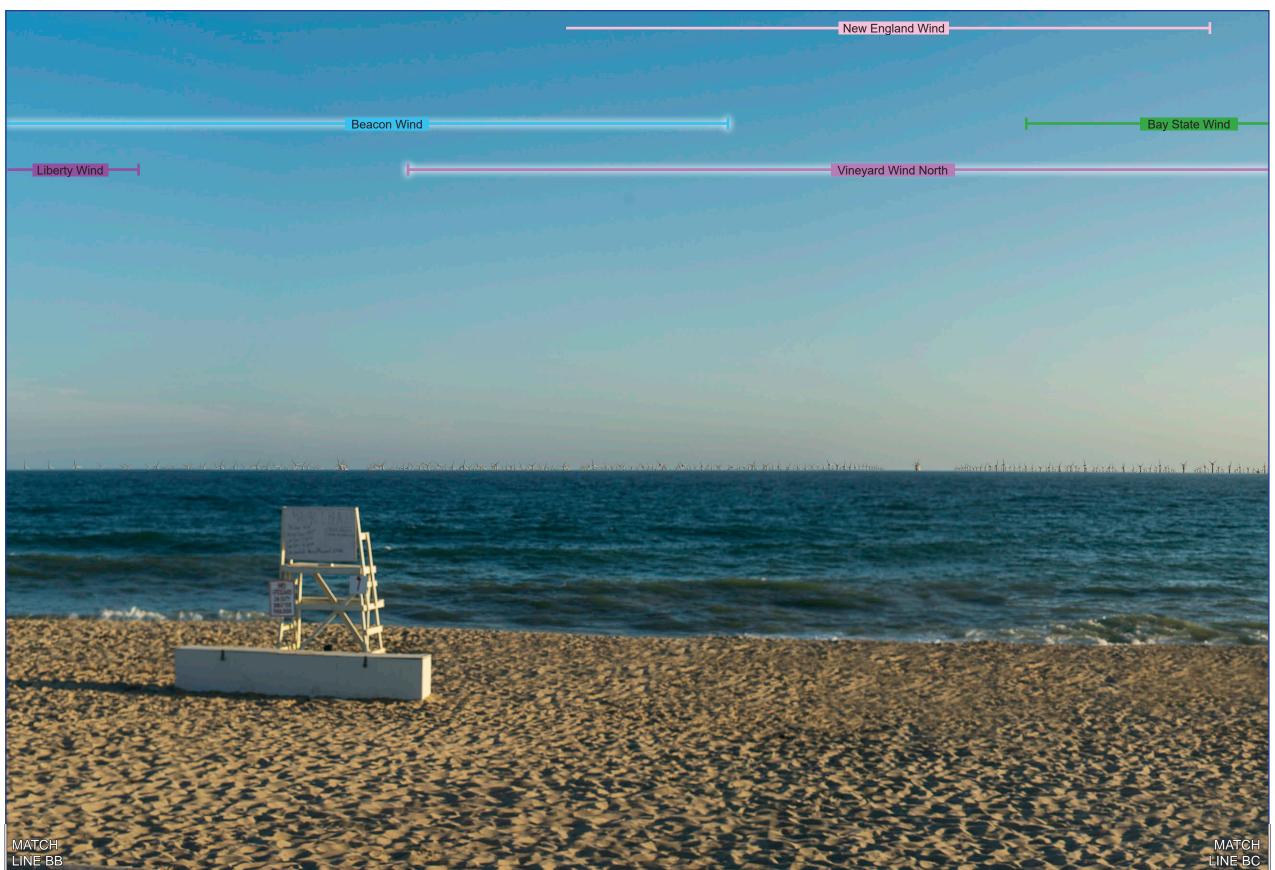
Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

### CAMERA

Camera Elevation: 13.5 ft / 4.1 m Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



5



MATCH LINE AB

6



LINE BC

# PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS 1 WATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH MATCH LINE AB LINE BB LINE BC LINE CC LINE CO LINE BB LINE BB LINE BC LINE CC LINE CD LINE BB LINE BC LINE CC LINE CD LINE BB

# KOP 22-N Madaket Beach Sunset Nantucket Island 6 0 5 10 Miles Legend Nantucket KOP

#### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 46 mi / 73 km

Vertical Field of View: 40° Potential Number of Structures Visible: 129

Nearest WTG: 24 mi / 39 km Potential Number of Structures Not Visible: 20

#### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Viewing direction: South (228°)

Date of photograph: 7-29-20 Latitude: 41.270282°N

L/SCA: Ocean beach Longitude: 70.201719°W

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

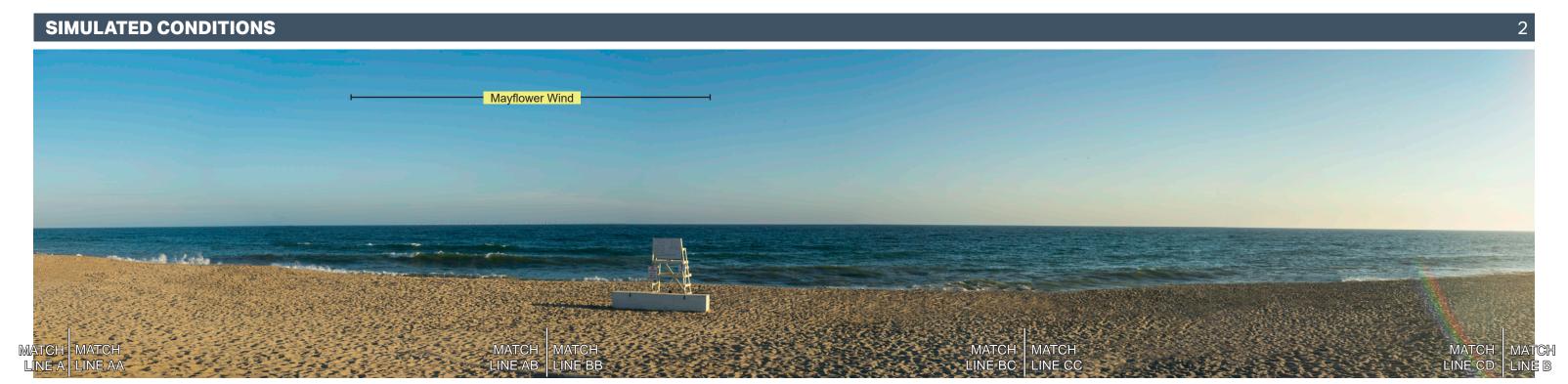
Temperature: 74° F Humidity: 79%

Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

#### CAMERA

Camera Elevation: 13.5 ft / 4.1 m

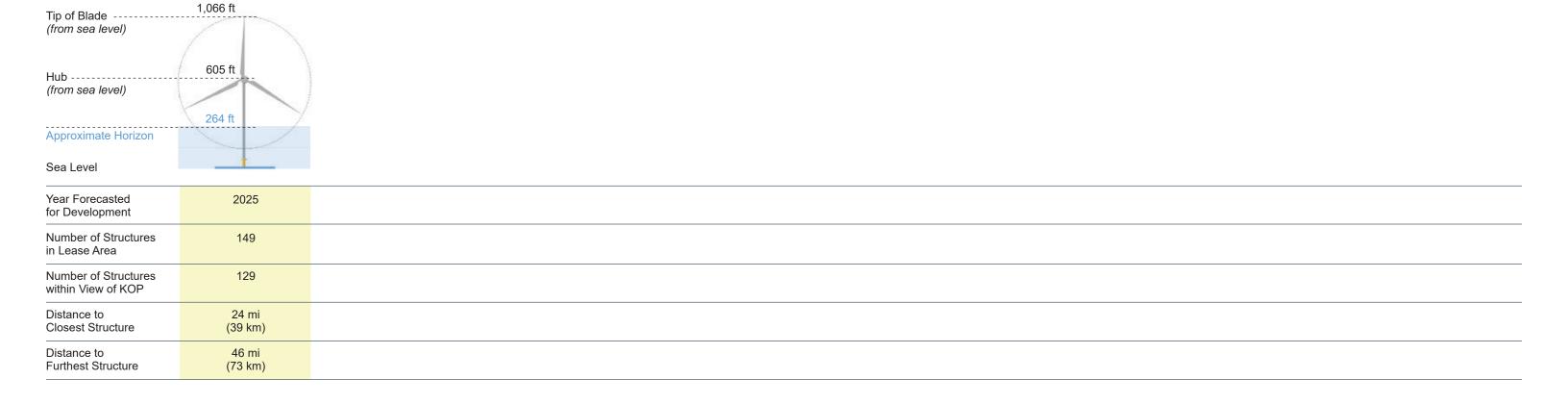
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



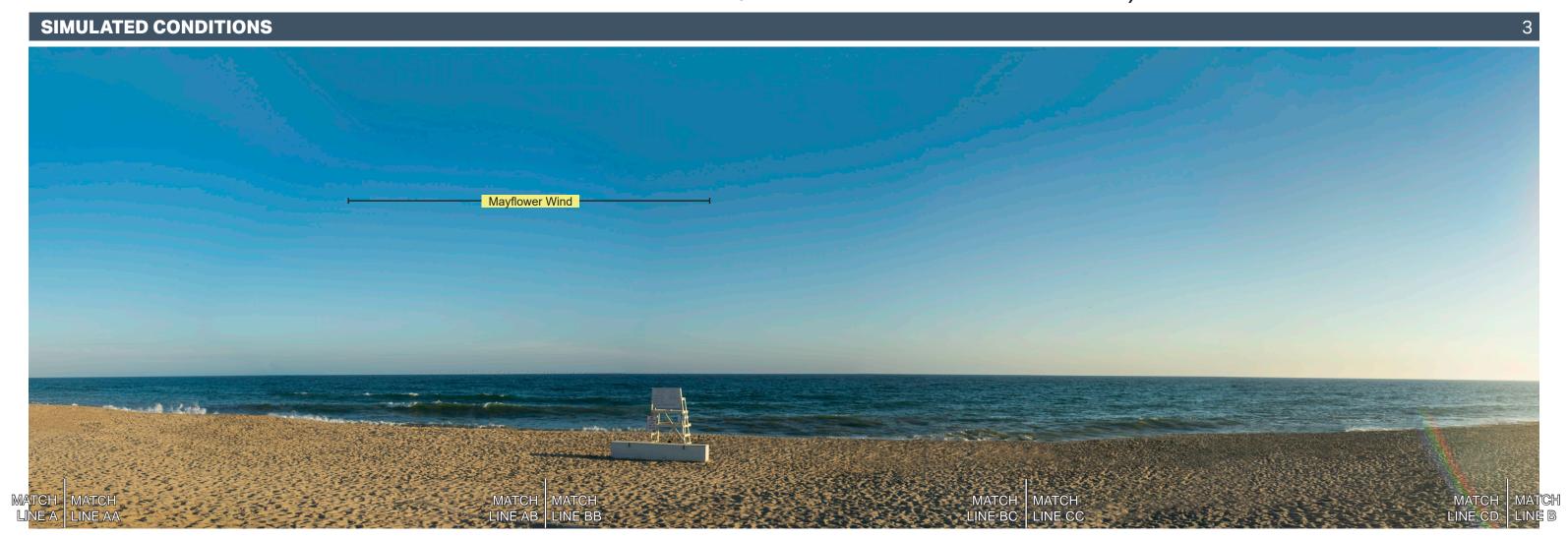
## **VISIBILTY OF CLOSEST TURBINES**

Mayflower Wind (OCS-A 0521)

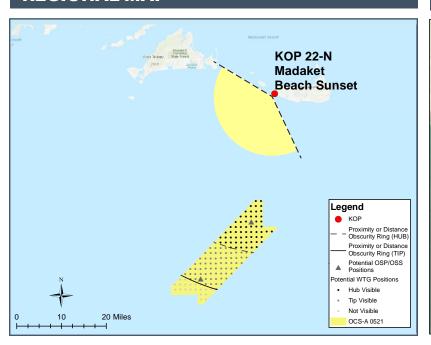
919 ft rotor diameter



# KOP 22-N Madaket Beach at Sunset - Scenario 5 (Human Field of View - 124°)



#### **REGIONAL MAP**



#### **SITE MAP**



#### **PROJECT VIEW**

Vertical Field of View: 40° Nearest WTG: 24 mi / 39 km

Horizontal Field of View: 127° Furthest Visible WTG: 46 mi / 73 km Potential Number of Structures Visible: 129 Potential Number of Structures Not Visible: 20

#### **PHOTOGRAPH AND SITE**

Time of photograph: 6:11PM Date of photograph: 7-29-20 L/SCA: Ocean beach

Viewing direction: South (228°) Latitude: 41.270282°N Longitude: 70.201719°W Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

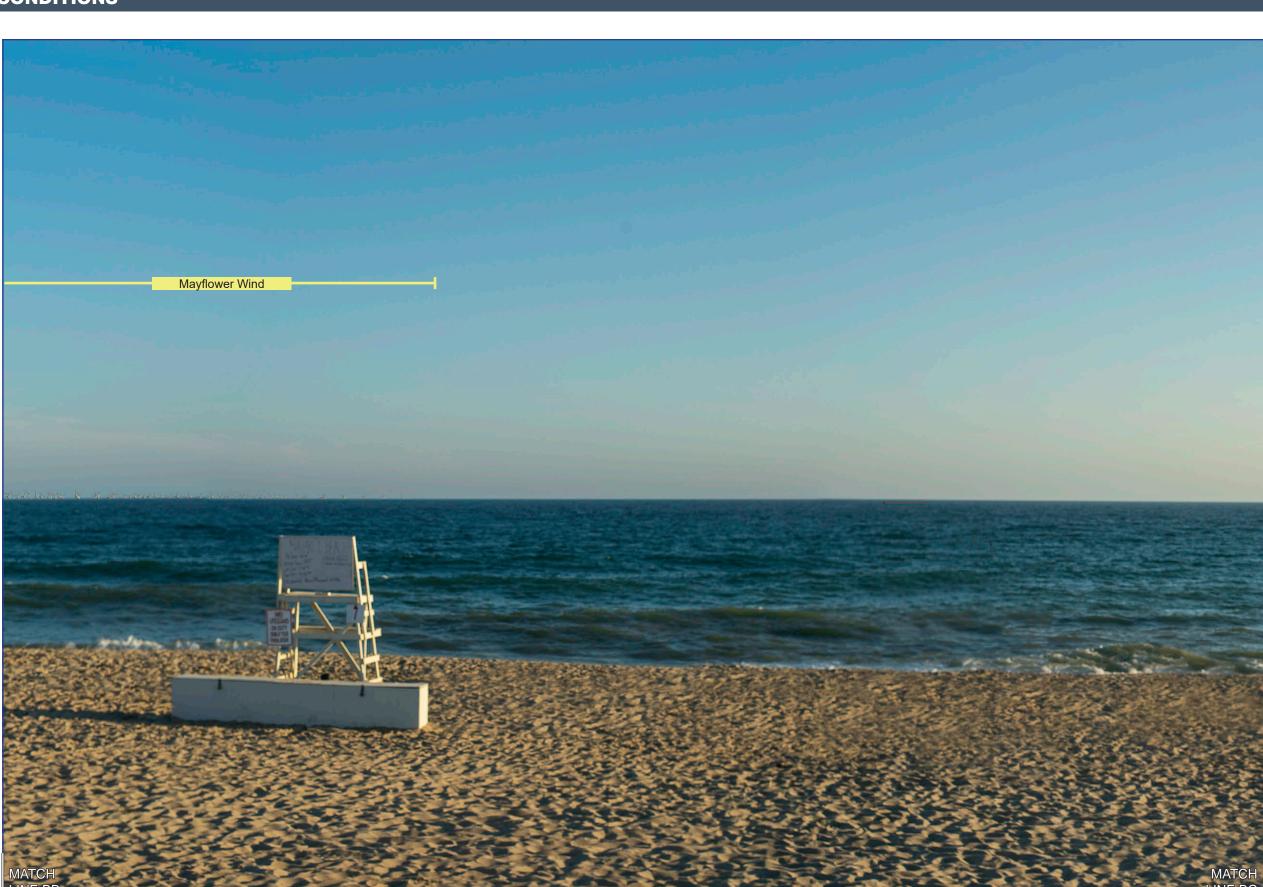
Temperature: 74° F Humidity: 79%

Wind Dir & Speed: WNW 3 mph Weather Condition: Clear

#### **CAMERA**

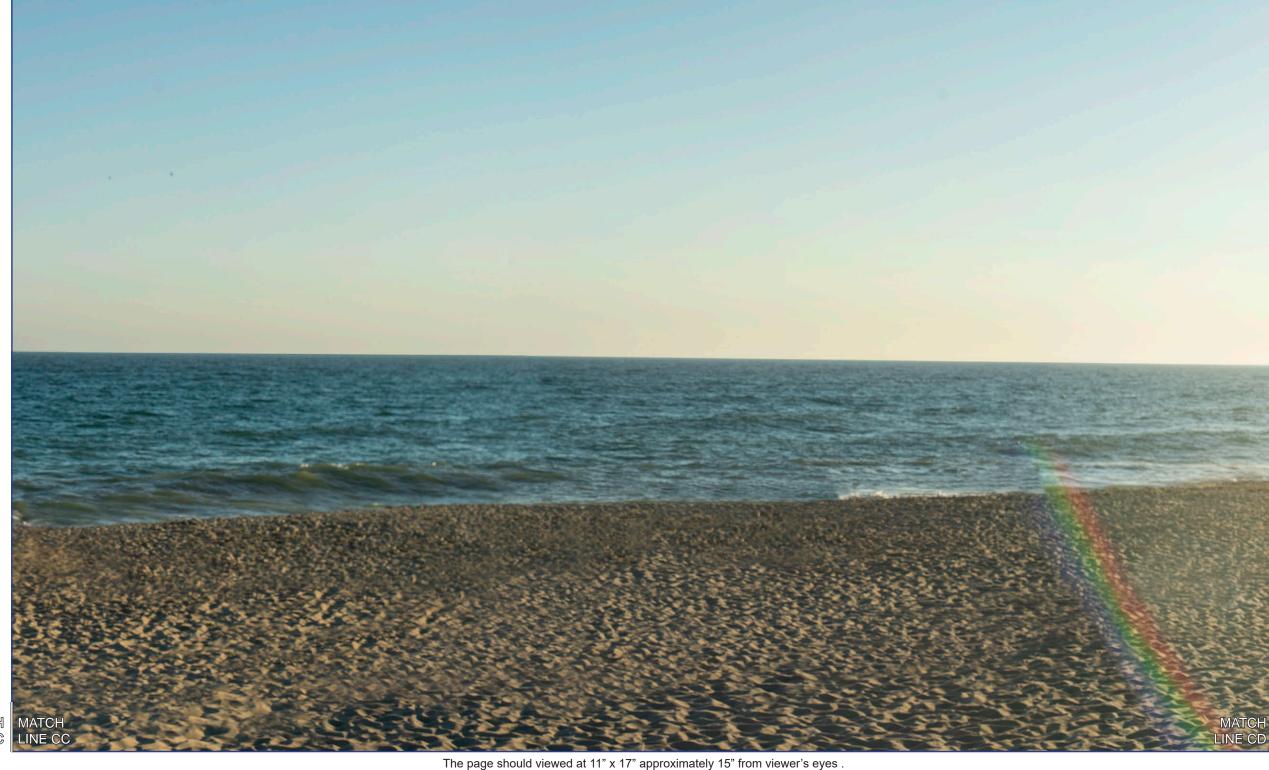
Camera Elevation: 13.5 ft / 4.1 m Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





MATCH LINE AB





# KOP 1-MV Wasque Point - Scenario 1

#### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



#### **REGIONAL MAP**



#### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 43 mi / 69 km

Vertical Field of View: 40° Potential Number of Structures Visible: 352

Nearest WTG: 15 mi / 24 km Potential Number of Structures Not Visible: 95

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)

Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub, Rural/Residential Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F
Humidity: 58%
Wind Dir & Speed: SSW 14mph
Weather Condition: Cloudy

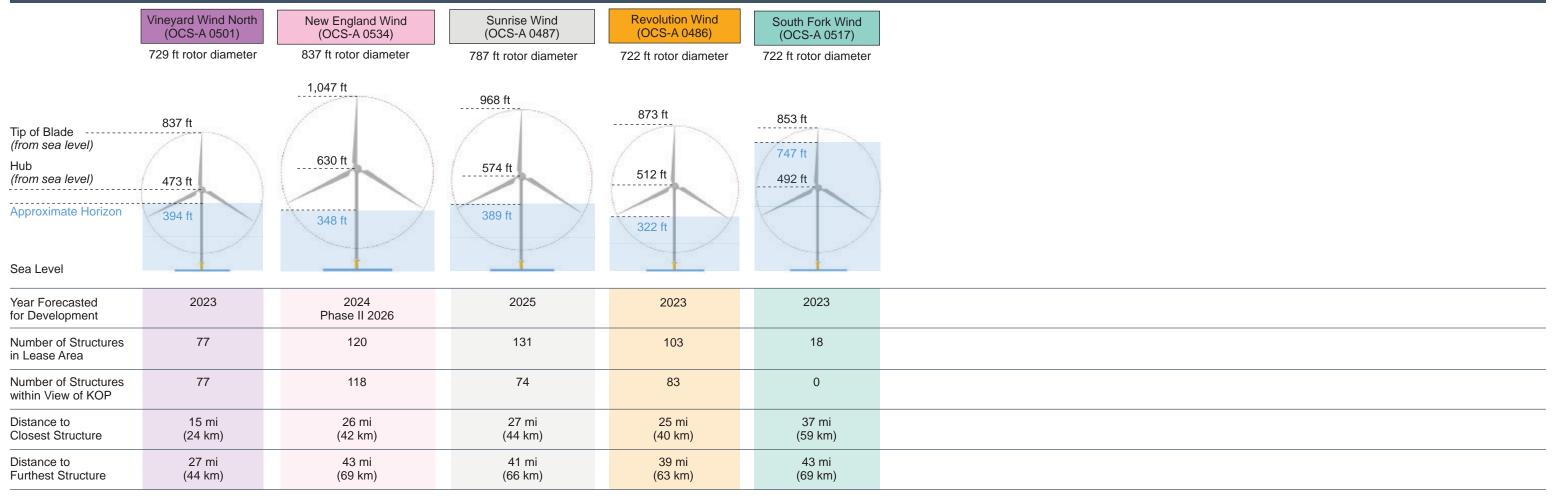
#### **CAMERA**

Camera Elevation: 6.5 ft / 6.3 m

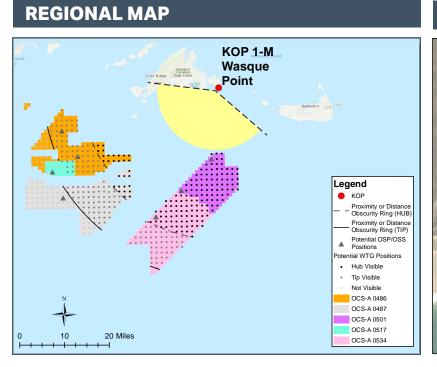
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



# VISIBILTY OF CLOSEST TURBINES









#### **PROJECT VIEW**

Horizontal Field of View: 124° Vertical Field of View: 40° Nearest WTG: 15 mi / 24 km

Furthest Visible WTG: 43 mi / 69 km Potential Number of Structures Visible: 352 Potential Number of Structures Not Visible:

95

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Date of photograph: 6-25-20 L/SCA: Ocean Beach, Costal Scrub, Rural/Residential

Viewing direction: South (194°) Latitude: 41.351077°N Longitude: 70.454821°W

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F Humidity: 58%

Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

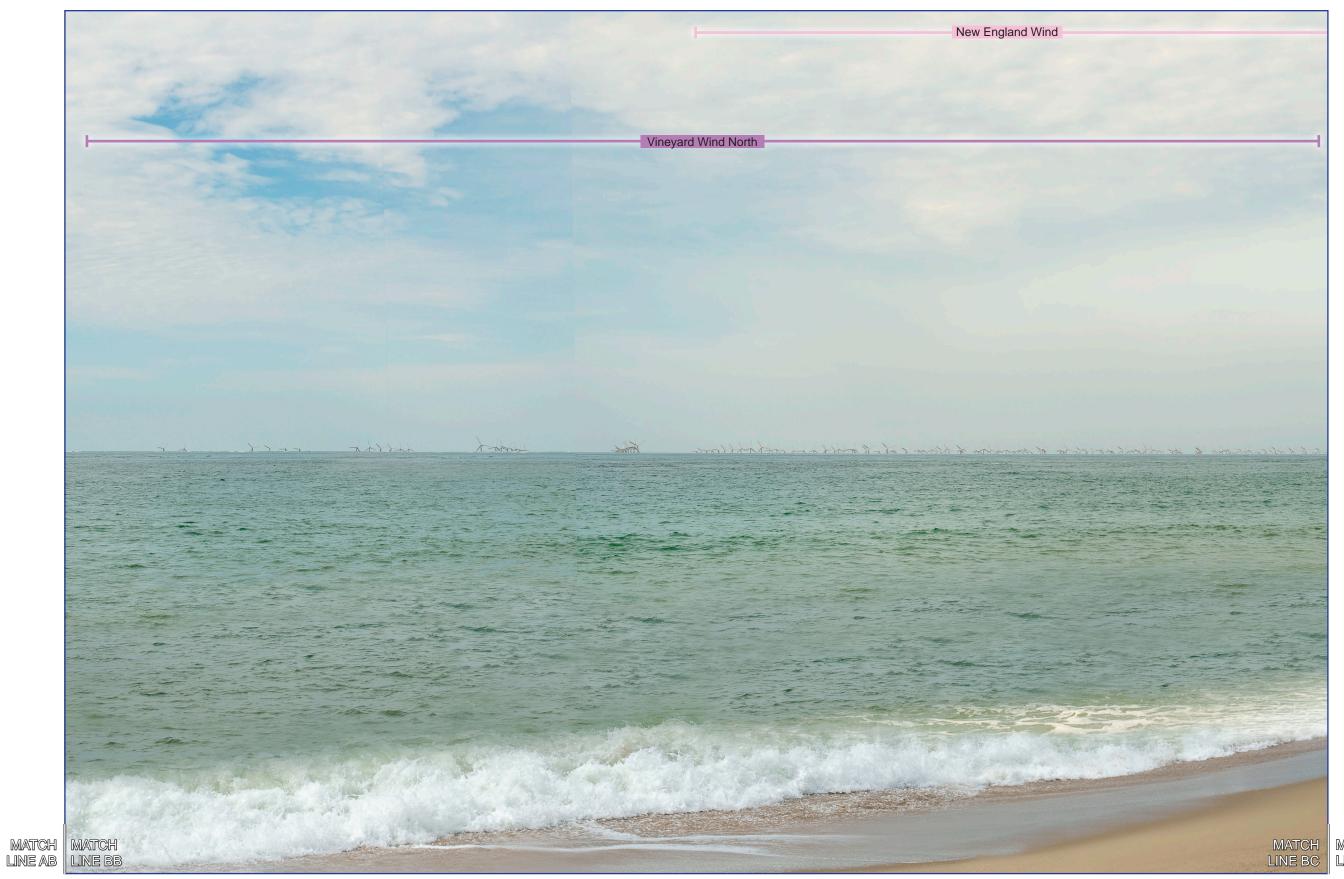
#### **CAMERA**

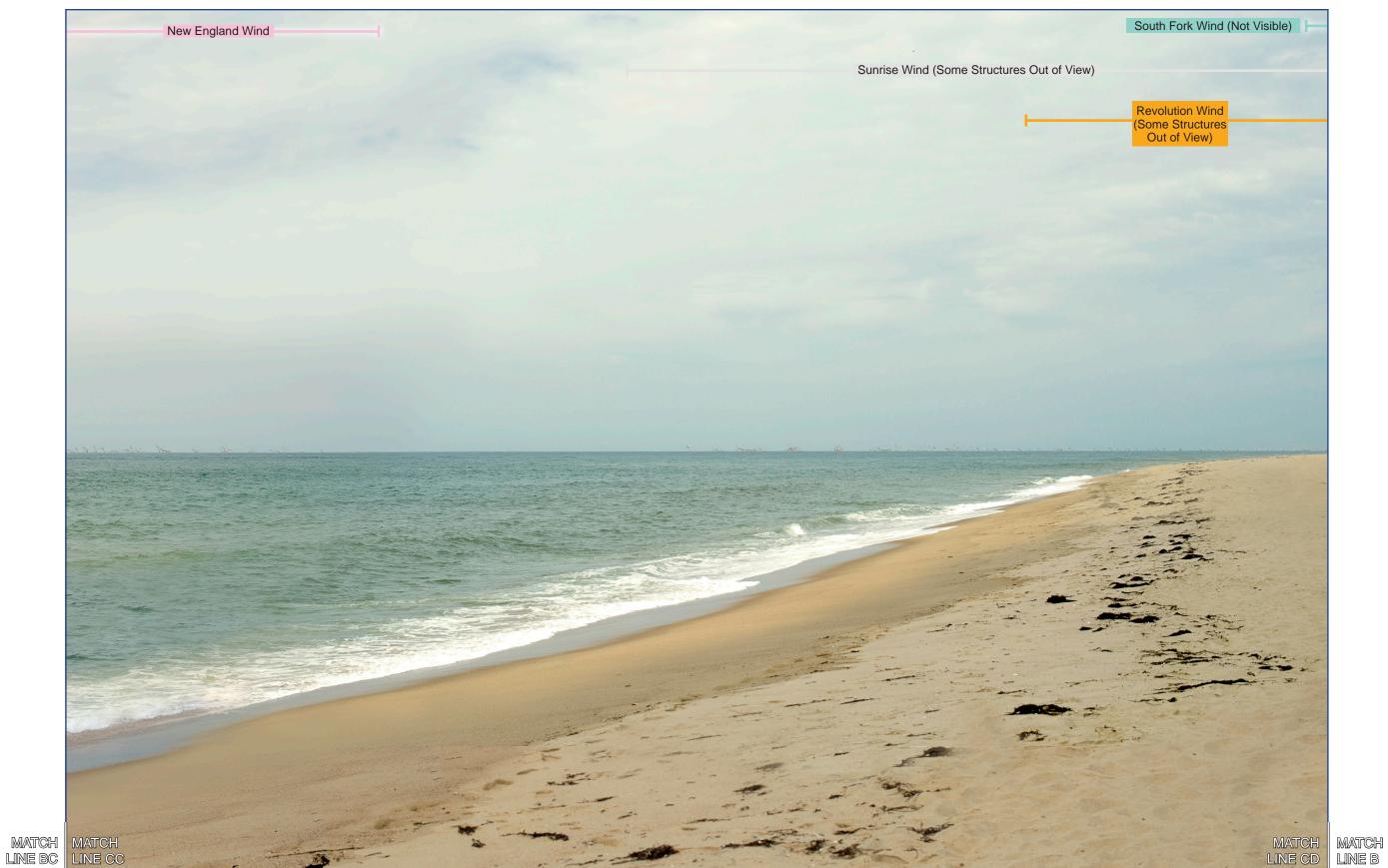
Camera Elevation: 6.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



LINEA





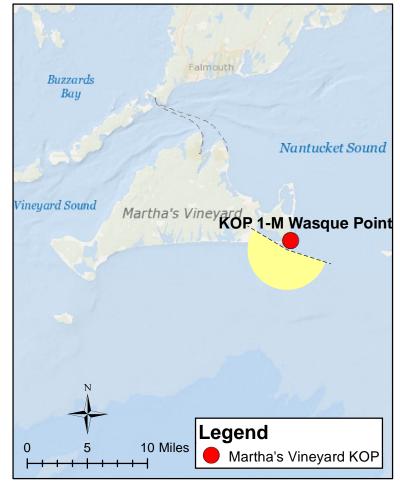
The page should viewed at 11" x 17" approximately 15" from viewer's eyes .

# KOP 1-MV Wasque Point - Scenario 2

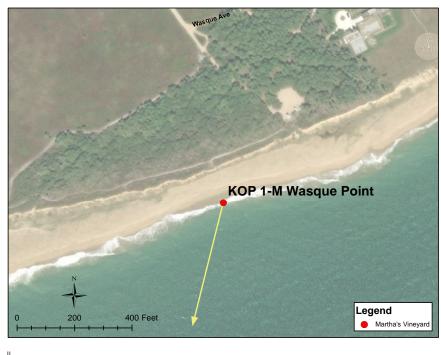
#### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



#### **REGIONAL MAP**



#### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 43 mi / 69 km Vertical Field of View: 40° Potential Number of Structures Visible: 438 Nearest WTG: 15 mi / 4 km Potential Number of Structures Not Visible: 160

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°) Latitude: 41.351077°N Date of photograph: 6-25-20 L/SCA: Ocean Beach, Costal Scrub, Longitude: 70.454821°W Rural/Residential

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F Humidity: 58%

Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

Camera Elevation: 6.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

**CAMERA** 

MATCH

LINE CD

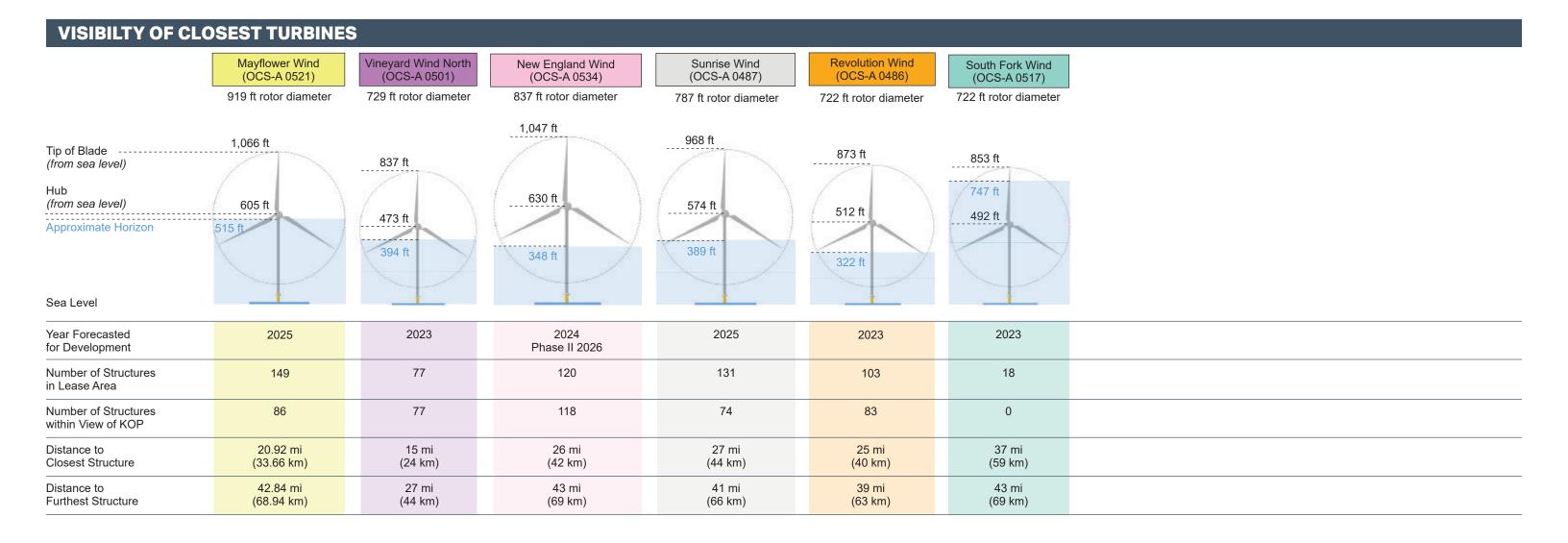
# SIMULATED CONDITIONS Mayflower Wind New England Wind New England Wind South Fork Wind (Not Visible) Surrise Wind (Some Structures Out of View) Revolution Wind Some Structures Out of View) We will the surrise wind (Some Structures Out of View) Revolution Wind South Fork Wind (Not Visible) Revolution Wind Some Structures Out of View)

MATCH MATCH

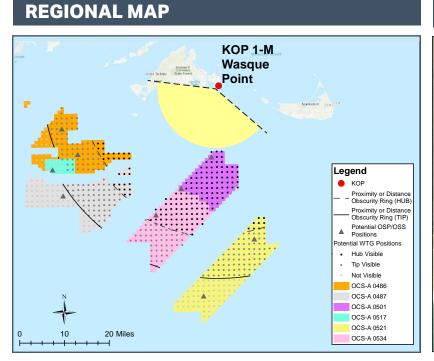
LINE AB LINE BB

MATCH MATCH

LINE BC | LINE CC









#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 43 mi / 69 km Vertical Field of View: 40° Potential Number of Structures Visible: 438 Nearest WTG: 15 mi / 4 km Potential Number of Structures Not Visible:

160

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Date of photograph: 6-25-20 L/SCA: Ocean Beach, Costal Scrub, Rural/Residential

Viewing direction: South (194°) Latitude: 41.351077°N

Lighting Direction: Backlit diffused

Longitude: 70.454821°W

#### **ENVIRONMENT**

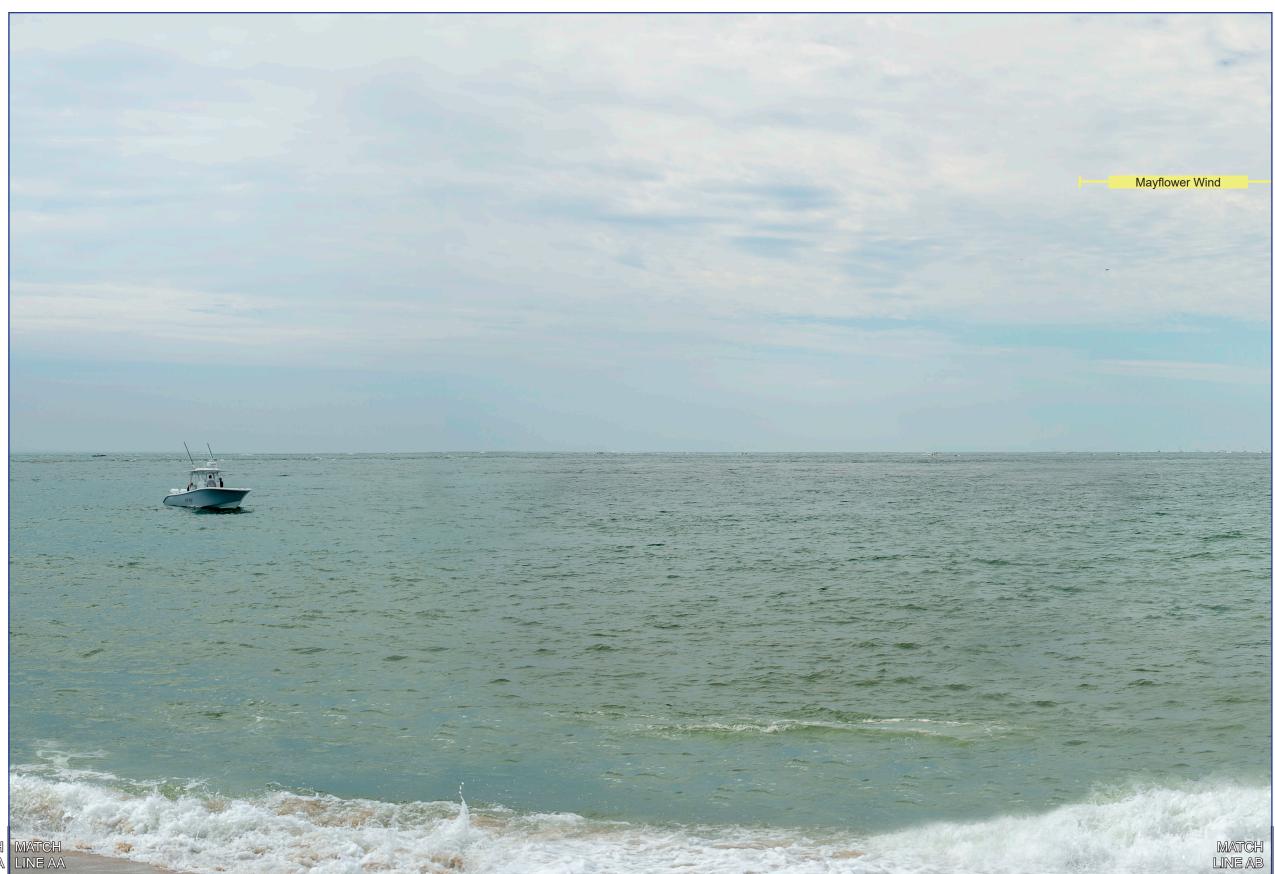
Temperature: 77° F Humidity: 58%

Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

#### **CAMERA**

Camera Elevation: 6.5 ft / 6.3 m

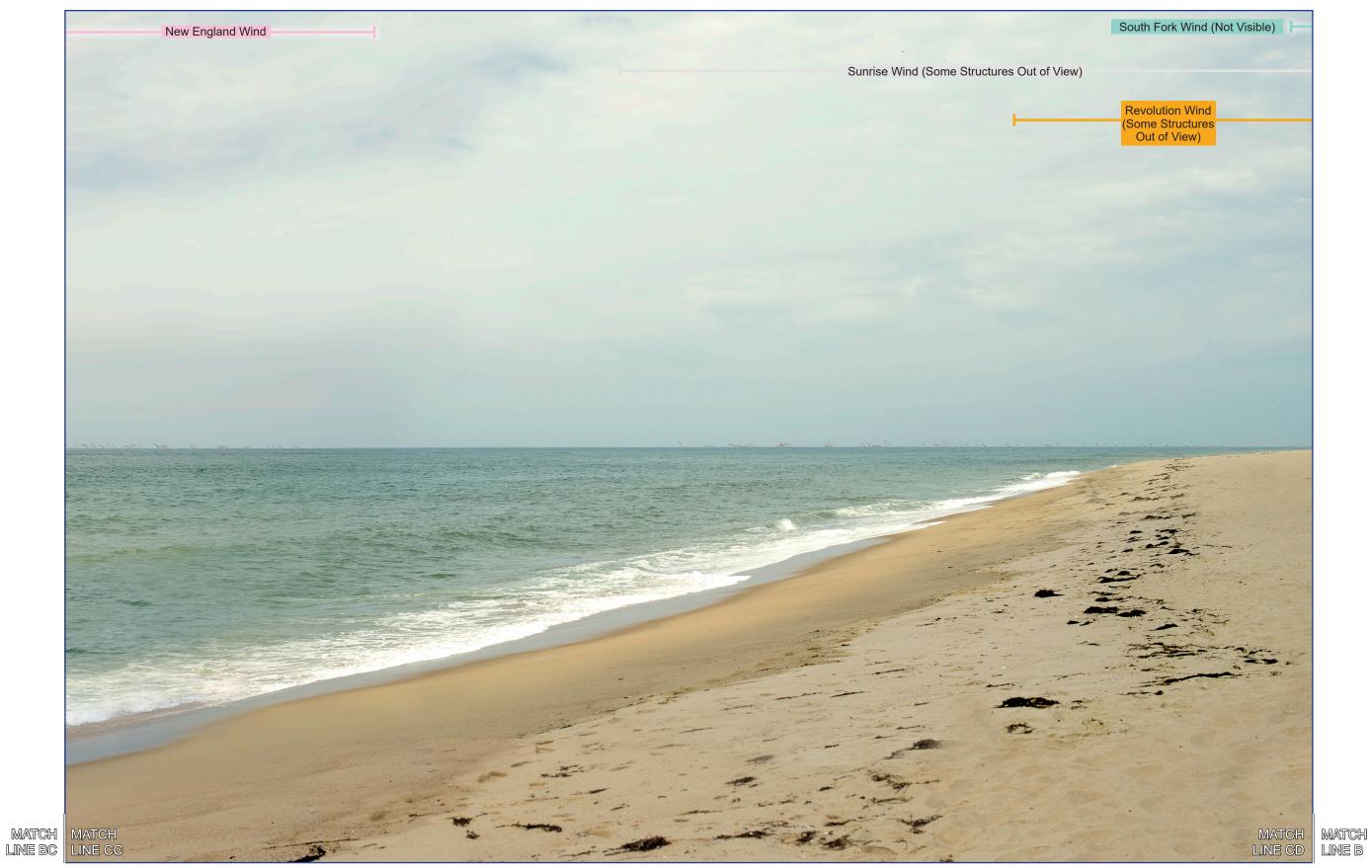
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



LINEA

5





# KOP 1-MV Wasque Point - Scenario 3

#### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



#### **REGIONAL MAP**



#### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 43 mi / 70 km

Vertical Field of View: 40° Potential Number of Structures Visible: 686

Nearest WTG: 15 mi / 24 km Potential Number of Structures Not Visible: 384

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)

Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub,

Rural/Residential Lighting Direction: Backlit diffus

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F Humidity: 58%

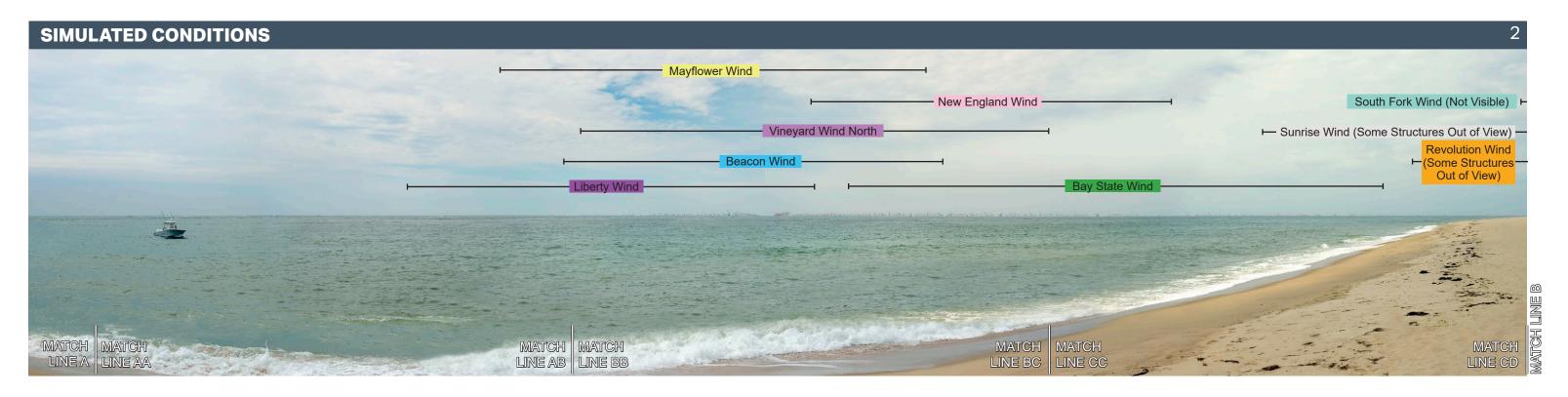
Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

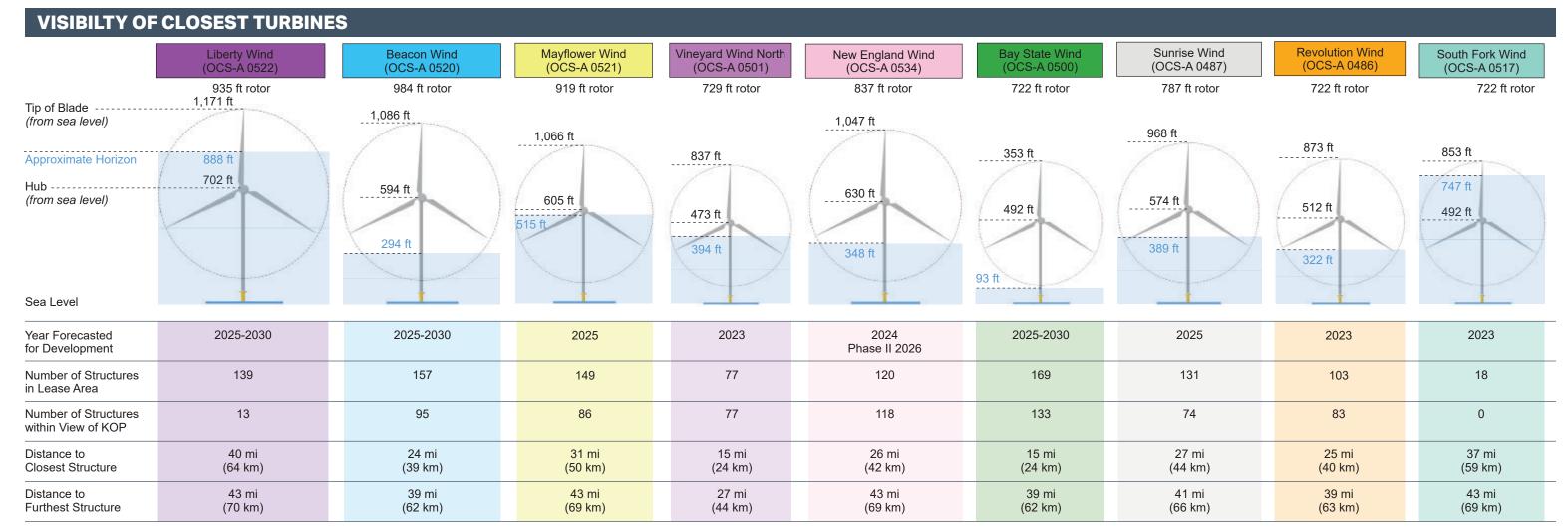
#### CAMERA

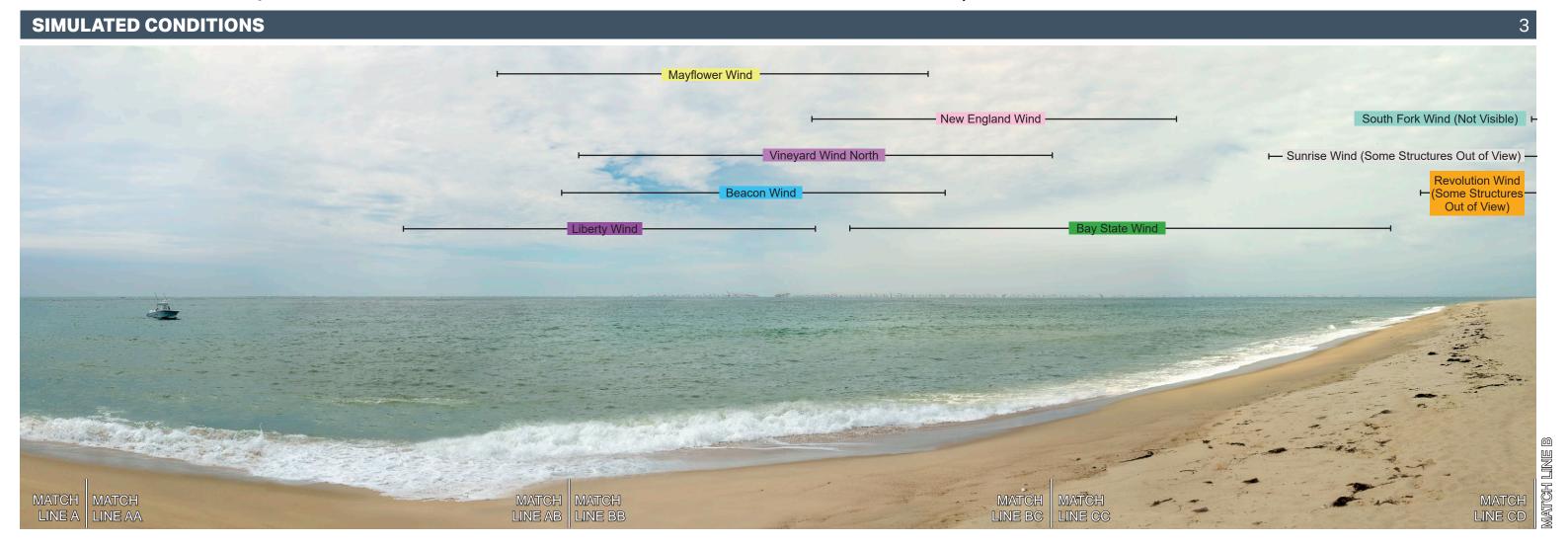
Camera Elevation: 6.5 ft / 6.3 m

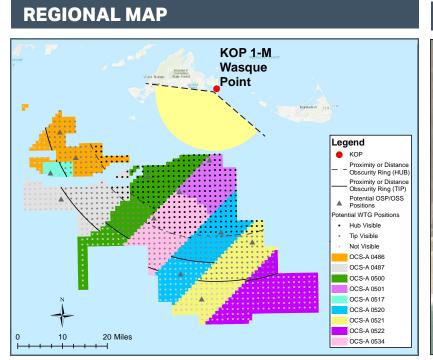
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

# KOP 1-MV Wasque Point - Scenario 3











#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 43 mi / 70 km

Vertical Field of View: 40° Potential Number of Structures Visible: 686

Nearest WTG: 15 mi / 24 km Potential Number of Structures Not Visible:

384

#### km Temperature, 77° □

Temperature: 77° F Humidity: 58%

**ENVIRONMENT** 

Wind Dir & Speed: SSW 14mph
Weather Condition: Cloudy

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)
Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub,
Rural/Residential Lighting Direction: Racklit diffus

Lighting Direction: Backlit diffused

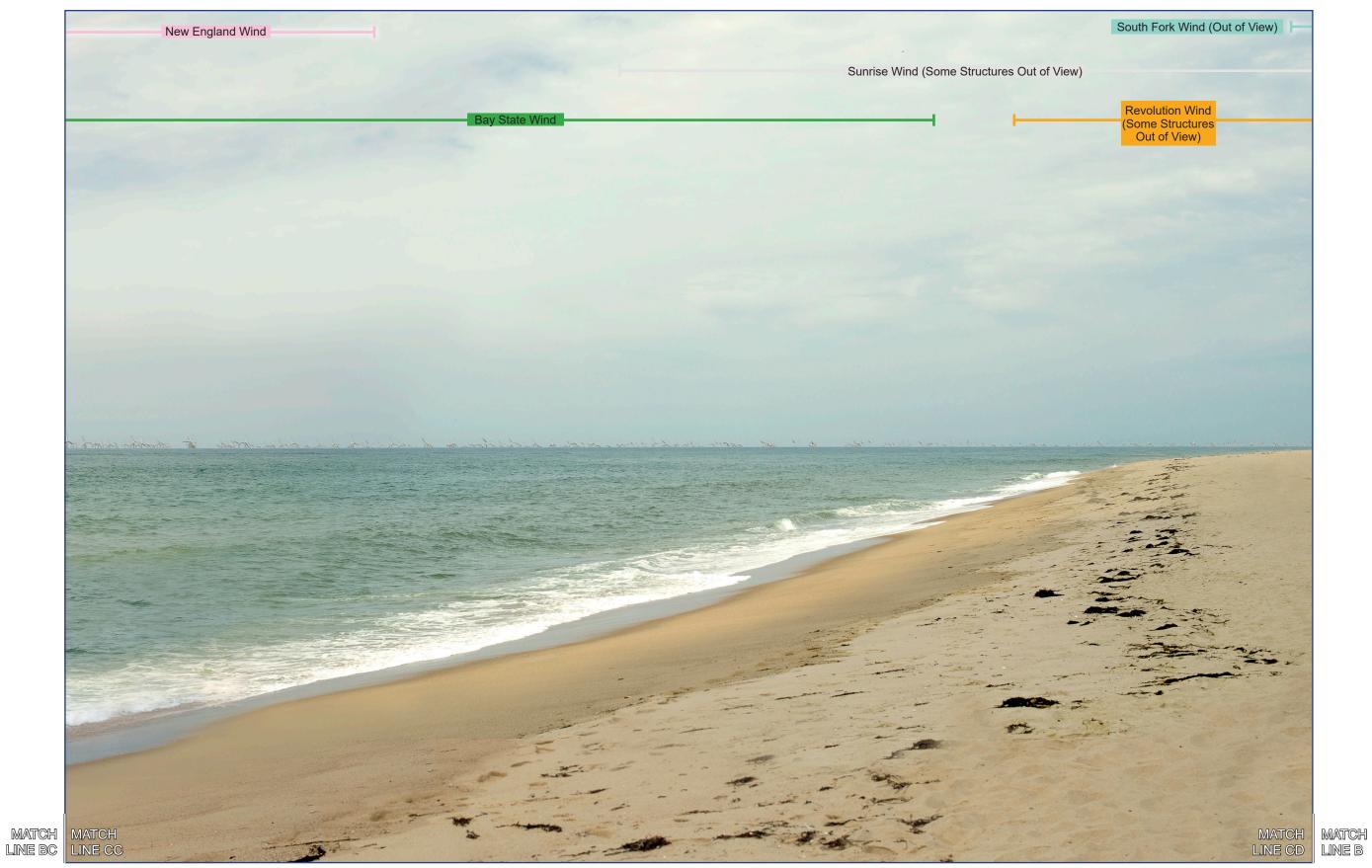
#### CAMERA

Camera Elevation: 6.5 ft / 6.3 m Nikon D4 Nikon 50mm

ISO: 100 Fstop: f/7.1





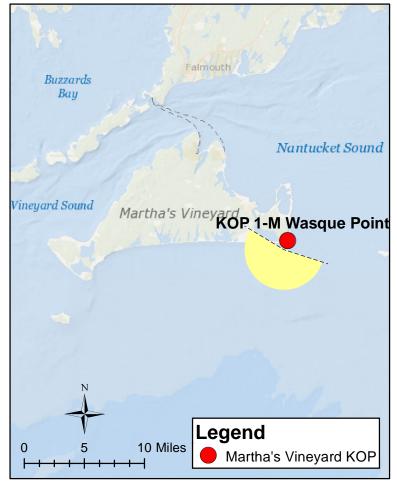


# KOP 1-MV Wasque Point - Scenario 4

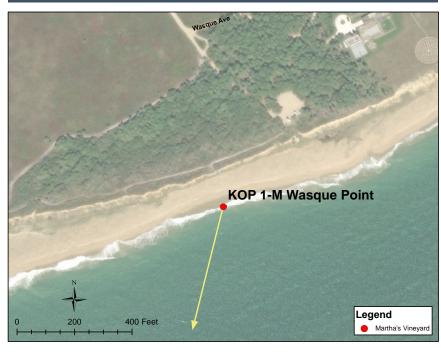
#### **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



#### **REGIONAL MAP**



#### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3 AA-AB is shown on page 4 BB-BC is shown on page 5 CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 43 mi / 70 km

Vertical Field of View: 40° Potential Number of Structures Visible: 593

Nearest WTG: 15 mi / 24 km Potential Number of Structures Not Visible:

321

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)

Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub,

Rural/Residential Lighting Direction: Resultit diffusions

Residential Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

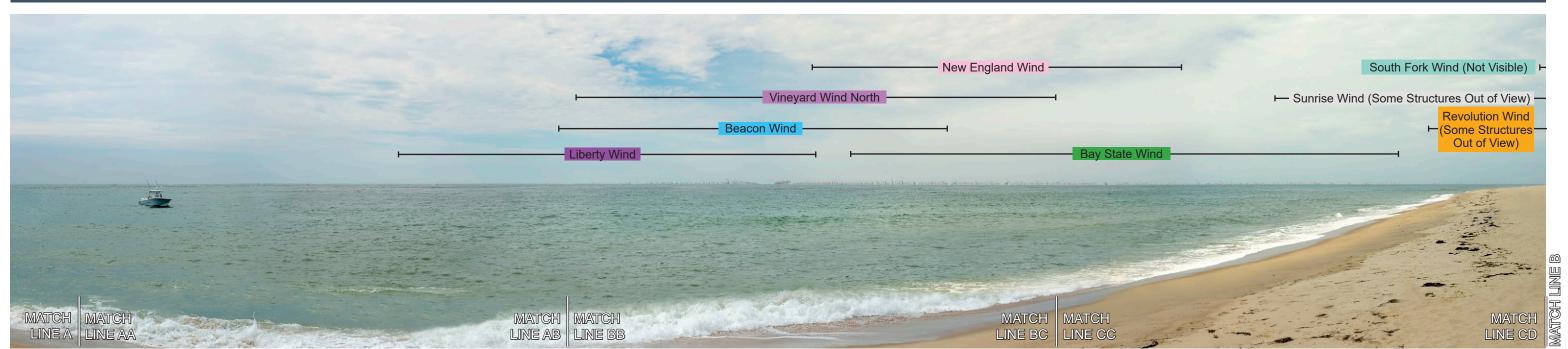
Temperature: 77° F Humidity: 58%

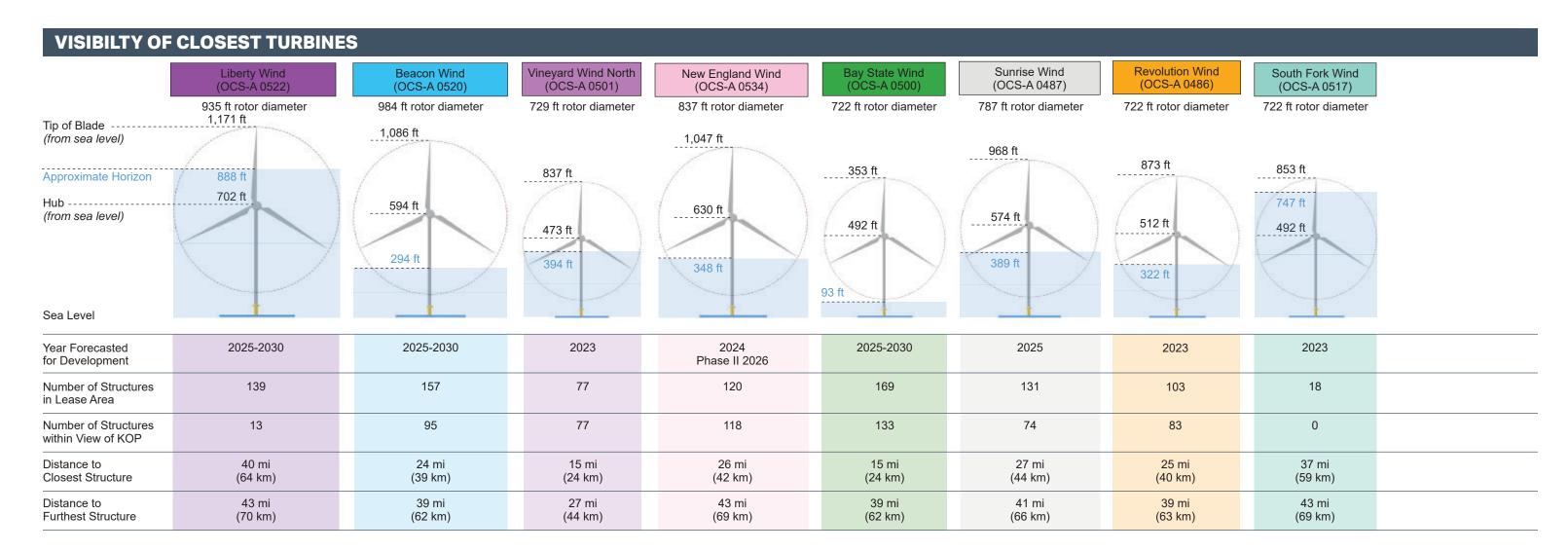
Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

#### CAMERA

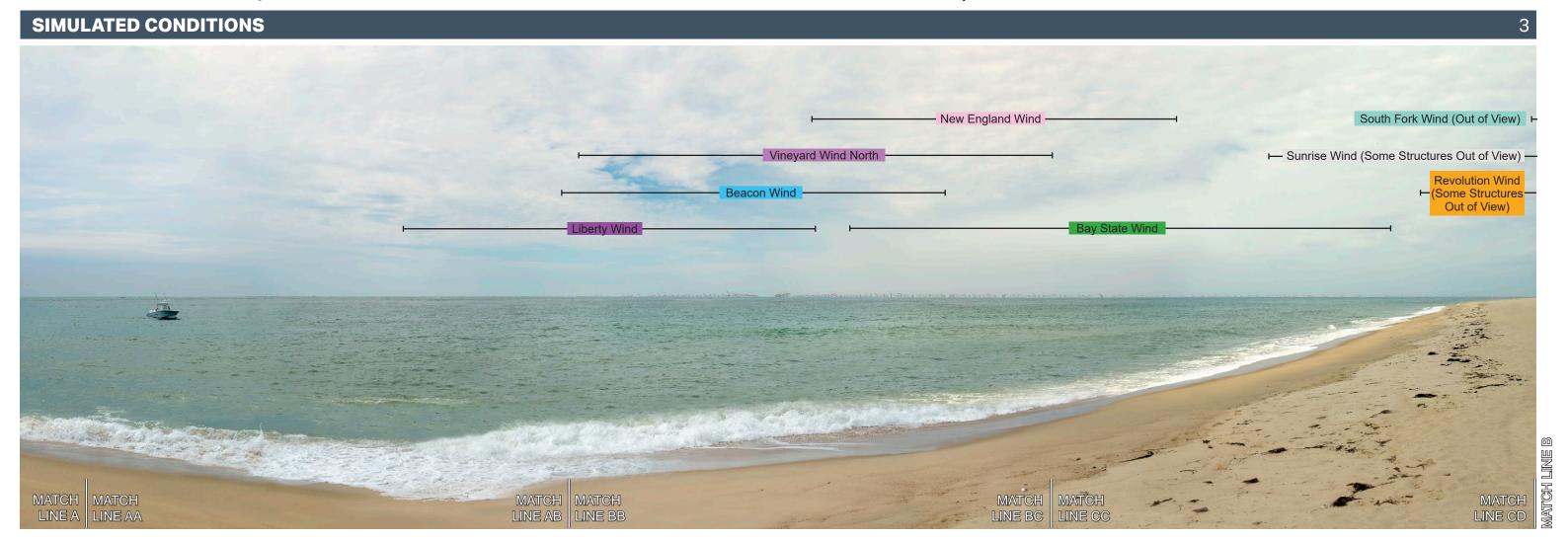
Camera Elevation: 6.5 ft / 6.3 m

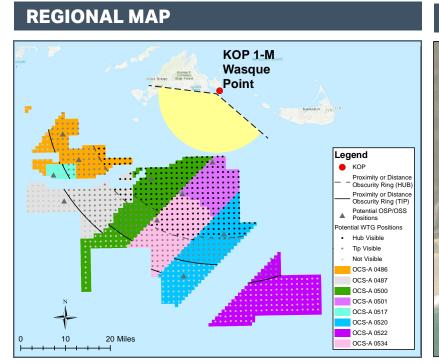
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

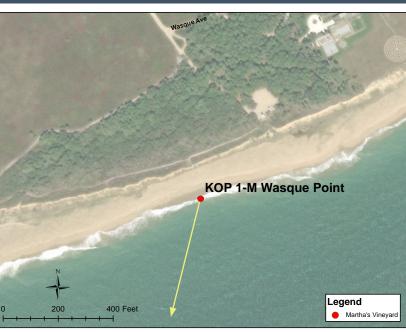




**SITE MAP** 







#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 43 mi / 70 km

Vertical Field of View: 40° Potential Number of Structures Visible: 593

Nearest WTG: 15 mi / 24 km Potential Number of Structures Not Visible: 321

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)

Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub, Rural/Residential Lighting Direction: Backlit diffused

# CAMERA

**ENVIRONMENT** 

Temperature: 77° F

Humidity: 58%

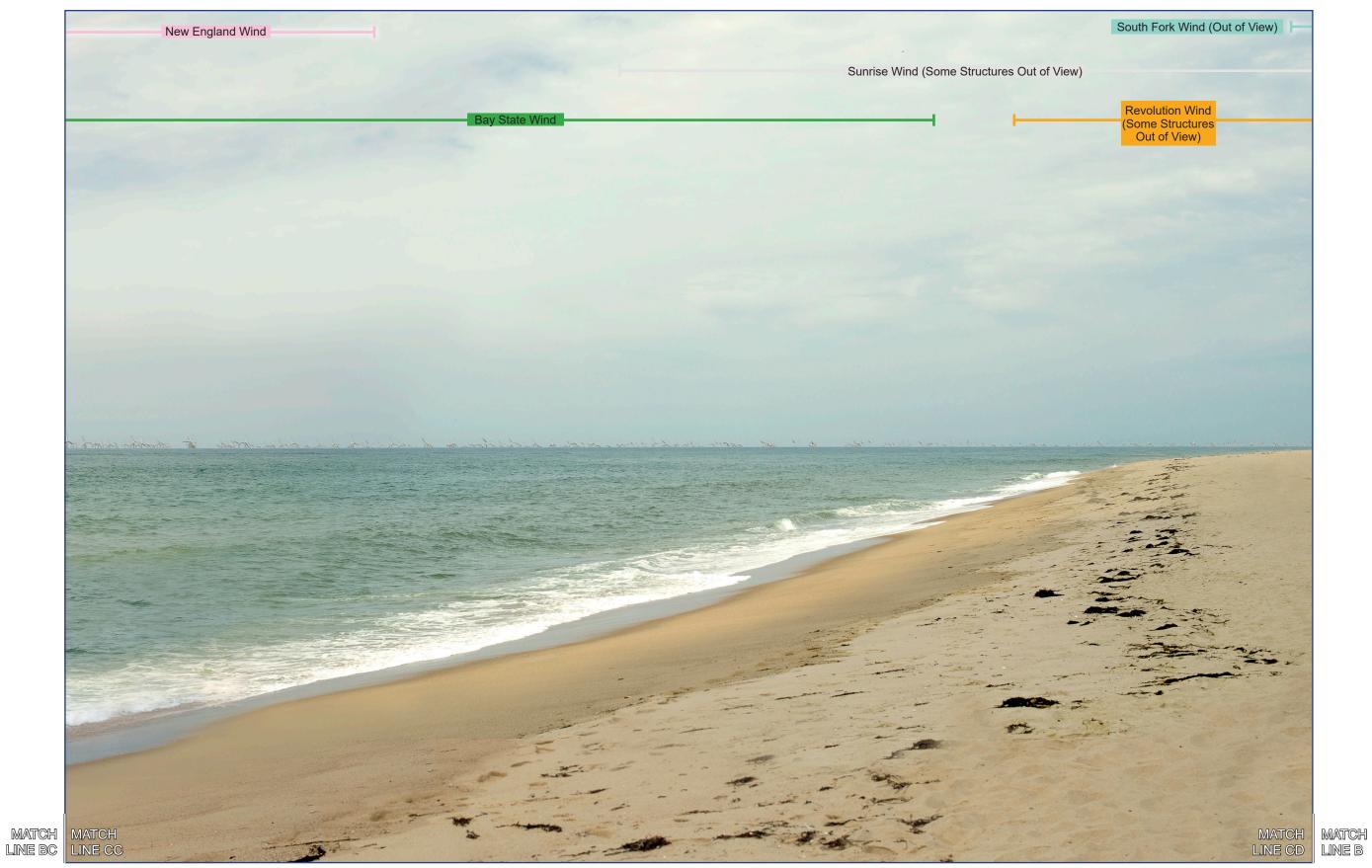
Camera Elevation: 6.5 ft / 6.3 m Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1 Shutter: 1/1250 sec

Wind Dir & Speed: SSW 14mph

Weather Condition: Cloudy





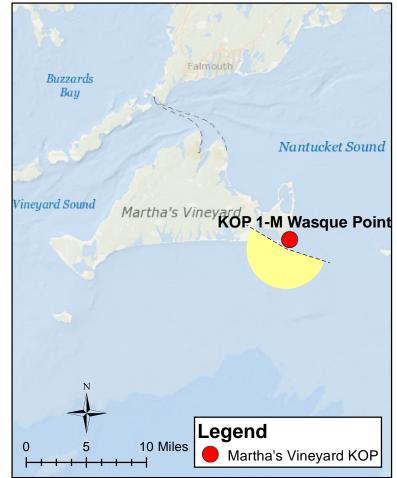


# KOP 1-MV Wasque Point - Scenario 5

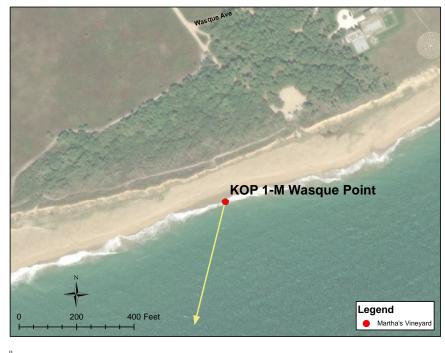
#### PANORAMIC PHOTOGRAPH - EXISTING CONDITIONS



#### **REGIONAL MAP**



#### SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

#### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 43 mi / 69 km

Vertical Field of View: 40° Potential Number of Structures Visible: 86

Nearest WTG: 31 mi / 50 km Potential Number of Structures Not Visible:

63

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM Viewing direction: South (194°)
Date of photograph: 6-25-20 Latitude: 41.351077°N

L/SCA: Ocean Beach, Costal Scrub,
Rural/Residential Lighting Direction: Resultit diffusion

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F Humidity: 58%

Wind Dir & Speed: SSW 14mph
Weather Condition: Cloudy

#### **CAMERA**

Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



#### **VISIBILTY OF CLOSEST TURBINES**

Closest Structure

Furthest Structure

Distance to

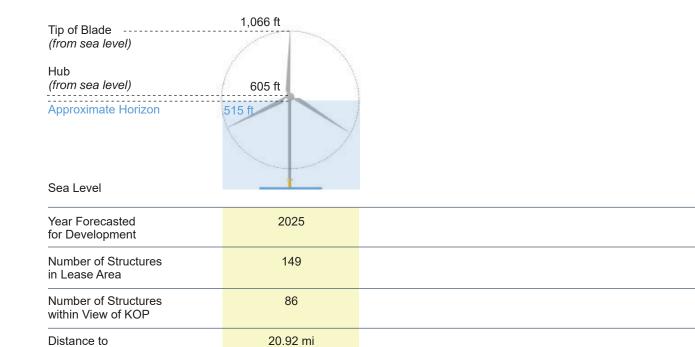
Mayflower Wind (OCS-A 0521)

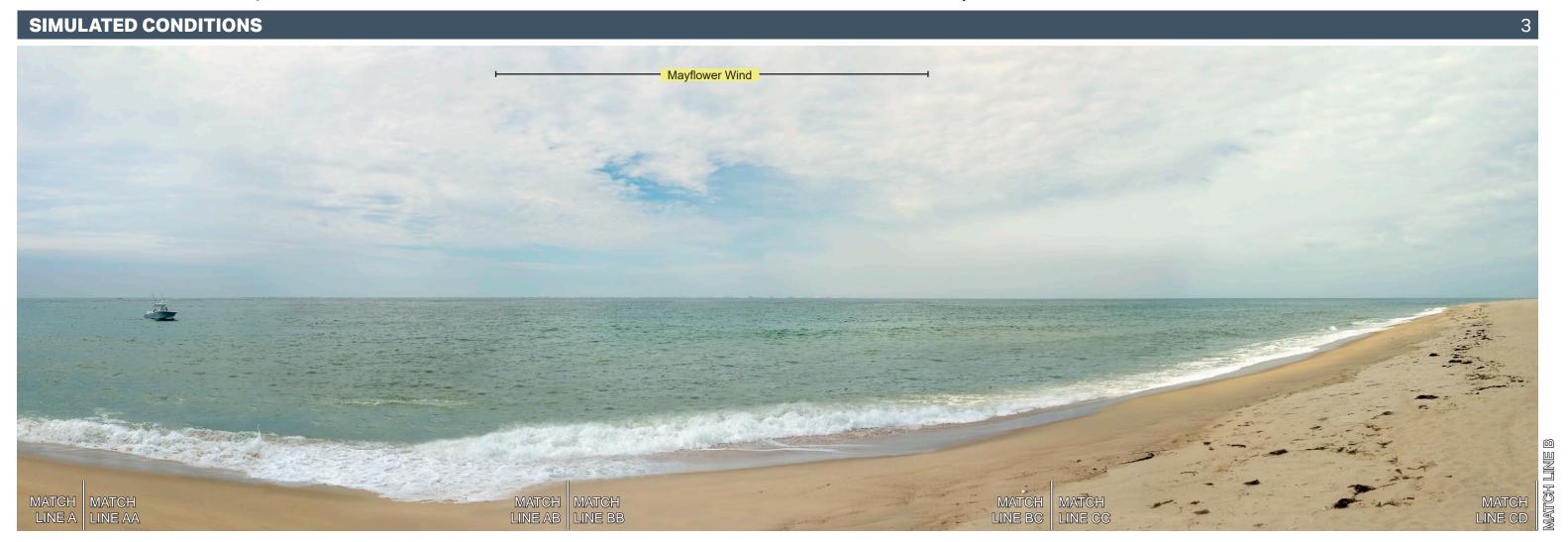
919 ft rotor diameter

(33.66 km)

42.84 mi

(68.94 km)





#### **REGIONAL MAP**

# 

#### SITE MAP



#### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 43 mi / 69 km

Vertical Field of View: 40° Potential Number of Structures Visible: 86

Nearest WTG: 31 mi / 50 km Potential Number of Structures Not Visible: 63

#### **PHOTOGRAPH AND SITE**

Time of photograph: 9:01AM

Date of photograph: 6-25-20

L/SCA: Ocean Beach, Costal Scrub,
Rural/Residential

Viewing direction: South (194°)
Latitude: 41.351077°N
Longitude: 70.454821°W

Lighting Direction: Backlit diffused

#### **ENVIRONMENT**

Temperature: 77° F Humidity: 58%

Wind Dir & Speed: SSW 14mph Weather Condition: Cloudy

#### CAMERA

Camera Elevation: 20.5 ft / 6.3 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



LINEA



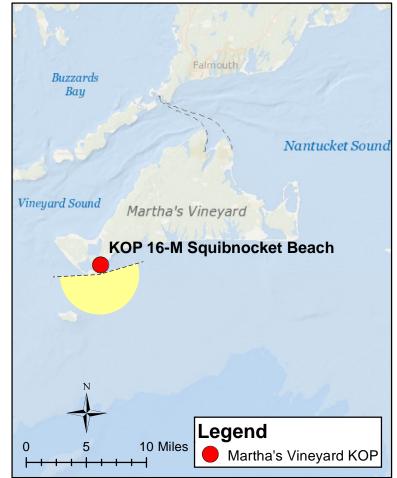


# KOP 16-MV Squibnocket Beach - Scenario 1

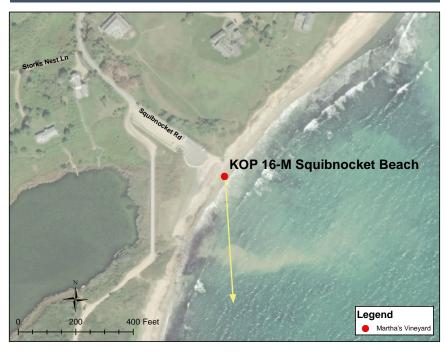
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 39 mi / 63 km

Vertical Field of View: 40° Potential Number of Structures Visible: 191

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible: 258

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph

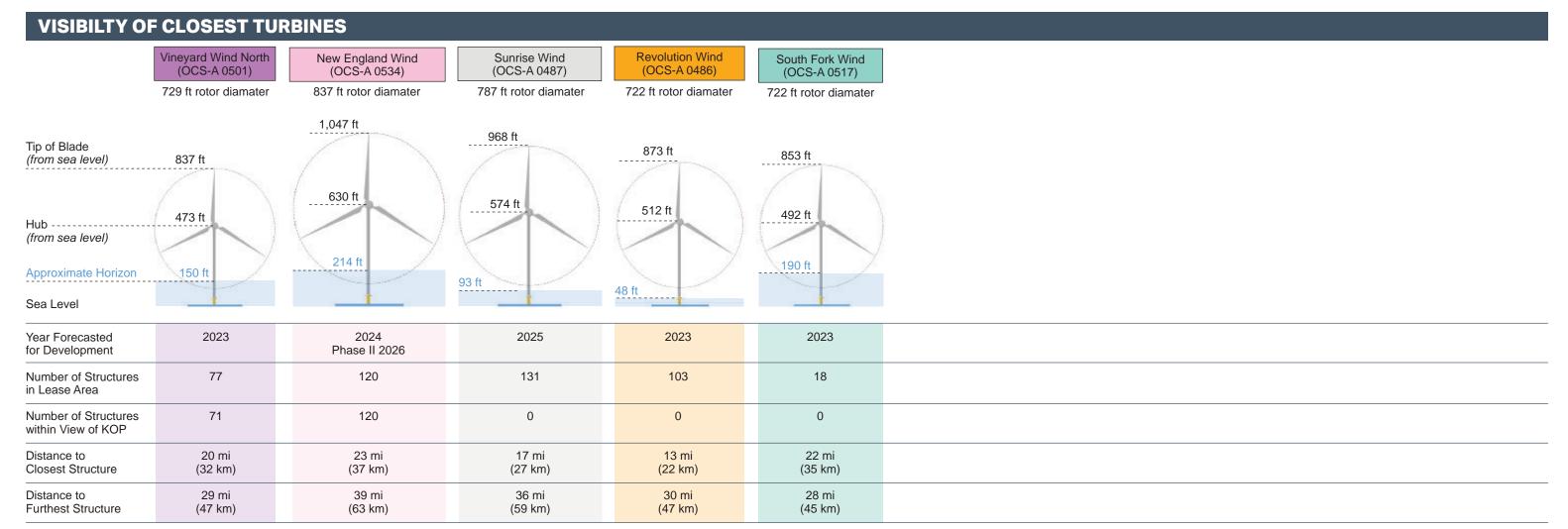
Weather Condition: Hazy

## **CAMERA**

Camera Elevation: 16.5 ft / 5.0 m

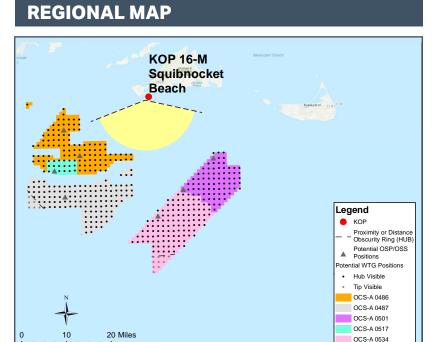
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

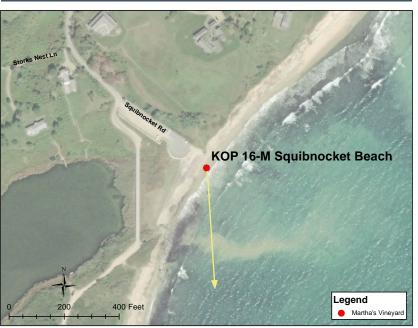




**SITE MAP** 







### **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 39 mi / 63 km

Vertical Field of View: 40° Potential Number of Structures Visible: 191

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible:

258

# **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

# **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph Weather Condition: Hazy

### CAMERA

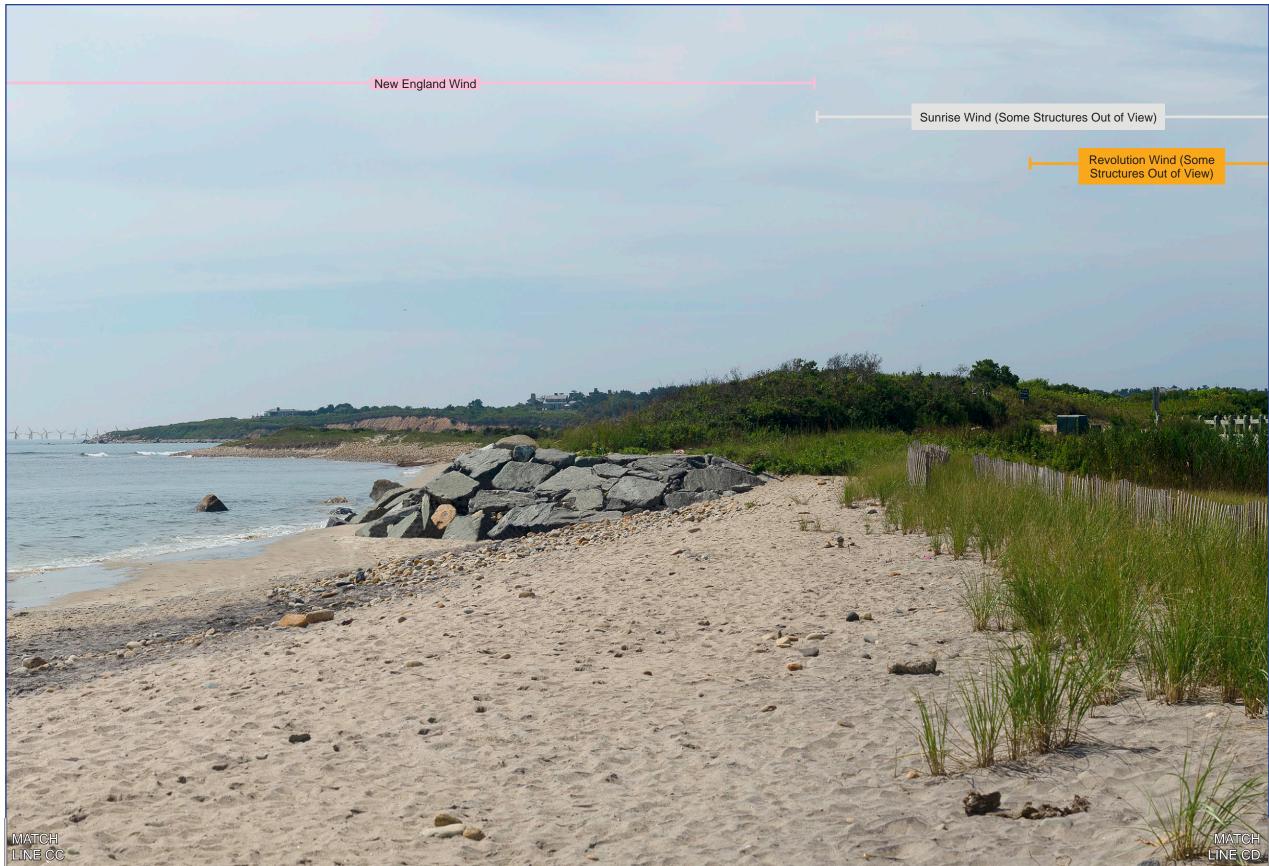
Camera Elevation: 16.5 ft / 5.0 m  $\,$ 

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1





LINE AB



MATCH LINE BC

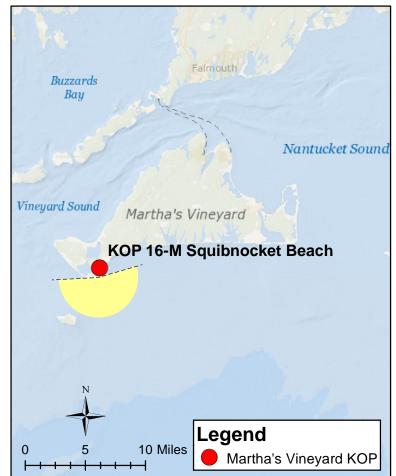
LINE B

# KOP 16-MV Squibnocket Beach - Scenario 2

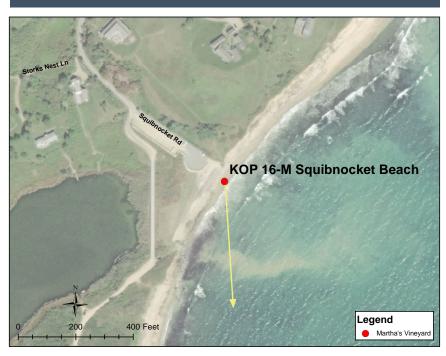
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



### **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 239

Nearest WTG: 12 mi / 20 km Potential Number of Structures Not Visible: 359

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

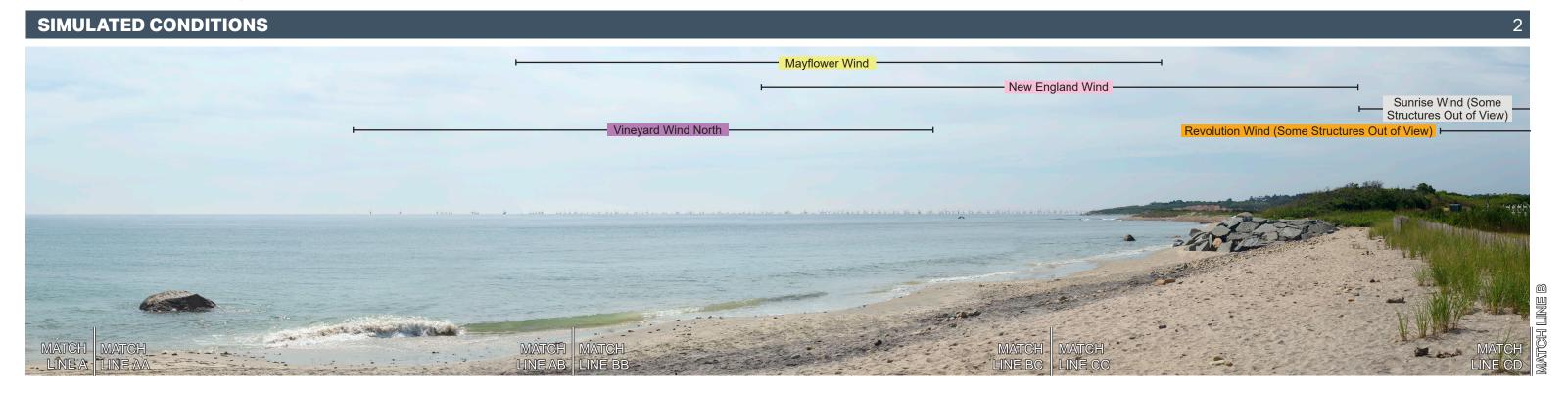
Wind Dir & Speed: SSW 16mph Weather Condition: Hazy

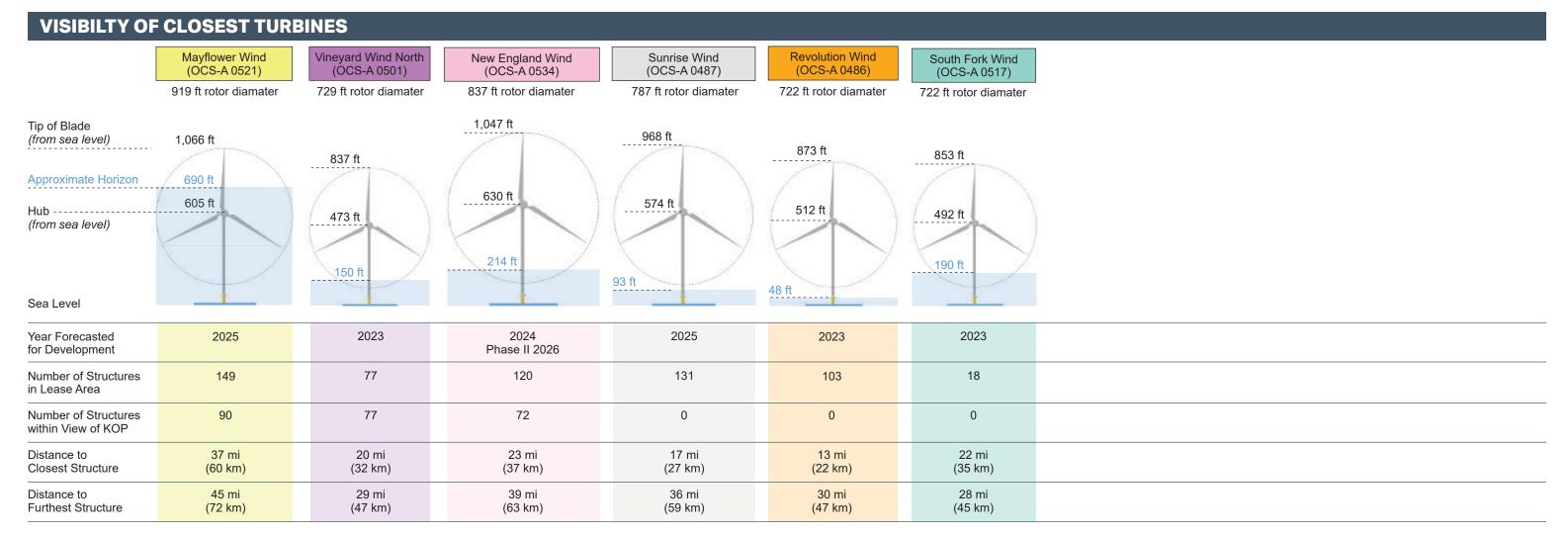
Martha's Vineyard

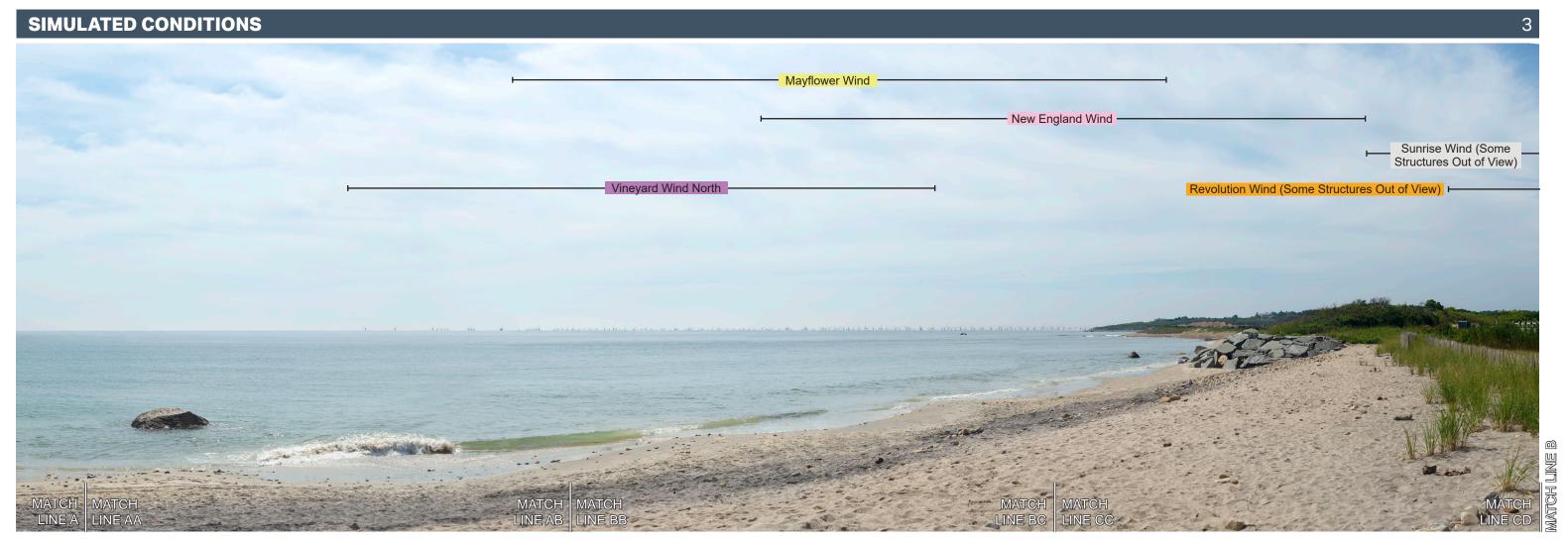
### CAMERA

Camera Elevation: 16.5 ft / 5.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

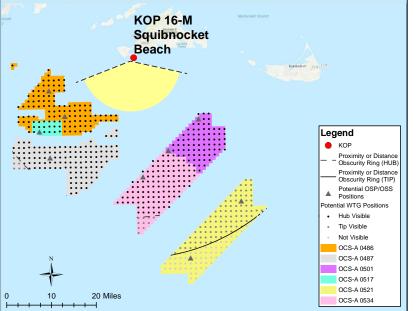




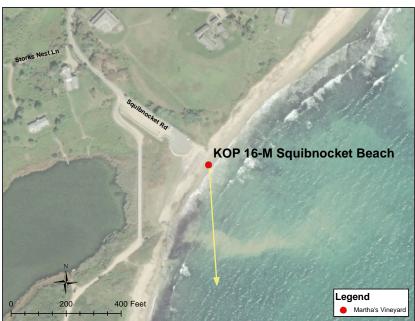




**REGIONAL MAP** 



# **SITE MAP**



# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km Vertical Field of View: 40° Potential Number of Structures Visible: 239 Nearest WTG: 12 mi / 20 km Potential Number of Structures Not Visible:

359

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°) Latitude: 41.318873°N Date of photograph: 11-6-20 L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W Lighting Direction:Sidelit diffused

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1 Shutter: 1/1250 sec Exposure bias: -0.7 step

**ENVIRONMENT** 

Weather Condition: Hazy

Temperature: 65° F

Humidity: 78%

**CAMERA** 

Camera Elevation: 16.5 ft / 5.0 m

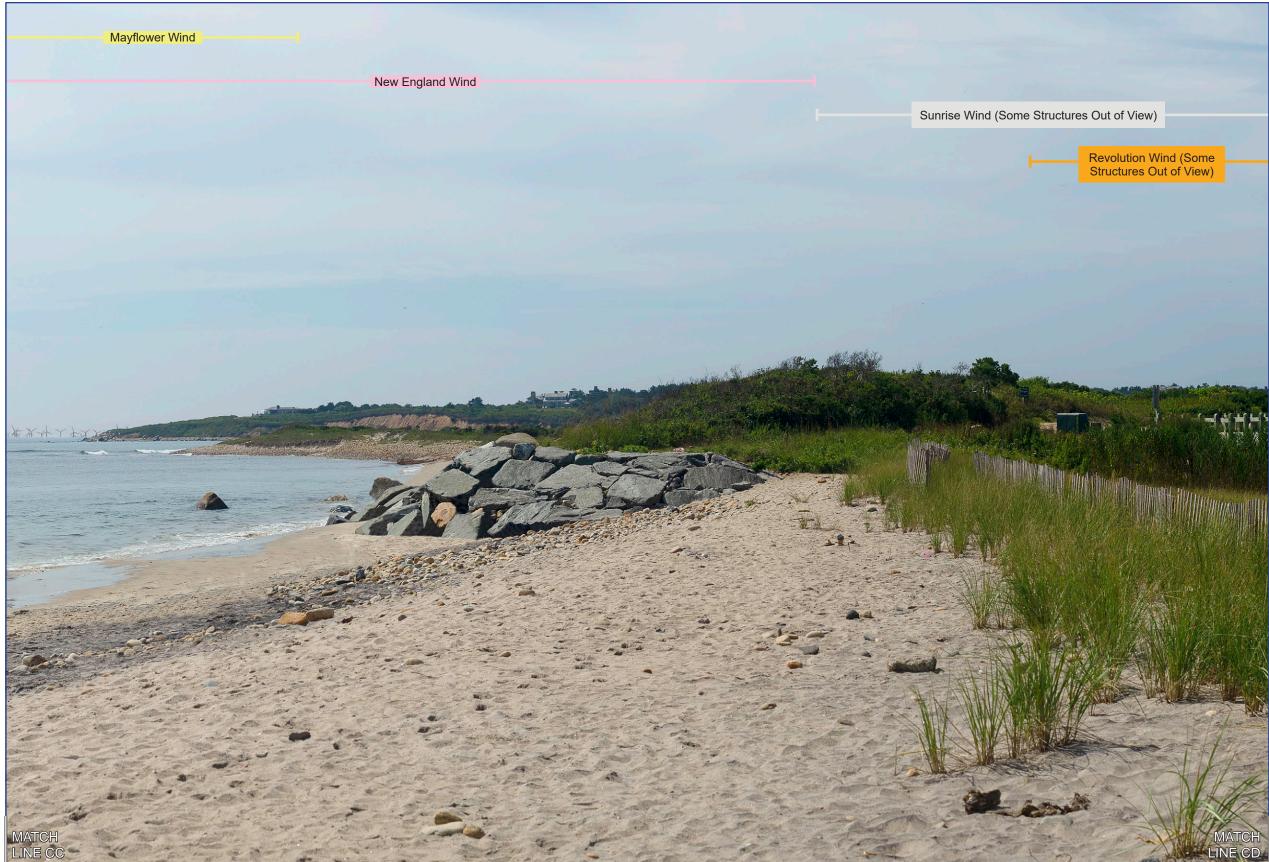
Wind Dir & Speed: SSW 16mph



LINE BB

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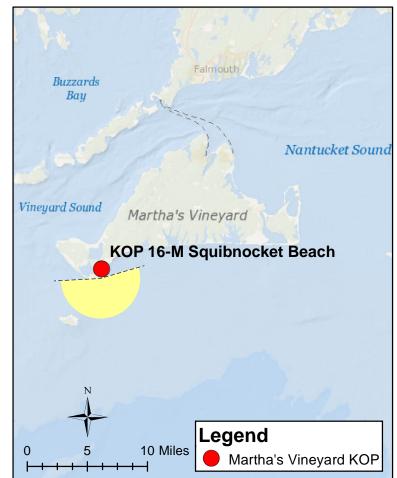




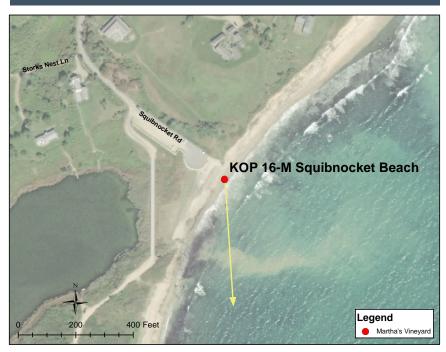
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 425

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible: 638

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph

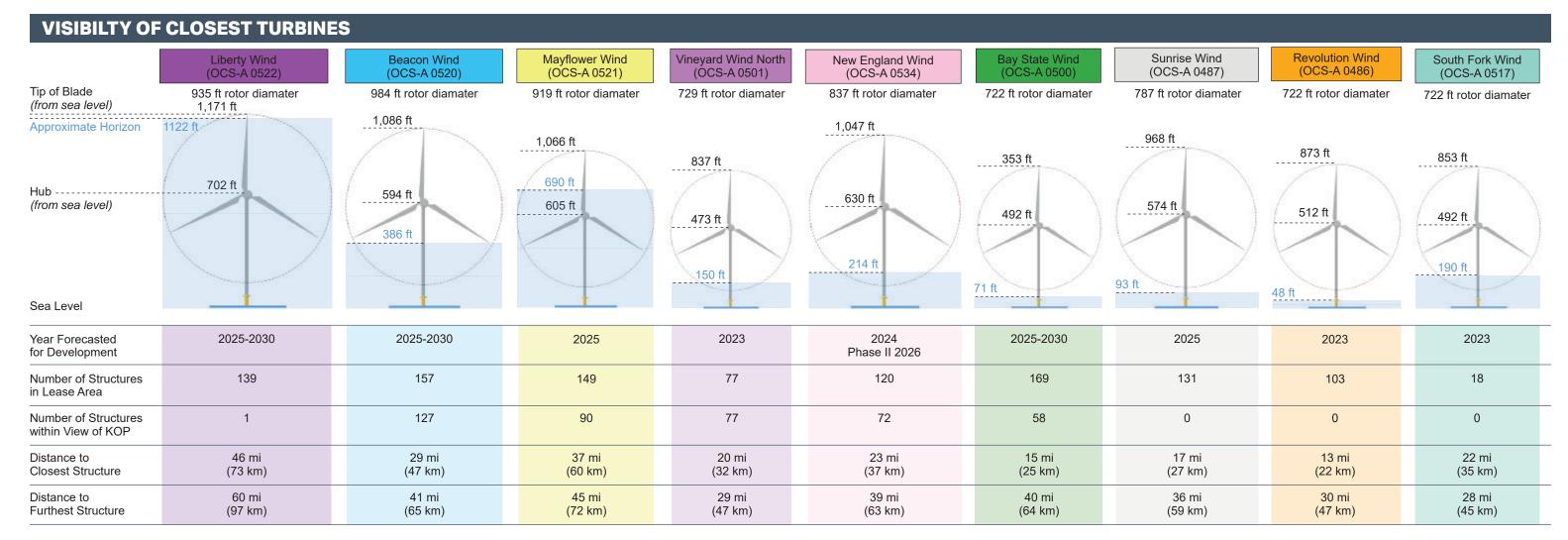
Weather Condition: Hazy

### **CAMERA**

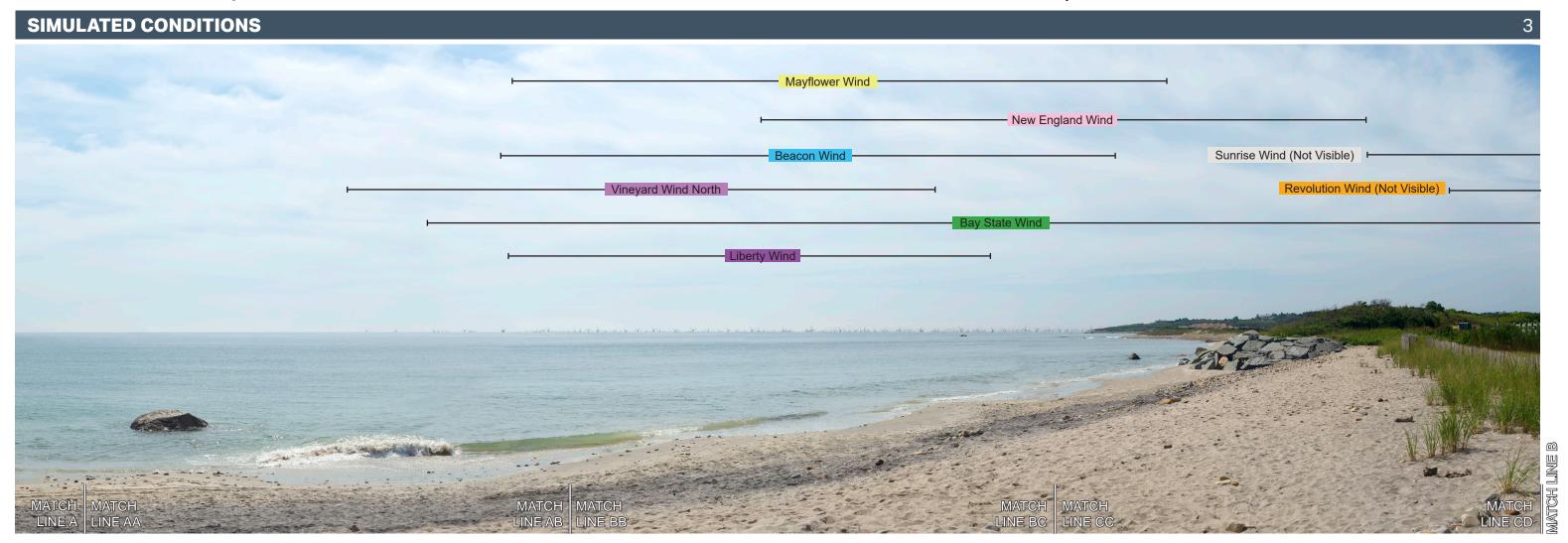
Camera Elevation: 16.5 ft / 5.0 m

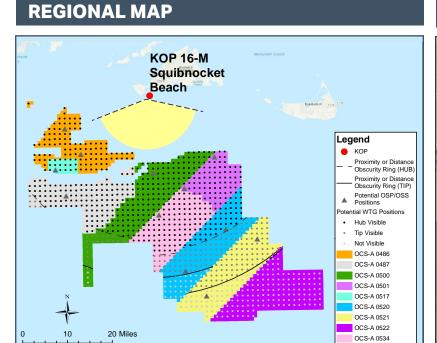
Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

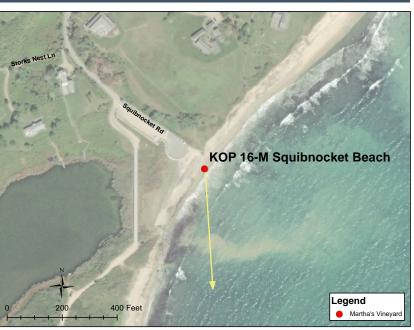




**SITE MAP** 







### **PROJECT VIEW**

Horizontal Field of View: 124° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 425

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible:

638

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

# CAMERA

Temperature: 65° F

Humidity: 78%

**ENVIRONMENT** 

Weather Condition: Hazy

Camera Elevation: 16.5 ft / 5.0 m Nikon D4 Nikon 50mm

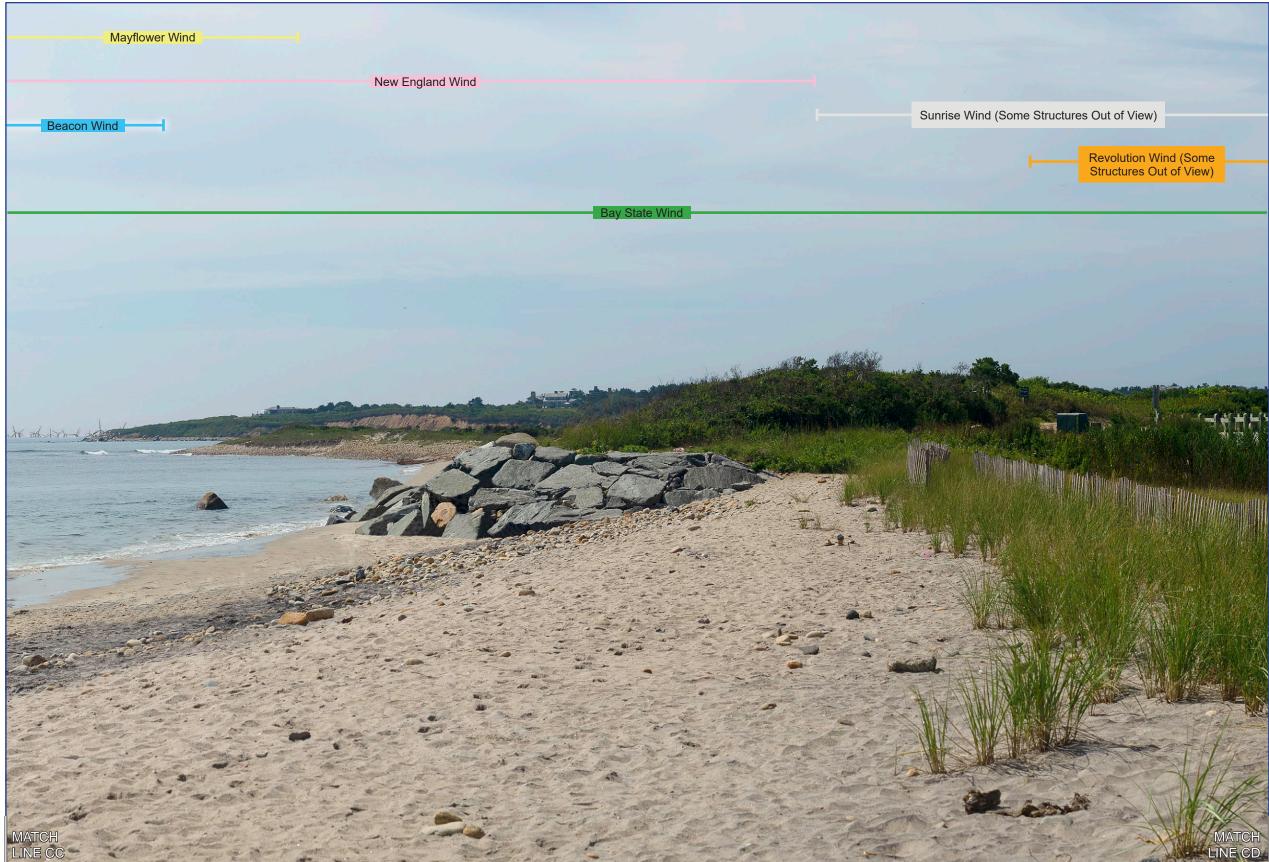
Wind Dir & Speed: SSW 16mph

ISO: 100 Fstop: f/7.1



5





MATCH LINE BC

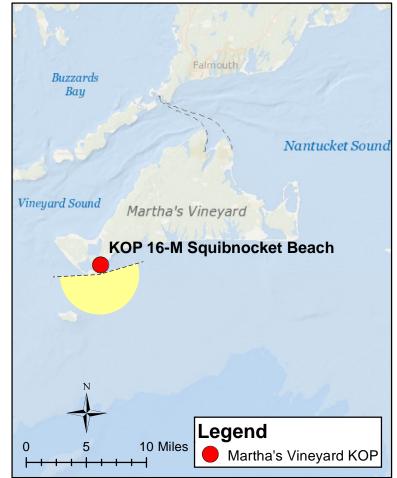
LINE B

# KOP 16-MV Squibnocket - Scenario 4

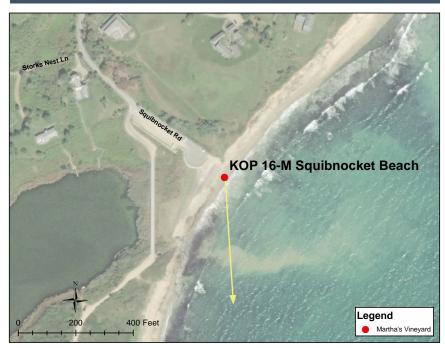
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



## **SITE MAP**



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 335

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible:

579

# **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph

Weather Condition: Hazy

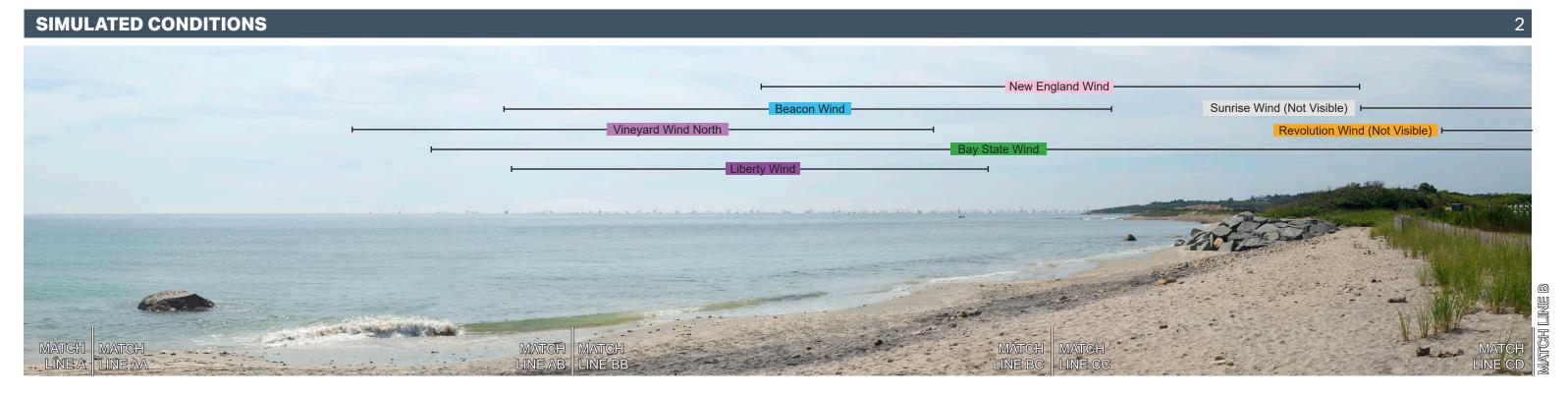
### **CAMERA**

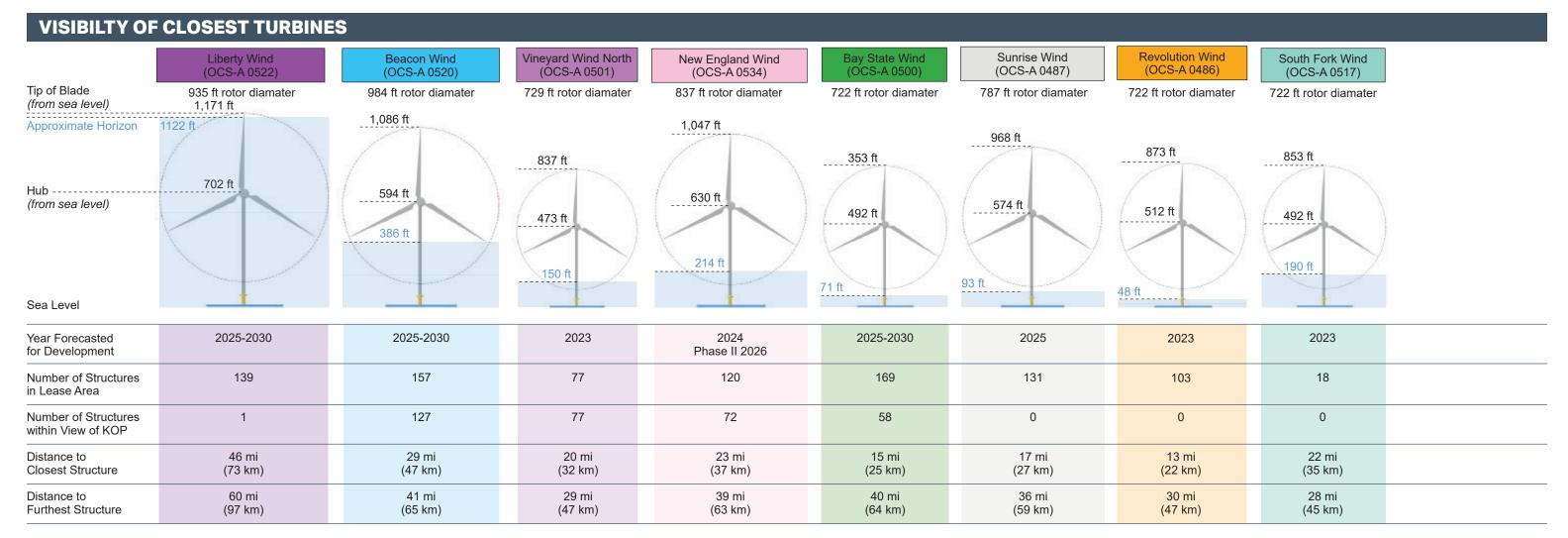
Camera Elevation: 16.5 ft / 5.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

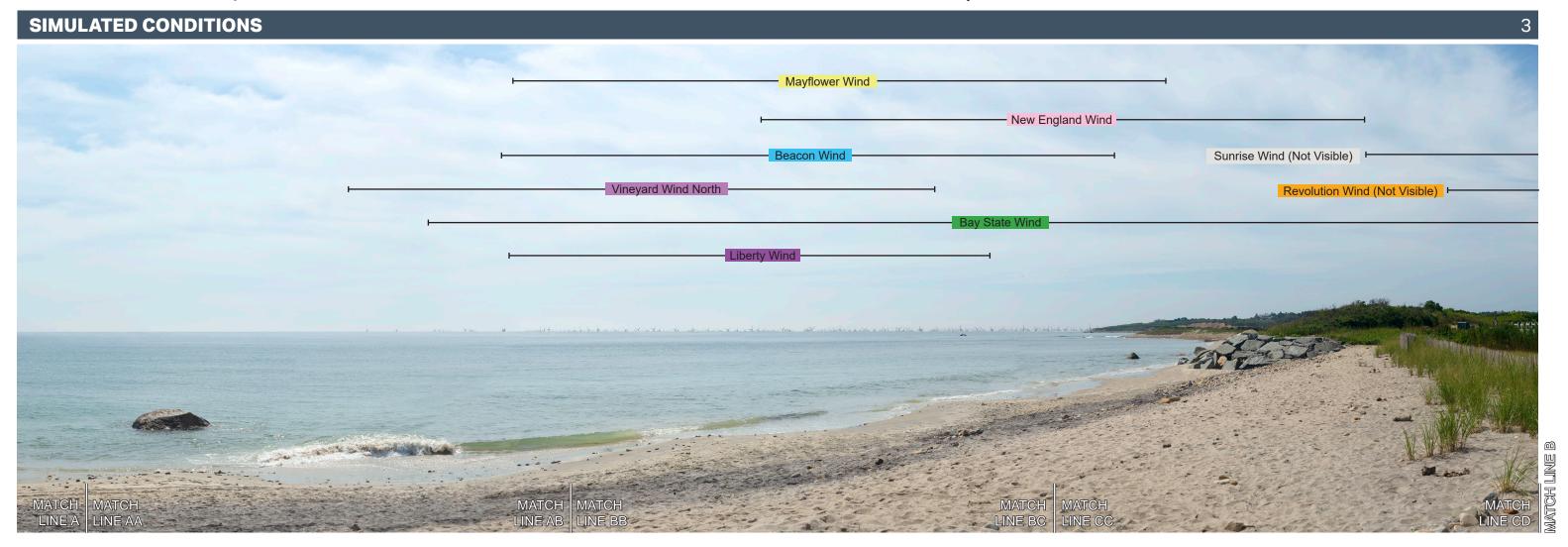
Shutter: 1/1250 sec

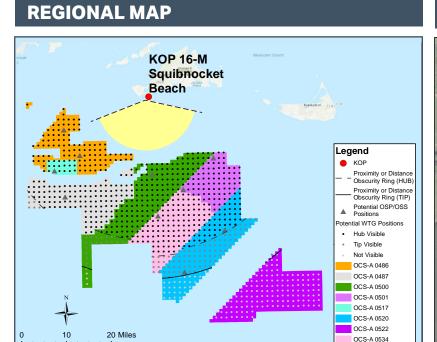
Exposure bias: -0.7 step

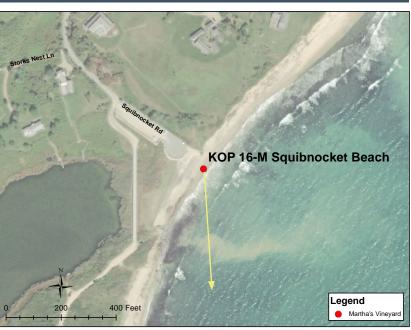




**SITE MAP** 







# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 335

Nearest WTG: 13 mi / 22 km Potential Number of Structures Not Visible:

579

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph
Weather Condition: Hazy

### CAMERA

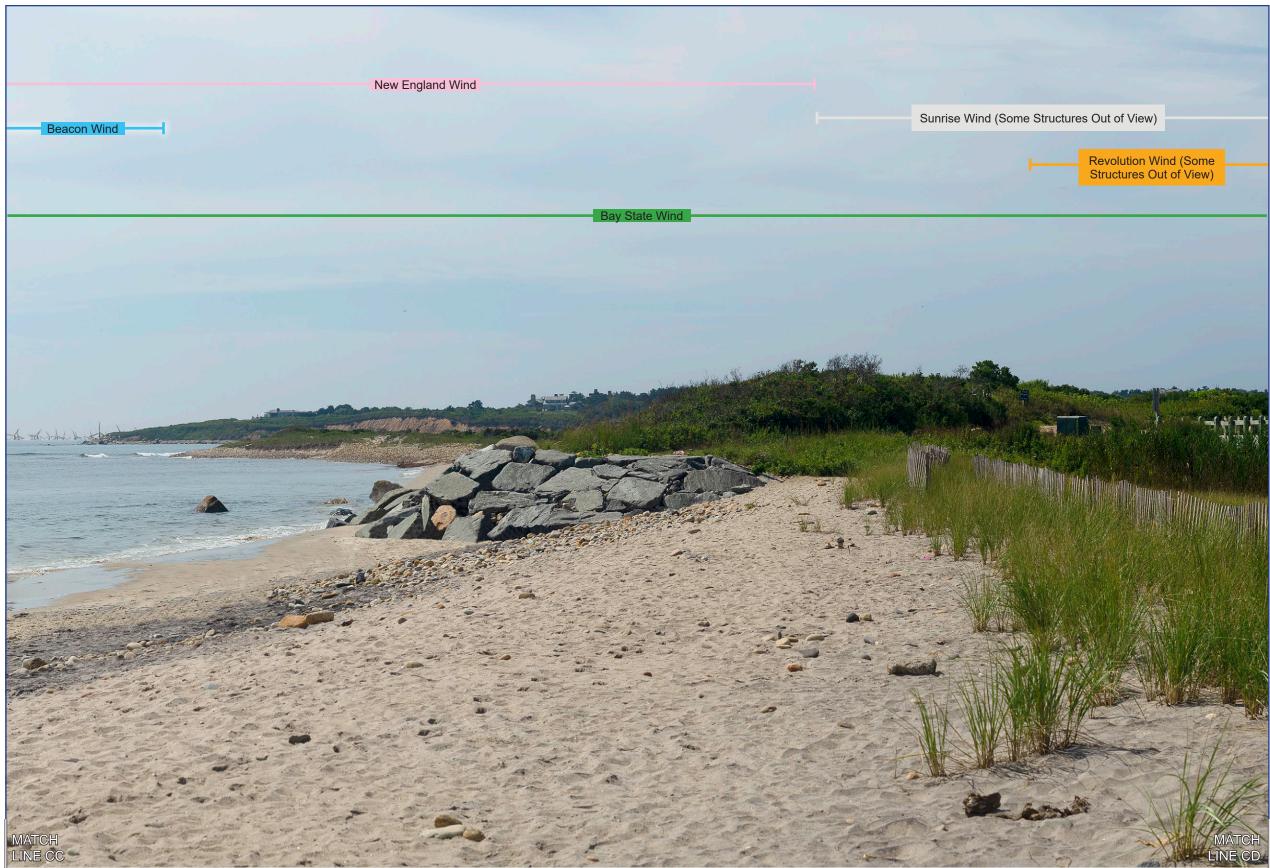
Camera Elevation: 16.5 ft / 5.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1



New England Wind Vineyard Wind North when to the state of making the state of the

MAICH LINE AB



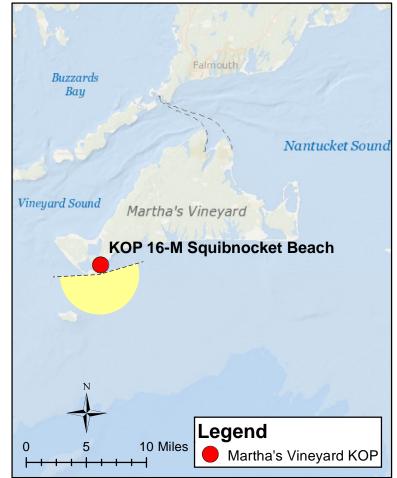
MATCH LINE BC

# KOP 16-MV Squibnocket - Scenario 5

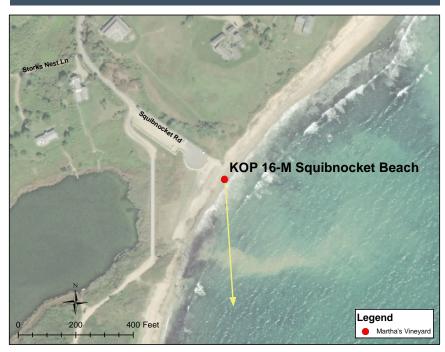
# **PANORAMIC PHOTOGRAPH** - EXISTING CONDITIONS



# **REGIONAL MAP**



# SITE MAP



MATCH LINES define visual simulation detail areas

A-B is shown on pages 2-3
AA-AB is shown on page 4
BB-BC is shown on page 5
CC-CD is shown on page 6

# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 90

Nearest WTG: 37 mi / 60 km Potential Number of Structures Not Visible:

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

### **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph

Weather Condition: Hazy

### CAMERA

Camera Elevation: 16.5 ft / 5.0 m

Nikon D4 Nikon 50mm ISO: 100 Fstop: f/7.1

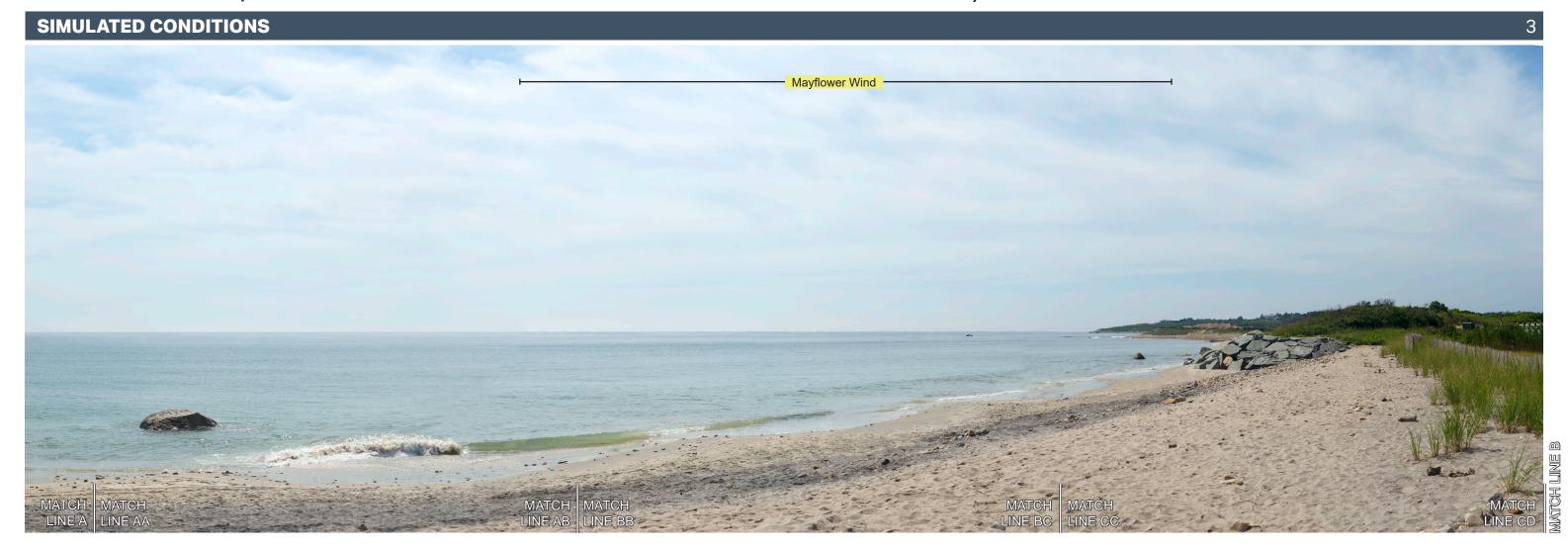
# Mayllower Wind Mayllower Wind

# **VISIBILTY OF CLOSEST TURBINES**

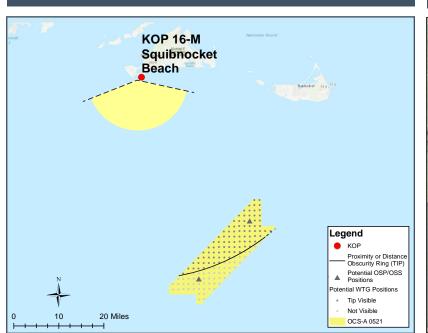
Mayflower Wind (OCS-A 0521)

919 ft rotor diamater

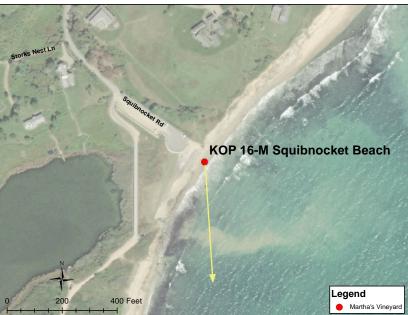




# **REGIONAL MAP**



# **SITE MAP**



# **PROJECT VIEW**

Horizontal Field of View: 193° Furthest Visible WTG: 45 mi / 72 km

Vertical Field of View: 40° Potential Number of Structures Visible: 90

Nearest WTG: 37 mi / 60 km Potential Number of Structures Not Visible: 59

### **PHOTOGRAPH AND SITE**

Time of photograph: 2:08PM Viewing direction: Southeast (176°)

Date of photograph: 11-6-20 Latitude: 41.318873°N

L/SCA: Ocean Beach, Open Ocean Longitude: 70.764908°W

Lighting Direction:Sidelit diffused

# **ENVIRONMENT**

Temperature: 65° F Humidity: 78%

Wind Dir & Speed: SSW 16mph Weather Condition: Hazy

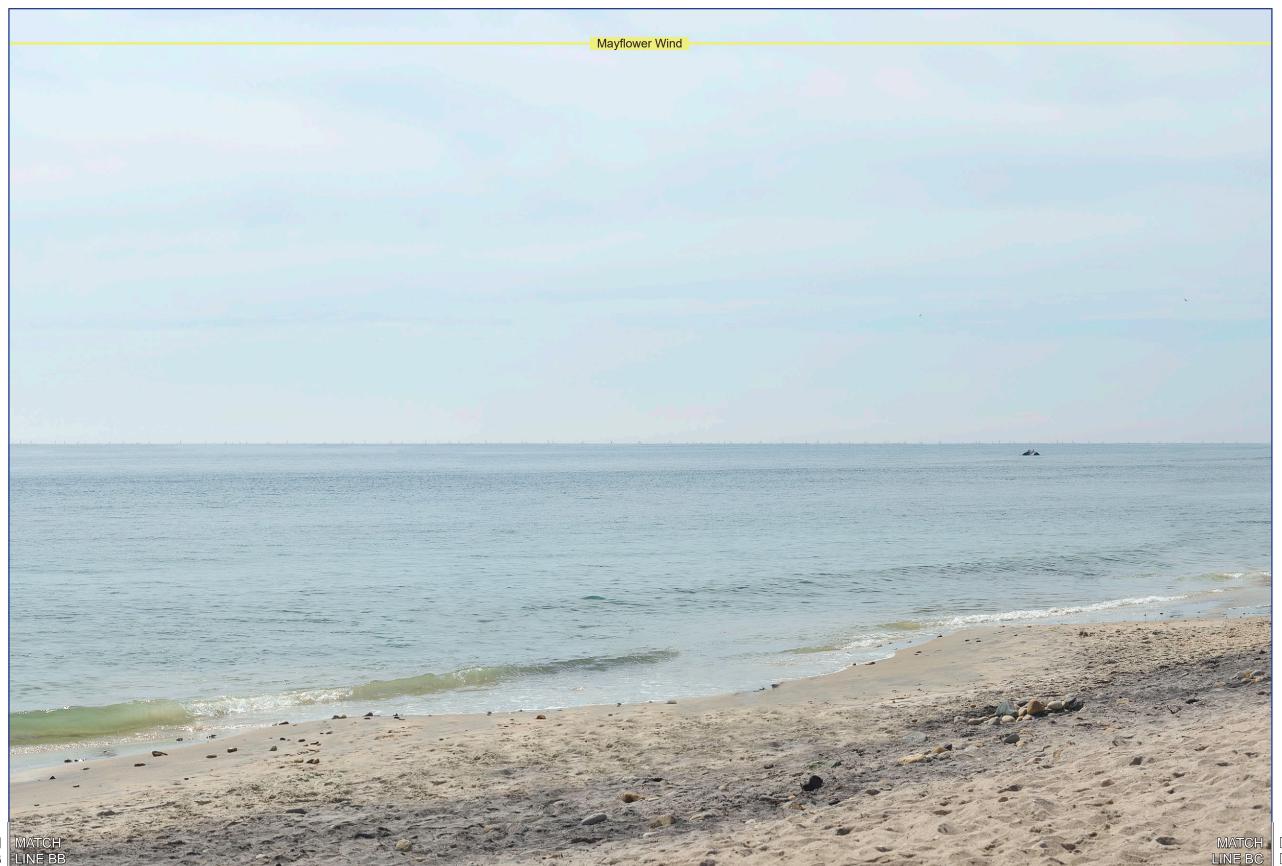
# CAMERA

Camera Elevation: 16.5 ft / 5.0 m Nikon D4

Nikon 50mm ISO: 100 Fstop: f/7.1



MATCH LINE BB





MATCH LINE BC

LINE B