PAGES 1-16:
APPLICATION SUBMISSION

INSPECTION & STANDARDS
RECEIVED
FEB 20 2020

CITY OF PROVIDENCE
ZONING BOARD OF REVIEW

APPLICATION FOR VARIANCE OR SPECIAL USE PERMIT

Check Each Type Zoning Relief Sought:

- ☐ Variance – Use *
- ☑ Variance – Dimensional*
- ☐ Special Use Permit **

* Attach Appendix A to apply for a Use or Dimensional Variances
**Attach Appendix B to apply for a Special Use Permit

Applicant: Green Providence Wind I, LLC
Name: Mark Depasquale, Manager
Address 3760 Quaker Ln. North Kingstown, RI
Zip Code 02852
E-mail md@green-ri.com
Phone 401-295-4998 *Home/Office*
401-580-2060 *Mobile (Cell)*

Owner: Provport, Inc.
Address 35 Terminal Road Providence, RI
Zip Code 02903
E-mail wgbesq@aol.com
Phone 401-781-4719 *Home/Office*
Mobile (Cell)

Lessee: same as applicant
Address
Zip Code
E-mail
Phone: *Home/Office*
Mobile (Cell)

Does the proposal require review by any of the following (check each):

- n/a Downtown Design Review Committee
- n/a I-195 Redevelopment District Commission
- n/a Capital Center Commission
- n/a Historic District Commission

1. **Location of Property:** 1 Fields Point Drive (56 Lot 322)
Street Address
2. **Zoning District(s):** W-3
Special purpose or overlay district(s): no

3a. Date owner purchased the Property: 10/2/2015

3b. Month/year of lessee's occupancy: 2020 subject to all permits being received

3. **Dimensions of each lot:**

Lot #	322	**Frontage**	220' +/-	**depth**	212' +/-	**Total area**	49,717 sq. ft.
Lot #		**Frontage**		**depth**		**Total area**	sq. ft.
Lot #		**Frontage**		**depth**		**Total area**	sq. ft.

4. **Size of each structure located on the Property:**

Principal Structure: **Total gross square footage** 12,990
Footprint 12990 **Height** 24'+/- **Floors** 1

Accessory Structure: **Total gross square footage**
Footprint **Height** **Floors**

5. **Size of proposed structure(s):** **Total gross square footage:**
Footprint 1.31ac blade swing area **Height** 342 **Floors** n/a
3650 sf +/- foundation only

6a. **Existing Lot coverage:** *(include all buildings, decks, etc.)* 12,990 sf

6b. **Proposed Lot coverage:** *(include new construction)* 1.31 ac (rotation of blades) 3650 sf foundation only
Existing 12,990 sf building to remain

7a. **Present Use of Property (each lot/structure):**
Equipment maintenance bldg. & outside vehicle storage

7b. **Legal Use of Property (each lot/structure) as recorded in Dept. of Inspection & Standards:**
Existing industrial building for vehicle maintenance and outisde parking/storage

8. **Proposed Use of Property (each lot/structure):**
same as existing and (1) wind energy turbine system

9. **Number of Current Parking Spaces:** No change proposed

10. **Describe the proposed construction or alterations (each lot/structure):**
(1) 1.5 MW wind energy system located within an existing building and parking/storage area

11. **Are there outstanding violations concerning the Property under any of the following:**
n/a Zoning Ordinance
n/a RI State Building Code
n/a Providence Housing Code

12. **List all Sections of the Zoning Ordinance from which relief is sought and description of each section:**

902	90' building height limitation, structue is 342', variance 252'
1202-cc-10	376.2 property line setback required, 0' proposed, variance 376.2'
1202-cc-11	376.2 propety line setback required, 125' prop. (Harborside), variance 251.2'
1202-cc-09	342' structure setback required, 25' proposed, variance 317'.

13. Explain the changes proposed for the Property.

No changes are proposed except for the construction of (1) 1.5 MW wind energy system and associated equipment for electrical interconnection.

The undersigned acknowledge(s) and agree(s) that members of the Zoning Board of Review and its staff may enter upon the exterior of the Property in order to view the Property prior to any hearing on the application.

The undersigned further acknowledge(s) that the statements herein and in any attachments or appendices are true and accurate, and that providing a false statement in this application may be subject to criminal and/or civil penalties as provided by law, including prosecution under the State and Municipal False Claims Acts. ***Owner(s)/Applicant(s) are jointly responsible with their attorneys for any false statements.***

Owner(s):

William G. Brady, Sec,
Type Name

Signature

Type Name

Signature

Applicant(s):

Mark DePasquale
Type Name

Signature

Type Name

Signature

All requirements listed and described in the Instruction Sheet must be met or this application will not be considered complete.

APPENDIX A

APPLICATION FOR VARIANCE(S)

Rhode Island General Laws § 45-24-41(c) requires that the Applicant for a variance demonstrate:

(1) That the hardship from which the applicant seeks relief is due to the unique characteristics of the subject land or structure and not to the general characteristics of the surrounding area; and is not due to a physical or economic disability of the applicant, excepting those physical disabilities addressed in § 45-24-30(16);

(2) That the hardship is not the result of any prior action of the applicant and does not result primarily from the desire of the applicant to realize greater financial gain;

(3) That the granting of the requested variance will not alter the general character of the surrounding area or impair the intent or purpose of the zoning ordinance or the comprehensive plan upon which the ordinance is based;

(4) That the relief to be granted is the least relief necessary; and

(5) (a) For a **use variance**: That the land or structure cannot yield any beneficial use if it is required to conform to the provisions of the zoning ordinance;

(b) For a **dimensional variance**, that the hardship suffered by the owner of the subject property if the dimensional variance is not granted amounts to more than a mere inconvenience.

Please provide the following information:

1. **What is the specific hardship from which the applicant seeks relief?**

Building height limitation, unique characteristics of the property, and location in I-2 zone adjacent to W-3 zone where the use is allowed require the dimensional relief requested for the proposed use

2. **Specify any and all unique characteristics of the land or structure that cause the hardship?**

The required height is necessary to capture the wind regime needed for efficient energy production without turbulence and not exceed FAA limitations.

3. **(a) Is the hardship caused by an economic disability?** Yes ____ No x

(b) Is the hardship caused by a physical disability? Yes ____ No x

(c) If the response to subsection (b) is "yes," is the physical disability covered by the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. § 12101 et seq.?
Yes ____ No x

4. **Did the owner/applicant take any prior action with respect to the Property that resulted in the need for the variance requested? (Examples include, but are not limited to, any changes the owner/applicant made to the structure(s), lot lines, or land, or changes in use of the Property)?**
Yes ____ No x

If "yes," describe any and all such prior action(s), and state the month/year taken.

5. **State any and all facts to support your position that the applicant is not seeking the variance(s) primarily in order to obtain greater financial gain.**

The applicant is seeking variances to provide renewable energy.

6. **State any and all facts that support your position that you are seeking the least relief necessary to lessen or eliminate the hardship (for example, why there are no viable alternatives to your proposed plan).**

The tower that is proposed is a specialized design to minimize the height relief needed. FAA limits the height above sea level to no more than elevation 350 MSL.

7. **If you are seeking a USE VARIANCE, set forth all facts that demonstrate that the Property cannot have any beneficial use if you are required to use it in a manner allowed in the zoning district.**

N/A

8. **If you are seeking a DIMENSIONAL VARIANCE, set forth all facts that indicate that if the variance is not granted, the hardship the owner/applicant will suffer is more than a mere inconvenience.**

The required height and location is necessary to capture the wind regime needed for efficient energy production without turbulence and to avoid conflicts with existing operational turbines on the Narragansett Bay Commission properties to the north as well as FAA.

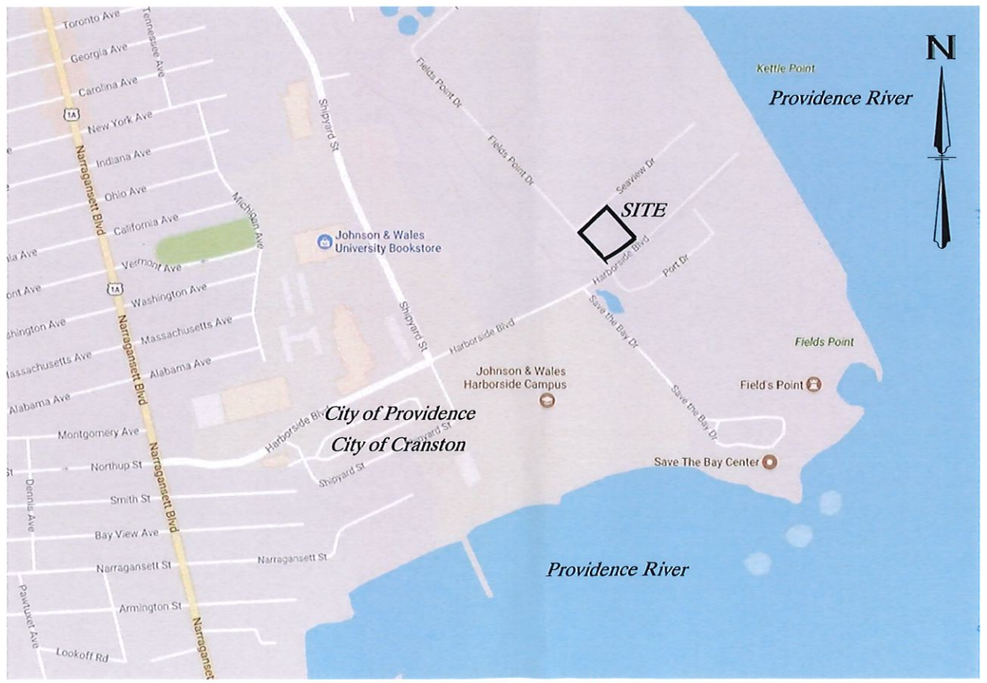
ZONING SUBMISSION

Green Providence Wind I

1 Fields Point Drive
Providence, Rhode Island 02905
Assessor's Plat 56 Lot 322

Sheet Index

Sheet Number	Sheet Title
C1.1	Cover Sheet
C1.2	Aerial & Map Sheet
C1.3	Site Plan
C1.4	Detail Sheet
1 of 1	Vensys 82 (Wind Turbine Detail)



Vicinity Map (Scale: 1"=400')

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com
GREEN development, LLC

APPLICANT: *Green Providence Wind I, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Provport, Inc*
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/2/2020	ZONING RESUBMISSION	RRS
1	10/22/2019	ZONING SUBMISSION	RRS

SHEET TITLE:
Cover Sheet

PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 18857
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/3/2020

SHEET NO.:
C1.1 OF 4

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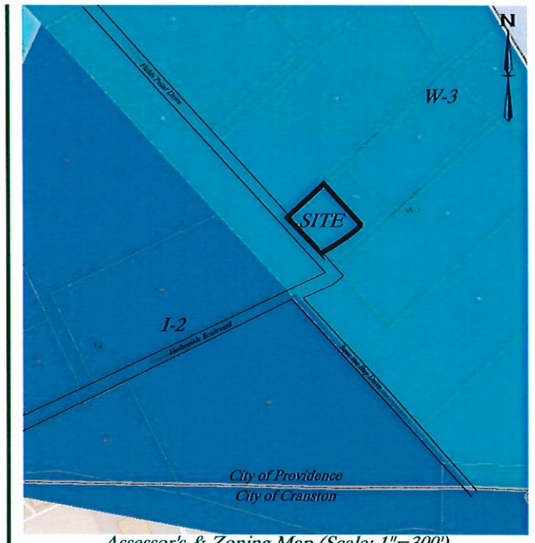
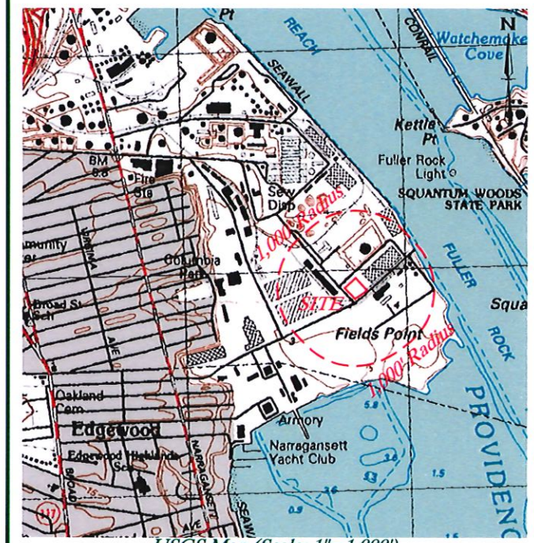
1/2 Mile Radius Map



Assessor's & Zoning Map (Scale: 1"=300')



USGS Map (Scale: 1"=1,000')

Disclaimer:

THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. INFORMATION AND IMAGES ON THIS PLAN ARE THOSE FOUND THROUGH ONLINE STATE AND CITY/TOWN GIS DATABASES. THE INFORMATION SHOWN IS ONLY AS ACCURATE AS THE INFORMATION FOUND THROUGH ONLINE SITE RESEARCH. AERIAL IMAGE DEPICTED IS FROM 2014 USGS DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY. THE ASSESSOR'S AND ZONING MAP ABOVE IS TAKEN FROM PLAN TITLED "THE CITY OF PROVIDENCE, RHODE ISLAND - PLAT NO. 056", REVISED DECEMBER 31, 2017. FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

Existing Conditions Legend

GROUNDWATER RESERVOIR AREA

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

APPLICANT: *Green Providence Wind I, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Provport, Inc*
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/5/2020	ZONING RESUBMISSION	RBS
1	10/22/2019	ZONING SUBMISSION	RBS

SHEET TITLE:
Aerial & Map Sheet
PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 18571
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/3/2020

SHEET NO.:
C1.2 OF 4

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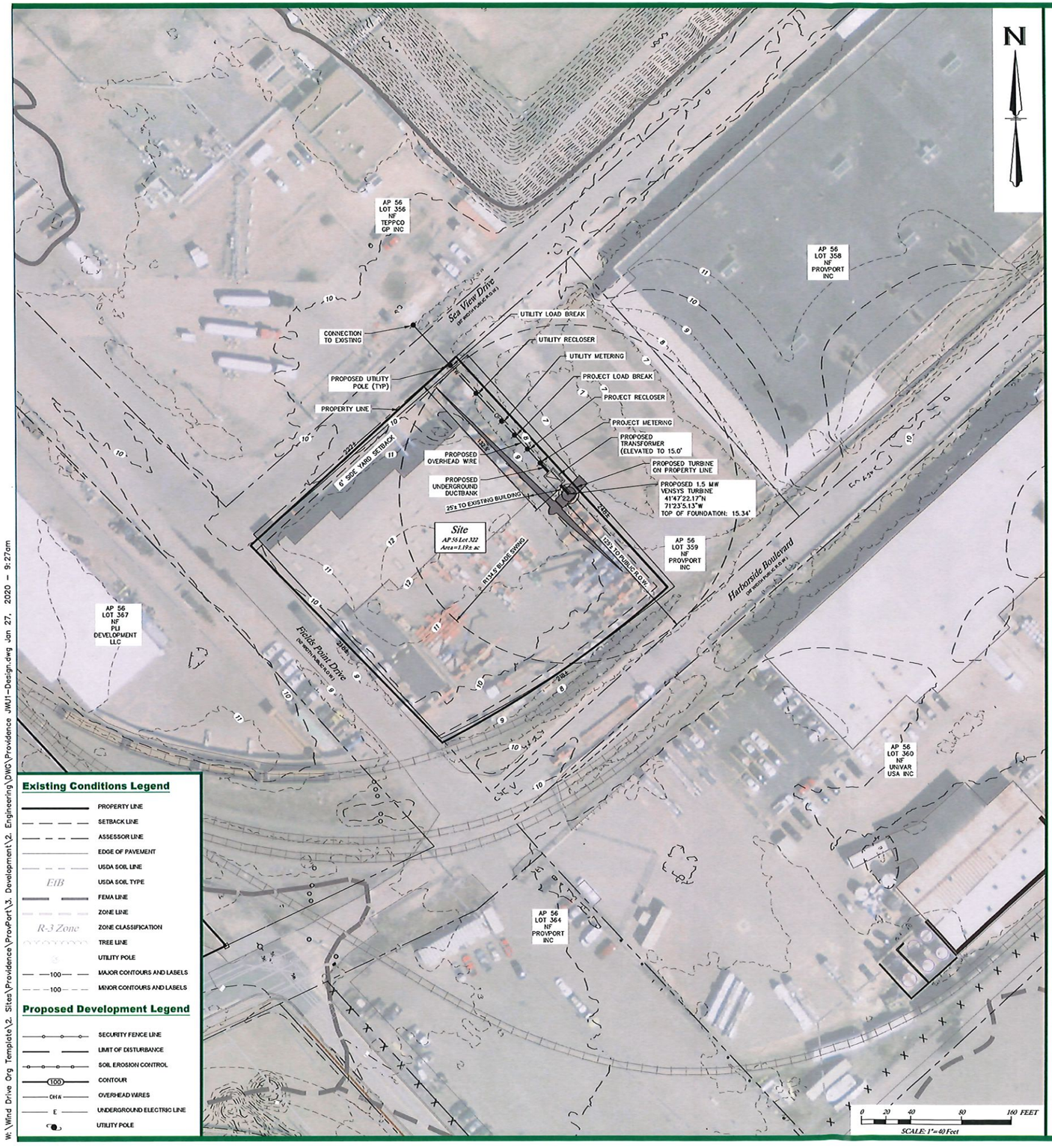

Existing Conditions Legend

- PROPERTY LINE
- SETBACK LINE
- ASSESSOR LINE
- EDGE OF PAVEMENT
- USDA SOIL LINE
- EIB — USDA SOIL TYPE
- FEMA LINE
- ZONE LINE
- R-3 Zone — ZONE CLASSIFICATION
- TREE LINE
- UTILITY POLE
- 100 — MAJOR CONTOURS AND LABELS
- 100 — MINOR CONTOURS AND LABELS

Proposed Development Legend

- SECURITY FENCE LINE
- LIMIT OF DISTURBANCE
- SOIL EROSION CONTROL
- 100 — CONTOUR
- OHW — OVERHEAD WIRES
- E — UNDERGROUND ELECTRIC LINE
- UTILITY POLE

Development Information:

1. APPLICANT INFORMATION: GREEN PROVIDENCE WIND I, LLC
   3760 QUAKER LANE
   NORTH KINGSTOWN, RHODE ISLAND 02852
2. OWNER INFORMATION: PROVPORT INC
   32 TERMINAL ROAD
   PROVIDENCE, RI 02905
3. SITE INFORMATION: 1 FIELDS POINT DRIVE
   PROVIDENCE, RHODE ISLAND, 02905
   ASSESSOR'S PLAT 56, LOT 322
   AREA: 1.19± ACRES
   ZONE: W-3 (PORT/MARITIME INDUSTRIAL WATERFRONT DISTRICT)
4. REQUIRED PERMITS: CITY OF PROVIDENCE ZONING ORDINANCE TABLE 12-2: USE MATRIX
   PROPOSED USE: WIND ENERGY SYSTEM (PRINCIPAL USE)
   PERMISSIBLE UNDER ZONE W-3
5. FEMA INFORMATION: THE SITE IS LOCATED WITHIN ZONE AE (ELEV. 12) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE CITY OF PROVIDENCE, PROVIDENCE COUNTY. FIRM MAP NUMBERS, REVISION DATES AND ZONE DESCRIPTIONS ARE AS FOLLOW:

MAP	MAP REVISION DATE
44007C0317J	SEPTEMBER 18, 2013

ZONE	DESCRIPTION
AE	SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD BASE FLOOD ELEVATION (ELEV.12 WITHIN LIMIT OF MODERATE WAVE ACTION)

6. AREA INFORMATION:

SITE WITHIN	YES/NO
GROUNDWATER PROTECTION AREA (RIDEM)	NO
NATURAL HERITAGE AREAS (RIDEM)	NO
HISTORIC CEMETERY AREA (CITY/TOWN)	NO
HISTORIC DISTRICT (CITY/TOWN)	NO
OVERLAY DISTRICT (CITY/TOWN)	NO
GROUNDWATER RESERVOIR AREA (CITY/TOWN)	YES
GROUNDWATER RECHARGE AREA (CITY/TOWN)	NO

7. SOIL INFORMATION:

SOIL NAME	HSG	DESCRIPTION
UD	N/A	UDORTHENTS-URBAN LAND COMPLEX

   THE SOIL ABBREVIATIONS REFERENCE THE SOIL SURVEY OF RHODE ISLAND,PREPARED BY THE USDA SOIL CONSERVATION SERVICE. INFORMATION FOUND THROUGH ONLINE RESEARCH FROM RIGIS DATA. THE ABBREVIATIONS CORRESPOND TO SOIL AREAS OUTLINE ON THE PLAN AND ARE TO BE CONSIDERED APPROXIMATE BASED ON RIGIS DATABASE

8. ZONING INFORMATION:

EXISTING ZONE (TABLE 18.20.010)	ZONE W-3 (WATERFRONT)
MINIMUM LOT AREA:	NONE
MINIMUM FRONTAGE:	NONE
MINIMUM FRONT YARD:	NONE
MINIMUM INTERIOR SIDE YARD:	6'
MINIMUM CORNER SIDE YARD:	NONE
MINIMUM REAR YARD:	NONE*
MAXIMUM BUILDING HEIGHT:	90'

   *UNLESS ABUTTING A RESIDENTIAL DISTRICT (NOT APPLICABLE)

9. EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING, THE RIGIS DATABASE AND INFORMATION PROVIDED TO GREEN DEVELOPMENT. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. REFERENCE CLASS I SURVEY PLAN BY OTHERS ENTITLED "ADMINISTRATIVE SUBDIVISION PORT OF PROVIDENCE, RHODE ISLAND, TERMINAL ROAD, NEW YORK AVENUE, FIELDS POINT AVE, SHIPYARD STREET, & HARBORSIDE BOULEVARD" PREPARED FOR PROV. PORT, INC., TERMINAL ROAD, PROVIDENCE, RHODE ISLAND DATED MAY 24, 2005 PREPARED BY WATERMAN ENGINEERING COMPANY, 46 SUTTON AVENUE, EAST PROVIDENCE, RHODE ISLAND 02914.
10. TOPOGRAPHY SHOWN ON THE PLAN IS LIDAR AND WAS OBTAINED BY RIGIS DATABASE. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD88 DATUM.
11. THERE ARE NO HISTORICAL CEMETERIES LOCATED ON SITE BASED ON THE RHODE ISLAND HISTORICAL CEMETERY COMMISSION WEBSITE AND RESOURCES.
12. THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN IN THIS PLAN SET AS RIDOT STD X.X.X. REFERENCE LINK: HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/RIDOT_STD_DETAILS.PDF
13. NO TOPSOIL OR PRIME AGRICULTURAL SOIL, AS DEFINED IN CHAPTER 18.08, SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.
14. ALL EXISTING STRUCTURES AND SUPPORTING UTILITIES ARE TO REMAIN AND PROTECTED DURING CONSTRUCTION ACTIVITIES.
15. THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.
16. THERE ARE NO SIGNIFICANT IMPACTS TO THE EXISTING COMMUNITY, CITY SERVICES OR TO THE ENVIRONMENT.
17. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION CONTROLS ON SITE. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS AS SHOWN ON PLAN.
18. CONSTRUCTION TO BEGIN IN 2020 OR UPON RECEIPT OF ALL NECESSARY PERMITS. ONCE ALL PERMITS HAVE BEEN RECEIVED, THE PROPOSED SCHEDULE OF CONSTRUCTION WILL BE LIMITED TO ONE YEAR FROM COMMENCEMENT OF CONSTRUCTION.
19. THE SITE WILL UTILIZE EXISTING PAVED ROADS AND DRIVEWAYS FOR CONSTRUCTION ENTRANCE.
20. THERE IS NO INCREASE IN TRAFFIC GENERATED BY THE PROPOSED SITE IMPROVEMENTS ALONG SHIPYARD STREET.
21. FIELDS POINT DRIVE, SEAVIEW DRIVE AND HARBORSIDE BOULEVARD PROVIDE ADEQUATE EMERGENCY VEHICLE ACCESS TO THE PROPERTY.
22. THERE IS NO OUTDOOR LIGHTING PROPOSED FOR THE PROJECT EXCEPT AS REQUIRED BY FAA.
23. ELECTRICAL SERVICE SHALL BE BROUGHT ONTO THE SITE THROUGH OVERHEAD UTILITY POLES AND TRANSITION TO UNDERGROUND DUCTBANK WITH TWO (2) 4 INCH UNDERGROUND CONDUITS OR AS DEEMED NECESSARY BY NATIONAL GRID. ELECTRICAL SERVICES ARE SHOWN SCHEMATICALLY AND DETAILED DESIGN SHALL BE COORDINATED WITH NATIONAL GRID AND MAY BE SUBJECT TO MODIFICATION.
24. FIRE REQUIREMENTS FOR THE PROPOSED USE WILL BE ADDRESSED PRIOR TO OBTAINING A BUILDING PERMIT.
25. NO INCREASE IN IMPERVIOUS SURFACES INCLUDING PAVEMENT, COMPACTED GRAVEL OR STRUCTURES ARE PROPOSED.

GREEN development, LLC
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APPLICANT: *Green Providence Wind I, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Provport, Inc*
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/3/2020	ZONING RESUBMISSION	RBS
1	10/22/2019	ZONING SUBMISSION	RBS

SHEET TITLE: *Site Plan*

PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 19951
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/3/2020

SHEET NO.:
C1.3 OF 4

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Wind Energy System (Principal Use)

(SECTION 1202 - PRINCIPAL USE STANDARDS)

1. THE DESIGN OF THE WIND ENERGY SYSTEM SHALL CONFORM TO APPLICABLE INDUSTRY STANDARDS AS SUCH STANDARDS EXIST AS OF THE DATE CONSTRUCTION IS COMMENCED. THE FACILITY OWNER OR OPERATOR SHALL SUBMIT CERTIFICATES OF DESIGN COMPLIANCE OBTAINED BY THE EQUIPMENT MANUFACTURERS FROM UNDERWRITERS LABORATORIES, DET NORSKE VERITAS, GERMANISHCER LLOYD WIND ENERGIES, OR SIMILAR CERTIFYING ORGANIZATIONS.
2. ALL WIND TURBINES SHALL BE NEWLY MANUFACTURED AS OF THE DATE OF INSTALLATION. EXPERIMENTAL/PROTOTYPE WIND TURBINES MAY BE APPROVED AS A SPECIAL USE. (WIND TURBINES BEING USED FOR THIS PROJECT ARE NOT EXPERIMENTAL/PROTOTYPE)
3. ALL WIND ENERGY SYSTEMS SHALL BE EQUIPPED WITH A REDUNDANT BRAKING SYSTEM. THIS INCLUDES BOTH AERODYNAMIC OVER-SPEED CONTROLS (@CLUDING VARIABLE PITCH, TIP, AND OTHER SIMILAR SYSTEMS) AND MECHANICAL BRAKES. MECHANICAL BRAKES SHALL BE OPERATED IN A FAIL-SAFE MODE. STALL REGULATION IS NOT CONSIDERED A SUFFICIENT BRAKING SYSTEM FOR OVER-SPEED PROTECTION.
4. ALL ELECTRICAL COMPONENTS OF THE WIND ENERGY SYSTEM SHALL CONFORM TO APPLICABLE LOCAL, STATE, AND NATIONAL CODES, AND APPLICABLE INTERNATIONAL STANDARDS.
5. AN ENGINEER'S CERTIFICATE SHALL BE COMPLETED BY A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF RHODE ISLAND, CERTIFYING THAT THE TOWER AND FOUNDATION OF THE WIND TURBINES ARE COMPATIBLE WITH, AND ARE APPROPRIATE FOR, THE PARTICULAR MODEL OF WIND TURBINE USED, AND THAT THE SPECIFIC SOILS AT THE SITE CAN SUPPORT THE WIND TURBINE.
6. WIND TURBINES SHALL COMPLY WITH THE FOLLOWING DESIGN STANDARDS:
   - 6.a. WIND TURBINES SHALL BE A NONOBTRUSIVE AND NONREFLECTIVE COLOR. THE FACILITY OWNER OR OPERATOR SHALL MAINTAIN THE PAINT ON WIND TURBINES AT ALL TIMES IN GOOD REPAIR.
   - 6.b. WIND TURBINES SHALL NOT DISPLAY ADVERTISING, EXCEPT FOR REASONABLE IDENTIFICATION OF THE TURBINE MANUFACTURER, OR THE FACILITY OWNER AND OPERATOR.
   - 6.c. WITHIN THE WIND ENERGY SYSTEM, WIND TURBINES SHALL BE OF A GENERALLY CONSISTENT SIZE, DESIGN, AND COLOR, OF SIMILAR HEIGHT AND ROTOR DIAMETER, AND ROTATE IN THE SAME DIRECTION.
   - 6.d. WIND TURBINES SHALL NOT BE ARTIFICIALLY LIT, EXCEPT TO THE EXTENT REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION OR OTHER APPLICABLE REGULATORY AUTHORITIES.
   - 6.e. ON-SITE TRANSMISSION AND POWER LINES BETWEEN WIND TURBINES SHALL, TO THE MAXIMUM EXTENT PRACTICABLE, BE PLACED UNDERGROUND, REACH THE PROPERTY LINE, AND BE LOCATED AND CONSTRUCTED IN SUCH A WAY AS TO MINIMIZE DISRUPTION TO THE PROPERTY'S PRIMARY PURPOSE AS WELL AS TO FACILITATE THE INTERCONNECTION OF OTHER COMMERCIAL WIND POWER GENERATING FACILITIES.
   - 6.f. NONESSENTIAL APPURTENANCES ARE PROHIBITED TO BE AFFIXED TO ANY WIND TURBINE, INCLUDING, BUT NOT LIMITED TO, CELLULAR OR RADIO ANTENNAE.
   - 6.g. A CLEARLY VISIBLE WARNING SIGN ADVISING PERSONS OF THE PRESENCE OF HIGH VOLTAGE LEVELS SHALL BE PLACED AT THE BASE OF ALL PAD-MOUNTED TRANSFORMERS AND SUBSTATIONS.
7. THE APPLICANT SHALL COMMISSION AND SUBMIT AT THE TIME OF PERMIT APPLICATION A WILDLIFE ASSESSMENT (IMPACT STUDY), CONDUCTED BY A QUALIFIED WILDLIFE EXPERT HAVING NO LESS THAN TEN YEARS OF EXPERIENCE CONDUCTING WILDLIFE ASSESSMENTS, INDICATING POSSIBLE RISKS TO LOCAL WILDLIFE, HABITAT, AND MIGRATORY BIRDS. ADDITIONALLY, THE APPLICANTS WILDLIFE EXPERT SHALL ALSO DEVELOP A MITIGATION PLAN, IF APPLICABLE, THAT ADDRESSES/MITIGATES ANY RISK TO WILDLIFE, MIGRATORY BIRDS, AND AFFILIATED HABITAT. ALL WIND TURBINES AT TIME OF APPLICATION SHALL BE LOCATED OUT OF BIRD AND BAT MIGRATION PATHWAYS/CORRIDORS WHERE WIND TURBINE CONSTRUCTION WOULD POSE A SUBSTANTIAL RISK.
8. WIND TURBINES SHALL NOT BE CLIMBABLE UP TO A HEIGHT OF AT LEAST 15 FEET ABOVE GROUND SURFACE. ALL ACCESS DOORS TO WIND TURBINES AND ELECTRICAL EQUIPMENT SHALL BE LOCKED OR FENCED, AS APPROPRIATE, TO PREVENT ENTRY BY NON-AUTHORIZED PERSONS. (SEE ATTACHED)
9. WIND TURBINES SHALL BE SET BACK FROM ALL STRUCTURES ON A PARTICIPATING PROPERTY OWNER'S PROPERTY A DISTANCE OF NO LESS THAN THE WIND ENERGY SYSTEM HEIGHT. THE SETBACK DISTANCE IS MEASURED FROM THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER TO THE NEAREST POINT ON THE FOUNDATION OF THE OCCUPIED BUILDING.

   WIND TURBINE HEIGHT = 342'
   NEAREST STRUCTURE FOUNDATION = 25'
   VARIANCE REQUESTED = 342' - 25' = 317'
10. ALL WIND TURBINES SHALL BE SET BACK FROM THE NEAREST PROPERTY LINE A DISTANCE OF NOT LESS THAN THE NORMAL SETBACK REQUIREMENTS FOR THAT ZONING DISTRICT OR 110 PERCENT OF THE WIND ENERGY SYSTEM HEIGHT, WHICHEVER IS GREATER. THE SETBACK DISTANCE IS MEASURED FROM THE PROPERTY LINE TO THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER. OPERATION AND MAINTENANCE BUILDING(S) AND SUBSTATIONS SHALL BE LOCATED IN ACCORDANCE WITH ZONING DISTRICT YARD REQUIREMENTS. ALL WIND FARM STRUCTURES, EXCEPT FOR WIND TURBINES, SHALL COMPLY WITH THE REGULATIONS OF THE ZONING DISTRICT. (A VARIANCE IS REQUIRED)

    WIND TURBINE HEIGHT = 342'
    REQUIRED PROPERTY LINE SETBACK = 342' X 110% = 376.2'
    NEAREST PROPERTY LINE = 0' (UNDER COMMON OWNERSHIP)
    VARIANCE REQUESTED = 376.2' - 0' = 376.2'
11. ALL WIND TURBINES SHALL BE SET BACK FROM THE NEAREST PUBLIC RIGHT-OF-WAY A DISTANCE OF 110 PERCENT OF THE WIND ENERGY SYSTEM HEIGHT, AS MEASURED FROM THE RIGHT-OF-WAY LINE TO THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER. (A VARIANCE IS REQUIRED)

    WIND TURBINE HEIGHT = 342'
    REQUIRED PROPERTY LINE SETBACK = 342' X 110% = 376.2'
    NEAREST PUBLIC R.O.W. LINE = 125'
    VARIANCE REQUESTED = 376.2' - 125' = 251.2'
12. THE FACILITY OWNER OR OPERATOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGULATING SOUND GENERATION. IN THE EVENT THAT ANY SOUND LEVELS FROM A WIND TURBINE ARE FOUND TO BE IN EXCESS OF PERMISSIBLE LEVELS, THE FACILITY OWNER OR OPERATOR SHALL TAKE NECESSARY MEASURES TO BRING SOUND LEVELS DOWN TO A LEVEL ACCEPTABLE.
13. WIND TURBINE SHADOW FLICKER SHALL NOT EXCEED 30 HOURS PER YEAR ON ANY WINDOW OF AN EXISTING RESIDENTIAL STRUCTURE LOCATED ON A PARCEL OWNED BY AN ENTITY OTHER THAN THE PARCEL OWNER WHERE THE TURBINE IS LOCATED.
14. THE FACILITY OWNER AND OPERATOR SHALL, AT THEIR SOLE EXPENSE, COMPLETE DECOMMISSIONING OF THE WIND ENERGY SYSTEM, OR INDIVIDUAL WIND TURBINES, WITHIN ONE YEAR AFTER THE END OF THE USEFUL LIFE OF THE WIND ENERGY SYSTEM OR INDIVIDUAL WIND TURBINES. THE WIND ENERGY SYSTEM OR TURBINE SHALL BE DEEMED TO BE AT THE END OF ITS USEFUL LIFE IF IT IS ABANDONED FOR A PERIOD OF TIME IN EXCESS OF 180 DAYS. DECOMMISSIONING INCLUDES REMOVAL OF WIND TURBINES, STRUCTURES, ROADS AND FOUNDATIONS TO A DEPTH OF 48 INCHES, AND ANY OTHER ELEMENT CONSTRUCTED BY FACILITY OWNER OR OPERATOR FOR THE PURPOSE OF MAINTAINING OR OPERATING THE WIND ENERGY SYSTEM.
15. WIND ENERGY SYSTEMS ARE PERMITTED IN THE I-2 ZONE BY SPECIAL USE PERMIT, PROVIDED THE PARCEL ABUTS A W-3 ZONE AND WIND ENERGY SYSTEM IS NOT LESS THAN 1,000 FEET FROM A RESIDENTIAL ZONE.

Soil Erosion and Sediment Control Notes:

1. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, RIGIS DATA, SURVEYED INFORMATION AND/OR INFORMATION PROVIDED TO GREEN DEVELOPMENT AND IS SUBJECT TO CHANGE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE PROPER UTILITY ENGINEERING DEPARTMENTS AND COMPANIES TO LOCATE ALL EXISTING SUBSURFACE UTILITIES AND STRUCTURES IN AND AROUND THE LIMIT OF DISTURBANCE.
2. CONTRACTOR TO CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO ANY EXCAVATION WORK TAKES PLACE. CONTRACTOR TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES FOUND DURING UTILITY RESEARCH PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITIES WHICH ARE SHOWN AND NOT SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR.
3. CONTRACTOR IS LIABLE TO OBTAIN ALL MUNICIPAL, STATE AND FEDERAL APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION.
4. DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING CONSTRUCTION IS REQUIRED TO MINIMIZE SEDIMENTS ON BUTTONWOODS ROAD. THE CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING (R&D) OF ALL MATERIALS LEGALLY AS INDICATED ON THE PLANS TO AN APPROVED OFF-SITE LOCATION.
6. CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF DISTURBANCE SHALL BE RESTORED TO MATCH PRIOR CONDITIONS OR PROPOSED CONDITIONS SHOWN ON THE PLANS.
7. THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN IN THIS PLAN SET AS RIDOT STD X.X.X.

   REFERENCE LINK: HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/RIDOT_STD_DETAILS.PDF
8. NO TOPSOIL OR PRIME AGRICULTURAL SOIL SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.
9. THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.

Erosion and Sedimentation Control Measures, Permanent Stabilization, and Maintenance

ESTABLISHMENT OF VEGETATIVE COVER

1. SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND'S STANDARD SPECIFICATION, M.20.
4. THE TEMPORARY SEEDING DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	LBS/AC
WINTER RYE	100
MILLET OR SUDANGRASS	40
ANNUAL OR PERENNIAL RYE GRASS	60

5. TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW, OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING. TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING. SIDE SLOPES OF BASINS SHALL BE TREATED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKETS SUCH AS S150 OR APPROVED EQUAL. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.
6. ALL STRAW WATTLE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
7. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH LOCAL MUNICIPAL REQUIREMENTS AND THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE SECTION 202.
8. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED.
9. ALL AREAS PROPOSED TO BE VEGETATED THAT ARE DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STANDARD IS MAINTAINED. WELL ESTABLISHED VEGETATION SHALL BE MAINTAINED. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEEDED BY THE CONTRACTOR. ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.
10. MAXIMUM PERMANENT GRADED SLOPE WITHIN THE SITE IS TO BE 3:1 UNLESS NOTED OTHERWISE.
11. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
12. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989 AS A GUIDE.

NON-STRUCTURAL MEASURES

13. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE ACCESS ROAD AND AREAS TO BE GRADED.
14. TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHALL SURROUND ALL TOPSOIL STOCKPILES.
15. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND TOWN OF PROVIDENCE REGULATIONS. CONSTRUCTION DEBRIS SHALL BE DISPOSED OF DAILY TO AVOID EXPOSURE TO PRECIPITATION.
16. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
17. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

STRUCTURAL MEASURES

18. STRAW WATTLE OR SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATION.
19. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURE IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
20. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDS SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

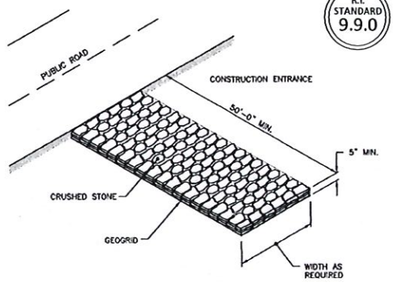
MAINTENANCE: SHORT TERM / LONG TERM

21. SEDIMENTS TRACKED SPILLED ON EXISTING IMPERVIOUS AREAS ON SITE SHALL BE SWEPT DAILY.
22. ALL STRAW WATTLE/SILT FENCE, TEMPORARY TREATMENTS (HAY, STRAW, ETC.), AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION. STRAW WATTLE/SILT FENCE SHALL BE INSPECTED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH STORM EVENT OR EVERY 7 DAYS, WHICHEVER COMES FIRST, FOR UNDERMINING AND DETERIORATION. A STORM EVENT SHALL BE DEFINED AS 0.25 INCHES OF RAIN WITHIN A 24-HOUR PERIOD. THE STRAW WATTLE/SILT FENCE SHALL BE REPAIRED OR REPLACED AS WARRANTED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE STRAW WATTLE/SILT FENCE BECOMES FILLED IN WITH SEDIMENT. THE STRAW WATTLE/SILT FENCE SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. FOLLOWING CONFIRMATION FROM THE TOWN OF PROVIDENCE AND OR THE PROJECT ENGINEER THAT AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER HAS BEEN ESTABLISHED THE STRAW WATTLE/SILT FENCE SHALL BE REMOVED.
23. THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER. STRAW WATTLE OR SILT FENCE SHALL BE STAKED AROUND THE STOCKPILES.
24. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE AND FOR A PERIOD OF ONE YEAR AFTER CONSTRUCTION. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.

Sequence of Construction and Staging of Land Disturbing Activities

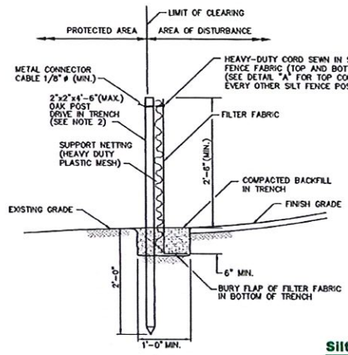
1. CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL (SE & SC) ONSITE. SEQUENCE OF CONSTRUCTION PROVIDED MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH PRIOR APPROVAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
2. CONSTRUCTION TO BEGIN IN 2020 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
3. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE.
4. PLACE SEDIMENTATION BARRIERS (STRAW WATTLE OR SILT FENCE) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
5. EXCAVATE AND INSTALL THE PROPOSED MONOPOLE FOOTING AND FOUNDATION. GEOTECHNICAL AND STRUCTURAL ENGINEERING SERVICES FOR THE FOUNDATION SYSTEM FOR THE TURBINE ARE TO BE PROVIDED BY OTHERS PRIOR TO CONSTRUCTION.
6. INSTALL UNDERGROUND UTILITIES AND BACKFILL FOUNDATION.
7. CONSTRUCT THE PROPOSED MONOPOLE AND BLADES AND RELATED ABOVE-GROUND ELECTRICAL EQUIPMENT.
8. FINISH PERMANENT STABILIZATION AS REQUIRED.
9. THE CONTRACTOR SHALL CLEAN AND FLUSH THE DRAINAGE STRUCTURES AS NEEDED.

R.I. STANDARD 9.9.0



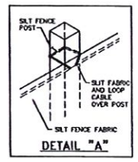
NOTE:
1. SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

Construction Access (N.T.S.)

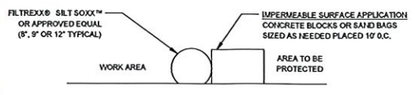


Silt Fence Detail (N.T.S.)

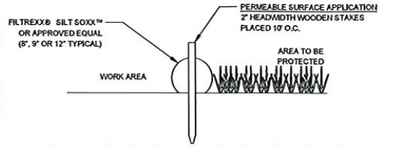
R.I. STANDARD 9.2.0



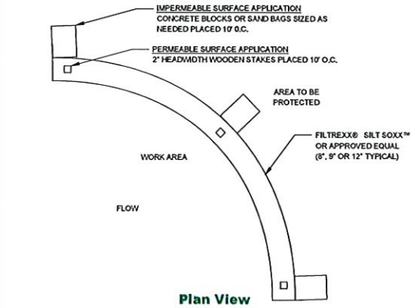
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0"(MAX.) O.C. IN WETLAND AREAS AND 4'-0"(MAX.) O.C. IN WETLAND RAWNE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



Impermeable Surface Application Section View



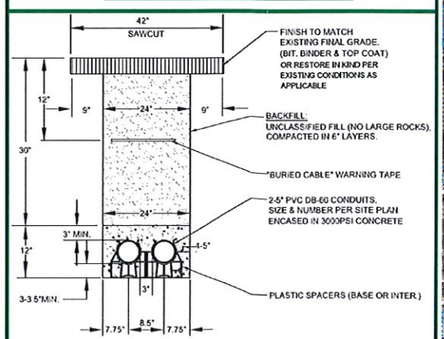
Permeable Surface Application Section View



Plan View

NOTES:
1. CONTRACTOR TO USE FILTREXX® SILT SOXX™ OR APPROVED EQUAL.
2. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
3. SILT SOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
4. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
5. SEE PLANS FOR LOCATION AND SURFACE APPLICATION TYPE.
6. TO BE INCORPORATED AS NECESSARY.

Silt Soxx Sediment Barrier (N.T.S.)

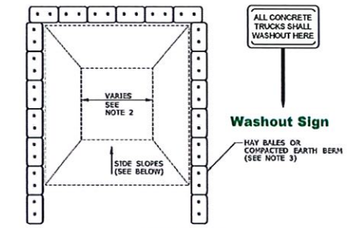


Typical Trench Backfill Detail Under Roadway & Pathway (N.T.S.)

NOTES:
1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH ANY CONCRETE WORK.

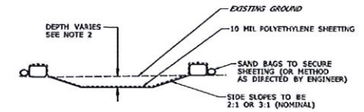
   LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AT LEAST FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE AREAS. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

   SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS WITH A MINIMUM FREEBOARD OF 12".
3. SURFACE DISCHARGE IS UNACCEPTABLE, THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.
4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHODS.
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONTRACTION SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS. WASHOUT AREA(S) SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW WASHOUT AREA IS CONSTRUCTED.
6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT THE UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.



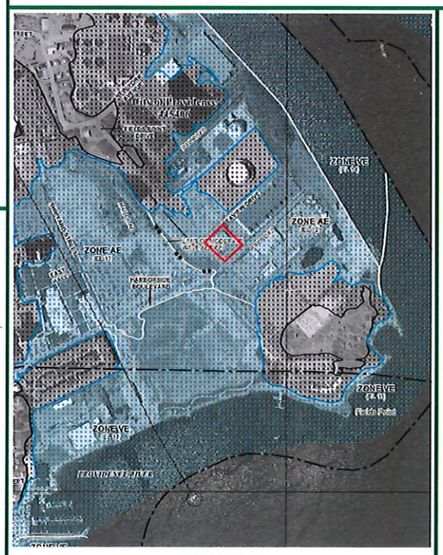
Washout Sign

Plan View

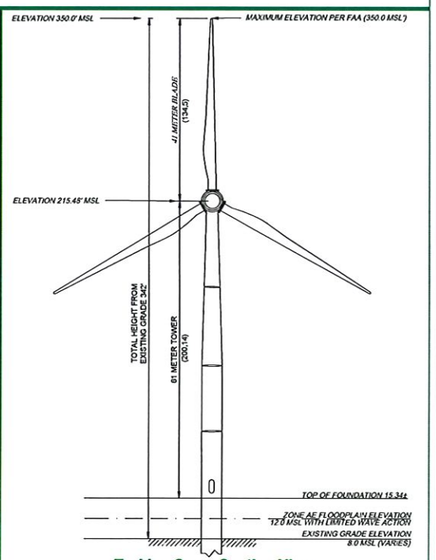


Section View

Concrete Washout Area (N.T.S.)



FEMA Map



Turbine Cross-Section View

NOT TO SCALE

APPLICANT: Green Providence Wind I, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: Provport, Inc
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com
GREEN development, LLC

No.	DATE	BY	REVISION
2	2/3/2020	RGS	ZONING RESUBMISSION
1	10/22/2019	RGS	ZONING SUBMISSION

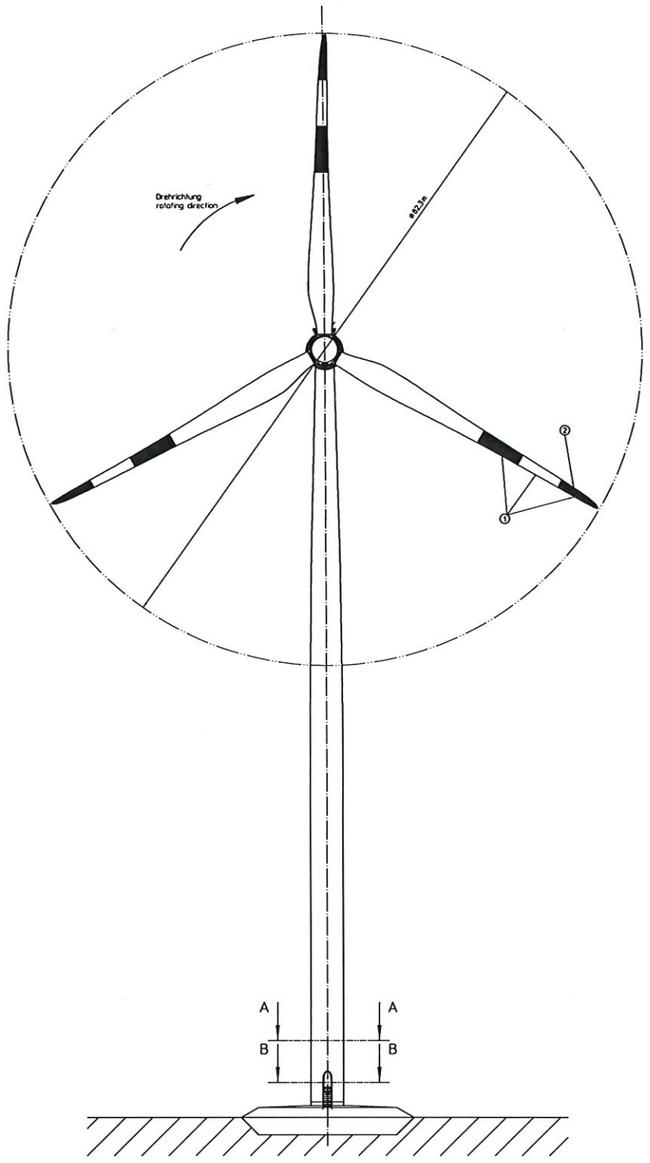
SHEET TITLE: Detail Sheet

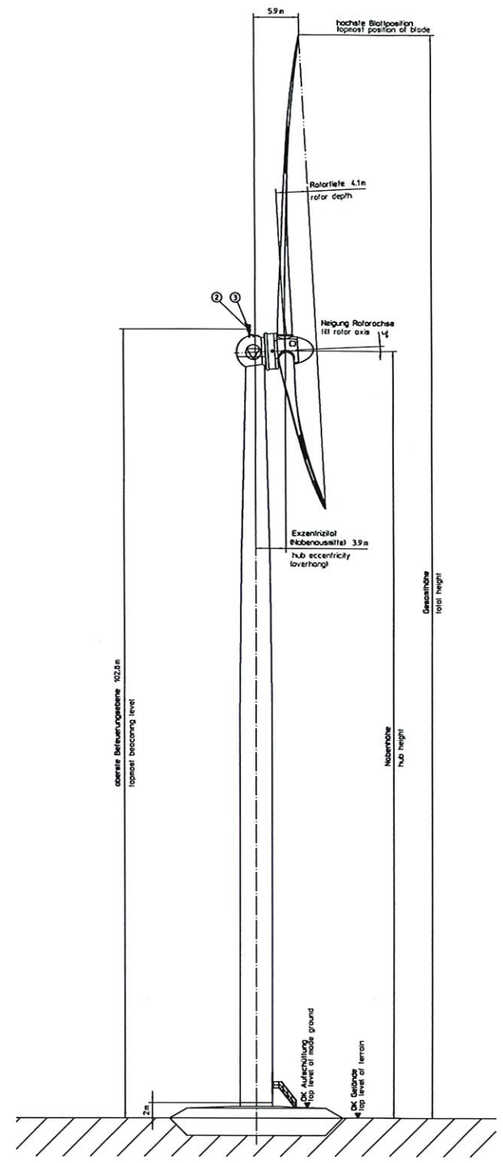
PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 9857
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/3/2020

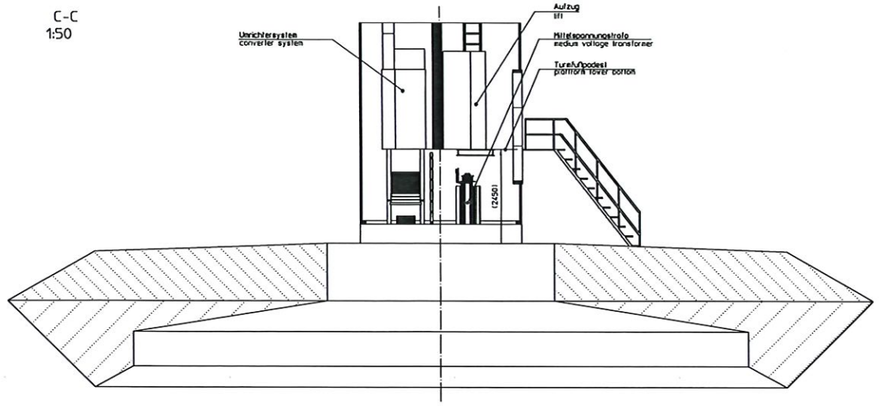
SHEET NO.:
C1.4 OF 4

W:\Wind Drive Org Template\2_Sites\Providence\ProvPort\3_Development\2_Engineering\DWG\Providence JWU1-Design.dwg Jan 27, 2020 - 9:27am





C-C
1:50



A-A
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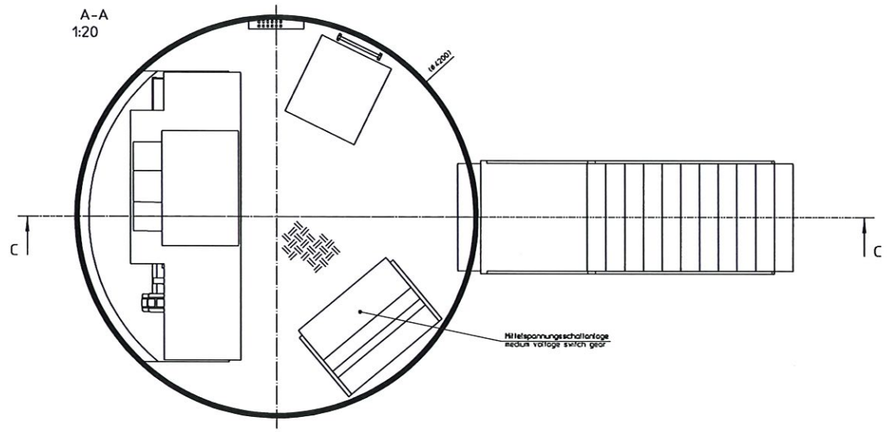

B-B
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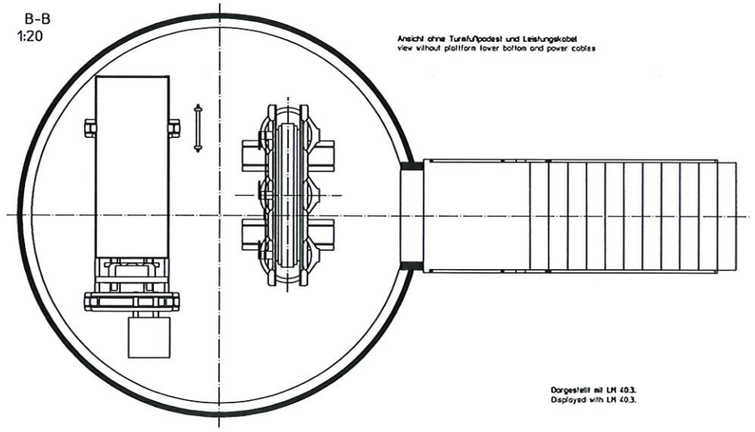
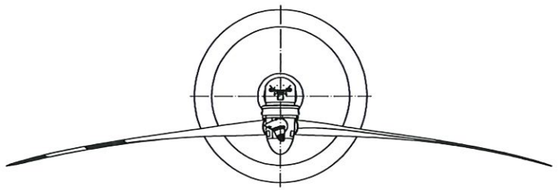


Ansicht ohne Turmfußpodest und Leistungskabel
view without platform tower portion and power cables



Tageskennzeichnung gemäß der AVV zur Kennzeichnung von Luftfahrthindernissen

① Standard:
Farbkennzeichnung der Rotorblätter gekennzeichnet durch drei Farbstreifen pro Rotorblatt von Blattspitze nach innen 6m rot, 6m grau, 6m rot
Rot: RAL 3020, Grau RAL 7035

② Alternative:
Tagesfeuer + Farbkennzeichnung der Rotorblätter
Tagesfeuer weißes Blitzlicht 20.000cd
Farbkennzeichnung:
6m breiter, roter Farbstreifen an den Blattspitzen
Rot: RAL 3020

Nachtkennzeichnung gemäß der AVV zur Kennzeichnung von Luftfahrthindernissen

③ Standard:
Feuer W, rot

day light marking acc. to the General Administrative Provision for the identification of Aviation Obstacles

① alternative:
flashlight + colour marking of the rotor blades
flashlight: white flashlight 20.000cd
colour marking:
6m wide, red colour stripe on the blade tips
red: RAL 3020

night marking acc. to the General Administrative Provision for the identification of Aviation Obstacles

② standard:
light W, red

*HUB / TOWER HEIGHT WILL BE NO MORE THAN 61 METERS TO CONFORM TO FAA REQUIREMENTS. SEE DETAIL ON SHEET 1.4 OF 4. FOUNDATION DESIGN TO BE DETERMINED BASED ON GEOTECHINCAL INVESTIGATION AND STRUCTURAL ENGINEERING DESIGN

Dargestellt mit LM 40.3.
Displayed with LM 40.3.

Der deutsche Zeichnungstext ist bindend.
The German drawing text is binding.

Revision revision	Änderungen modifications
d	Seite 2 links, Darstellung geändert, Seite 1 mit LM 40.3, Seite 2 mit EBT 40 page 2 added, depiction changed, page 1 with LM 40.3, page 2 with EBT 40

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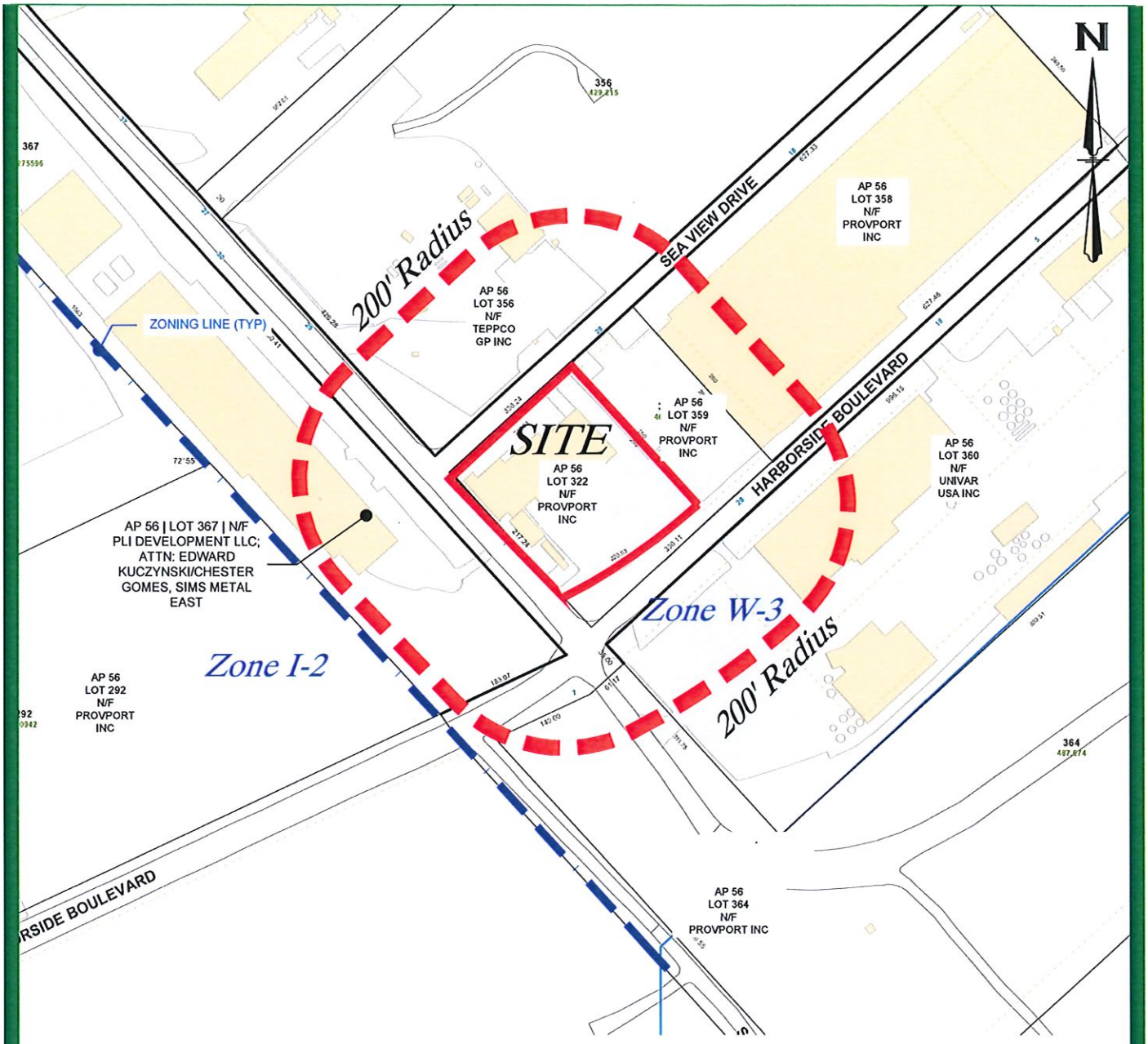
	Datum date	Name name
gezeichnet drawn	13.12.18	T. Kirchen
geprüft checked	27.11.19	D.Graus
norm.	06.12.19	D.Graus
Format format		DIN A3

Maßstab scale: 1:250 1:50 1:20 | Gewicht weight:
Werkstoff material:
Benennung description: Vensys 82 - NH 100m
Vensys 82 - NH 100m
Zeichnungsnummer drawing number: 30006 0019
Index index: d
Blatt sheet: 1

VENSYS Energy AG


VOLVO


VOLVO



Disclaimer:

THE ASSESSOR'S AND ZONING MAP ABOVE IS TAKEN FROM PLAN TITLED "THE CITY OF PROVIDENCE, RHODE ISLAND - PLAT NO. 056", REVISED DECEMBER 31, 2017.

200' Radius Map

0 100 200 400 600 FEET

SCALE: 1"=200 Feet

PROJECT INFORMATION:

Green Providence Wind I

1 FIELDS POINT DRIVE, PROVIDENCE RI 02905

APPLICANT:

Green Providence Wind I, LLC

3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR:

Provport, Inc

32 TERMINAL ROAD, PROVIDENCE, RI 02905

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com

GREEN development, LLC

Department of Planning and Development

Recommendation to the Zoning Board of Review

MAY 13, 2020

Application Type

Dimensional Variance

Neighborhood

Washington Park

Applicant

Green Providence Wind II LLC, Applicant. Mark DePasquale, Owner

Parcel

AP 56 Lot 322

Address

1 Fields Point Drive

Parcel Size

± 49,717 SF

Zoning District

W-3

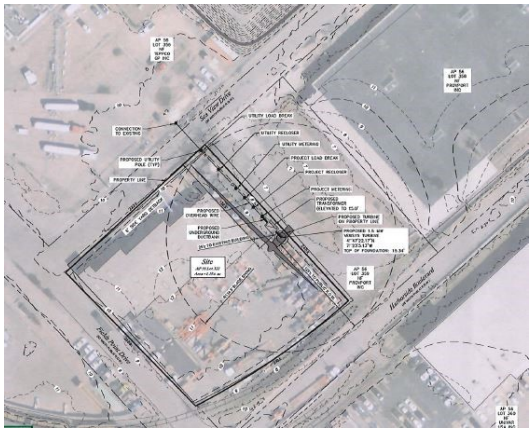
Variance Requested

1. Dimensional variances for height of wind turbine
2. Dimensional variances for setback of wind turbine

Updated: April 28, 2020

1 Fields Point Drive

Location Map



Proposed development

Summary

Project Description

The applicant is seeking a dimensional variance seeking relief from height and setback limits of Table 9-1 and Section 1202.CC.9, 10 & 11 in the installation and operation of a 342 foot turbine as part of a Wind Energy System (Principal Use).

Discussion

The applicant is proposing to install a wind turbine on the subject property. The applicant is seeking dimensional variances for the proposed height and setback.

The proposed turbine height of approximately 342' exceeds the 90' height limit of the W-3 zone requiring a dimensional variance of 252'. The applicant also requires relief from setback requirements pertaining to the location of turbines from lot lines. The ordinance requires that turbines be set back 110% of the turbine height from the property line and nearest right of way. Further, turbines are required to be set back the distance of the turbine height from neighboring structures on the lot. The turbine will be set to the northern lot line, requiring a variance of approximately 376.2'. A variance of approximately 251' is required for the 125' proposed setback from adjacent rights of way, where 376.2' is required. A setback of 342' is required from other buildings on the lot and a variance of 317' is required with 25' proposed.

It is the DPDs opinion that the need for relief can be attributed to the unique characteristics of the lot, which cannot accommodate the required setbacks due to the required height of the turbine. Per the application, the siting of the turbines and the proposed height is necessitated by the need to capture the required amount of wind necessary for energy generation without interfering with other proximate turbines. The subject lot, and all adjacent lots are owned by Provport, who has co-signed the application. Wind energy operation is permitted by right in the W-3 zone. A negative effect on neighborhood character or the health of the community is not expected as a result of the variance as the subject zone is intended to accommodate uses of varying intensity and there are numerous turbines in the vicinity.

In addition to the variance criteria, the applicant is required to demonstrate that shadow flicker on property not owned by the applicant will be limited to no more than 30 hours a year. The DPD would not object to granting the requested relief subject to demonstrating that shadow flicker will be limited.

Recommendation

Based on the foregoing discussion, the DPD recommends that the requested relief be granted subject to the applicant demonstrating that shadow flicker will be limited as required.

PAGES 18-58:
ZBR MEETING PRESENTATION SUBMISSION

Green Providence Wind I and II Providence Zoning Board

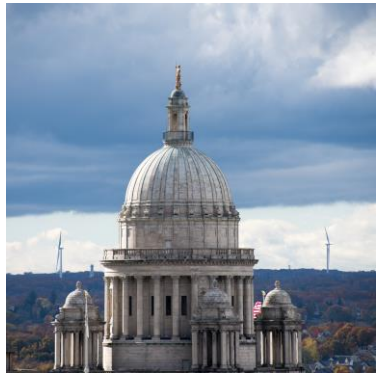
May 13, 2020












Project Team

Legal: Mancini-Carter, PC

Applicant/Project Owner: Green Providence Wind I, LLC
Green Providence Wind IIO, LLC

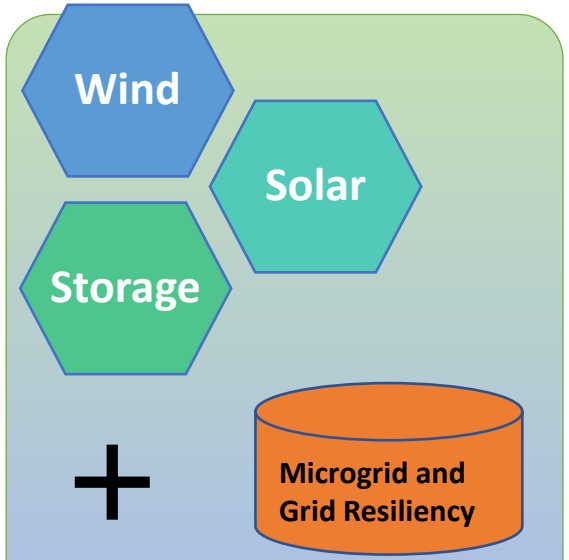
Land Planner: JDL Enterprises / Joseph Lombardo

Civil Engineer: Green Development, LLC

Landowners: Johnson & Wales
ProvPort

Turbine Supplier: Vensys North America

Overview



Diverse Project Portfolio

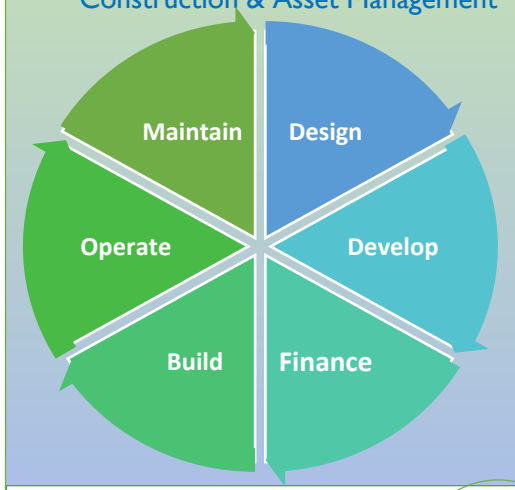
- 1st Large project under DG & REG
- 1st Virtual Net Metering Project
- 1st Multi-Municipal Collaborative Project
- #1 Delivering Virtual Net Metering Credits in RI

Market Leadership

- Founded in 2009
- 55.1 MW in Operational Wind & Solar Projects
- Largest Share: RI Net Metered Customers
- 200+ Million kWh's successfully delivered to RI entities.

Experience & Results

Green Development is vertically integrated from Design through Development, Construction & Asset Management



Total Lifecycle Management

North Kingstown Green

Portsmouth High School

Coventry Wind Farm

Johnston Wind Farm

Narragansett Bay Commission (project by others)

Project Overview

Wind Energy Generating Systems

- 58-meter tower with 82 meter rotor diameter (41 meter blade length)
- Nearly identical to turbines operating north of this area at Narragansett Bay Commission
- Green Providence Wind II– (2) wind energy generating systems
  Plat 56 Lot 370
  Property Size – 21.3 acres
  Use: Recreational fields for JWU, Urban Coastal Greenway
- Green Providence Wind I– (1) wind energy generating system
  - Plat 56 Lot 322
  - Property Size – 49,717 sf
  - Use: Waterfront commercial (vehicle maintenance/storage facility)
  - Previously approved for zoning variance for this use in December 2018

ARTICLE 12. USES
1201 USE MATRIX

Table 12-1: Use Matrix
Key: P = Permitted // S = Special Use

Green Provid. Wind I

Green Provid. Wind II

Use	R-1A	R-1	R-2	R-3	R-4	RP	C-1	C-2	C-3	D-1	W-2	W-3	M-1	M-2	M-MU	I-1	I-2	PS	OS	CD	Use Standard
Wind Energy System (Principal Use)											S	P	P	P			S				Sec. 1202.CC

Project Outreach

- Port/Community Working Group Meeting 11/22/19
- Save the Bay 11/21/19 – Met to discuss overview of project
- CRMC Preliminary Determination

Relief Requested – Green Providence Wind II

Variances

- Section 702- 75’ Building Height Limitation – Structure height is 341’, variance of 266’
- Section 1202-cc-10 – A 375.1’ property line setback is required, 69’ is proposed for one of the turbines, requiring a variance of 306.1’
- Section 1202-cc-11 – A 375.1’ right of way setback is provided, 69’ is proposed for one of the turbines, requiring a variance of 306.1’

Special Use Permit (Special Use in I-2 Zone) – The property is located in an I-2 Zone and adjacent to a W-3 zone and is located more than 1,000’ from a residential zone as required in Ordinance 1202-cc-15

Zoning Submission

Green Providence Wind II

0 Harborside Boulevard
Providence, Rhode Island 02905
Assessor's Plat 56 Lot 370

Sheet Index

Sheet Number	Sheet Title
C1.1	Cover Sheet
C1.2	Aerial & Map Sheet
C1.3	Existing Site Analysis Plan
C1.4	Overall Site Plan
C1.5	Construction Detail
C1.6	Detail Sheet 1
C1.7	Vensys Turbine Detail

Vicinity Map (Scale: 1"=500')

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-4998
www.green-ri.com
GREEN development, LLC

APPLICANT: Green Providence Wind II, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: Johnson & Wales University
8 ABBOTT PARK PLACE, PROVIDENCE, RI 02903

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
1	1/31/2020	ZONING SUBMISSION	N.C.
2	8/30/2019	CRMC PRELIMINARY DETERMINATION	N.C.

SHEET TITLE:
Cover Sheet

PROJECT INFORMATION:
Green Providence Wind II
HARBORSIDE BOULEVARD, PROVINCE, RI 02905
ASSESSOR'S PLAT 56 LOT 370

KEVIN C. MORN
No. 9851
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/3/2020

SHEET NO.:
C1.1

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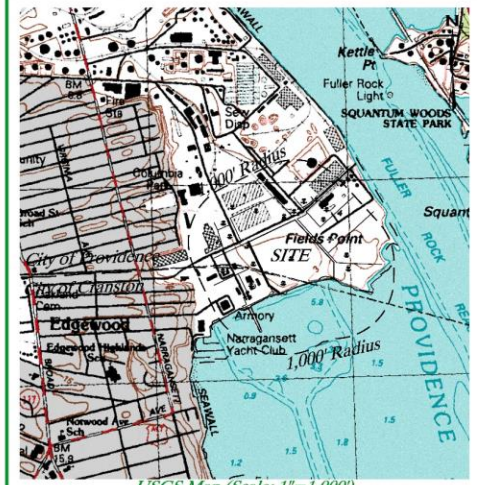
1/2 Mile Radius Map

Assessor's & Zoning Map (Scale: 1"=500')



USGS Map (Scale: 1"=1,000')

Disclaimer:

THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. INFORMATION AND IMAGES ON THIS PLAN ARE THOSE FOUND THROUGH ONLINE STATE AND CITY/TOWN GIS DATABASES. THE INFORMATION SHOWN IS ONLY AS ACCURATE AS THE INFORMATION FOUND THROUGH ONLINE SITE RESEARCH. AERIAL IMAGE DEPICTED IS FROM 2014 USGS DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY. FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

Existing Conditions Legend

GROUNDWATER RESERVOIR AREA

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-5566
www.green-ri.com

APPLICANT: *Green Providence Wind II, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Johnson & Wales University*
8 ABBOTT PARK PLACE, PROVIDENCE, RI 02903

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

NO.	DATE	REVISION	BY
2	1/13/2020	ZONING SUBMISSION	NJC
1	8/20/2019	DMC PRELIMINARY DETERMINATION	NJC

SHEET TITLE:
Aerial & Map Sheet

PROJECT INFORMATION:
Green Providence Wind II
HARBORSIDE BOULEVARD, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 370

KEVIN C. MORIN
No. 19931
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/20/2020

SHEET NO.:
012 of 15

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Development Information:

1. APPLICANT INFORMATION: GREEN DEVELOPMENT, LLC
3760 QUAKER LANE
NORTH KINGSTOWN, RHODE ISLAND 02852

2. OWNER INFORMATION: JOHNSON & WALES
8 ABBOTT PARK PLACE
PROVIDENCE, RHODE ISLAND 02903

3. SITE INFORMATION: 0 HARBORSIDE BOULEVARD
PROVIDENCE, RHODE ISLAND, 02905
ASSESSORS PLAT 56, LOT 370
AREA: 24.23± ACRES
ZONE: I-2 (EDUCATIONAL INSTITUTION DISTRICT)

4. REQUIRED PERMITS: CITY OF PROVIDENCE ZONING ORDINANCE TABLE 12-2: USE MATRIX
PROPOSED USE: WIND ENERGY SYSTEM (PRINCIPAL USE)

5. FEMA INFORMATION: THE SITE IS LOCATED WITHIN ZONE VE (ELEV. 17) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE CITY OF PROVIDENCE, PROVIDENCE COUNTY, FIRM MAP NUMBERS, REVISION DATES AND ZONE DESCRIPTIONS ARE AS FOLLOW:

MAP	MAP REVISION DATE
44007C0317J	SEPTEMBER 17, 2013

ZONE	DESCRIPTION
VE(17)	COASTAL FLOOD ZONE WITH VELOCITY HAZARD, BASE FLOOD ELEVATION (ELV 17)

6. AREA INFORMATION:

SITE WITHIN	YES/NO
GROUNDWATER PROTECTION AREA (RIDEM)	NO
NATURAL HERITAGE AREAS (RIDEM)	NO
HISTORIC CEMETERY AREA (CITY/TOWN)	NO
HISTORIC DISTRICT (CITY/TOWN)	NO
OVERLAY DISTRICT (CITY/TOWN)	NO
GROUNDWATER RESERVOIR AREA (CITY/TOWN)	YES
GROUNDWATER RECHARGE AREA (CITY/TOWN)	NO

7. SOIL INFORMATION:

SOIL NAME	HSG	DESCRIPTION
FtA	A	FORTRESS SAND
UD	N/A	UDORTHENTS-URBAN LAND COMPLEX
UrS	N/A	URBAN LAND

THE SOIL ABBREVIATIONS REFERENCE THE SOIL SURVEY OF RHODE ISLAND PREPARED BY THE USDA SOIL CONSERVATION SERVICE INFORMATION FOUND THROUGH ONLINE RESEARCH FROM RIGIS DATA. THE ABBREVIATIONS CORRESPOND TO SOIL AREAS OUTLINE ON THE PLAN AND ARE TO BE CONSIDERED APPROXIMATE BASED ON RIGIS DATABASE.

8. ZONING INFORMATION:

EXISTING ZONE (TABLE 19.20.010)	ZONE I-2 (INSTITUTIONAL)
MINIMUM LOT AREA:	NONE
MINIMUM FRONTAGE:	NONE
MINIMUM FRONT YARD:	NONE
MINIMUM INTERIOR SIDE YARD:	NONE*
MINIMUM CORNER SIDE YARD:	NONE*
MINIMUM REAR YARD:	NONE*
MAXIMUM BUILDING HEIGHT:	75*

*UNLESS ABUTTING A RESIDENTIAL DISTRICT (NOT APPLICABLE)

9. EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING, THE RIGIS DATABASE AND INFORMATION PROVIDED TO GREEN DEVELOPMENT. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE.

10. TOPOGRAPHY SHOWN ON THE PLAN IS LIDAR AND WAS OBTAINED BY RIGIS DATABASE. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD88 DATUM.

11. THERE ARE NO HISTORICAL CEMETERIES LOCATED ON SITE BASED ON THE RHODE ISLAND HISTORICAL CEMETERY COMMISSION WEBSITE AND RESOURCES.

12. THE FACILITY IS LOCATED WITHIN AN E.L.U.R. (ENVIRONMENTAL LAND USE RESTRICTION) DESIGNATED AREA. ALL WORK WILL BE COORDINATED AS NECESSARY WITH THE OWNER AND RIDEM.

13. THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN IN THIS PLAN SET AS RIDOT STD X.X.X. REFERENCE LINK: HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESSWITH/DOT_STD_DETAILS.PDF

14. NO TOPSOIL OR PRIME AGRICULTURAL SOIL AS DEFINED IN CHAPTER 18.08, SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.

15. ALL EXISTING STRUCTURES AND SUPPORTING UTILITIES ARE TO REMAIN AND PROTECTED DURING CONSTRUCTION ACTIVITIES.

16. THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.

17. THERE ARE NO SIGNIFICANT IMPACTS TO THE EXISTING COMMUNITY, CITY SERVICES OR TO THE ENVIRONMENT.

18. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION CONTROLS ON SITE. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS AS SHOWN ON PLAN.

19. CONSTRUCTION TO BEGIN IN 2020 OR UPON RECEIPT OF ALL NECESSARY PERMITS. ONCE ALL PERMITS HAVE BEEN RECEIVED, THE PROPOSED SCHEDULE OF CONSTRUCTION WILL BE LIMITED TO ONE YEAR FROM COMMENCEMENT OF CONSTRUCTION.

20. THE SITE WILL UTILIZE EXISTING PAVED ROADS AND DRIVEWAYS FOR CONSTRUCTION ENTRANCE AS WELL AS ADDITIONAL STONE DUST PATHS CONSISTENT WITH EXISTING CONDITIONS.

21. THERE IS NO INCREASE IN TRAFFIC GENERATED BY THE PROPOSED SITE IMPROVEMENTS ALONG SHIPYARD STREET.

22. HARBOR SIDE BOULEVARD AND SAVE THE BAY DRIVE PROVIDE ADEQUATE EMERGENCY VEHICLE ACCESS TO THE PROPERTY.

23. THERE IS NO OUTDOOR LIGHTING PROPOSED FOR THE PROJECT EXCEPT AS REQUIRED BY FAA.

24. ELECTRICAL SERVICE SHALL BE BROUGHT ONTO THE SITE THROUGH OVERHEAD UTILITY POLES AND TRANSITION TO UNDERGROUND DUCTBANK WITH TWO (2) 4 INCH UNDERGROUND CONDUITS OR AS DEEMED NECESSARY BY NATIONAL GRID. ELECTRICAL SERVICES ARE SHOWN SCHEMATICALLY AND DETAILED DESIGN SHALL BE COORDINATED WITH NATIONAL GRID AND MAY BE SUBJECT TO MODIFICATION.

25. FIRE REQUIREMENTS FOR THE PROPOSED USE WILL BE ADDRESSED PRIOR TO OBTAINING A BUILDING PERMIT.

26. NO SIGNIFICANT INCREASE IN IMPERVIOUS SURFACES INCLUDING PAVEMENT, COMPACTED GRAVEL OR STRUCTURES ARE PROPOSED.

27. DIG SAFE NOTE: PRE-MARKING MEANS TO MARK OUT THE AREA ON THE GROUND WHERE THE WORK WILL TAKE PLACE, USING WHITE STAKES, PAINT OR FLAGS. NOTE THAT PRE-MARKING REQUIREMENTS VARY SLIGHTLY FROM STATE TO STATE.

Existing Site Conditions Legend

- PROPERTY LINE (GIS)
- PROPERTY LINE (CLASS I)
- CITY/TOWN LINE
- ROAD CENTERLINE
- 25' COSTAL GREEN-WAY BUFFER
- URBAN COSTAL GREEN-WAY
- SETBACK LINE
- ASSESSOR LINE
- EASEMENT LINE & HATCH
- SLOPES > 15%
- MAJOR CONTOURS AND LABELS
- MINOR CONTOURS AND LABELS
- GIS EDGE OF WATER LINE
- GIS WETLAND LINE
- COSTAL FEATURE FLAG
- W — EXISTING WATER MAIN
- G — EXISTING GAS MAIN
- D — EXISTING DRAINAGE PIPE

3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-5566
www.green-ri.com
GREEN development, LLC

APPLICANT: *Green Providence Wind II, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Johnson & Wales University*
8 ABBOTT PARK PLACE, PROVIDENCE, RI 02903

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/3/2020	ZONING SUBMISSION	KJC
1	8/30/2019	CRMC PRELIMINARY RESUBMISSION	KJC

SHEET TITLE:
Existing Site Analysis Plan

PROJECT INFORMATION:
Green Providence Wind II
HARBORSIDE BOULEVARD, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 370

KEVIN C. MORIN
No. 19931
REGISTERED PROFESSIONAL ENGINEER
OWE
2/3/2020

SHEET NO.: C13 OF 15

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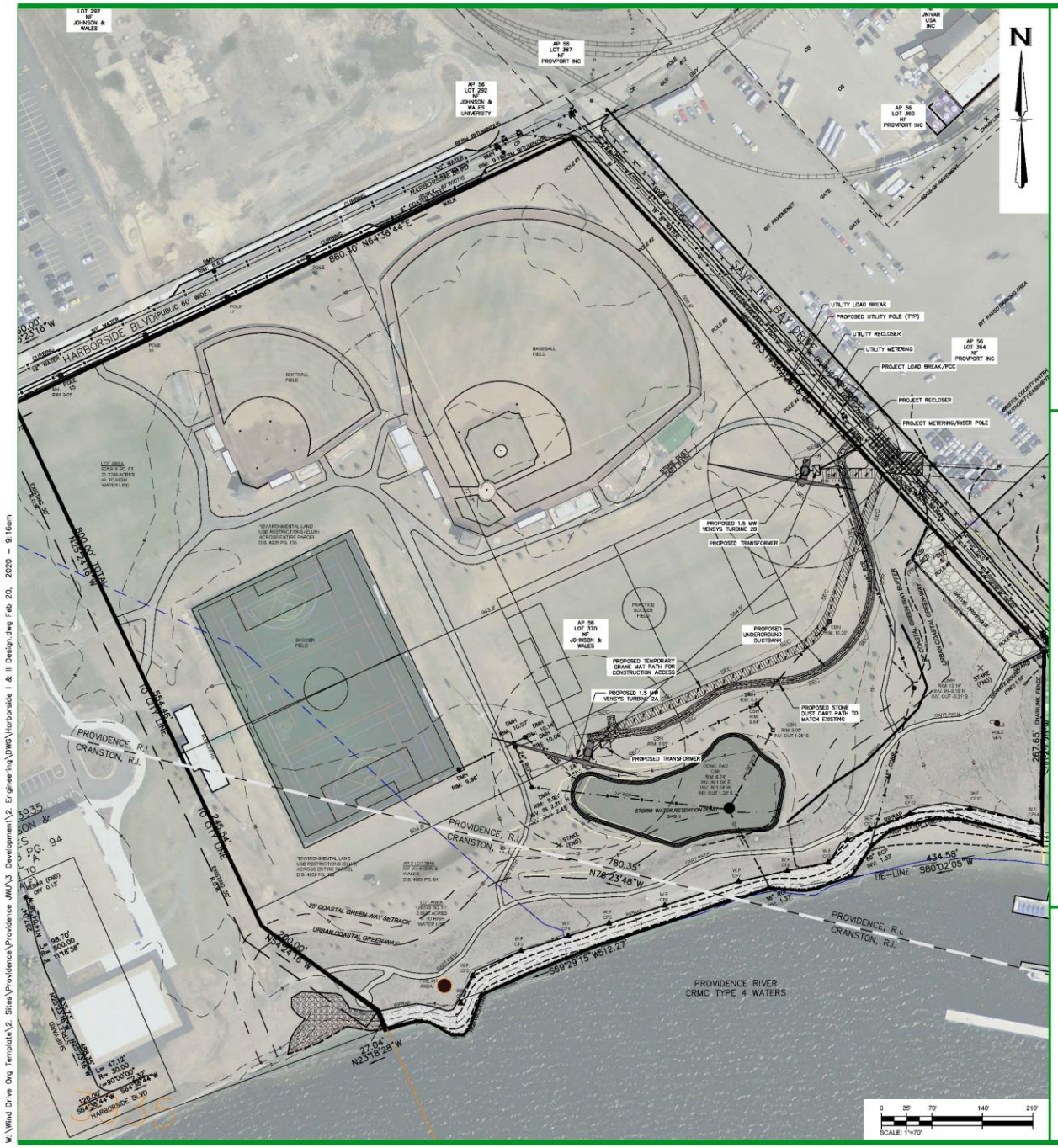
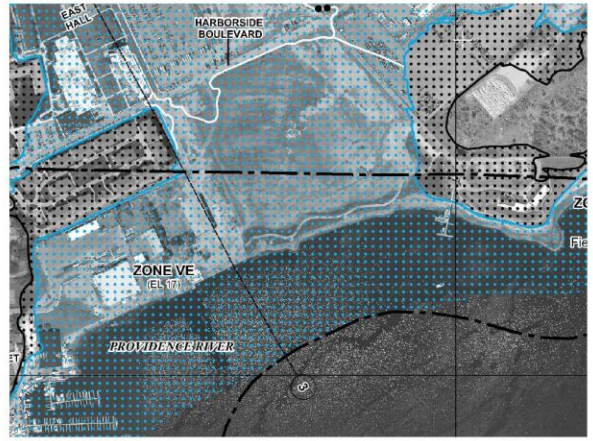
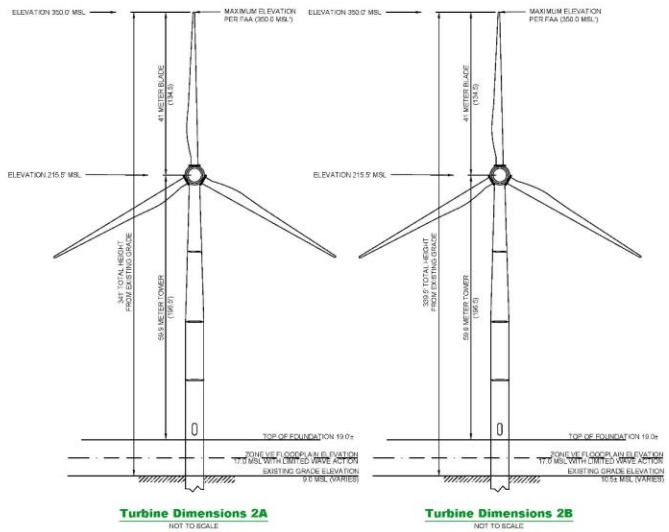




FEMA MAP



Turbine Dimensions 2A
NOT TO SCALE

Turbine Dimensions 2B
NOT TO SCALE

Proposed Site Development Legend

- INVERTER
- TRANSFORMER CONCRETE PAD
- ACCESS PATH EDGE
- ACCESS PATH HATCH
- CHAINLINK FENCE LINE
- GUARDRAIL
- RIP RAP
- QUALIFIED PERVIOUS AREA (QPA)
- RETAINING WALL
- LOT LINE
- BUILDING FOOTPRINT
- SAWCUT LINE
- SAW CUT/MATCH AREA
- EDGE OF PAVEMENT
- UTILITY POLE
- BITUMINOUS BERM
- CONCRETE CURB
- MINOR CONTOUR PROPOSED
- DRAINAGE BASIN
- MAJOR CONTOUR PROPOSED
- SOIL EROSION CONTROL/ LIMIT OF DISTURBANCE
- CONSTRUCTION ACCESS
- OVERHEAD WIRES
- UNDERGROUND ELECTRIC LINE

CRMC PRIOR APPROVAL:
- 2006-07-012
- 2012-05-056
- 2008-09-023

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-5551
www.green-ri.com

APPLICANT: *Green Providence Wind II, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Johnson & Wales University*
8 ABBOTT PARK PLACE, PROVIDENCE, RI 02903

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/3/2020	ZONING SUBMISSION	KJC
1	8/30/2019	CRMC PRELIMINARY DETERMINATION	KJC

SHEET TITLE:
Overall Site Plan

PROJECT INFORMATION:
Green Providence Wind II
HARBORSIDE BOULEVARD, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 370

KEVIN C. MORIN
No. 19931
REGISTERED PROFESSIONAL ENGINEER
2/3/2020

SHEET NO.: C14 OF 15

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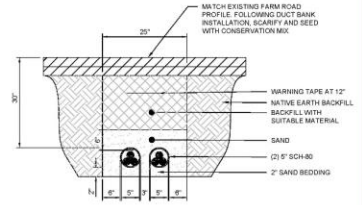
Sequence of Construction

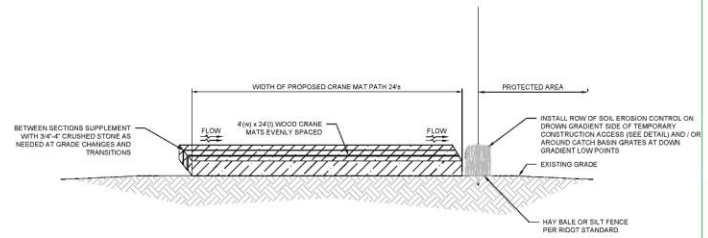
1. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE/APPLICATION.
2. CLEAR BRUSH WITHIN LIMIT OF DISTURBANCE/APPLICATION ON SITE IF NECESSARY. IN NO CASE IS THE LIMIT OF DISTURBANCE TO EXTEND BEYOND THE SEDIMENTATION BARRIERS OR CONSTRUCTION FENCING. NO CUTTING OF CANOPY TREES ARE PROPOSED.
3. INSTALL PERIMETER EROSION CONTROL BARRIERS AS SHOWN ON THE PLANS ALONG LIMIT OF DISTURBANCE/APPLICATION. IN NO CASE IS THE LIMIT OF DISTURBANCE/APPLICATION TO EXTEND BEYOND THE SEDIMENTATION BARRIERS. ALL TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS FOLLOWS:
   - RIDOT STANDARD 9.1.0 OR 9.2.0 TO BE INSTALLED WITHIN AND OUTSIDE OF THE 50' PERIMETER WETLAND AND 100' RIVERBANK WETLAND
   - RIDOT STANDARD 9.3.0 TO BE INSTALLED WITHIN THE BIOLOGICAL WETLANDS (SEE SHEET C1.3).

   TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER FOR SEDIMENT ACCUMULATION AND BREACH OF SEDIMENT BARRIER. REMOVAL OF ACCUMULATED SEDIMENT AND ALL REPAIRS SHALL BE MADE WITHIN 48 HOURS FROM END OF STORM EVENT.
4. INSTALL TEMPORARY CONSTRUCTION ACCESS OVER EXISTING GRASS AS FOLLOWS:
   - UTILIZE CRANE MATS AS A TEMPORARY ACCESS ROAD DURING CONSTRUCTION PERIOD THAT IS ANTICIPATED THROUGH 2020.
   - UTILIZE ADITIONAL CRANE MATS ASS NEEDED FOR WIND URBINE CONSTRUCTION
5. INSTALL WIND TURBINE FOUNDATION AND CONSTRUCT TURBINE.
6. INSTALL DUCT BANK AND STONE DUST ACCESS PATH PER PLAN.
7. RESTORE TO ORIGINAL CONDITIONS. IMMEDIATELY TOP DRESS TRENCH WITH LOAM AS NEEDED AND/OR SCARIFY AND SEED WITH A SEED MIX TO MATCH EXISTING.
8. ONCE VEGETATION IS FULLY ESTABLISHED, REMOVE EROSION CONTROLS AND ACCUMULATED SEDIMENT.

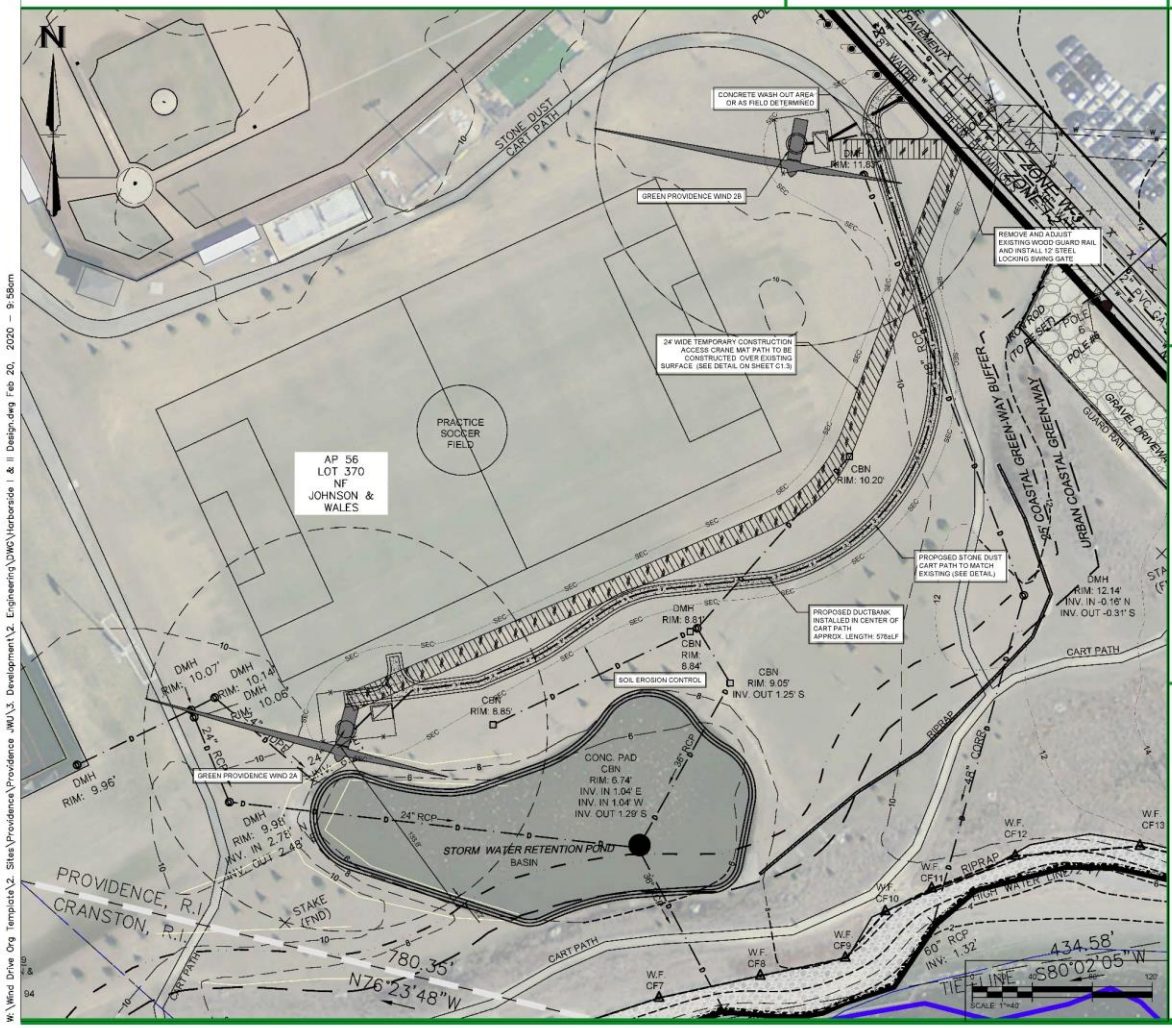
NOTES:
1. ALL CONDUIT IS 5" SCH-80
2. CONDUIT TO BE INSTALLED IN SPACERS AT 3' BASE AND 3' INTERMEDIATE.
3. WARNING TAPE TO BE BLACK PRINTING ON RED BACKGROUND.

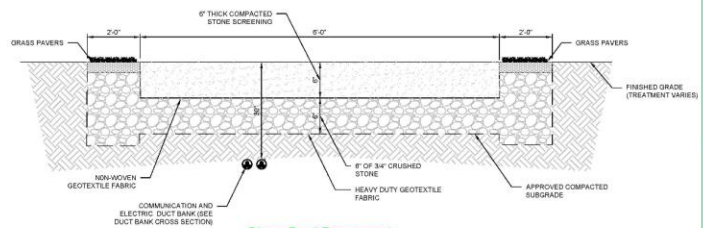


Ductbank Cross Section
NOT TO SCALE

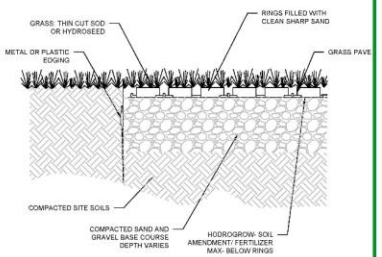


Typical Temporary Crane Mat Construction Access Detail
NOT TO SCALE

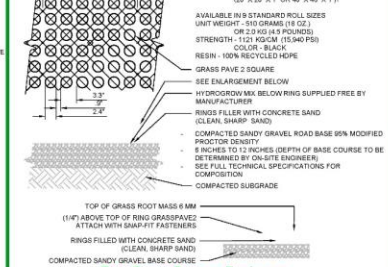




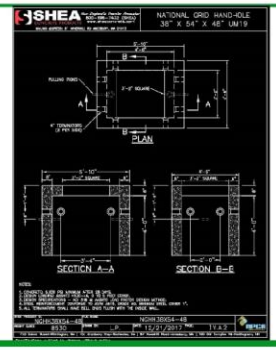
Stone Dust Permanent Access Driveway
NOT TO SCALE



Metal or Plastic Edging
NOT TO SCALE



Typ. Grass Pave or Engineer Approved Equal
NOT TO SCALE



W:\Wind Drive Org Template\2_Sites\Providence\Providence #NU\3_Development\2_Engineering\DWG\Harborside I & II Design.dwg Feb. 20, 2020 - 9:58am

APPLICANT: Green Providence Wind II, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: Johnson & Wales University
8 ABBOTT PARK PLACE, PROVIDENCE, RI 02903

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	2/3/2020	ZONING SUBMISSION	NJC
1	8/20/2019	CRMC PRELIMINARY DETERMINATION	NJC

SHEET TITLE:
Construction Detail

PROJECT INFORMATION:
Green Providence Wind II
HARBORSIDE BOULEVARD, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 370

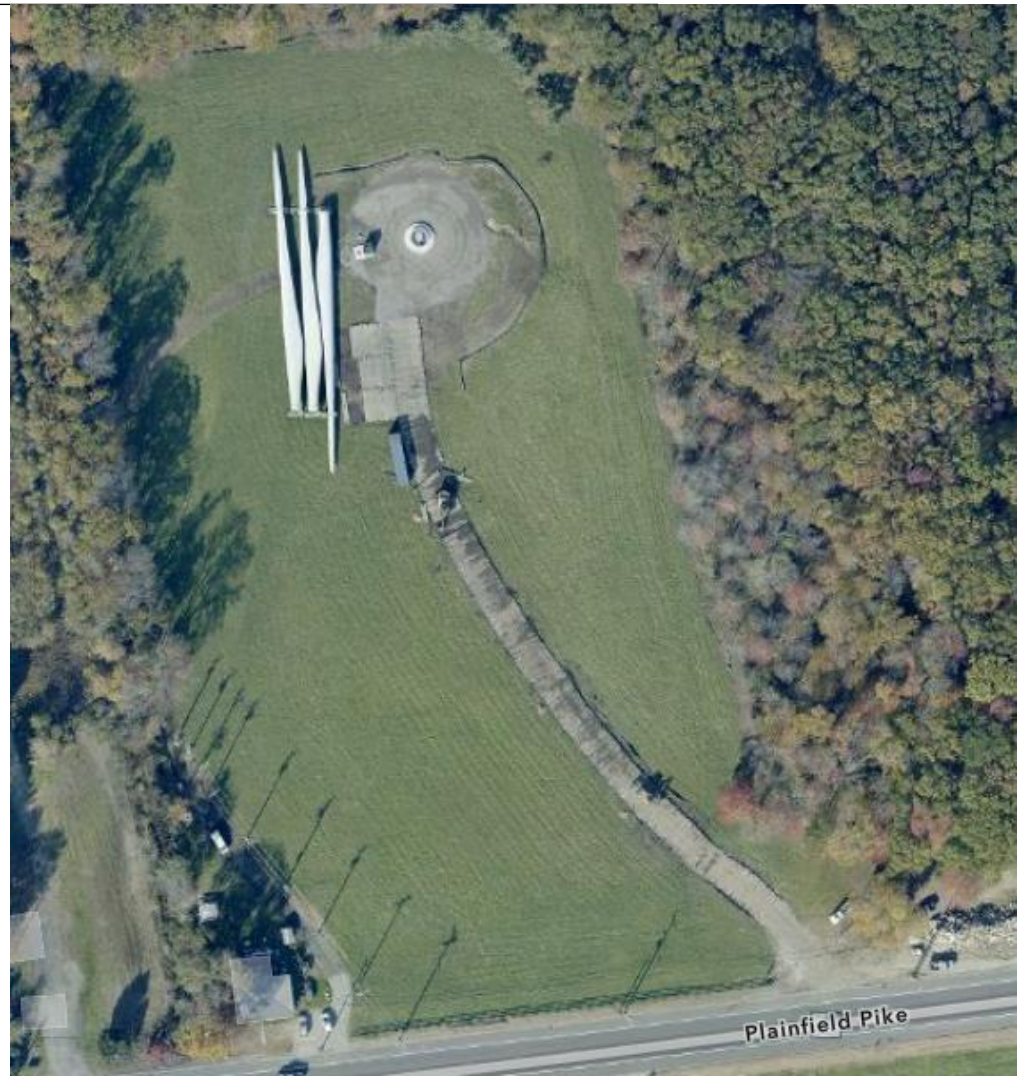
KEVIN C. MORIN
No. 19931
REGISTERED PROFESSIONAL ENGINEER
CIVIL
2/20/2020

SHEET NO.:
C1.4

Engineering Design

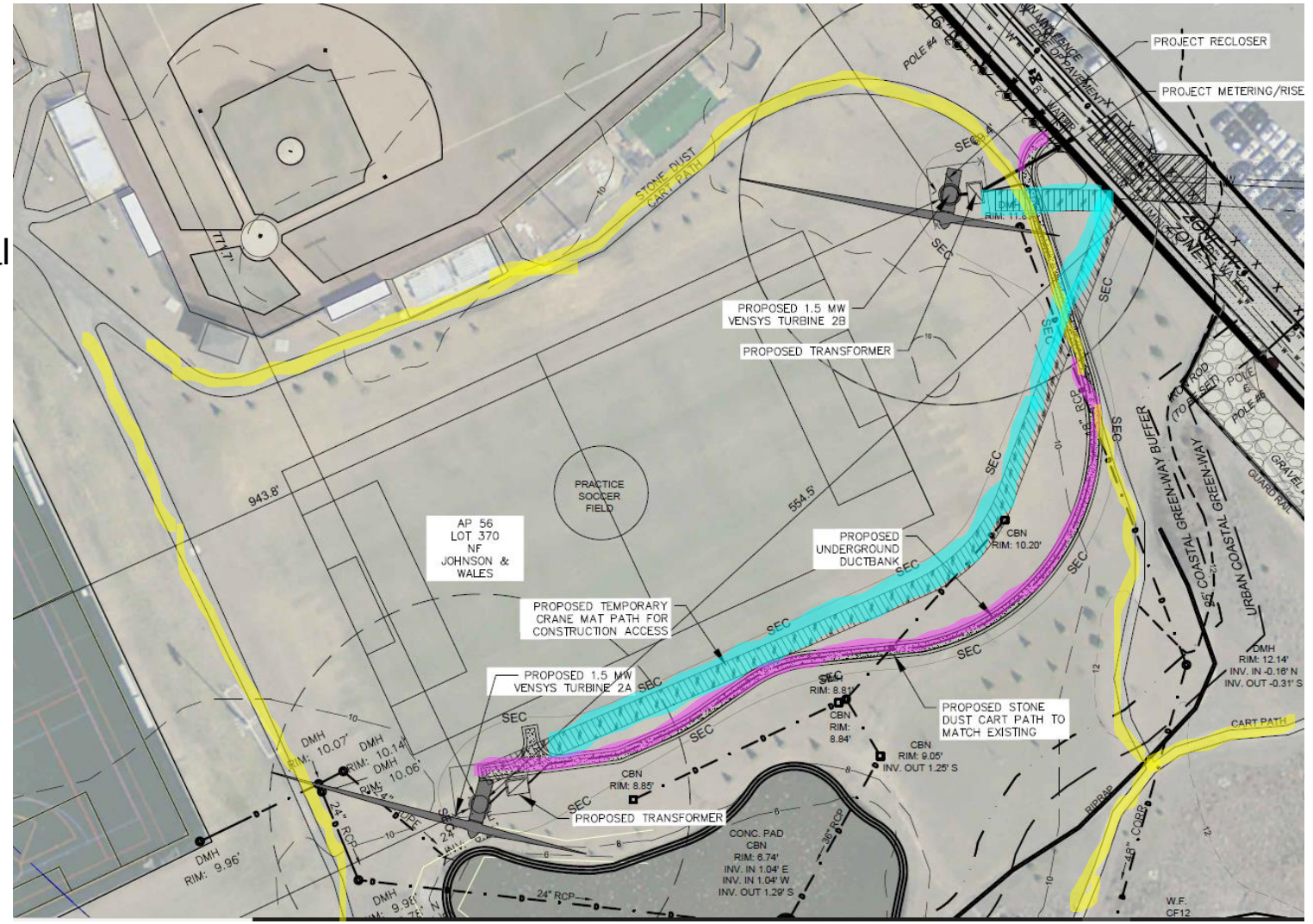
Providence Wind II

- Minimize Site Disturbance
  - Example from another wind site site
  - Crane mats across pasture/hayfield during construction stage
  - Minimize disturbance and restoration required



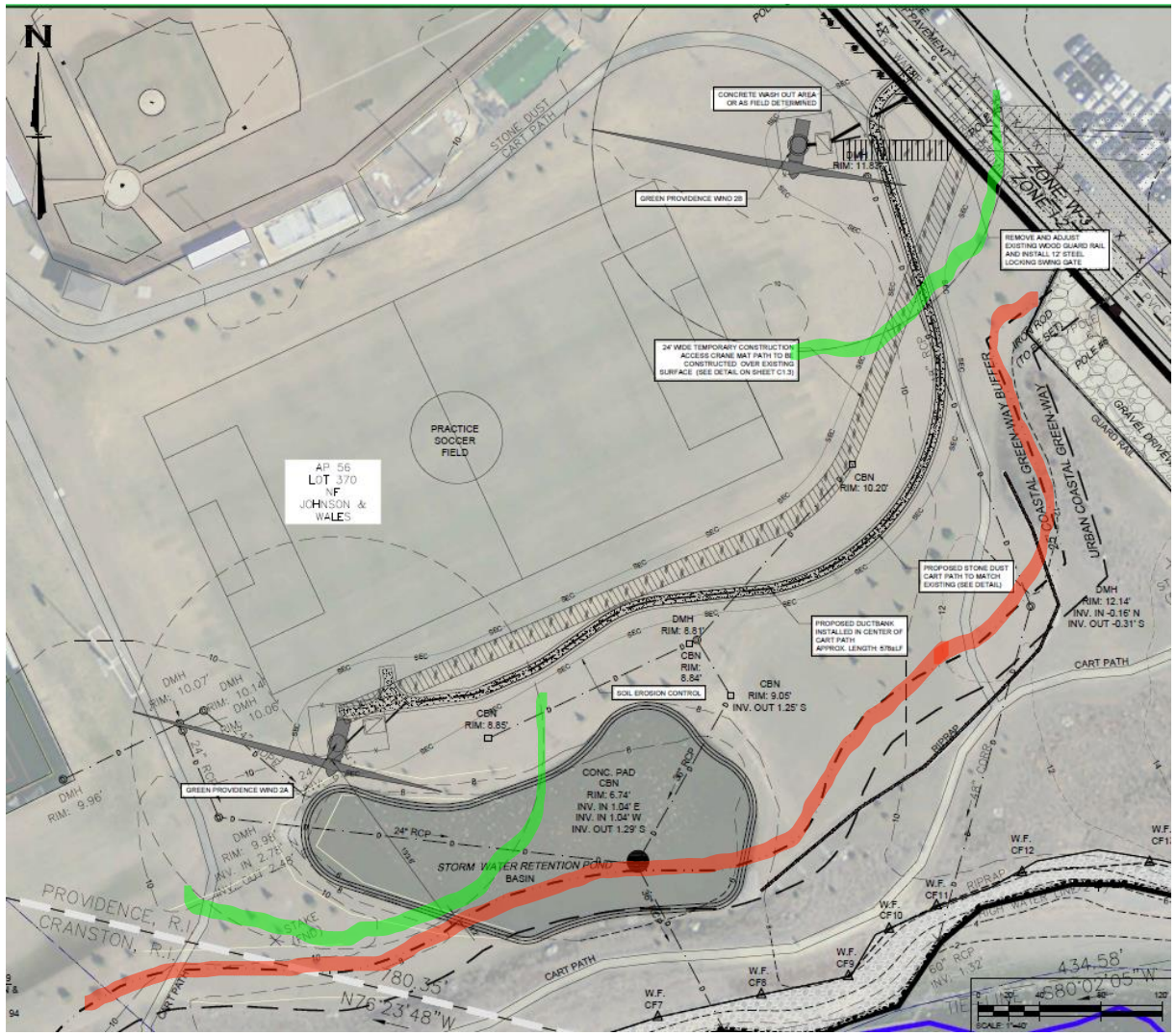
Creative Site Access

- Pervious surface for access
- Match design concept for original complex
- Soft bends versus sharp corners
- Existing pervious access path
- Proposed access path
- Crane mat construction access



CRMC Coastal Feature/ Urban Coastal Greenway

- CRMC PD Application
- Turbines and Blade Swing (🟩) Avoid UCG and 25' Buffer (🟥) per CRMC Standards
- Less than 1 acre of land disturbance through the use of crane mats for construction access



Relief Requested – Green Providence Wind I

Variances

- Section 902- 90’ Building Height Limitation – Structure height is 342’, variance of 252’
- Section 1202-cc-10 – A 376.2’ property line setback is required, 0’ is proposed, requiring a variance of 376.2’
- Section 1202-cc-11 – A 376.2’ right of way setback is provided, 125’ is proposed requiring a variance of 251.2’
- 1202-cc-09 – A 342’ structure setback is required, 25’ is proposed, requiring a variance of 317’

Permitted Use in W-3 zone (No Special Use Permit required)

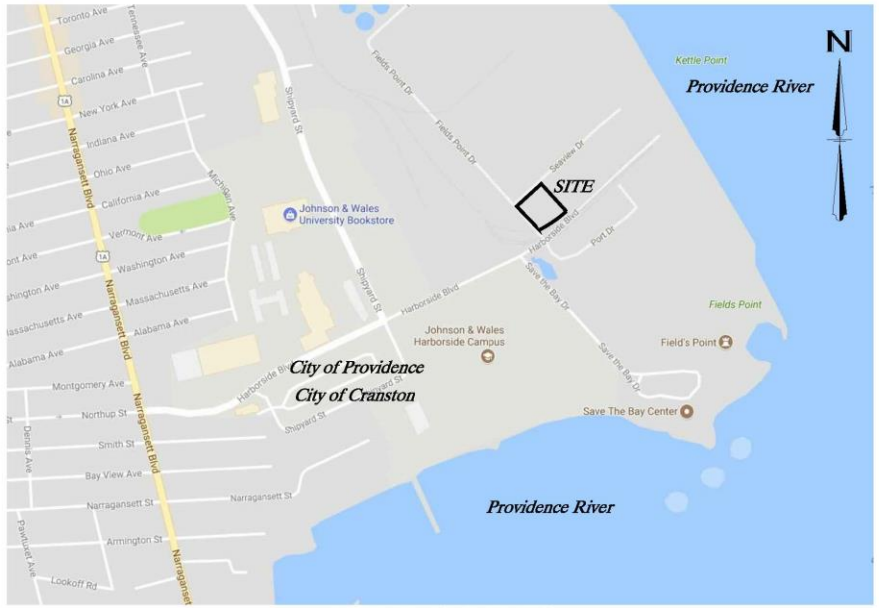
ZONING SUBMISSION

Green Providence Wind I

1 Fields Point Drive
Providence, Rhode Island 02905
Assessor's Plat 56 Lot 322

Sheet Index

Sheet Number	Sheet Title
C1.1	Cover Sheet
C1.2	Aerial & Map Sheet
C1.3	Site Plan
C1.4	Detail Sheet
1 of 1	Vensys 82 (Wind Turbine Detail)



Vicinity Map (Scale: 1"=400')

APPLICANT: Green Providence Wind I, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: Provport, Inc
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

No.	DATE	REVISION	BY
2	1/17/2020	ZONING RESUBMISSION	RES
1	12/20/2019	ZONING SUBMISSION	RSC

SHEET TITLE: Cover Sheet

PROJECT INFORMATION: Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 9511
REGISTERED PROFESSIONAL ENGINEER
CIVIL
1/17/2020

SHEET NO: C1.1 OF 1

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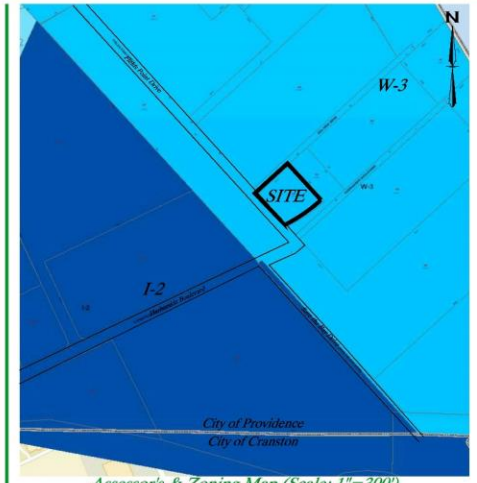
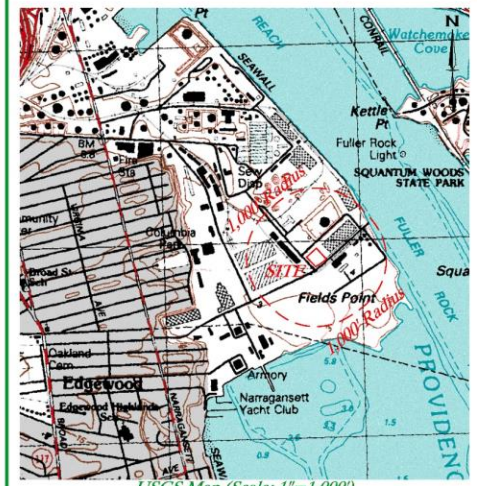
1/2 Mile Radius Map



Assessor's & Zoning Map (Scale: 1"=300')



USGS Map (Scale: 1"=1,000')

Disclaimer:

THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. INFORMATION AND IMAGES ON THIS PLAN ARE THOSE FOUND THROUGH ONLINE STATE AND CITY/TOWN GIS DATABASES. THE INFORMATION SHOWN IS ONLY AS ACCURATE AS THE INFORMATION FOUND THROUGH ONLINE SITE RESEARCH. AERIAL IMAGE DEPICTED IS FROM 2014 USGS DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY. THE ASSESSOR'S AND ZONING MAP ABOVE IS TAKEN FROM PLAN TITLED "THE CITY OF PROVIDENCE, RHODE ISLAND - PLAT NO. 056", REVISED DECEMBER 31, 2017. FOR BEST CLARITY, THIS SHEET SHOULD BE REPRODUCED IN COLOR ONLY.

Existing Conditions Legend

GROUNDWATER RESERVOIR AREA

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-5566
www.green-ri.com

APPLICANT: *Green Providence Wind I, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Proport, Inc*
52 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

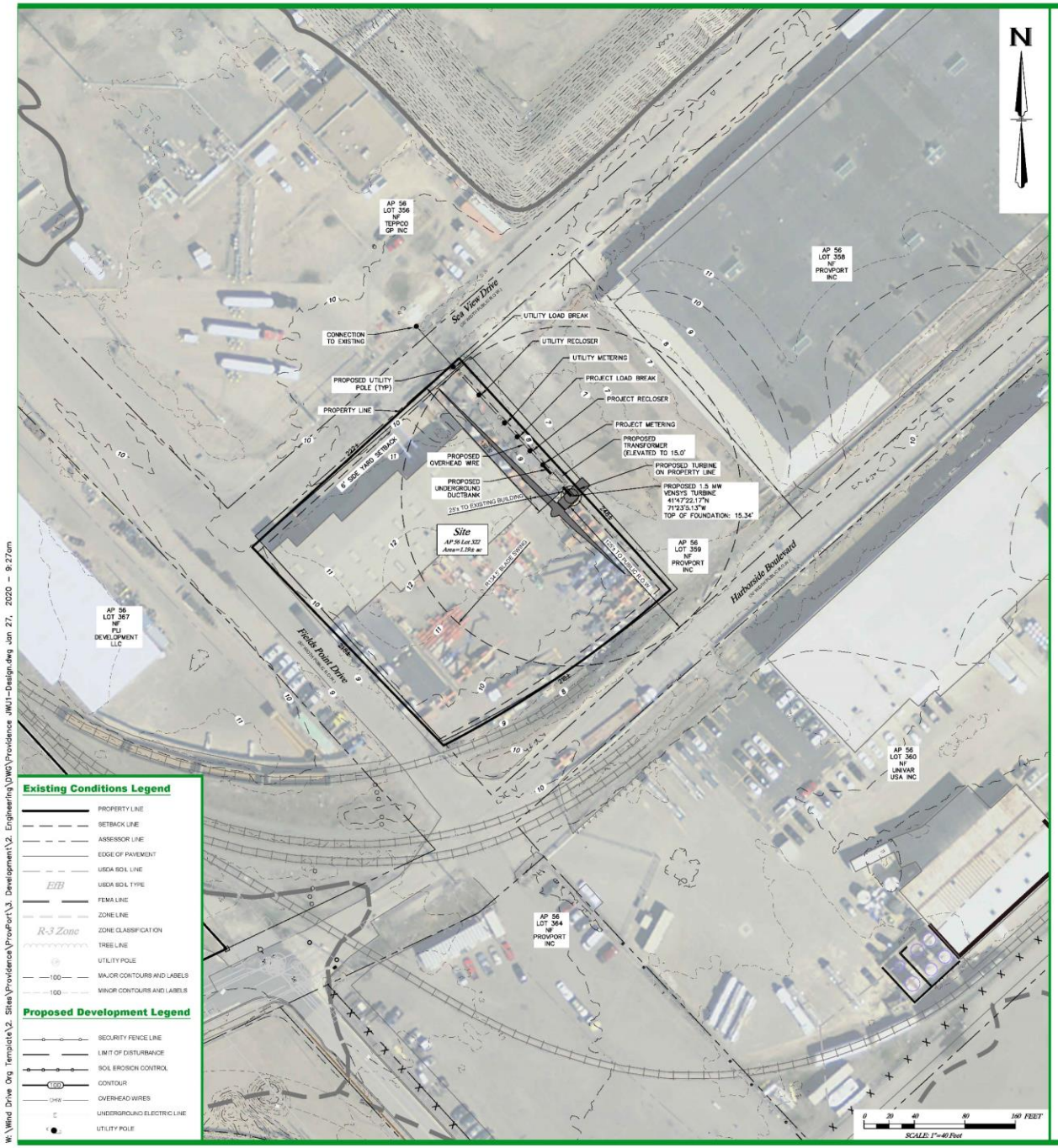
NO.	DATE	REVISION	BY
2	1/13/2020	ZONING RESUBMISSION	RES
1	10/22/2018	ZONING SUBMISSION	RES

SHEET TITLE:
Aerial & Map Sheet

PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 16801
REGISTERED PROFESSIONAL ENGINEER
CIVIL
1/13/2020

SHEET NO.:
C12 OF 14



Development Information:

1. APPLICANT INFORMATION: GREEN PROVIDENCE WIND I, LLC
3760 QUAKER LANE
NORTH KINGSTOWN, RHODE ISLAND 02852

2. OWNER INFORMATION: PROVPORT INC
32 TERMINAL ROAD
PROVIDENCE, RI 02905

3. SITE INFORMATION: 1 FIELDS POINT DRIVE
PROVIDENCE, RHODE ISLAND, 02905
ASSESSORS PLAT 56, LOT 322
AREA: 1.19± ACRES
ZONE: W-3 (PORT/MARITIME INDUSTRIAL WATERFRONT DISTRICT)

4. REQUIRED PERMITS: CITY OF PROVIDENCE ZONING ORDINANCE TABLE 12-2: USE MATRIX
PROPOSED USE: WIND ENERGY SYSTEM (PRINCIPAL USE)
PERMISSIBLE UNDER ZONE W-3

5. FEMA INFORMATION: THE SITE IS LOCATED WITHIN ZONE AE (ELEV. 12) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE CITY OF PROVIDENCE, PROVIDENCE COUNTY. FIRM MAP NUMBERS, REVISION DATES AND ZONE DESCRIPTIONS ARE AS FOLLOW:

MAP	MAP REVISION DATE
44007C0317J	SEPTEMBER 16, 2013

ZONE	DESCRIPTION
AE	SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD BASE FLOOD ELEVATION (ELEV.12 WITHIN LIMIT OF MODERATE WAVE ACTION)

6. AREA INFORMATION:

SITE WITHIN	Y/S/N/O
GROUNDWATER PROTECTION AREA (RIDEM)	NO
NATURAL HERITAGE AREAS (RIDEM)	NO
HISTORIC CEMETERY AREA (CITY/TOWN)	NO
HISTORIC DISTRICT (CITY/TOWN)	NO
OVERLAY DISTRICT (CITY/TOWN)	NO
GROUNDWATER RESERVOIR AREA (CITY/TOWN)	YES
GROUNDWATER RECHARGE AREA (CITY/TOWN)	NO

7. SOIL INFORMATION:

SOIL NAME	H/SG	DESCRIPTION
UD	N/A	UDORTHENTS-URBAN LAND COMPLEX

THE SOIL ABBREVIATIONS REFERENCE THE SOIL SURVEY OF RHODE ISLAND PREPARED BY THE USDA SOIL CONSERVATION SERVICE. INFORMATION FOUND THROUGH ONLINE RESEARCH FROM RIGIS DATA. THE ABBREVIATIONS CORRESPOND TO SOIL AREAS OUTLINE ON THE PLAN AND ARE TO BE CONSIDERED APPROXIMATE BASED ON RIGIS DATABASE

8. ZONING INFORMATION:

EXISTING ZONE: (TABLE 18.20.010)	ZONE W-3 (WATERFRONT)
MINIMUM LOT AREA:	NONE
MINIMUM FRONTAGE:	NONE
MINIMUM FRONT YARD:	NONE
MINIMUM INTERIOR SIDE YARD:	6'
MINIMUM CORNER SIDE YARD:	NONE
MINIMUM REAR YARD:	NONE*
MAXIMUM BUILDING HEIGHT:	90'

*UNLESS ABUTTING A RESIDENTIAL DISTRICT (NOT APPLICABLE)

9. EXISTING CONDITIONS WITHIN THE PROPERTY WERE DETERMINED BY ONLINE INFORMATION, AERIAL MAPPING, THE RIGIS DATABASE AND INFORMATION PROVIDED TO GREEN DEVELOPMENT. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND MAY BE SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. REFERENCE CLASS I SURVEY PLAN BY OTHERS ENTITLED "ADMINISTRATIVE SUBDIVISION PORT OF PROVIDENCE, RHODE ISLAND, TERMINAL ROAD, NEW YORK AVENUE, FIELDS POINT AVE, SHIPYARD STREET, & HARBORSIDE BOULEVARD" PREPARED FOR PROV. PORT, INC., TERMINAL ROAD, PROVIDENCE, RHODE ISLAND DATED MAY 24, 2005 PREPARED BY WATERMAN ENGINEERING COMPANY, 46 SUTTON AVENUE, EAST PROVIDENCE, RHODE ISLAND 02914.

10. TOPOGRAPHY SHOWN ON THE PLAN IS LIDAR AND WAS OBTAINED BY RIGIS DATABASE. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO NAVD88 DATUM.

11. THERE ARE NO HISTORICAL CEMETERIES LOCATED ON SITE BASED ON THE RHODE ISLAND HISTORICAL CEMETERY COMMISSION WEBSITE AND RESOURCES.

12. THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN IN THIS PLAN SET AS RIDOT STD.X.X.X. REFERENCE LINK: HTTP://WWW.DOT.RI.GOV/DOCUMENTSDOINGBUSINESSRIDOT_STD_DETAILS.PDF

13. NO TOPSOIL OR PRIME AGRICULTURAL SOIL, AS DEFINED IN CHAPTER 16.68, SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.

14. ALL EXISTING STRUCTURES AND SUPPORTING UTILITIES ARE TO REMAIN AND PROTECTED DURING CONSTRUCTION ACTIVITIES.

15. THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.

16. THERE ARE NO SIGNIFICANT IMPACTS TO THE EXISTING COMMUNITY, CITY SERVICES OR TO THE ENVIRONMENT.

17. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION CONTROLS ON SITE. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS AS SHOWN ON PLAN.

18. CONSTRUCTION TO BEGIN IN 2020 OR UPON RECEIPT OF ALL NECESSARY PERMITS. ONCE ALL PERMITS HAVE BEEN RECEIVED, THE PROPOSED SCHEDULE OF CONSTRUCTION WILL BE LIMITED TO ONE YEAR FROM COMMENCEMENT OF CONSTRUCTION.

19. THE SITE WILL UTILIZE EXISTING PAVED ROADS AND DRIVEWAYS FOR CONSTRUCTION ENTRANCE.

20. THERE IS NO INCREASE IN TRAFFIC GENERATED BY THE PROPOSED SITE IMPROVEMENTS ALONG SHIPYARD STREET.

21. FIELDS POINT DRIVE, SEAVIEW DRIVE AND HARBORSIDE BOULEVARD PROVIDE ADEQUATE EMERGENCY VEHICLE ACCESS TO THE PROPERTY.

22. THERE IS NO OUTDOOR LIGHTING PROPOSED FOR THE PROJECT EXCEPT AS REQUIRED BY FAA.

23. ELECTRICAL SERVICE SHALL BE BROUGHT ONTO THE SITE THROUGH OVERHEAD UTILITY POLES AND TRANSITION TO UNDERGROUND DUCTBANK WITH TWO (2) 4 INCH UNDERGROUND CONDUITS OR AS DEEMED NECESSARY BY NATIONAL GRID. ELECTRICAL SERVICES ARE SHOWN SCHEMATICALLY AND DETAILED DESIGN SHALL BE COORDINATED WITH NATIONAL GRID AND MAY BE SUBJECT TO MODIFICATION.

24. FIRE REQUIREMENTS FOR THE PROPOSED USE WILL BE ADDRESSED PRIOR TO OBTAINING A BUILDING PERMIT.

25. NO INCREASE IN IMPERVIOUS SURFACES INCLUDING PAVEMENT, COMPACTED GRAVEL OR STRUCTURES ARE PROPOSED.

GREEN development, LLC
3760 Quaker Lane
North Kingstown, RI 02852
(401) 295-5566
www.green-ri.com

APPLICANT: *Green Providence Wind I, LLC*
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: *Provport, Inc*
32 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: *Green Development, LLC*
3760 QUAKER LANE, NORTH, KINGSTOWN, RI 02852

NO.	DATE	REVISION	BY
2	2/3/2020	ZONING RESUBMISSION	KWS
1	10/22/2019	ZONING SUBMISSION	BDS

SHEET TITLE: *Site Plan*

PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 322

KEVIN C. MORIN
No. 9851
REGISTERED PROFESSIONAL ENGINEER
STATE OF RHODE ISLAND
3/3/2020

SHEET NO.: C1.3 OF 14

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Wind Energy System (Principal Use)

(SECTION 1202 - PRINCIPAL USE STANDARDS)

1. THE DESIGN OF THE WIND ENERGY SYSTEM SHALL CONFORM TO APPLICABLE INDUSTRY STANDARDS AS SUCH STANDARDS EXIST AS OF THE DATE CONSTRUCTION IS COMMENCED. THE FACILITY OWNER OR OPERATOR SHALL SUBMIT CERTIFICATES OF DESIGN COMPLIANCE OBTAINED BY THE EQUIPMENT MANUFACTURERS FROM UNDERWRITERS LABORATORIES, DET NORSKE VERITAS, GERMANISCHER LLOYD WIND ENERGIES, OR SIMILAR CERTIFYING ORGANIZATIONS.

2. ALL WIND TURBINES SHALL BE NEWLY MANUFACTURED AS OF THE DATE OF INSTALLATION. EXPERIMENTAL/PROTOTYPE WIND TURBINES MAY BE APPROVED AS A SPECIAL USE. (WIND TURBINES BEING USED FOR THIS PROJECT ARE NOT EXPERIMENTAL/PROTOTYPE)

3. ALL WIND ENERGY SYSTEMS SHALL BE EQUIPPED WITH A REDUNDANT BRAKING SYSTEM. THIS INCLUDES BOTH AERODYNAMIC OVER-SPEED CONTROLS (INCLUDING VARIABLE PITCH, TIP, AND OTHER SIMILAR SYSTEMS) AND MECHANICAL BRAKES. MECHANICAL BRAKES SHALL BE OPERATED IN A FAIL-SAFE MODE. STALL REGULATION IS NOT CONSIDERED A SUFFICIENT BRAKING SYSTEM FOR OVER-SPEED PROTECTION.

4. ALL ELECTRICAL COMPONENTS OF THE WIND ENERGY SYSTEM SHALL CONFORM TO APPLICABLE LOCAL, STATE, AND NATIONAL CODES, AND APPLICABLE INTERNATIONAL STANDARDS.

5. AN ENGINEER'S CERTIFICATE SHALL BE COMPLETED BY A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF RHODE ISLAND, CERTIFYING THAT THE TOWER AND FOUNDATION OF THE WIND TURBINES ARE COMPATIBLE WITH, AND ARE APPROPRIATE FOR, THE PARTICULAR MODEL OF WIND TURBINE USED, AND THAT THE SPECIFIC SOILS AT THE SITE CAN SUPPORT THE WIND TURBINE.

6. WIND TURBINES SHALL COMPLY WITH THE FOLLOWING DESIGN STANDARDS:
   - 6.a. WIND TURBINES SHALL BE A NONOBTRUSIVE AND NONREFLECTIVE COLOR. THE FACILITY OWNER OR OPERATOR SHALL MAINTAIN THE PAINT ON WIND TURBINES AT ALL TIMES IN GOOD REPAIR.
   - 6.b. WIND TURBINES SHALL NOT DISPLAY ADVERTISING, EXCEPT FOR REASONABLE IDENTIFICATION OF THE TURBINE MANUFACTURER, OR THE FACILITY OWNER AND OPERATOR.
   - 6.c. WITHIN THE WIND ENERGY SYSTEM, WIND TURBINES SHALL BE OF A GENERALLY CONSISTENT SIZE, DESIGN, AND COLOR, OF SIMILAR HEIGHT AND ROTOR DIAMETER, AND ROTATE IN THE SAME DIRECTION.
   - 6.d. WIND TURBINES SHALL NOT BE ARTIFICIALLY LIT, EXCEPT TO THE EXTENT REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION OR OTHER APPLICABLE REGULATORY AUTHORITIES.
   - 6.e. ON-SITE TRANSMISSION AND POWER LINES BETWEEN WIND TURBINES SHALL, TO THE MAXIMUM EXTENT PRACTICABLE, BE PLACED UNDERGROUND, REACH THE PROPERTY LINE, AND BE LOCATED AND CONSTRUCTED IN SUCH A WAY AS TO MINIMIZE DISRUPTION TO THE PROPERTY'S PRIMARY PURPOSE AS WELL AS TO FACILITATE THE INTERCONNECTION OF OTHER COMMERCIAL WIND POWER GENERATING FACILITIES.
   - 6.f. NONESSENTIAL APPURTENANCES ARE PROHIBITED TO BE AFFIXED TO ANY WIND TURBINE, INCLUDING, BUT NOT LIMITED TO, CELLULAR OR RADIO ANTENNAE.
   - 6.g. A CLEARLY VISIBLE WARNING SIGN ADVISING PERSONS OF THE PRESENCE OF HIGH VOLTAGE LEVELS SHALL BE PLACED AT THE BASE OF ALL PAD-MOUNTED TRANSFORMERS AND SUBSTATIONS.

7. THE APPLICANT SHALL COMMISSION AND SUBMIT AT THE TIME OF PERMIT APPLICATION A WILDLIFE ASSESSMENT (IMPACT STUDY), CONDUCTED BY A QUALIFIED WILDLIFE EXPERT HAVING NO LESS THAN TEN YEARS OF EXPERIENCE CONDUCTING WILDLIFE ASSESSMENTS, INDICATING POSSIBLE RISKS TO LOCAL WILDLIFE, HABITAT, AND MIGRATORY BIRDS. ADDITIONALLY, THE APPLICANT'S WILDLIFE EXPERT SHALL ALSO DEVELOP A MITIGATION PLAN, IF APPLICABLE, THAT ADDRESSES/MITIGATES ANY RISK TO WILDLIFE, MIGRATORY BIRDS, AND AFFILIATED HABITAT. ALL WIND TURBINES AT TIME OF APPLICATION SHALL BE LOCATED OUT OF BIRD AND BAT MIGRATION PATHWAYS/CORRIDORS WHERE WIND TURBINE CONSTRUCTION WOULD POSE A SUBSTANTIAL RISK.

8. WIND TURBINES SHALL NOT BE CLIMBABLE UP TO A HEIGHT OF AT LEAST 15 FEET ABOVE GROUND SURFACE. ALL ACCESS DOORS TO WIND TURBINES AND ELECTRICAL EQUIPMENT SHALL BE LOCKED OR FENCED, AS APPROPRIATE, TO PREVENT ENTRY BY NON-AUTHORIZED PERSONS. (SEE ATTACHED)

9. WIND TURBINES SHALL BE SET BACK FROM ALL STRUCTURES ON A PARTICIPATING PROPERTY OWNER'S PROPERTY A DISTANCE OF NO LESS THAN THE WIND ENERGY SYSTEM HEIGHT. THE SETBACK DISTANCE IS MEASURED FROM THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER TO THE NEAREST POINT ON THE FOUNDATION OF THE OCCUPIED BUILDING.

   WIND TURBINE HEIGHT = 342'
   NEAREST STRUCTURE FOUNDATION = 25'
   VARIANCE REQUESTED = 342' - 25' = 317'

10. ALL WIND TURBINES SHALL BE SET BACK FROM THE NEAREST PROPERTY LINE A DISTANCE OF NOT LESS THAN THE NORMAL SETBACK REQUIREMENTS FOR THAT ZONING DISTRICT OR 110 PERCENT OF THE WIND ENERGY SYSTEM HEIGHT, WHICHEVER IS GREATER. THE SETBACK DISTANCE IS MEASURED FROM THE PROPERTY LINE TO THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER. OPERATION AND MAINTENANCE BUILDING(S) AND SUBSTATION(S) SHALL BE LOCATED IN ACCORDANCE WITH ZONING DISTRICT YARD REQUIREMENTS. ALL WIND FARM STRUCTURES, EXCEPT FOR WIND TURBINES, SHALL COMPLY WITH THE REGULATIONS OF THE ZONING DISTRICT. (A VARIANCE IS REQUIRED).

    WIND TURBINE HEIGHT = 342'
    REQUIRED PROPERTY LINE SETBACK = 342' X 110% = 376.2'
    NEAREST PROPERTY LINE = 0' (UNDER COMMON OWNERSHIP)
    VARIANCE REQUESTED = 376.2' - 0' = 376.2'

11. ALL WIND TURBINES SHALL BE SET BACK FROM THE NEAREST PUBLIC RIGHT-OF-WAY A DISTANCE OF 110 PERCENT OF THE WIND ENERGY SYSTEM HEIGHT, AS MEASURED FROM THE RIGHT-OF-WAY LINE TO THE NEAREST POINT ON THE OUTSIDE EDGE OF A TOWER. (A VARIANCE IS REQUIRED)

    WIND TURBINE HEIGHT = 342'
    REQUIRED PROPERTY LINE SETBACK = 342' X 110% = 376.2'
    NEAREST PUBLIC R.O.W. LINE = 125'
    VARIANCE REQUESTED = 376.2' - 125' = 251.2'

12. THE FACILITY OWNER OR OPERATOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGULATING SOUND GENERATION. IN THE EVENT THAT ANY SOUND LEVELS FROM A WIND TURBINE ARE FOUND TO BE IN EXCESS OF PERMISSIBLE LEVELS, THE FACILITY OWNER OR OPERATOR SHALL TAKE NECESSARY MEASURES TO BRING SOUND LEVELS DOWN TO A LEVEL ACCEPTABLE.

13. WIND TURBINE SHADOW FLICKER SHALL NOT EXCEED 30 HOURS PER YEAR ON ANY WINDOW OF AN EXISTING RESIDENTIAL STRUCTURE LOCATED ON A PARCEL OWNED BY AN ENTITY OTHER THAN THE PARCEL OWNER WHERE THE TURBINE IS LOCATED.

14. THE FACILITY OWNER AND OPERATOR SHALL, AT THEIR SOLE EXPENSE, COMPLETE DECOMMISSIONING OF THE WIND ENERGY SYSTEM, OR INDIVIDUAL WIND TURBINES, WITHIN ONE YEAR AFTER THE END OF THE USEFUL LIFE OF THE WIND ENERGY SYSTEM OR INDIVIDUAL WIND TURBINES. THE WIND ENERGY SYSTEM OR TURBINE SHALL BE DEEMED TO BE AT THE END OF ITS USEFUL LIFE IF IT IS ABANDONED FOR A PERIOD OF TIME IN EXCESS OF 180 DAYS. DECOMMISSIONING INCLUDES REMOVAL OF WIND TURBINES, STRUCTURES, ROADS AND FOUNDATIONS TO A DEPTH OF 48 INCHES, AND ANY OTHER ELEMENT CONSTRUCTED BY FACILITY OWNER OR OPERATOR FOR THE PURPOSE OF MAINTAINING OR OPERATING THE WIND ENERGY SYSTEM.

15. WIND ENERGY SYSTEMS ARE PERMITTED IN THE I-2 ZONE BY SPECIAL USE PERMIT, PROVIDED THE PARCEL ABUTS A VI-3 ZONE AND WIND ENERGY SYSTEM IS NOT LESS THAN 1,000 FEET FROM A RESIDENTIAL ZONE.

Soil Erosion and Sediment Control Notes:

1. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS FROM OTHERS, RIGIS DATA, SURVEYED INFORMATION AND/OR INFORMATION PROVIDED TO GREEN DEVELOPMENT AND IS SUBJECT TO CHANGE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE PROPER UTILITY ENGINEERING DEPARTMENTS AND COMPANIES TO LOCATE ALL EXISTING SUBSURFACE UTILITIES AND STRUCTURES IN AND AROUND THE LIMIT OF DISTURBANCE.
2. CONTRACTOR TO CALL THE DIG SAFE CENTER TOLL FREE AT 1-888-344-7233, 72 HOURS PRIOR TO ANY EXCAVATION WORK TAKES PLACE. CONTRACTOR TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES FOUND DURING UTILITY RESEARCH PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITIES WHICH ARE SHOWN AND NOT SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR.
3. CONTRACTOR IS LIABLE TO OBTAIN ALL MUNICIPAL, STATE AND FEDERAL APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION.
4. DAILY SWEEPING AT CONSTRUCTION ENTRANCE DURING CONSTRUCTION IS REQUIRED TO MINIMIZE SEDIMENTS ON BUTTONWOODS ROAD. THE CONTRACTOR SHALL PROVIDE STORAGE FOR WATER AS NECESSARY TO ENSURE PROPER DUST CONTROL.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING (R&D) OF ALL MATERIALS LEGALLY AS INDICATED ON THE PLANS TO AN APPROVED OFF-SITE LOCATION.
6. CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF DISTURBANCE SHALL BE RESTORED TO MATCH PRIOR CONDITIONS OR PROPOSED CONDITIONS SHOWN ON THE PLANS.
7. THIS PLAN SET REFERENCES RHODE ISLAND DEPARTMENT OF TRANSPORTATION (RIDOT) STANDARD DETAILS WHICH CAN BE FOUND ON THE RIDOT ONLINE DATABASE. DESIGNATED DETAILS ARE LABELED WITHIN IN THIS PLAN SET AS RIDOT STD.X.X.X.

   REFERENCE LINK: HTTP://WWW.DOT.RI.GOV/DOCUMENTS/DOINGBUSINESS/RIDOT_STD_DETAILS.PDF
8. NO TOPSOIL OR PRIME AGRICULTURAL SOIL SHALL BE REMOVED FROM THE SITE FOR INSTALLATION OF THE FACILITY.
9. THIS PROJECT IS PROPOSED TO BE BUILT IN 1 PHASE.

Erosion and Sedimentation Control Measures, Permanent Stabilization, and Maintenance

ESTABLISHMENT OF VEGETATIVE COVER

1. SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND'S STANDARD SPECIFICATION, M.30.
4. THE TEMPORARY SEEDING DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	LBS/AC
WINTER RYE	100
MILLET OR SUDANGRASS	40
ANNUAL OR PERENNIAL RYE GRASS	60

5. TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW, OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING. TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING. SIDE SLOPES OF BASINS SHALL BE TREATED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKETS SUCH AS S150 OR APPROVED EQUAL. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.
6. ALL STRAW WATTLE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
7. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH LOCAL MUNICIPAL REQUIREMENTS AND THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE SECTION 202.
8. STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED.
9. ALL AREAS PROPOSED TO BE VEGETATED THAT ARE DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. WELL ESTABLISHED VEGETATION SHALL BE MAINTAINED. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEEDED BY THE CONTRACTOR. ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.
10. MAXIMUM PERMANENT GRADED SLOPE WITHIN THE SITE IS TO BE 3:1 UNLESS NOTED OTHERWISE.
11. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
12. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989 AS A GUIDE.

NON-STRUCTURAL MEASURES

13. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE ACCESS ROAD AND AREAS TO BE GRADED.
14. TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHALL SURROUND ALL TOPSOIL STOCKPILES.
15. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND TOWN OF PROVIDENCE REGULATIONS. CONSTRUCTION DEBRIS SHALL BE DISPOSED OF DAILY TO AVOID EXPOSURE TO PRECIPITATION.
16. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
17. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

STRUCTURAL MEASURES

18. STRAW WATTLE OR SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATION.
19. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURE IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
20. REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDS SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

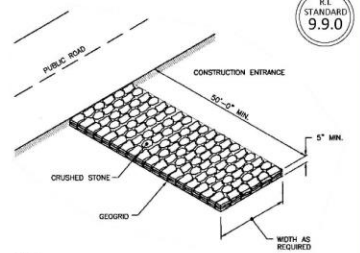
MAINTENANCE: SHORT TERM / LONG TERM

21. SEDIMENTS TRACKED/SPILLED ON EXISTING IMPERVIOUS AREAS ON SITE SHALL BE SWEPT DAILY.
22. ALL STRAW WATTLE/SILT FENCE, TEMPORARY TREATMENTS (HAY, STRAW, ETC.), AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION. STRAW WATTLE/SILT FENCE SHALL BE INSPECTED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH STORM EVENT OR EVERY 7 DAYS, WHICHEVER COMES FIRST, FOR UNDERMINING AND DETERIORATION. A STORM EVENT SHALL BE DEFINED AS 0.25 INCHES OF RAIN WITHIN A 24-HOUR PERIOD. THE STRAW WATTLE/SILT FENCE SHALL BE REPAIRED OR REPLACED AS WARRANTED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE STRAW WATTLE/SILT FENCE BECOMES FILLED IN WITH SEDIMENT. THE STRAW WATTLE/SILT FENCE SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. FOLLOWING CONFIRMATION FROM THE TOWN OF PROVIDENCE AND OR THE PROJECT ENGINEER THAT AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER HAS BEEN ESTABLISHED THE STRAW WATTLE/SILT FENCE SHALL BE REMOVED.
23. THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER. STRAW WATTLE OR SILT FENCE SHALL BE STAKED AROUND THE STOCKPILES.
24. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE AND FOR A PERIOD OF ONE YEAR AFTER CONSTRUCTION. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.

Sequence of Construction and Staging of Land Disturbing Activities

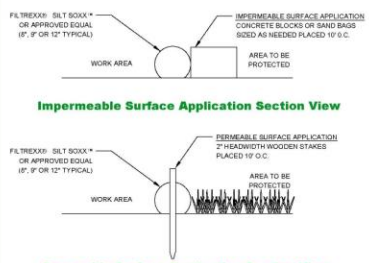
1. CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL (SE & SC) ONSITE. SEQUENCE OF CONSTRUCTION PROVIDED MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH PRIOR APPROVAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
2. CONSTRUCTION TO SEGIN IN 2020 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
3. SURVEY AND STAKE LIMIT OF SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE.
4. PLACE SEDIMENTATION BARRIERS (STRAW WATTLE OR SILT FENCE) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.
5. EXCAVATE AND INSTALL THE PROPOSED MONOPOLE FOOTING AND FOUNDATION. GEOTECHNICAL AND STRUCTURAL ENGINEERING SERVICES FOR THE FOUNDATION SYSTEM FOR THE TURBINE ARE TO BE PROVIDED BY OTHERS PRIOR TO CONSTRUCTION.
6. INSTALL UNDERGROUND UTILITIES AND BACKFILL FOUNDATION.
7. CONSTRUCT THE PROPOSED MONOPOLE AND BLADES AND RELATED ABOVE-GROUND ELECTRICAL EQUIPMENT.
8. FINISH PERMANENT STABILIZATION AS REQUIRED.
9. THE CONTRACTOR SHALL CLEAN AND FLUSH THE DRAINAGE STRUCTURES AS NEEDED.

R.I. STANDARD 9.9.0



NOTE:
1. SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

Construction Access (N.T.S.)

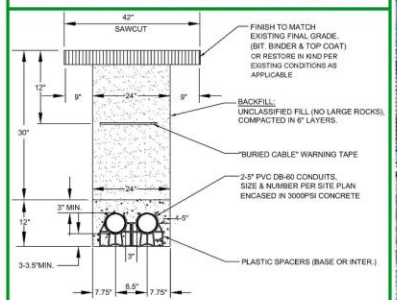


Impermeable Surface Application Section View

Permeable Surface Application Section View

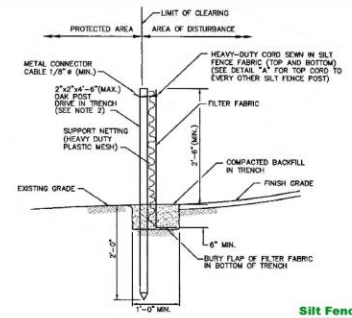
NOTES:
1. CONTRACTOR TO USE FILTREXX® SILT SOXX™ OR APPROVED EQUAL.
2. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
3. SILT SOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
4. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
5. SEE PLANS FOR LOCATION AND SURFACE APPLICATION TYPE.
6. TO BE INCORPORATED AS NECESSARY.

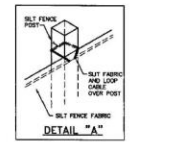
Silt Soxx Sediment Barrier (N.T.S.)



Typical Trench Backfill Detail Under Roadway & Pathway (N.T.S.)

R.I. STANDARD 9.2.0





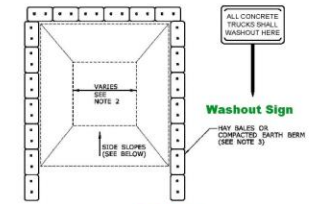
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0"(MAX.) O.C. IN WETLAND AREAS AND 4'-0"(MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-0"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

Silt Fence Detail (N.T.S.)

NOTES:
1. CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. THE CONCRETE WASHOUT AREA SHALL BE ENTIRELY SELF-CONTAINED.
2. THE CONTRACTOR SHALL SUBMIT THE DESIGN, LOCATION AND SIZING OF THE CONCRETE WASHOUT AREA(S) WITH THE PROJECT'S EROSION AND SEDIMENTATION CONTROL PLAN AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH ANY CONCRETE WORK.

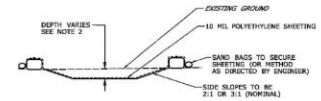
   LOCATION: WASHOUT AREA(S) ARE TO BE LOCATED AT LEAST FEET FROM ANY STREAM, WETLAND, STORM DRAINS, OR OTHER SENSITIVE RESOURCE AREAS. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER. THE FLOOD CONTINGENCY PLAN MUST ADDRESS THE CONCRETE WASHOUT IF THE WASHOUT IS TO BE LOCATED WITHIN THE FLOODPLAIN.

   SIZE: THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS WITH A MINIMUM FREEBOARD OF 12".
3. SURFACE DISCHARGE IS UNACCEPTABLE. THEREFORE, HAY BALES OR OTHER CONTROL MEASURES, AS APPROVED BY THE ENGINEER, SHOULD BE USED AROUND THE PERIMETER OF THE CONCRETE WASHOUT AREA FOR CONTAINMENT.
4. SIGNS SHOULD BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CONCRETE AREA(S) AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS. WASHOUT AREA(S) SHOULD BE FLAGGED WITH SAFETY FENCING OR OTHER APPROVED METHODS.
5. WASHOUT AREA(S) ARE TO BE INSPECTED AT LEAST ONCE A WEEK FOR STRUCTURAL INTEGRITY, ADEQUATE HOLDING CAPACITY AND CHECKED FOR LEAKS, TEARS, OR OVERFLOWS. (AS REQUIRED BY THE CONTRACTION SITE ENVIRONMENTAL INSPECTION REPORT) WASHOUT AREA(S) SHOULD BE CHECKED AFTER HEAVY RAINS. WASHOUT AREA(S) SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW WASHOUT AREA IS CONSTRUCTED.
6. HARDENED CONCRETE WASTE SHOULD BE REMOVED AND DISPOSED OF WHEN THE WASTE HAS ACCUMULATED TO HALF OF THE CONCRETE WASHOUT'S HEIGHT. THE WASTE CAN BE STORED AT THE UPLAND LOCATION, AS APPROVED BY THE ENGINEER. ALL CONCRETE WASTE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL APPLICABLE LAWS, REGULATIONS, AND GUIDELINES.



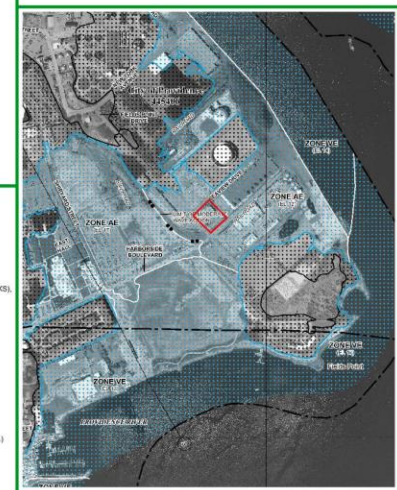
Washout Sign

Plan View

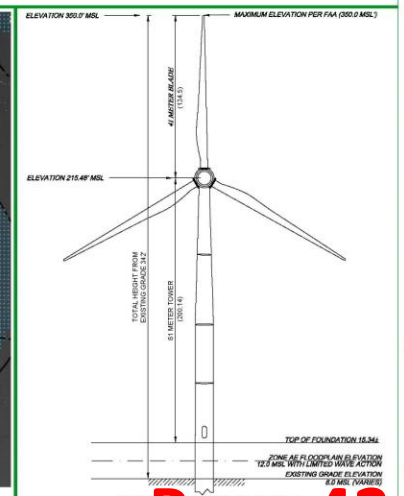


Section View

Concrete Washout Area (N.T.S.)



FEMA Map



Turbine Elevation View

NOTE: NOT TO SCALE

APPLICANT: Green Providence Wind I, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

PREPARED FOR: Proport, Inc
52 TERMINAL ROAD, PROVIDENCE, RI 02905

PREPARED BY: Green Development, LLC
3760 QUAKER LANE, NORTH KINGSTOWN, RI 02852

3760 Quaker Lane
North Kingstown, RI 02852
(401) 294-3233
www.green-ri.com

NO.	DATE	REVISION	BY
2	2/13/2020	ZONING RESUBMISSION	RSS
1	10/23/2019	ZONING SUBMISSION	RSS

SHEET TITLE: Detail Sheet

PROJECT INFORMATION:
Green Providence Wind I
1 FIELDS POINT DRIVE, PROVIDENCE, RI 02905
ASSESSOR'S PLAT 56 LOT 332

KEVIN C. MORIN
No. 19301
REGISTERED PROFESSIONAL ENGINEER
CIVIL
03/02/20

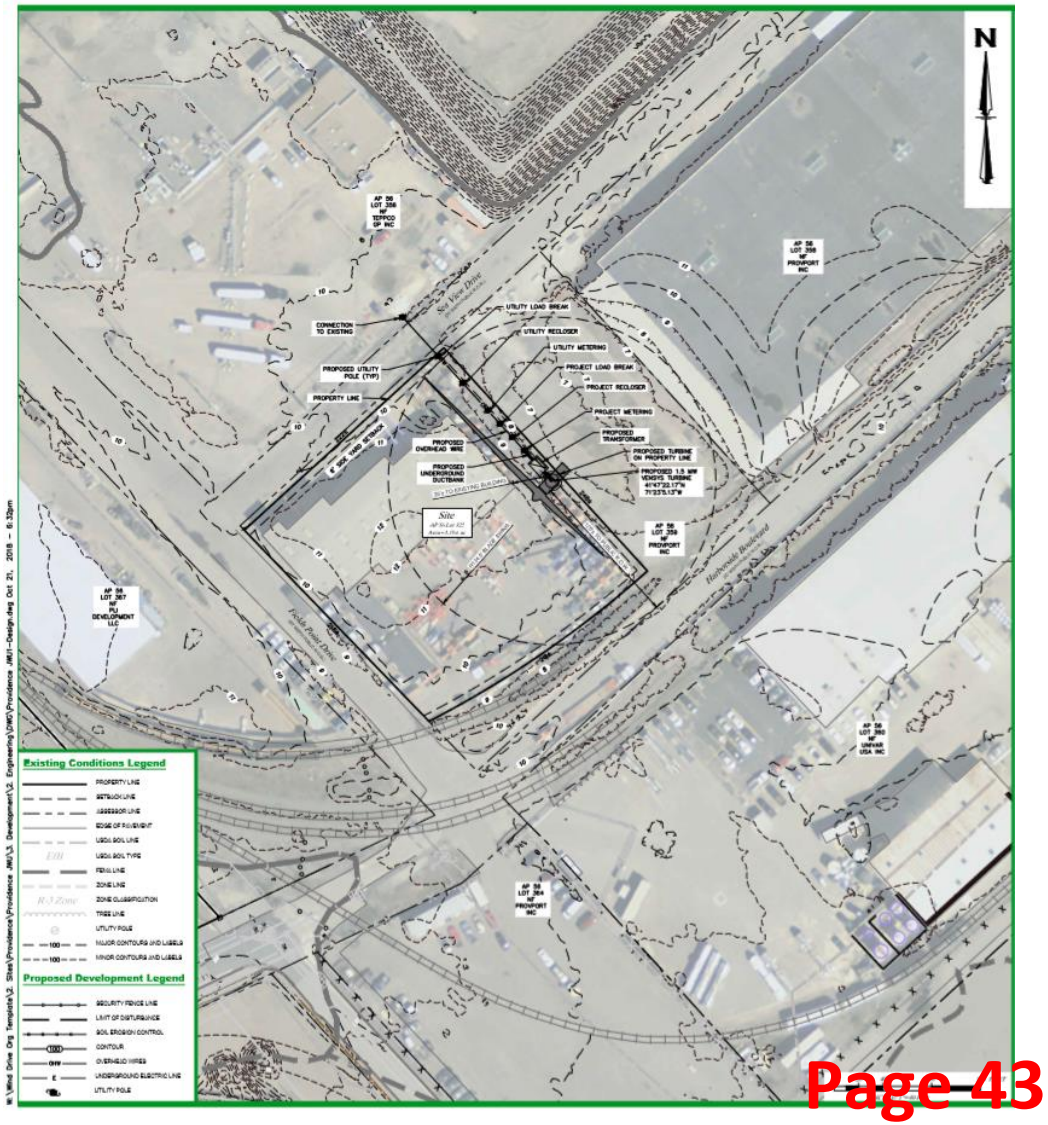
SHEET NO: C14 OF 14

W:\Wind Drive Org Template\2_Sites\Providence\ProPort\3_Development\2_Engineering\DWG\Providence JMU1-Design.dwg Jan 27, 2020 - 9:27am

Engineering Design

Providence Wind I

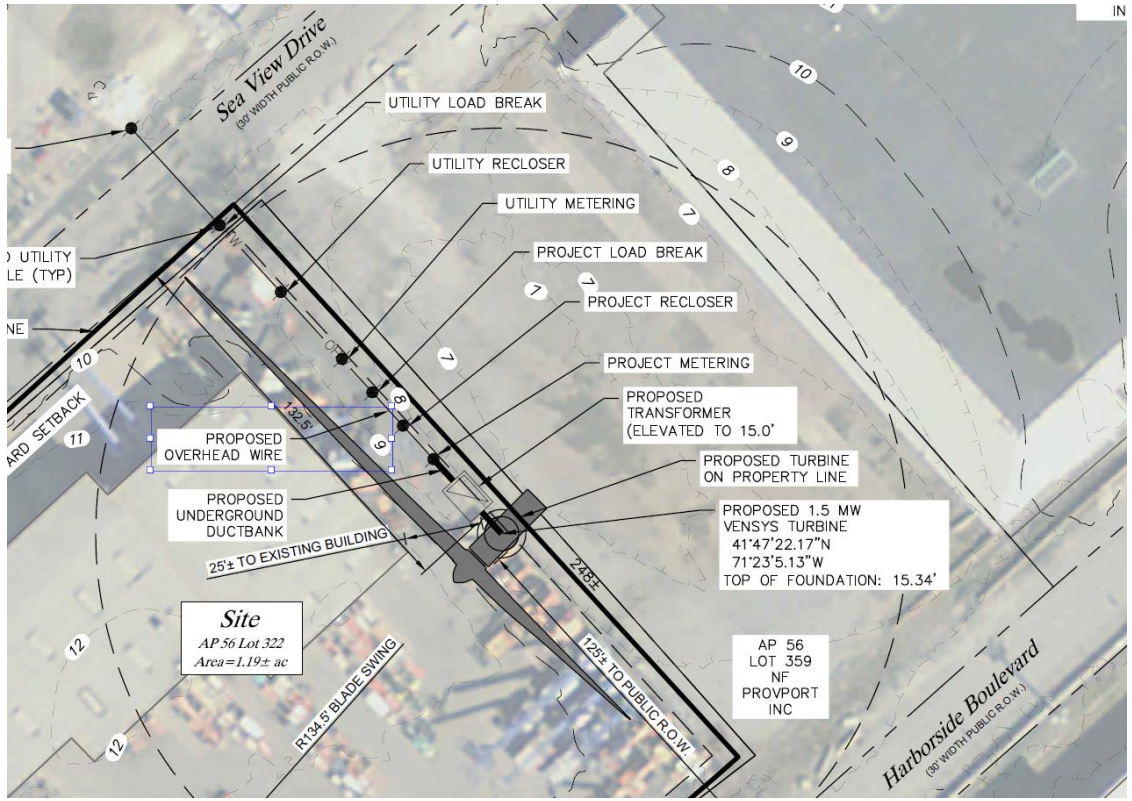
- Existing developed areas, minimal disturbance during construction
- Existing impervious surface onsite



Engineering /Design

Providence Wind I

- Adjacent properties requiring dimensional variance are under common ownership



Variance Standards

Variance Criteria

- Variance is due to the unique characteristics of the subject land or structure and not to the general characteristics of the surrounding area
- Hardship is not the result of any prior action of the applicant and does not result primarily from the desire of the applicant to realize greater financial gain
- Granting of the variance will not alter the general character of the surrounding area or impair the intent or purpose of the Ordinance or the Comprehensive Plan
- That the relief to be granted is the least relief necessary

Special Use Standards

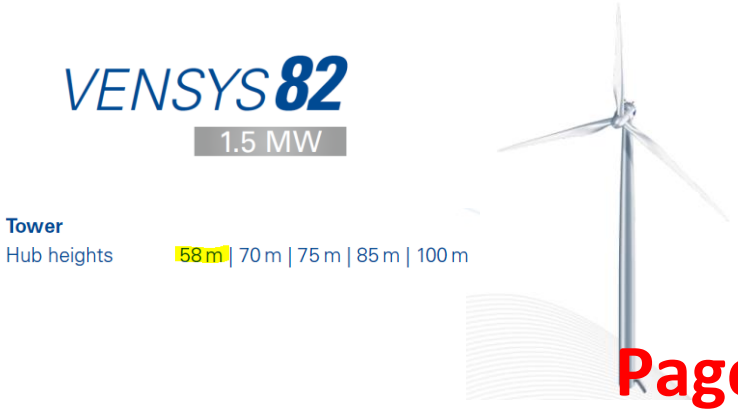
Special Use Permit Criteria

- Consider the written opinion from the Department of Planning and Development
- Make specific finding of fact, in writing, with evidence supporting them, that demonstrates that:
  - The proposed special use permit is set forth specifically in this Ordinance, and complies with any condition set forth therein for the authorization of such special use permit, including those listed in Article 12
  - Granting the proposed special use permit will not substantially inure the use and enjoyment of nor significantly devalue neighboring property
  - Granting the proposed special use permit will not be detrimental or injurious to the general health or welfare of the community

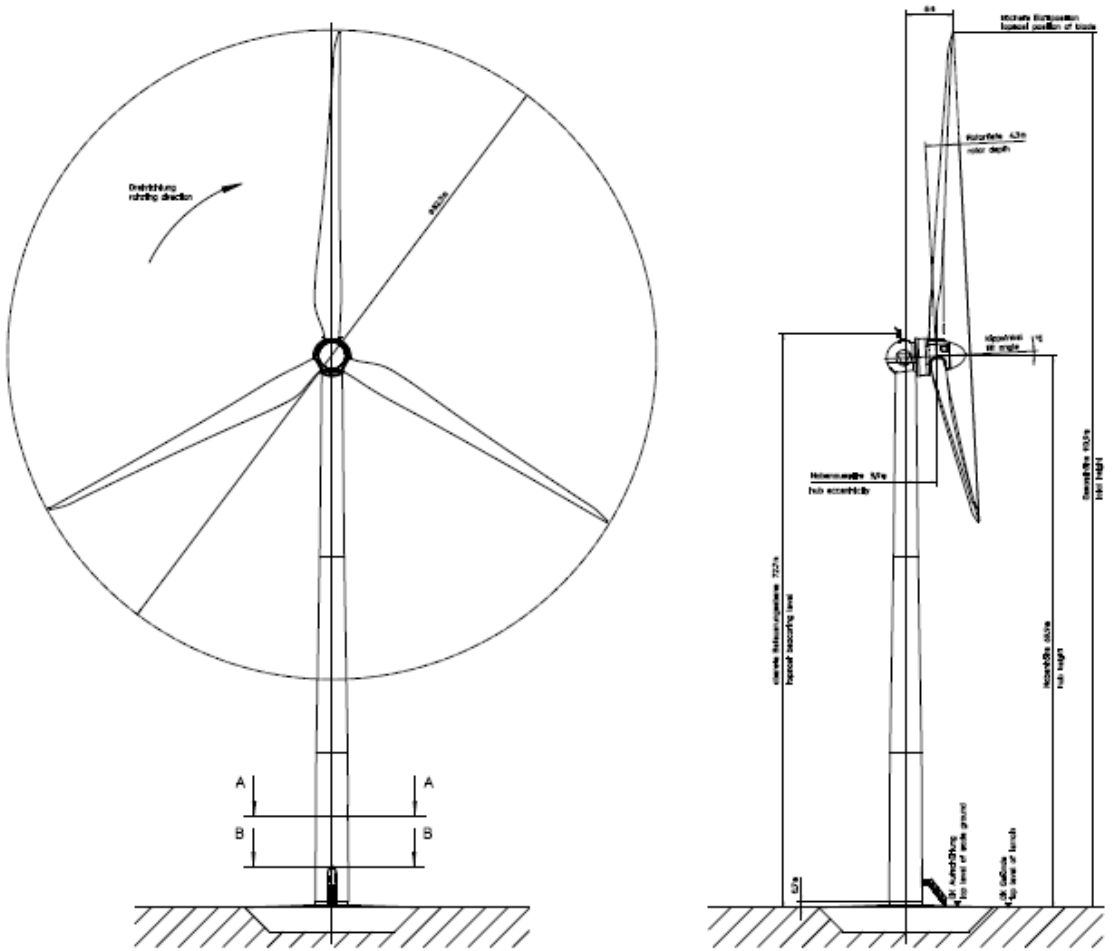
Unique Characteristics and Least Relief

…due to the unique characteristics of the subject land or structure and not to the general characteristics of the surrounding area…

- Based on existing wind patterns and surrounding characteristics, The WECS model selected is the minimum necessary for a viable project
- 58 meter tower/ hub height proposed
- Reduced height by 49 feet due to TF Green flight path



Turbine Drawing



Shadow Flicker Model

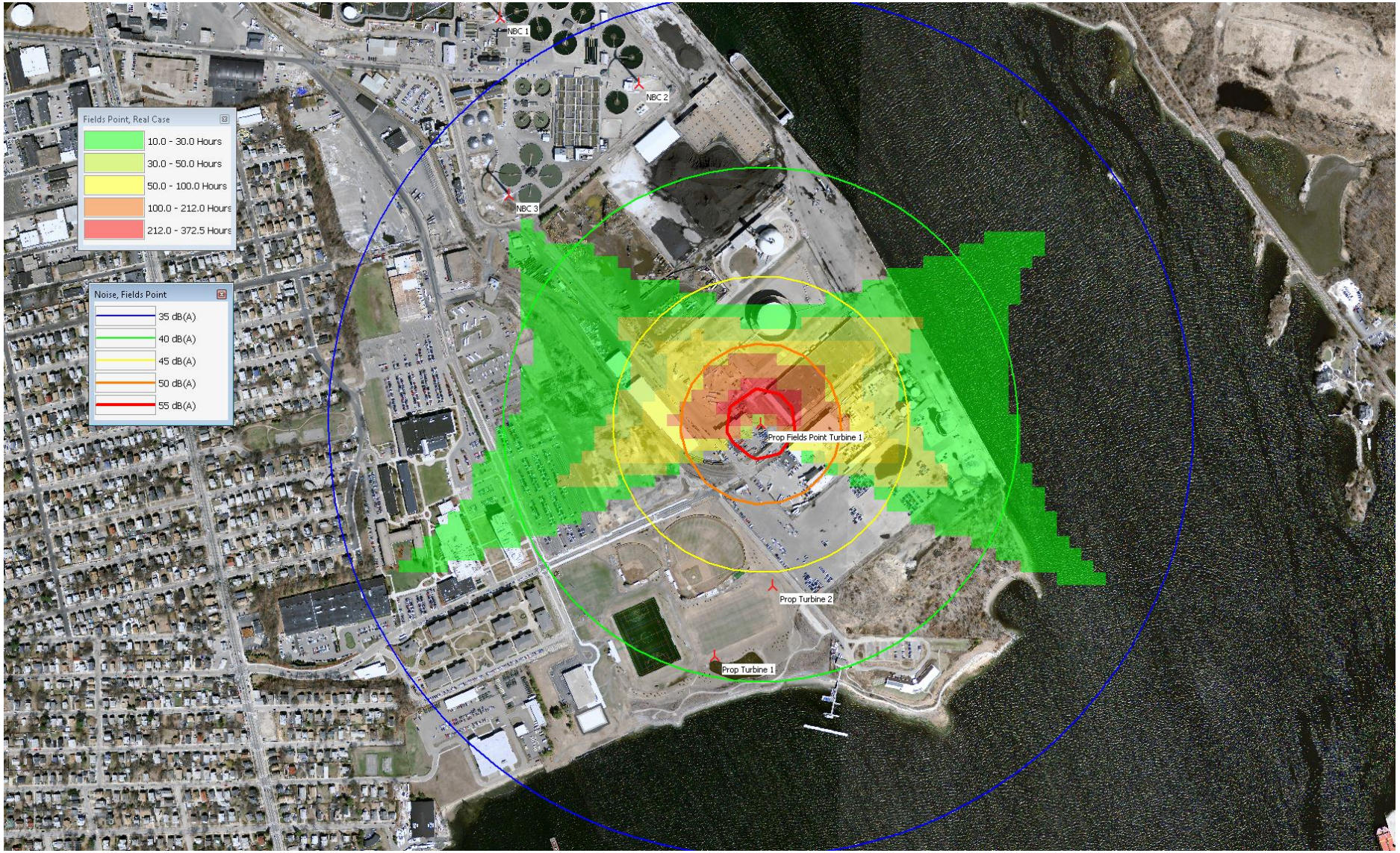
- Shadow flicker may occur when the sun is very low in the sky at sunrise and sunset.
- Model **does not account for existing objects on the ground** such as tree or buildings.
- Model assumes receptors are “glass” houses and doesn’t take into account window locations, size, orientation.
- Model takes into account wind resource and weather

Shadow Flicker - Defined

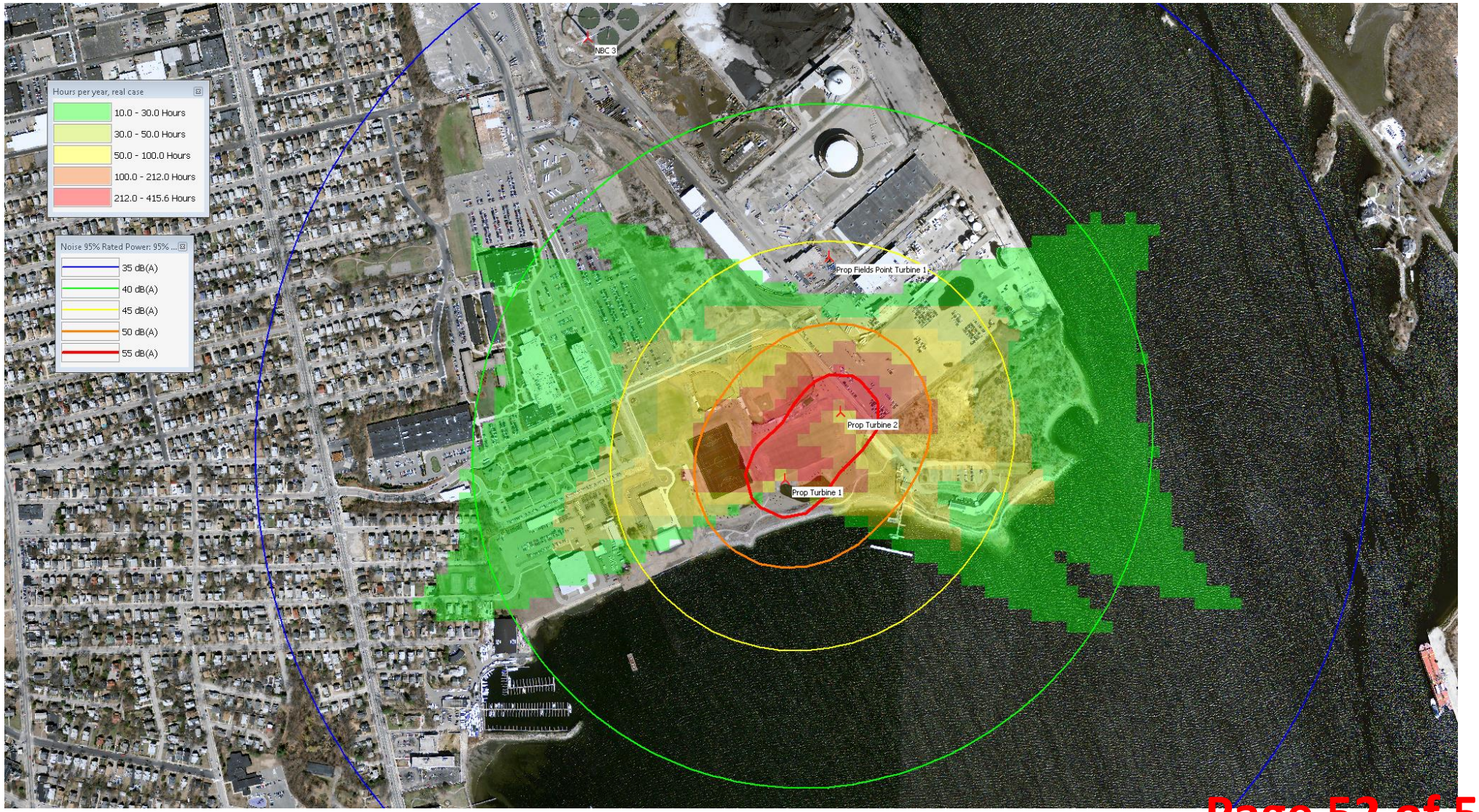
- “Shadow flicker can be defined as an intermittent change in the intensity of light in a given area resulting from the operation of a wind turbine due to its interaction with the sun. While indoors, an observer experiences repeated changes in the brightness of the room as shadows cast from the wind turbine blades briefly pass by windows as the blades rotate. In order for this to occur, the wind turbine must be operating, the sun must be shining, and the window must be within the shadow region of the wind turbine, otherwise there is no shadow flicker.”

  Reference: Report entitled “Wind Energy Development Project Town of Coventry, Rhode Island” prepared by Epsilon Associates, Inc. September 11, 2018

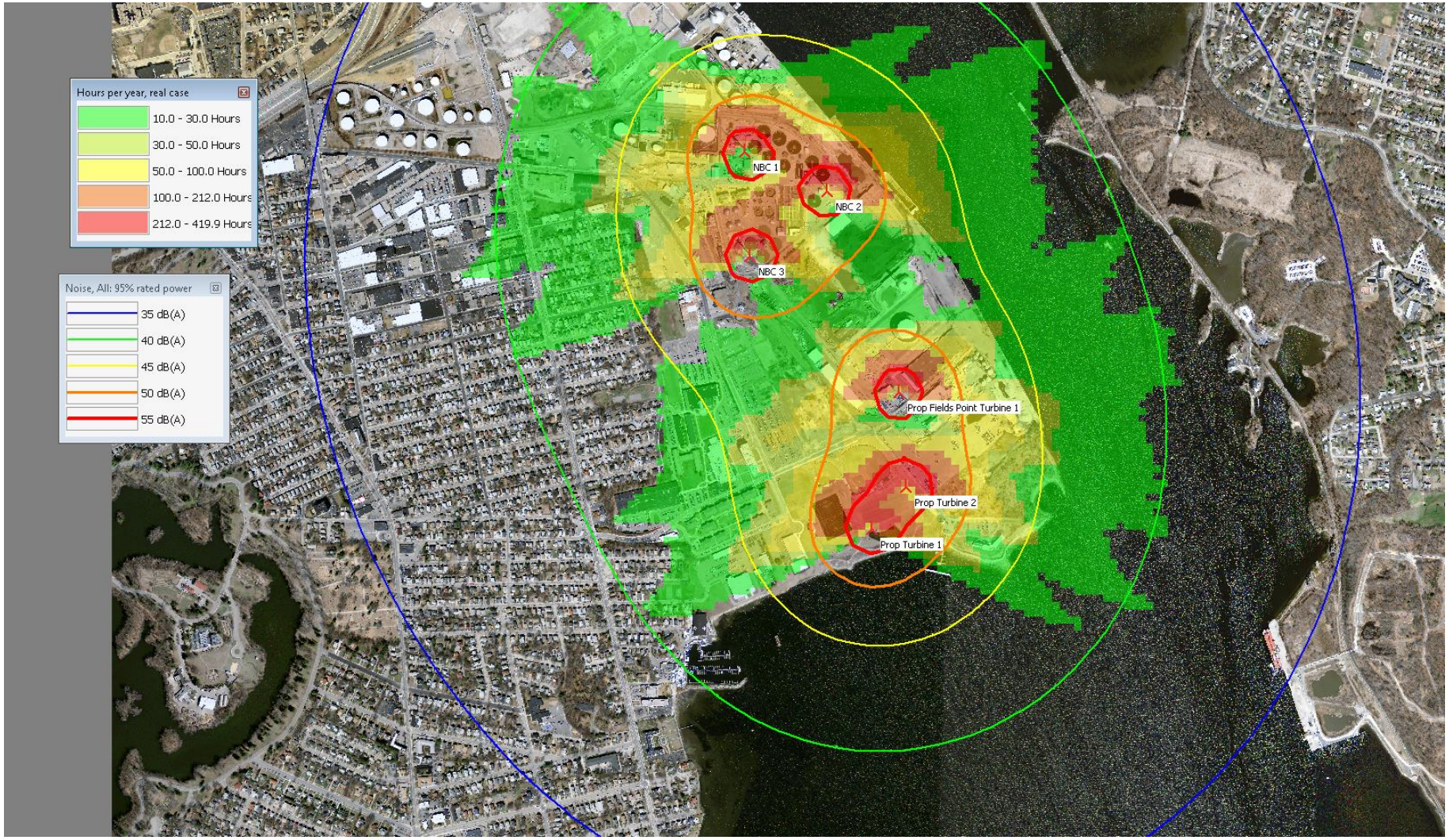
Noise and Shadow Flicker –PVD Wind I (Fields Pt. Drive)



Noise and Shadow Flicker – PVD Wind II (2 turbines/Harborside)

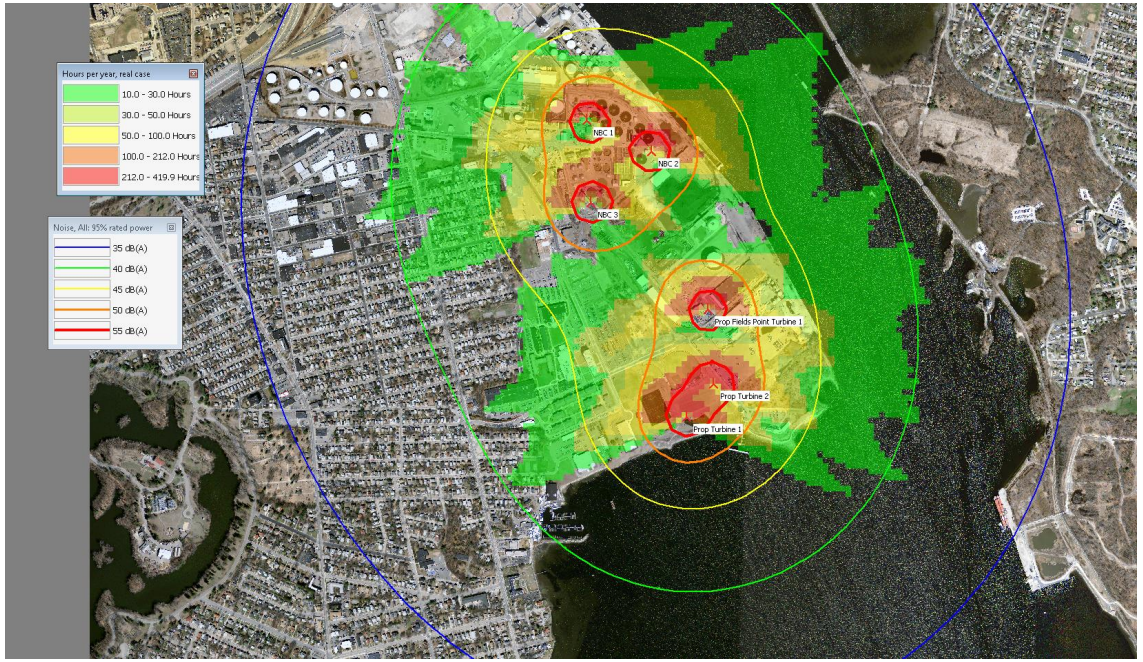


Noise and Shadow Flicker – Combined Existing and Proposed with NBC Existing Turbines



Noise and Shadow Flicker Summary

- Meets the requirements of the ordinance for flicker – Shall not exceed 30 hours per year on any window of an existing residential structure owned by an entity other than the parcel owner where the turbine is located
- Noise levels <= 55 dBA (Chapter 16, Article III "Noise Control"
- No known complaints for NBC turbines located north of the project in closer proximity to residential areas



Chapter 16 Article III "Noise Control":

Zoning District	Time	Sound Limit dBA
Residential	7:00 a.m. to 9:59 p.m. 10:00 p.m. to 6:59 a.m.	65 dBA 55 dBA
Downtown	2:00 a.m. to 7:00a.m. All other times	55 dBA 75 dBA
Commercial/Industrial	2:00 a.m. to 7:00 a.m. All other times	55 dBA 75 dBA
Open Spaces	2:00 a.m. to 7:00 a.m. All other times	55 dBA 75 dBA
Waterfront	2:00 a.m. to 7:00 a.m.	55 dBA

Variance Standards Met

1. The hardships presented are due to the unique characteristics of the subject land or structure and not to the general characteristics of the surrounding area; and is not due to a physical or economic disability of the applicant:
    - The height of the wind energy systems is necessary in order to capture the amount of wind necessary for energy generation without turbulence and is limited by FAA restrictions.
    - Wind turbines must be placed a certain distance apart for optimal performance

2. The hardship is not the result of any prior action of the Applicants and does not result primarily from the desire of the Applicant to realize financial gain.
    - The applicants took no prior action concerning the property (Prior zoning variance granted in 2018 for Harborside III). There is not greater financial gain from the locations of the turbine, and just a desire to establish a working wind energy system.

Variance Standards Met

3. The granting of the requested variances will not alter the general character of the surrounding area or impair the intent or purpose of the Zoning Ordinance or the Comprehensive Community Plan

- Wind turbines are characteristic of the type and developed suited for W-3 zone as a permitted use and the I-2 zone as a special use permit for the land uses designated in the Comprehensive Community Plan.
- The turbines are similar to other located around the Port

4. The relief sought is the least relief necessary in order to relieve the hardship

- Without dimensional variances the wind turbines would not be able to effectively and efficiently produce renewable energy.
- The locations were determined so as not to interfere with wind turbines already located north of the Property

5. The hardship to be suffered by the owner of the Property if the dimensional is not granted amounts to more than a mere inconvenience

- The variances are necessary to create an effective wind energy system

Special Use Permit Standards Met

1. Granting the proposed special use permit will not substantially inure the use and enjoyment of nor significantly devalue neighboring property
   - The proposed wind energy systems are located and design to be sensitive to the use and enjoyment and value of the neighboring properties.
   - The wind energy systems are located more than 1,000’ from a residential zone as per the zoning ordinance
   - The wind energy system are consistent with existing turbines in proximity to the site

Special Use Permit Standards Met

2. Granting the proposed special use permit will not be detrimental or injurious to the general health or welfare of the community

- The noise and flicker have been shown to meet the requirements of the ordinance so as not to be detrimental or injurious to the general health or welfare of the community
- The coastal urban coastal greenway and buffer is protected with the proposed wind energy system sighting