

In response to stakeholder interest regarding visual impacts from potential future renewable energy development within the New York Call Area, BOEM has undertaken a project to develop visual simulations of a hypothetical wind energy facility on the Outer Continental Shelf offshore Long Island, New York. The purpose of this study is to characterize the potential onshore visibility of offshore wind turbines from locations along the coasts of New York and New Jersey under different seasons, times of day and weather conditions.

BOEM is not currently considering the approval of a specific project within the Call Area; therefore, the visual simulations illustrate a *hypothetical project*. The *hypothetical project* was designed to represent a commercially-scaled and technically feasible scenario that is consistent with industry trends regarding operating capacity, wind turbine size, spacing and configuration. Per BOEM's guidelines, project-specific visual simulations would be prepared by a lessee and submitted with its construction and operations plan. See *Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plan* at http://www.boem.gov/National-and-Regional-Guidelines-for-Renewable-Energy-Activities/.

A series of accurate and realistic visual simulations of a hypothetical, commercial-scale wind energy facility within the New York Call Area were created from photographs and video taken at sixteen Key Observation Points located in New York and New Jersey. The simulations were further informed by a meteorological conditions assessment and a GIS-based viewshed analysis. A detailed description of the methods and supporting information used to create the visual simulations is provided in the Compendium Report accompanying the simulations.

Visual Simulation Overview

This appendix includes visual simulations of the *hypothetical project* prepared using photographs taken at Key Observation Points. An information pane is provided on each simulation and includes:

- Base Photographic Documentation
- Camera Information
- Sun and Weather Information
- Turbine Information
- Context Map
- Viewing Instructions

Viewing Instructions

Viewing instructions are provided on each simulation. The visibility of the turbines on images projected on a computer screen will depend on the scale at which the image is being viewed. Simply put, zooming in on the image may overstate visibility. Conversely, zooming out or observing the image at full-screen will minimize the visibility of turbines. To view the simulations properly, adjust the zoom until the scale bar on the simulation measures four inches. Scaling the simulation in this manner will ensure that turbines – and other natural features in the view frame – are portrayed at an accurate scale and will ensure the field of view is similar to that experienced by an observer standing at the KOP. Once property scaled the images should be viewed from a distance of 19.7 inches.



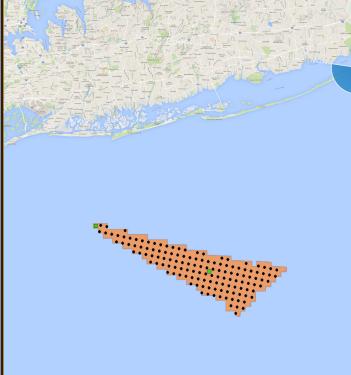
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Otis Pike Fire Island High Dune Wilderness - Visitor Center Spring / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Site Boundary
 Turbine
 Electrical Service Platform



Pace Photographic Documentation

Base Photographic Documentation

Date (MM/DD/YYYY): 6/16/201

Time (24hr): 14:2

GPS Longitude: -72.86659

GPS Latitude: 40.73230

Viewpoint Elevation (ft): 16.3

Camera Height (ft): 5.4

Camera Heading (°): 21

Cup And Westher Information

Sun And Weather Information

Sun Azimuth: 234.9437966
Sun Elevation: 64.06887348
Lighting Angle (On Turbines): Right-Lit
Weather Conditions: Clear
Maximum Visibility (NM): 26.6
Average Predicted Visibility (NM): 16
Wave Height (ft): 0.9
Period (Seconds): 10
Temperature (°F): 68
Temperature (°C): 20

mera Information

Camera Make & Model:

Camera Sensor Size:

Lens Make & Model:

Lens Focal Length:

Canon EOS 5D Mark III

Sens Focal Length:

Canon EOS 5D Mark III

EF28mm f/1.8 USM

EF28mm f/1.8 USM

Turbine Information

Distance to Nearest Turbine (NM):

Make & Model:

Number of Turbines:

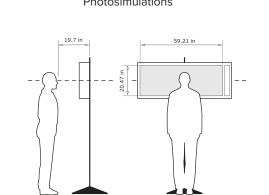
Hub Height (ft):

Support Structure Height (ft):

Rotor Diameter (ft):

Total Height to Tip of Blade (ft):

Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



Otis Pike Fire Island High Dune Wilderness - Visitor Center - Spring / Afternoon - Simulation of Project Under Maximum Visibility

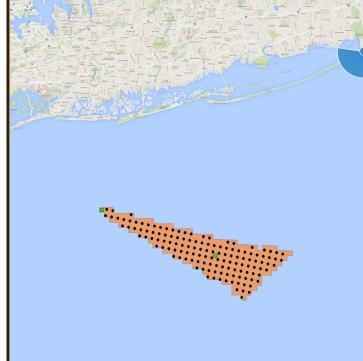


For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm) BUREAU OF OCEAN ENERGY MANAGEMENT

Otis Pike Fire Island High Dune Wilderness - Visitor Center Spring / Afternoon

Simulation of Project Under Maximum Visibility

Key Observation Point (KOP)
 Site Boundary
 Turbine
 Electrical Service Platform



Page Photographic Decumentation

Base Photographic Documentation	
Date (MM/DD/YYYY):	6/16/2
Time (24hr):	14
GPS Longitude:	-72.866
GPS Latitude:	40.732
Viewpoint Elevation (ft):	16
Camera Height (ft):	
Camera Heading (°):	

Sun And Weather Information

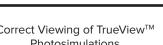
Sun And Weather Information	
Sun Azimuth:	234.943796
Sun Elevation:	64.0688734
Lighting Angle (On Turbines):	Right-
Weather Conditions:	Cle
Maximum Visibility (NM):	26
Average Predicted Visibility (NM):	
Wave Height (ft):	O
Period (Seconds):	
Temperature (°F):	6
Temperature (°C):	2
11 11 100	

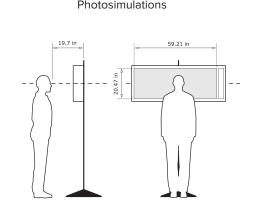
Camera Informatio

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 2
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	2

Turbine Information

ce to Nearest Turbine (NM):	2
& Model:	Senvion 6.2M
er of Turbines:	
eight (ft):	32
rt Structure Height (ft):	
Diameter (ft):	49
leight to Tip of Blade (ft):	57
e Platform:	100ft x 200ft Steel Platfo
	40th alague M





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



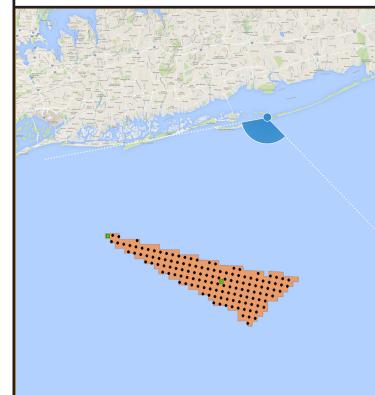


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Sunken Forest Summer / Morning

Existing Conditions

Key Observation Point (KOP)
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

se Photographic Documentation	
(MM/DD/YYYY):	9/20/201
e (24hr):	9:1
Longitude:	-73.11237
Latitude:	40.65493
point Elevation (ft):	31.3
era Height (ft):	5.4
era Heading (°):	19

Sun And Weather Information

Sun Azimuth:	116.242790
Sun Elevation:	28.596387
Lighting Angle (On Turbines):	Back-
Weather Conditions:	Cle
Maximum Visibility (NM):	19
Average Predicted Visibility (NM):	14
Wave Height (ft):	3
Period (Seconds):	
Temperature (°F):	(
Temperature (°C):	

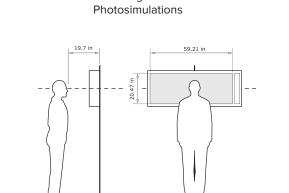
- 4

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	28

Turbine Information

nce to Nearest Turbine (NM):	
e & Model:	Senvion 6.2M 15
per of Turbines:	13
Height (ft):	32
ort Structure Height (ft):	
Diameter (ft):	498
Height to Tip of Blade (ft):	577
ce Platform:	100ft x 200ft Steel Platfor





Photosimulation Created Using
TrueView™ Technology
(Patent No.: US 8,184,906 B2)



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For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Sunken Forest Summer / Morning

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

ase Photographic Documentation		
ate (MM/DD/YYYY):	9/20/2014	
me (24hr):	9:18	
PS Longitude:	-73.112372	
PS Latitude:	40.654935	
ewpoint Elevation (ft):	31.31	
amera Height (ft):	5.41	
amera Heading (°):	198	

Sun And Weather Information

Sun Azimuth:	116.242790
Sun Elevation:	28.596387
Lighting Angle (On Turbines):	Back-
Weather Conditions:	Cle
Maximum Visibility (NM):	19
Average Predicted Visibility (NM):	14
Wave Height (ft):	3
Period (Seconds):	
Temperature (°F):	6
Temperature (°C):	

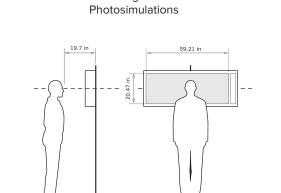
- 4

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8 L
Lens Focal Length:	28

Turbine Information

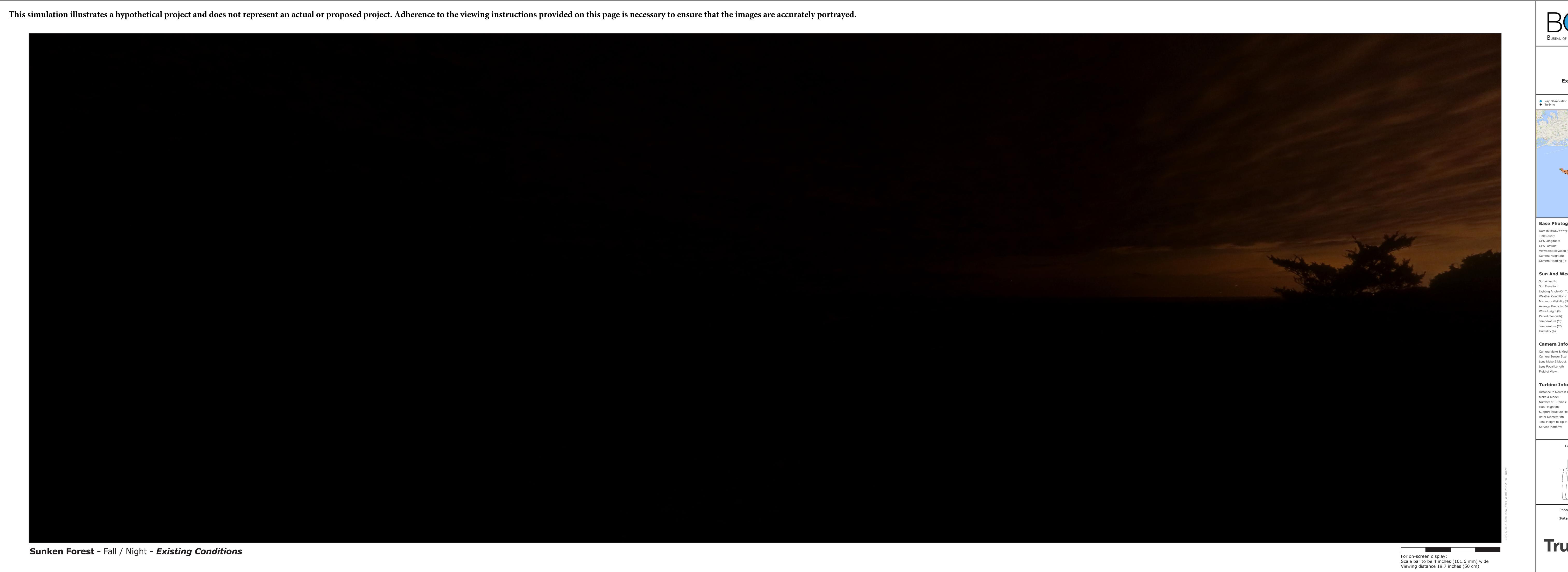
Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pla
	400





Photosimulation Created Using
TrueView™ Technology
(Patent No.: US 8,184,906 B2)





Bureau of Ocean Energy Management

Sunken Forest Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

ase i notograpine Bocamentation			
ate (MM/DD/YYYY):	10/24/2014		
ime (24hr):	20:45		
PS Longitude:	-73.112372		
PS Latitude:	40.654935		
iewpoint Elevation (ft):	31.31		
amera Height (ft):	5.41		
amera Heading (°):	193		

Sun And Weather Information

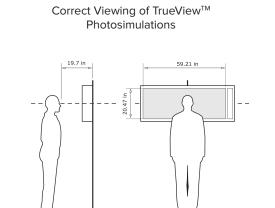
Sun Azimuth:	N
Sun Elevation:	N
Lighting Angle (On Turbines):	N
Weather Conditions:	Partly-Cloud
Maximum Visibility (NM):	14
Average Predicted Visibility (NM):	16
Wave Height (ft):	1
Period (Seconds):	
Temperature (°F):	Ţ
Temperature (°C):	
Humidity (%):	•

Camera Information

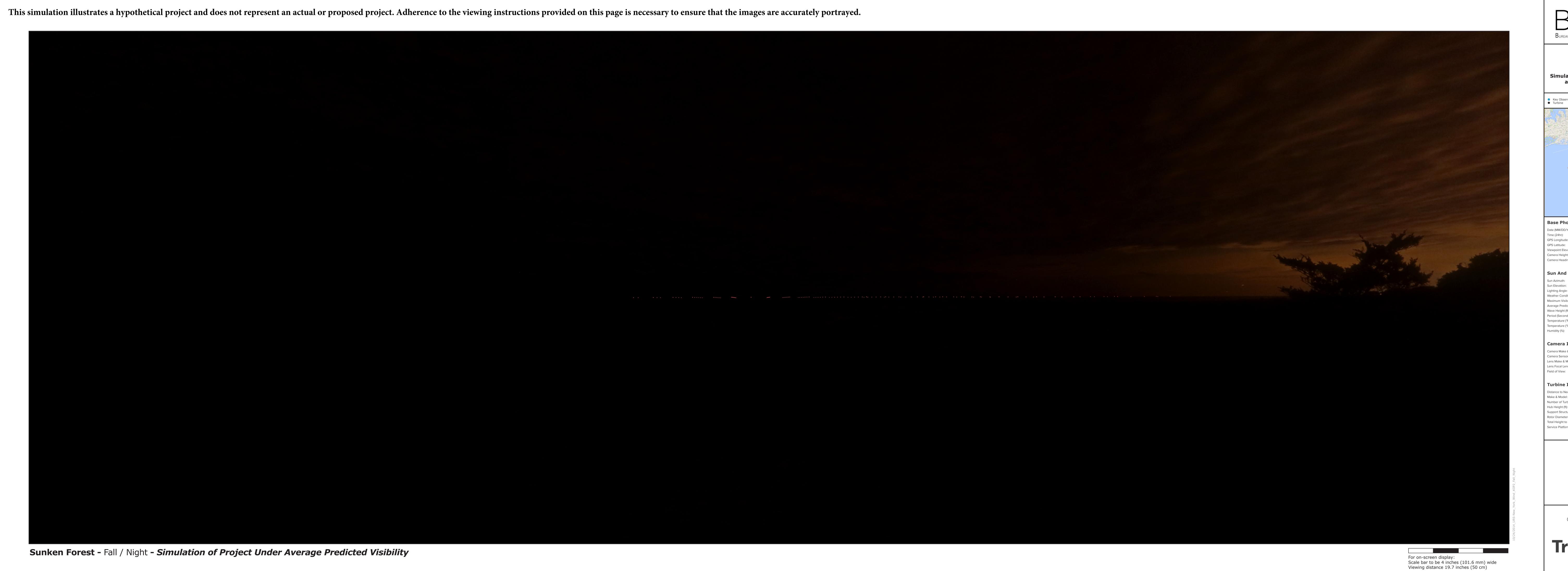
Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24m
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28m

Turbine Information

D	0.4
Distance to Nearest Turbine (NM):	21
Make & Model:	Senvion 6.2M 152
Number of Turbines:	134
Hub Height (ft):	328.1
Support Structure Height (ft):	25
Rotor Diameter (ft):	498.7
Total Height to Tip of Blade (ft):	577.4
Service Platform:	100ft x 200ft Steel Platform,
	40ft above MWS



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

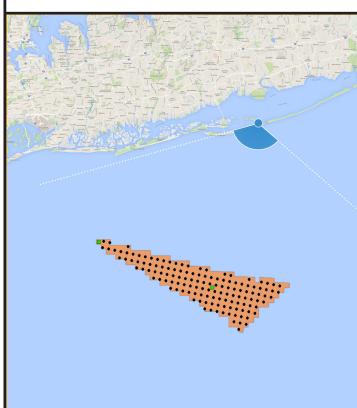


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Sunken Forest Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Pate (MM/DD/YYYY):	10/24/2014
ime (24hr):	20:45
GPS Longitude:	-73.112372
SPS Latitude:	40.654935
/iewpoint Elevation (ft):	31.31
Camera Height (ft):	5.41
Camera Heading (°):	193

Sun And Weather Information

Sun And Weather Information	
Sun Azimuth:	N/
Sun Elevation:	N/
Lighting Angle (On Turbines):	N/
Weather Conditions:	Partly-Cloud
Maximum Visibility (NM):	14.
Average Predicted Visibility (NM):	16.
Wave Height (ft):	1.
Period (Seconds):	
Temperature (°F):	5
Temperature (°C):	1
LL	-

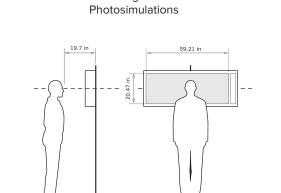
Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24m
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28m

Turbine Information Distance to Nearest Turbine (NM):

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.3
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pl
	40ft abov

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Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

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For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Fire Island Light House Spring / Morning

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): Time (24hr): GPS Longitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

108.9423609 55.55714794 Sun Elevation: Lighting Angle (On Turbines):
Weather Conditions: Average Predicted Visibility (NM):

Wave Height (ft):

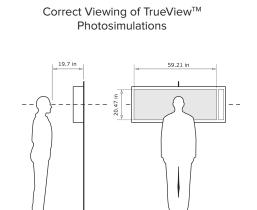
Period (Seconds): Temperature (°C): Humidity (%):

Camera Information Camera Make & Model: Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length:

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft):

65.47° (H) / 46.397° (V)



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



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Fire Island Light House - Spring / Morning - Existing Conditions

Fire Island Light House - Spring / Morning - Simulation of Project Under Maximum Visibility



For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

Fire Island Light House Spring / Morning

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): GPS Longitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

55.55714794 Sun Elevation: Lighting Angle (On Turbines):
Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°C): Humidity (%):

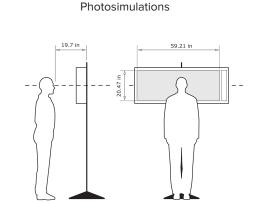
Camera Information

Camera Make & Model: Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft):

Correct Viewing of TrueView™ Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Camera Heading (°): ** Humidity (%): Camera Information Field of View: Fire Island Light House - Fall / Night - Existing Conditions For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Fire Island Light House Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



MM/DD/YYYY):	11/20/2014	
24hr):	21:48	
ongitude:	-73.218569	
ititude:	40.632419	
oint Elevation (ft):	154.68	
a Height (ft):	5.41	
a Haadina /º\:	100	

Sun And Weather Information

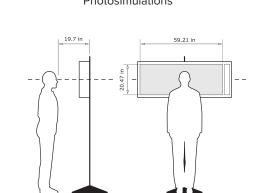
dii Alid Weather Illioilliation	
un Azimuth:	N/A
un Elevation:	N/A
ghting Angle (On Turbines):	N/A
leather Conditions:	Overcast
laximum Visibility (NM):	27.2
verage Predicted Visibility (NM):	16.5
/ave Height (ft):	3.5
eriod (Seconds):	7
emperature (°F):	36
emperature (°C):	2
. 11. (0.1)	0.4

Camera Make & Model:	Canon EOS 5D Mark III
Camera Sensor Size:	36mm x 24mm
Lens Make & Model:	EF28mm f/1.8 USM
Lens Focal Length:	28mm
Field of View:	65.47° (H) / 46.397° (V)

Turbine Information Distance to Nearest Turbine (NM):

Make & Model:	Senvion 6.
lumber of Turbines:	
lub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
otal Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel P
	40ft abov

Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



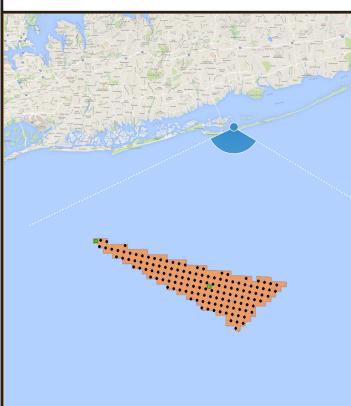
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. ** Humidity (%): Camera Information Field of View: Fire Island Light House - Fall / Night - Simulation of Project Under Maximum Visibility For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Fire Island Light House Fall / Night

Simulation of Project Under Maxi-

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Date (MM/DD/YYYY):	11/20/2014
Time (24hr):	21:48
GPS Longitude:	-73.218569
GPS Latitude:	40.632419
Viewpoint Elevation (ft):	154.68
Camera Height (ft):	5.41
Camera Heading (°):	183

Sun And Weather Information

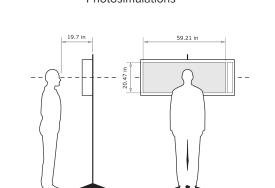
Sun Azimuth:	N/A
Sun Elevation:	N/A
ighting Angle (On Turbines):	N/A
Veather Conditions:	Overcast
Maximum Visibility (NM):	27.2
Average Predicted Visibility (NM):	16.5
Vave Height (ft):	3.5
Period (Seconds):	7
emperature (°F):	36
emperature (°C):	2

Camera Make & Model:	Canon EOS 5D Mark III
Camera Sensor Size:	36mm x 24mm
Lens Make & Model:	EF28mm f/1.8 USM
Lens Focal Length:	28mm

65.47° (H) / 46.397° (V) **Turbine Information**

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.3
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Sorvico Platform:	100ft v 200ft Steel Pl

40ft above MWS Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Time (24hr): GPS Longitude: GPS Latitude: The state of the s Temperature (°C): Humidity (%): **Camera Information** Field of View: Jones Beach - Summer / Afternoon - Existing Conditions For on-screen display:

Jones Beach Summer / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): Viewpoint Elevation (ft) Camera Height (ft): Camera Heading (°):

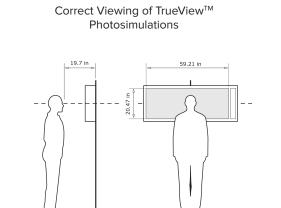
Sun And Weather Information

61.09625088 Sun Elevation: Lighting Angle (On Turbines):
Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F):

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft): Service Platform:



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



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Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. The state of the s Humidity (%): **Camera Information** Field of View: Jones Beach - Summer / Afternoon - Simulation of Project Under Maximum Visibility

Jones Beach Summer / Afternoon

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



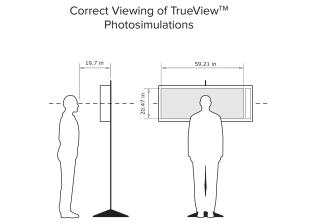
Date (MM/DD/YYYY): Time (24hr): GPS Longitude: GPS Latitude: Viewpoint Elevation (ft) Camera Height (ft): Camera Heading (°):

61.09625088 Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F): Temperature (°C):

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft): Service Platform:



Photosimulation Created Using TrueView[™] Technology (Patent No.: US 8,184,906 B2) Provided by

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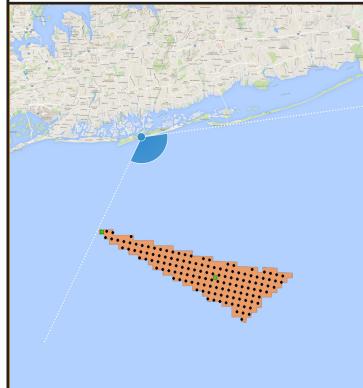
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Field of View: Jones Beach - Fall / Night - Existing Conditions

BUREAU OF OCEAN ENERGY MANAGEMENT

Jones Beach Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

ate (MM/DD/YYYY):	10/20/2014
ime (24hr):	21:47
PS Longitude:	-73.507291
PS Latitude:	40.59421
iewpoint Elevation (ft):	16.28
amera Height (ft):	5.41
amera Heading (°):	144

Sun And Weather Information

n Azimuth:	N/A
n Elevation:	N/A
hting Angle (On Turbines):	N/A
eather Conditions:	Partly-Cloudy
ximum Visibility (NM):	20.4
erage Predicted Visibility (NM):	18.6
ve Height (ft):	1.6
riod (Seconds):	9
mperature (°F):	63
mperature (°C):	17

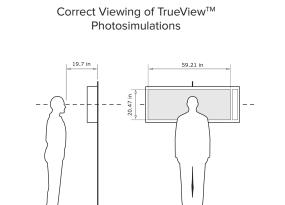
_ _ .

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8 L
Lens Focal Length:	28

Turbine Information Distance to Nearest Turbine (NM): Make & Model:

ke & Model:	Senvion
mber of Turbines:	
Height (ft):	
pport Structure Height (ft):	
or Diameter (ft):	
al Height to Tip of Blade (ft):	
vice Platform:	100ft x 200ft Stee
	40ft ab

ct Viewing of TrueView™



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



www.truescape.com

For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm) This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Camera Heading (°): Camera Information Make & Model: Hub Height (ft):

Jones Beach - Fall / Night - Simulation of Project Under Average Predicted Visibility

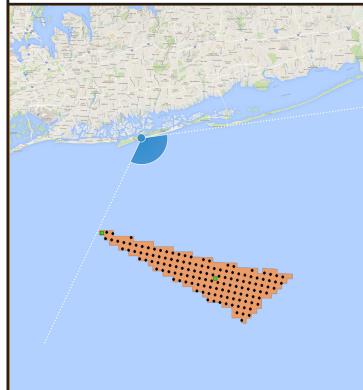
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Jones Beach Fall / Night

age Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

base Photographic Documentation	
Date (MM/DD/YYYY):	10/20/2014
Time (24hr):	21:47
GPS Longitude:	-73.507291
GPS Latitude:	40.59421
Viewpoint Elevation (ft):	16.28
Camera Height (ft):	5.41
C (0) -	4.4.4

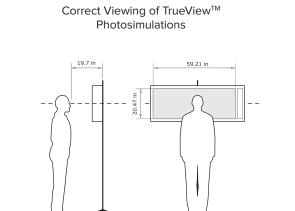
Sun And Weather Information

un Azimuth:	N/A
un Elevation:	N/A
ghting Angle (On Turbines):	N/A
leather Conditions:	Partly-Cloudy
laximum Visibility (NM):	20.4
verage Predicted Visibility (NM):	18.6
/ave Height (ft):	1.6
eriod (Seconds):	9
emperature (°F):	63
emperature (°C):	17

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24n
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28n

Turbine Information Distance to Nearest Turbine (NM):

Number of Turbines: Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft):



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)





For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

Jacob Riis Park Spring / Midday

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Time (24hr): GPS Longitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F):

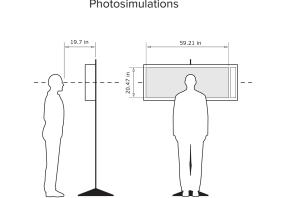
Camera Information

Camera Make & Model: Camera Sensor Size: Lens Make & Model: 35.8mm x 23.9mm EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft):
Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft): ervice Platform:

Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

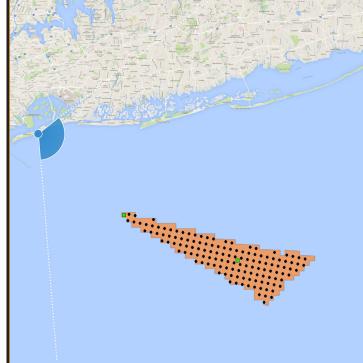
Truescape®



For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Jacob Riis Park Spring / Midday



notograpine bocamentation		
/DD/YYYY):	6/21/2014	
r):	12:47	
itude:	-73.869745	
ıde:	40.565889	
Elevation (ft):	15.57	
eight (ft):	5.41	
eading (°):	114	

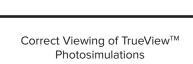
Sun Azimuth:	172.02789
Sun Elevation:	72.7329745
Lighting Angle (On Turbines):	Back-L
Weather Conditions:	Partly-Cloud
Maximum Visibility (NM):	27
Average Predicted Visibility (NM):	17
Wave Height (ft):	0.
Period (Seconds):	
Temperature (°F):	6
Temperature (°C):	2

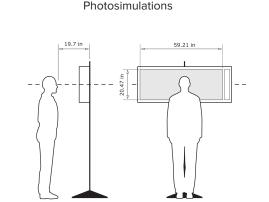
Camera Information

Camera Make & Model:	Canon EOS
Camera Sensor Size:	35.8mm x 23.9
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	28
Field of View:	65.47° (H) / 46.397

Turbine Information

stance to Nearest Turbine (NM):	
ake & Model:	Senvion (
umber of Turbines:	
ub Height (ft):	
pport Structure Height (ft):	
otor Diameter (ft):	
tal Height to Tip of Blade (ft):	
ervice Platform:	100ft x 200ft Steel





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

Truescape®

This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Date (MM/DD/YYYY): Time (24hr): GPS Longitude: GPS Latitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°): Humidity (%): **Camera Information** Field of View: Make & Model: Hub Height (ft): Service Platform:

Breezy Point - Spring / Afternoon - Existing Conditions

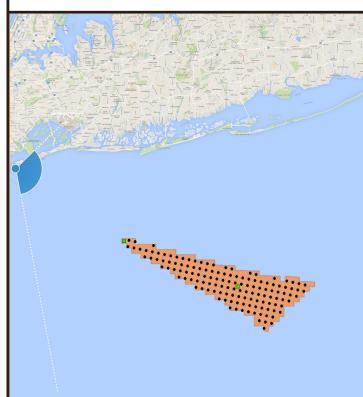
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Breezy Point Spring / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



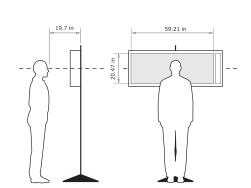
Sun And Weather Information

40.28202575 Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM):
Wave Height (ft):
Period (Seconds): Temperature (°F): Temperature (°C):

Camera Make & Model: Camera Sensor Size: EF28mm f/1.8 USM Lens Make & Model: Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Number of Turbines: Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft):



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



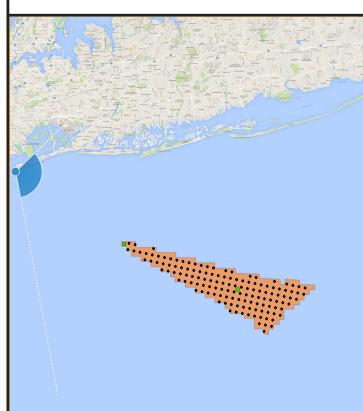
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Date (MM/DD/YYYY): Time (24hr): GPS Longitude: GPS Latitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°): Sun Elevation: Temperature (°F): Temperature (°C): Humidity (%): **Camera Information** Lens Focal Length: Field of View: Make & Model: Number of Turbines: Hub Height (ft): Rotor Diameter (ft): Service Platform:

For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Breezy Point Spring / Afternoon

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



-73.93107

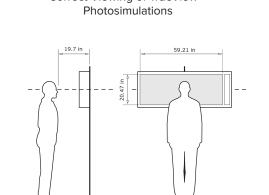
Sun And Weather Information

40.28202575 Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM):
Wave Height (ft):
Period (Seconds):

Camera Make & Model: Camera Sensor Size: EF28mm f/1.8 USM Lens Make & Model: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Support Structure Height (ft): Total Height to Tip of Blade (ft):



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



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Breezy Point - Spring / Afternoon - Simulation of Project Under Maximum Visibility

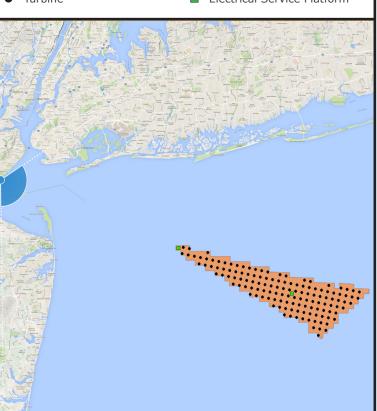


For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm) BUREAU OF OCEAN ENERGY MANAGEMENT

Great KillsSpring / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Site Boundary
 Turbine
 Electrical Service Platform



graphic Documentation

(MM/DD/YYYY):	5/30/201
e (24hr):	17:0
Longitude:	-74.12960
Latitude:	40.53755
point Elevation (ft):	16.6
era Height (ft):	5.4
era Heading (°):	11

Sun And Weather Information

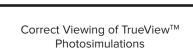
ın Azimuth:	270.4480647
ın Elevation:	34.41240528
ghting Angle (On Turbines):	Front-Lit
eather Conditions:	Clear
aximum Visibility (NM):	20.8
verage Predicted Visibility (NM):	20.2
ave Height (ft):	2
eriod (Seconds):	7
mperature (°F):	66
mperature (°C):	19

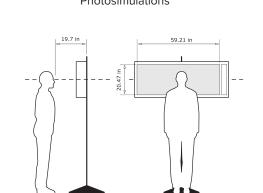
T 6 1.

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8 L
Lens Focal Length:	28

Turbine Information

nce to Nearest Turbine (NM):	25
e & Model:	Senvion 6.2M 15
per of Turbines:	13
Height (ft):	32
ort Structure Height (ft):	
Diameter (ft):	498
Height to Tip of Blade (ft):	577
ce Platform:	100ft x 200ft Steel Platfor





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





Great Kills - Spring / Afternoon - Simulation of Project Under Average Predicted Visibility

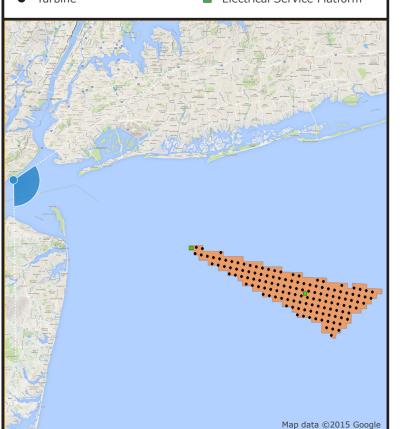
For on-screen display:
Scale bar to be 4 inches (101.6 mm) wide
Viewing distance 19.7 inches (50 cm)



Great KillsSpring / Afternoon

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Site Boundary
 Turbine
 Electrical Service Platform



Base Photographic Documentation

3 1	
Date (MM/DD/YYYY):	5/30/2014
ime (24hr):	17:05
SPS Longitude:	-74.129602
SPS Latitude:	40.537553
/iewpoint Elevation (ft):	16.62
Camera Height (ft):	5.41
Camera Heading (°):	118

Sun And Weather Information

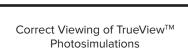
Sun Azimuth:	270.4480647
Sun Elevation:	34.41240528
Lighting Angle (On Turbines):	Front-Lit
Weather Conditions:	Clear
Maximum Visibility (NM):	20.8
Average Predicted Visibility (NM):	20.2
Wave Height (ft):	2
Period (Seconds):	7
Temperature (°F):	66
Temperature (°C):	19

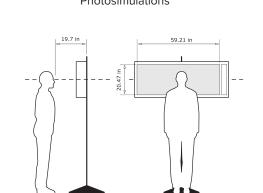
_ _ ..

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8 L
Lens Focal Length:	28

Turbine Information

nce to Nearest Turbine (NM):	25
e & Model:	Senvion 6.2M 15
per of Turbines:	13
Height (ft):	32
ort Structure Height (ft):	
Diameter (ft):	498
Height to Tip of Blade (ft):	577
ce Platform:	100ft x 200ft Steel Platfor





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



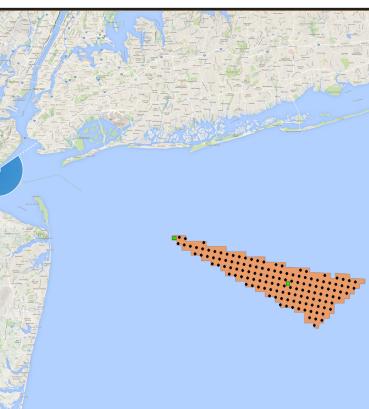
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Great Kills - Fall / Night - Existing Conditions For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Great Kills Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Date (MM/DD/YYYY):	10/23/20
Time (24hr):	22:5
GPS Longitude:	-74.12960
GPS Latitude:	40.53755
Viewpoint Elevation (ft):	16.6
Camera Height (ft):	5.
Camera Heading (°):	1

Sun And Weather Information

Sun Azimuth:	N
Sun Elevation:	N
Lighting Angle (On Turbines):	N
Weather Conditions:	Overca
Maximum Visibility (NM):	13
Average Predicted Visibility (NM):	19
Wave Height (ft):	
Period (Seconds):	
Temperature (°F):	í
Temperature (°C):	
Humidity (%):	\$

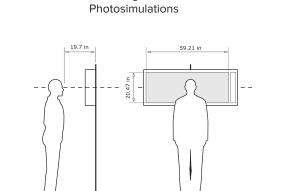
Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24m
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28m
Field of View:	65 47° (H) / 46 397° (

Turbine Information Distance to Nearest Turbine (NM):

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.3
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pl
	40ft abov

ct Viewing of TrueView™



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

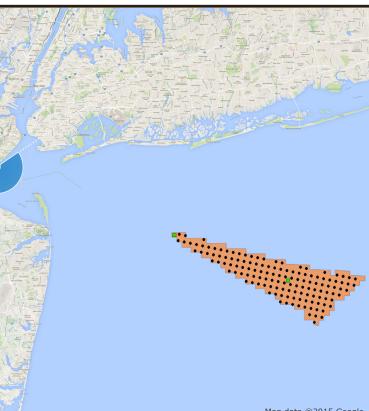
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Bureau of Ocean Energy Management

Great Kills Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Date (MM/DD/YYYY):	10/23/2014
Time (24hr):	22:55
GPS Longitude:	-74.129602
GPS Latitude:	40.537553
Viewpoint Elevation (ft):	16.62
Camera Height (ft):	5.41
Camera Heading (°):	118

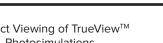
Sun And Weather Information

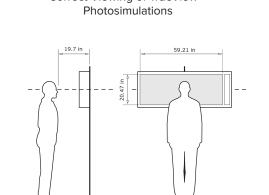
ı	Sun And Weather Information	
	Sun Azimuth:	Ν
	Sun Elevation:	N
	Lighting Angle (On Turbines):	N
	Weather Conditions:	Overc
	Maximum Visibility (NM):	13
	Average Predicted Visibility (NM):	1
ı	Wave Height (ft):	
	Period (Seconds):	
ı	Temperature (°F):	
	Temperature (°C):	
	11 11 100	

Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24m
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28m

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pla





Photosimulation Created Using TrueView[™] Technology (Patent No.: US 8,184,906 B2)



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For on-screen display:

Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

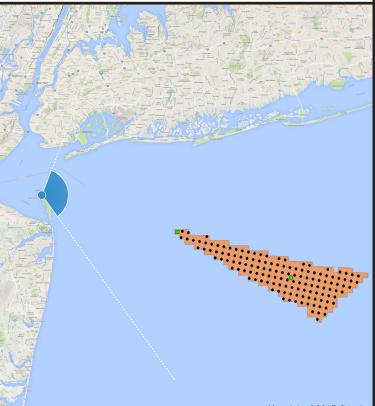


For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

Sandy Hook Light House Spring / Morning

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): Time (24hr): GPS Longitude: GPS Latitude: Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

Sun And Weather Information

Sun Azimuth: Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F): Temperature (°C): Humidity (%):

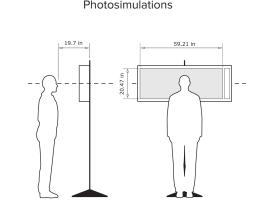
Camera Information

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size: EF28mm f/1.8 USM Lens Make & Model: Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft): Service Platform:

Correct Viewing of TrueView[™] Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)





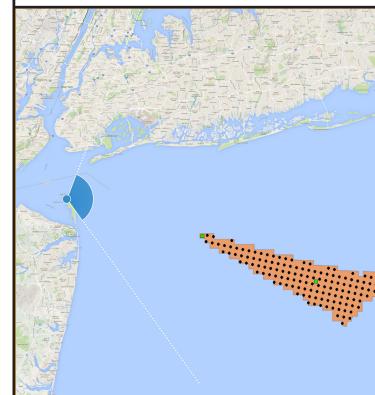
For on-screen display:
Scale bar to be 4 inches (101.6 mm) wide
Viewing distance 19.7 inches (50 cm)



Sandy Hook Light House Spring / Morning

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



map data ©2015 G

Date (MM/DD/YYYY): 6/06/3

Time (24hr):
GPS Longitude: -74.003

GPS Latitude: 40.46

Viewpoint Elevation (ft): 9

Camera Height (ft):

Camera Heading (°):

Sun And Weather Information

Sun Azimuth: 106.1066163
Sun Elevation: 52.42149934
Lighting Angle (On Turbines): Right-Lit
Weather Conditions: Clear
Maximum Visibility (NM): 22.3
Average Predicted Visibility (NM): 18.2
Wave Height (ft): 1.6
Period (Seconds): 9
Temperature (°F): 64
Temperature (°C): 18

Camera Information

Camera Make & Model:

Camera Sensor Size:

Lens Make & Model:

Lens Focal Length:

Canon EOS 5D Mark III

Sensor Size:

36mm x 24mm

EF28mm f/1.8 USM

28mm

65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM):

Make & Model:

Number of Turbines:

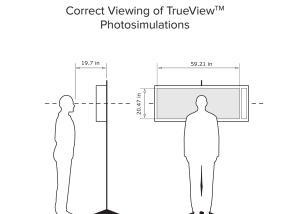
Hub Height (ft):

Support Structure Height (ft):

Rotor Diameter (ft):

Total Height to Tip of Blade (ft):

40



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



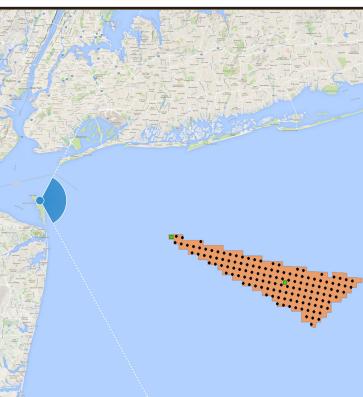
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Time (24hr): GPS Longitude: GPS Latitude: Field of View: Sandy Hook North Beach - Summer / Midday - Existing Conditions

Bureau of Ocean Energy Management

Sandy Hook North Beach Summer / Midday

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

Sun And Weather Information

Sun Azimuth: 55.11046539 Sun Elevation: Lighting Angle (On Turbines): Weather Conditions:

Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds):

Temperature (°F): Temperature (°C): Humidity (%):

Camera Information

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size:

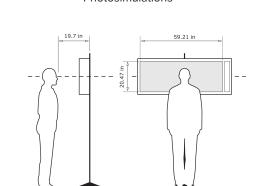
Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft):

Total Height to Tip of Blade (ft): ervice Platform:

Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

Truescape®

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For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

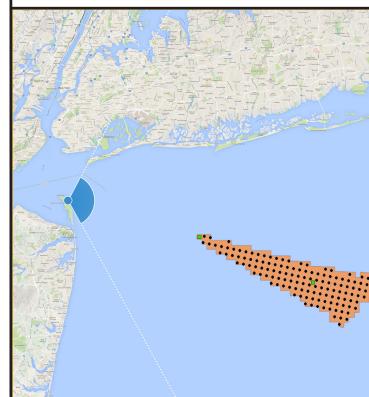
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Time (24hr): GPS Longitude: GPS Latitude: Humidity (%): Field of View: ervice Platform: Sandy Hook North Beach - Summer / Midday - Simulation of Project Under Average Predicted Visibility

Bureau of Ocean Energy Management

Sandy Hook North Beach Summer / Midday

age Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Date (MM/DD/YYYY): 40.468987 Viewpoint Elevation (ft): Camera Height (ft): Camera Heading (°):

Sun And Weather Information

Sun Azimuth: 55.11046539 Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: Average Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F): Temperature (°C):

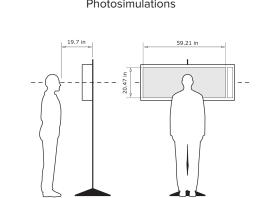
Camera Information

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM): Make & Model: Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft):

Correct Viewing of TrueView[™]
Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

Truescape®

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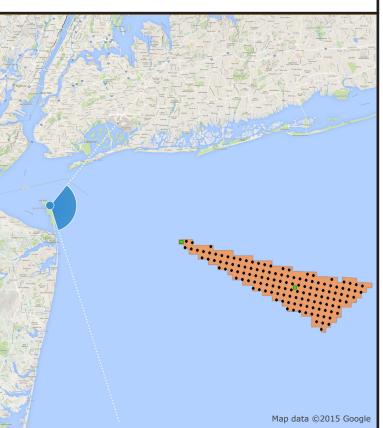
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm) This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Date (MM/DD/YYYY): Time (24hr): GPS Longitude: GPS Latitude: Camera Height (ft): Temperature (°C): Humidity (%): Field of View: Make & Model: Sandy Hook North Beach - Fall / Night - Existing Conditions For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

Bureau of Ocean Energy Management

Sandy Hook North Beach Fall / Night

Existing Conditions

Key Observation Point (KOP)TurbineSite BoundaryElectrical Service Platform



Base Photographic Documentation

Viewpoint Elevation (ft): Camera Heading (°):

Sun And Weather Information

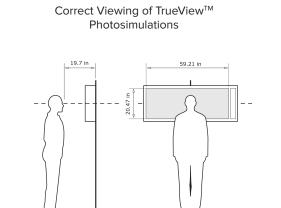
Sun Azimuth: Sun Elevation: Lighting Angle (On Turbines): Weather Conditions: verage Predicted Visibility (NM): Wave Height (ft): Period (Seconds): Temperature (°F):

Camera Information

Canon EOS 5D Mark III Camera Make & Model: 36mm x 24mm Camera Sensor Size: Lens Make & Model: EF28mm f/1.8 USM Lens Focal Length: 65.47° (H) / 46.397° (V)

Turbine Information Distance to Nearest Turbine (NM):

Number of Turbines: Hub Height (ft): Support Structure Height (ft): Rotor Diameter (ft): Total Height to Tip of Blade (ft): ervice Platform: 40ft above MWS



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

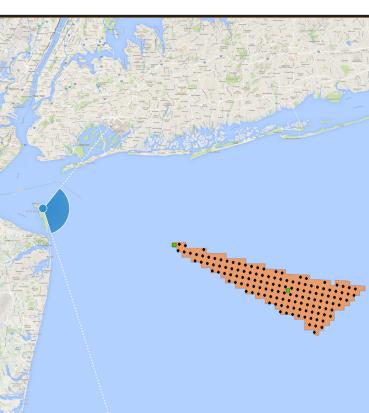
This simulation illustrates a hypothetical project and does not represent an actual or proposed project. Adherence to the viewing instructions provided on this page is necessary to ensure that the images are accurately portrayed. Humidity (%): eld of View: Sandy Hook North Beach - Fall / Night - Simulation of Project Under Average Predicted Visibility For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Sandy Hook North Beach Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

(MM/DD/YYYY):	10/20/201
e (24hr):	18:5
Longitude:	-73.99441
Latitude:	40.46898
point Elevation (ft):	10.9
era Height (ft):	5.4
era Heading (°):	10

Sun And Weather Information

ı	Sun Azimuth:	N
ı	Sun Elevation:	N
ı	Lighting Angle (On Turbines):	N
ı	Weather Conditions:	Partly-Clou
	Maximum Visibility (NM):	23
ı	Average Predicted Visibility (NM):	18
	Wave Height (ft):	
ı	Period (Seconds):	
	Temperature (°F):	
	Temperature (°C):	

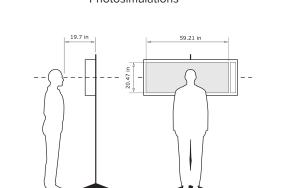
Camera Information

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	28
Field of View:	65 17° (H) / 16 397

Turbine Information Distance to Nearest Turbine (NM): Make & Model: Sen

Make & Model:	Sen
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft S
	401

Correct Viewing of TrueView[™] Photosimulations



Photosimulation Created Using
TrueView™ Technology
(Patent No.: US 8,184,906 B2)

Provided by





Twin Light NHL, aka Navesink Light Station - Winter / Afternoon - Existing Conditions

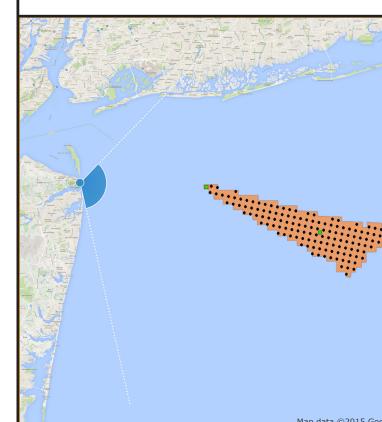
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Twin Light NHL, aka Navesink Light Station Winter / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Site Boundary
 Electrical Service Platform



se Photographic Documentation

Base Photographic Documentation		
Date (MM/DD/YYYY):	1/08/2015	
ime (24hr):	14:27	
SPS Longitude:	-73.98546	
SPS Latitude:	40.396035	
/iewpoint Elevation (ft):	254.78	
Camera Height (ft):	5.41	
Camera Heading (°):	106	

Sun And Weather Information

Sun Azimuth:	215.2180557
Sun Elevation:	18.96313597
Lighting Angle (On Turbines):	Right-Lit
Weather Conditions:	Clear
Maximum Visibility (NM):	26.4
Average Predicted Visibility (NM):	19.5
Wave Height (ft):	0.4
Period (Seconds):	11
Temperature (°F):	18
Temperature (°C):	-8
Llumidity (0/)	20

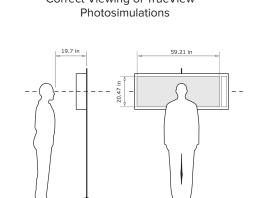
- 4

Canon EOS 5D Mark III
36mm x 24mm
EF28mm f/1.8 USM
28mm
65.47° (H) / 46.397° (V)

Turbine Information

nce to Nearest Turbine (NM):	17
e & Model:	Senvion 6.2M 15
per of Turbines:	13
Height (ft):	32
ort Structure Height (ft):	
Diameter (ft):	498
Height to Tip of Blade (ft):	577
ce Platform:	100ft x 200ft Steel Platfor

orrect Viewing of TrueViewTM



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





Twin Light NHL, aka Navesink Light Station - Winter / Afternoon - Simulation of Project Under Maximum Visibility

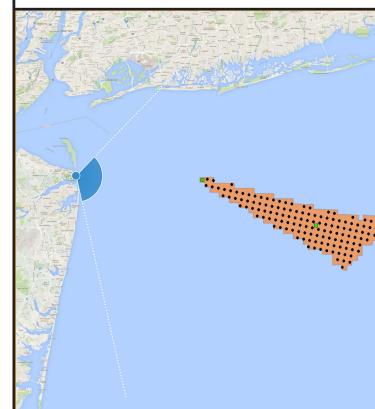
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Twin Light NHL, aka Navesink Light Station Winter / Afternoon

Simulation of Project Under Maximum Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Map data ©2015 Go

Base Photographic Documentation	
Date (MM/DD/YYYY):	1/08/20
Time (24hr):	14::
GPS Longitude:	-73.9854
GPS Latitude:	40.39603
Viewpoint Elevation (ft):	254.
Camera Height (ft):	5.
Camera Heading (°):	10

Sun And Weather Information

Sun Azimuth:	215.218055
Sun Elevation:	18.9631359
Lighting Angle (On Turbines):	Right-Li
Weather Conditions:	Clea
Maximum Visibility (NM):	26.4
Average Predicted Visibility (NM):	19.5
Wave Height (ft):	0.4
Period (Seconds):	1
Temperature (°F):	18
Temperature (°C):	-8

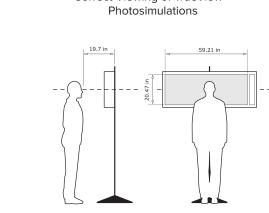
Camera Information

mera Make & Model:	Canon EOS 5D Mark III
mera Sensor Size:	36mm x 24mm
ns Make & Model:	EF28mm f/1.8 USM
ns Focal Length:	28mm
eld of View:	65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2N
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	4
Total Height to Tip of Blade (ft):	!
Service Platform:	100ft x 200ft Steel Plat
	400

orrect Viewing of TrueView™



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





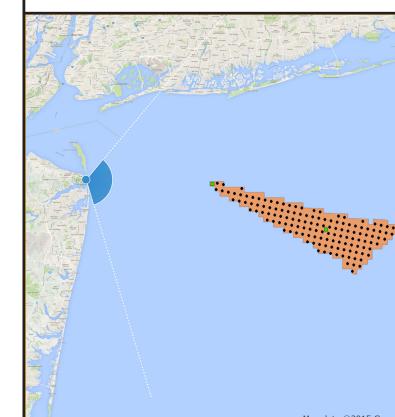
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Twin Light NHL, aka Navesink Light Station Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Base Photographic Documentation	
Date (MM/DD/YYYY):	10/20/201
Time (24hr):	20:2
GPS Longitude:	-73.9854
GPS Latitude:	40.39603
Viewpoint Elevation (ft):	254.7
Camera Height (ft):	5.4
Camera Heading (°):	10

Sun And Weather Information

Sun Azimuth:	N/A
Sun Elevation:	N/A
ighting Angle (On Turbines):	N/A
Veather Conditions:	Cloud
Maximum Visibility (NM):	22.9
Average Predicted Visibility (NM):	18.6
Vave Height (ft):	1.3
Period (Seconds):	9
emperature (°F):	63
emperature (°C):	17

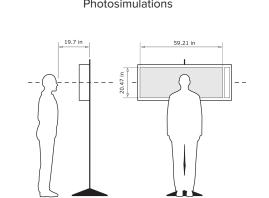
Camera Information

amera Make & Model:	Canon EOS 5D Mark III
amera Sensor Size:	36mm x 24mm
ens Make & Model:	EF28mm f/1.8 USM
ns Focal Length:	28mm
eld of View:	65.47° (H) / 46.397° (V)

Turbine Information

Distance to Nearest Turbine (NW):	
Make & Model:	Senvion 6.3
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pl
	40th abay

Correct Viewing of TrueView™ Photosimulations



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)





Twin Light NHL, aka Navesink Light Station - Fall / Night - Simulation of Project Under Average Predicted Visibility

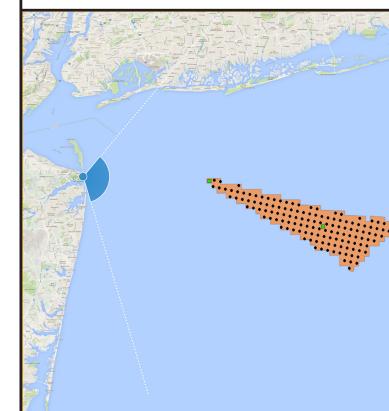
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Twin Light NHL, aka Navesink Light Station Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Site Boundary
 Turbine
 Electrical Service Platform



ese Photographic Documentation

Base Photographic Documentation	
Date (MM/DD/YYYY):	10/20/201
Time (24hr):	20:2
GPS Longitude:	-73.9854
GPS Latitude:	40.39603
Viewpoint Elevation (ft):	254.7
Camera Height (ft):	5.4
Camera Heading (°):	10

Sun And Weather Information

1	Juli / tild Wedther Illioniation	
	Sun Azimuth:	Ν
ı	Sun Elevation:	Ν
	Lighting Angle (On Turbines):	Ν
	Weather Conditions:	Clo
	Maximum Visibility (NM):	22
ı	Average Predicted Visibility (NM):	18
	Wave Height (ft):	
ı	Period (Seconds):	
	Temperature (°F):	
	Temperature (°C):	

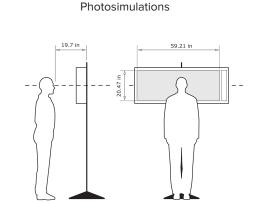
Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24n
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28n
Field of View:	65.47° (H) / 46.397°

Turbine Information Distance to Nearest Turbine (NM):

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pla

orrect Viewing of TrueView™



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





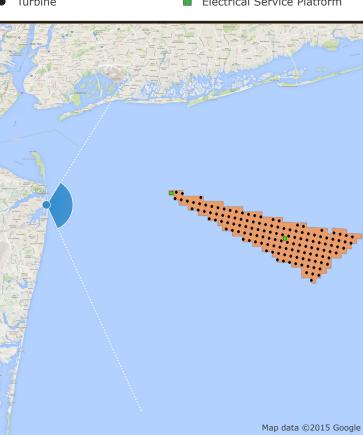
For on-screen display:
Scale bar to be 4 inches (101.6 mm) wide
Viewing distance 19.7 inches (50 cm)



Rumson Summer / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



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se Photographic Documentation		
e (MM/DD/YYYY):	8/28/2014	
e (24hr):	14:40	
Longitude:	-73.97379	
Latitude:	40.36699	
vpoint Elevation (ft):	19.4	
nera Height (ft):	5.4	
nera Heading (°):	94	

Sun And Weather Information

Sun And Weather Information	
Sun Azimuth:	223.637772
Sun Elevation:	51.6405220
Lighting Angle (On Turbines):	Front-l
Weather Conditions:	Cle
Maximum Visibility (NM):	26
Average Predicted Visibility (NM):	16
Wave Height (ft):	
Period (Seconds):	
Temperature (°F):	-
Temperature (°C):	2
1 1	_

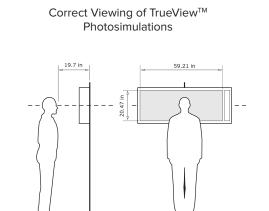
_ _ ..

Camera Make & Model:	Canon EOS 5D M
Camera Sensor Size:	36mm x 2
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	2
Field of View:	65.47° (H) / 46.39

ine Information

istance to Nearest Turbine (NM):	
lake & Model:	Senvion 6
umber of Turbines:	
ub Height (ft):	
upport Structure Height (ft):	
otor Diameter (ft):	
otal Height to Tip of Blade (ft):	
ervice Platform:	100ft x 200ft Steel F

orrect Viewing of TrueViewTM



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





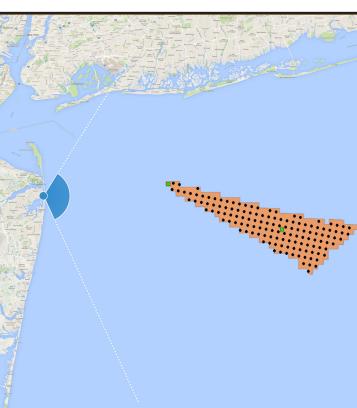
Rumson - Summer / Afternoon - Simulation of Project Under Maximum Visibility

For on-screen display:
Scale bar to be 4 inches (101.6 mm) wide
Viewing distance 19.7 inches (50 cm)



Rumson Summer / Afternoon

Key Observation Point (KOP) Site Boundary



riap data ©2013 GO

ase Photographic Documentation			
ate (MM/DD/YYYY):	8/28/2014		
me (24hr):	14:40		
PS Longitude:	-73.973794		
PS Latitude:	40.366991		
ewpoint Elevation (ft):	19.4		
amera Height (ft):	5.41		
amera Heading (°):	94		

Sun And Weather Information

Sun And Weather Information	
Sun Azimuth:	223.637772
Sun Elevation:	51.6405220
Lighting Angle (On Turbines):	Front-l
Weather Conditions:	Cle
Maximum Visibility (NM):	26
Average Predicted Visibility (NM):	16
Wave Height (ft):	
Period (Seconds):	
Temperature (°F):	-
Temperature (°C):	2

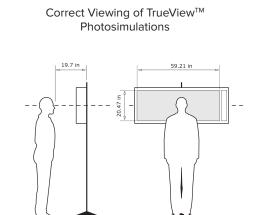
_ _ .

mera Make & Model:	Canon EOS 5D Mark III
mera Sensor Size:	36mm x 24mm
s Make & Model:	EF28mm f/1.8 USM
s Focal Length:	28mm

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6
lumber of Turbines:	
łub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
otal Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel P

Correct Viewing of TrueView™



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



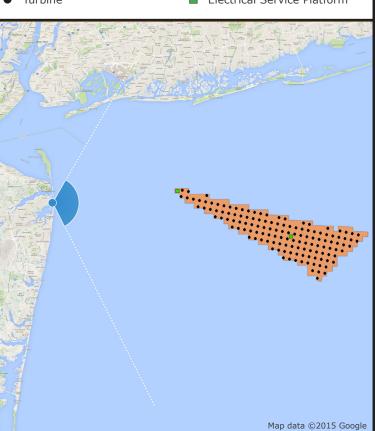


For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

5 1	
ate (MM/DD/YYYY):	10/20/2014
ime (24hr):	21:30
PS Longitude:	-73.973794
PS Latitude:	40.366991
iewpoint Elevation (ft):	19.4
amera Height (ft):	5.41
amera Heading (°):	92

Sun And Weather Information

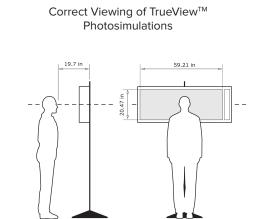
n Azimuth:	N/A
n Elevation:	N/A
hting Angle (On Turbines):	N/A
eather Conditions:	Overcast
ximum Visibility (NM):	20.1
erage Predicted Visibility (NM):	18.6
ve Height (ft):	1.3
riod (Seconds):	9
mperature (°F):	63
mperature (°C):	17

Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24n
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28n
Field of View:	65.47° (H) / 46.397°

Turbine Information

tance to Nearest Turbine (NM):	16.7
ke & Model:	Senvion 6.2M 152
mber of Turbines:	134
o Height (ft):	328.1
pport Structure Height (ft):	25
or Diameter (ft):	498.7
al Height to Tip of Blade (ft):	577.4
vice Platform:	100ft x 200ft Steel Platform



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



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Rumson - Fall / Night - Existing Conditions



Rumson - Fall / Night - Simulation of Project Under Average Predicted Visibility

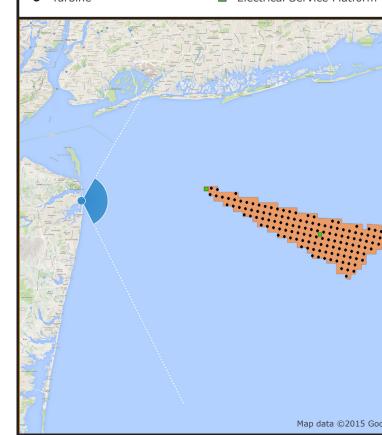
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Rumson Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



se Photographic Documentation

Date (MM/DD/YYYY):	10/20/20
Time (24hr):	21:3
GPS Longitude:	-73.97379
GPS Latitude:	40.3669
Viewpoint Elevation (ft):	19
Camera Height (ft):	5.
Camera Heading (°):	Ç

Sun And Weather Information

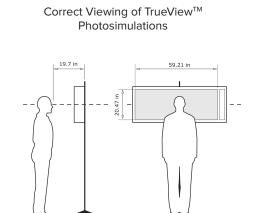
N/A
N/A
N/A
Overcast
20.1
18.6
1.3
9
63
17

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24m
Lens Make & Model:	EF28mm f/1.8 US
Lens Focal Length:	28m

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2M
Number of Turbines:	
Hub Height (ft):	3
Support Structure Height (ft):	
Rotor Diameter (ft):	4
Total Height to Tip of Blade (ft):	5
Service Platform:	100ft x 200ft Steel Platf

arract Viewing of TrucViewIM



Photosimulation Created Using
TrueView™ Technology
(Patent No.: US 8,184,906 B2)

Provided by





Asbury Park - Summer / Afternoon - Existing Conditions

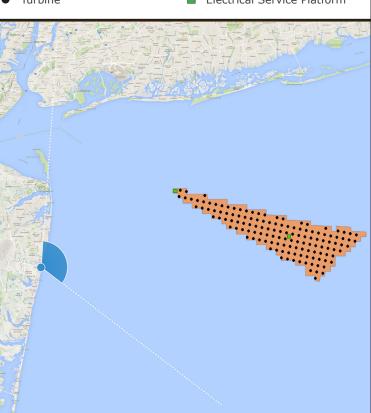
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Asbury Park Summer / Afternoon

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Map data ⊚2013 Gt

Photographic Documentation		
M/DD/YYYY):	8/28/2014	
hr):	15:29	
gitude:	-73.998334	
tude:	40.224404	
nt Elevation (ft):	0	
Height (ft):	5.41	
Heading (°):	66	

Sun And Weather Information

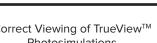
Sun Azimuth:	238.228783
Sun Elevation:	44.4662482
Lighting Angle (On Turbines):	Front-
Weather Conditions:	Cle
Maximum Visibility (NM):	26
Average Predicted Visibility (NM):	16
Wave Height (ft):	4
Period (Seconds):	
Temperature (°F):	
Temperature (°C):	2

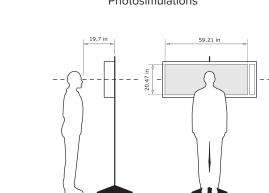
nera Information

Camera Make & Model:	Canon EOS 5D M
Camera Sensor Size:	36mm x 2
Lens Make & Model:	EF28mm f/1.8
Lens Focal Length:	2

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pla





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by





Asbury Park - Summer / Afternoon - Simulation of Project Under Maximum Visibility

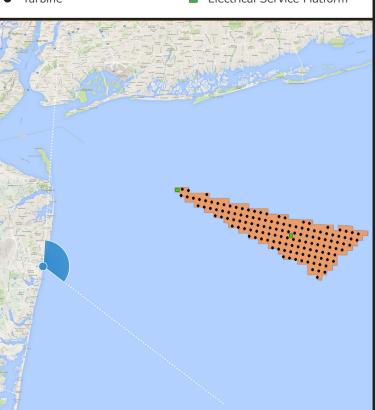
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)



Asbury Park Summer / Afternoon

ation of Project Under Maxi mum Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



map data ©2015 G

ase Photographic Documentation		
te (MM/DD/YYYY):	8/28/2014	
ne (24hr):	15:29	
S Longitude:	-73.998334	
S Latitude:	40.224404	
ewpoint Elevation (ft):	0	
mera Height (ft):	5.41	
mera Heading (°):	66	

n And Weather Information

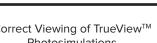
Sun And Weather Information	
Sun Azimuth:	238.228783
Sun Elevation:	44.4662482
Lighting Angle (On Turbines):	Front-
Weather Conditions:	Cle
Maximum Visibility (NM):	26
Average Predicted Visibility (NM):	16
Wave Height (ft):	4
Period (Seconds):	
Temperature (°F):	-
Temperature (°C):	2
Humidity (%):	3

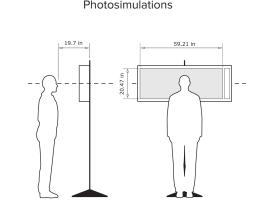
Camera Information

Camera Make & Model:	Canon EOS 5D Ma
Camera Sensor Size:	36mm x 24
Lens Make & Model:	EF28mm f/1.8 l
Lens Focal Length:	28
	0= 4=0 # # / 40 00=

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2
Number of Turbines:	
Hub Height (ft):	
Support Structure Height (ft):	
Rotor Diameter (ft):	
Total Height to Tip of Blade (ft):	
Service Platform:	100ft x 200ft Steel Pla





Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by



Ocean Grove - Fall / Night - Existing Conditions



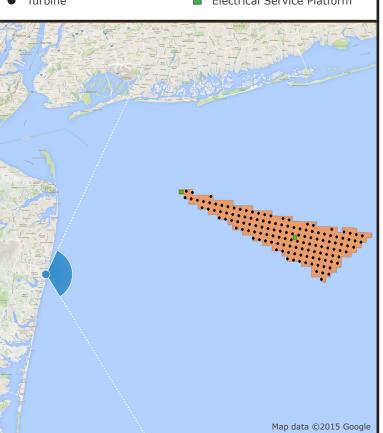
For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm)

BUREAU OF OCEAN ENERGY MANAGEMENT

Ocean Grove Fall / Night

Existing Conditions

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

Date (MM/DD/YYYY):	10/20/2014
Time (24hr):	23:10
GPS Longitude:	-74.002402
GPS Latitude:	40.213252
Viewpoint Elevation (ft):	15.7
Camera Height (ft):	5.41
Camera Heading (°):	87

Sun And Weather Information

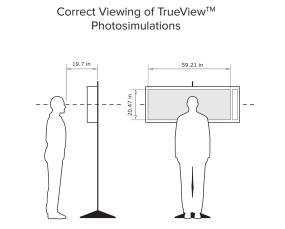
ın Azimuth:	N/A
ın Elevation:	N/A
ghting Angle (On Turbines):	N/A
eather Conditions:	Cloud
aximum Visibility (NM):	20.1
verage Predicted Visibility (NM):	18.6
ave Height (ft):	1.1
eriod (Seconds):	9
mperature (°F):	63
mperature (°C):	17

Camera Information

Camera Make & Model:	Canon EOS 5D Mark
Camera Sensor Size:	36mm x 24mı
Lens Make & Model:	EF28mm f/1.8 USI
Lens Focal Length:	28mi

Turbine Information

Distance to Nearest Turbine (NM):	
Make & Model:	Senvion 6.2M
Number of Turbines:	
Hub Height (ft):	3
Support Structure Height (ft):	
Rotor Diameter (ft):	4
Total Height to Tip of Blade (ft):	5
Service Platform:	100ft x 200ft Steel Platf



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)



Ocean Grove - Fall / Night - Simulation of Project Under Average Predicted Visibility

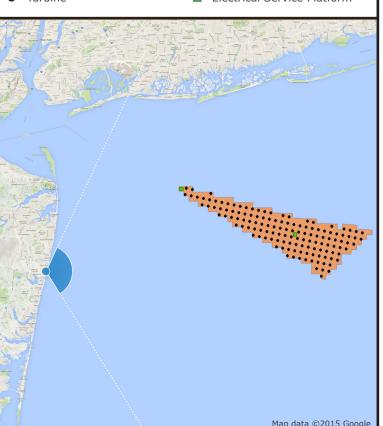


For on-screen display: Scale bar to be 4 inches (101.6 mm) wide Viewing distance 19.7 inches (50 cm) BUREAU OF OCEAN ENERGY MANAGEMENT

Ocean Grove Fall / Night

Simulation of Project Under Average Predicted Visibility

Key Observation Point (KOP)
 Turbine
 Site Boundary
 Electrical Service Platform



Base Photographic Documentation

• .	
Date (MM/DD/YYYY):	10/20/2014
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Camera Height (ft):	5.41
Camera Heading (°):	87

Sun And Weather Information

Sun Azimuth:	1
Sun Elevation:	1
Lighting Angle (On Turbines):	1
Weather Conditions:	Clo
Maximum Visibility (NM):	2
Average Predicted Visibility (NM):	1
Wave Height (ft):	
Period (Seconds):	
Temperature (°F):	
Temperature (°C):	

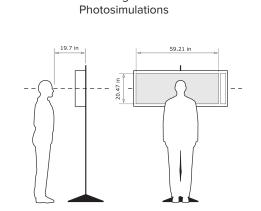
Camera Information

mera Make & Model:	Canon EOS 5D Mark III
mera Sensor Size:	36mm x 24mm
ns Make & Model:	EF28mm f/1.8 USM
ns Focal Length:	28mm
eld of View:	65.47° (H) / 46.397° (V)

Turbine Information

stance to Nearest Turbine (NM):	20.5
ke & Model:	Senvion 6.2M 152
mber of Turbines:	134
b Height (ft):	328.1
pport Structure Height (ft):	25
tor Diameter (ft):	498.7
tal Height to Tip of Blade (ft):	577.4
rvice Platform:	100ft x 200ft Steel Platform,

orrect Viewing of TrueViewTM



Photosimulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2) Provided by

