

APPLICATION FOR SPECIAL PERMIT (Planning Board) AND PETITION FOR VARIANCE (Zoning Board of Appeals) FOR WIRELESS COMMUNICATION FACILITY

SUPPLEMENT No. 3

Applicant:	Vertex Tower Assets, LLC		
Site Id:	VT-MA-0090I		
Property Address:	1356 Ashfield Road, Conway, MA 01341		
Tax Assessors:	Facility:	409-013-001	
	Access:	401-013-000	
Property Owner:	Theodore H. Lefkowitz and Barbara Melville		
Date:	May 10, 2022		

- 1. Long-Term Stormwater Pollution Prevention Plan and Operation and Maintenance (O&M) Plan
- 2. Site Plan Supplement Sheet A-4 (Driveway Resurface Plan)

Respectfully submitted,

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LONG-TERM STORMWATER POLLUTION PREVENTION PLAN and OPERATION & MAINTENANCE (O&M) PLAN FOR RAW LAND CELL TOWER

PROJECT OVERVIEW

Vertex Tower Assets, LLC ("Applicant") proposes to construct an unmanned wireless telecommunications facility within a 75'x75' [5,625 square foot (SF)] lease area in the northwestern corner of the property designated as Assessor's Parcel 409-013-001 located off Ashfield Road (MA 116) in Conway, Massachusetts. The project proposes to upgrade an existing gravel driveway and install a new extension to the tower facility. The facility itself will be constructed of a 60'x60' (3,600 SF) fenced-in compound surfaced with clean 3/4" stone over filter fabric. A galvanized steel monopole supporting antenna equipment will be placed on a reinforced concrete foundation below grade. Ground and monopole space will be allotted for up to four carriers. A common utility area will be located at the southeast side of the compound. The project also includes the addition of stormwater facilities for runoff treatment tributary to the proposed tower compound and driveway improvements.

The project seeks to avoid drainage impacts to surrounding resources by directing sheet flow runoff through existing vegetated areas that promotes sediment removal through filtering, absorption, and settling as the velocity of flow and resultant energy is reduced. Structural Best Management Practices (BMPs) along the tower compound and gravel driveway include stone diaphragms, vegetated or ripraplined swales, riprap check dams, reinforced ditch turnouts with level spreaders, plunge pools, culvert outlet energy dissipation, and water bars. The project will require disturbance of ~83,500 square feet of land, with an additional ~11,800 square feet to upgrade an existing gravel driveway.

The proposed site improvements are shown on the plans provided under separate cover entitled *"Conway 2; VT-MA-0090I; 1356 S. Ashfield Road; Conway, MA 01341"* latest revision dated February 9, 2022, and supplemental driveway upgrade plan included with this submittal, as prepared by ProTerra Design Group, LLC.

OWNER AND RESPONSIBLE PARTY

Landlord (Lessor/Property Owner):	Telecommunication Facility Lessee & Responsible Party:	
N/F Barbara K. Lefkowitz	Vertex Tower Assets, LLC	
P.O. Box 611	155 South Street, Suite 102	
Conway, MA 01341	Wrentham, MA 02093	

The Responsible Party has obtained ground and access leases from the Owner which allows for maintenance of the stormwater system and the associated telecommunications equipment.



CONSTRUCTION MANAGEMENT

Contractor:	
Address:	

Phone Number: _____

A construction manager with adequate knowledge and experience on projects of similar size and scope shall be employed to oversee all site work related construction. The contractor shall incorporate appropriate techniques to control sediment and erosion pollution during construction in accordance with the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas.

Dewatering activities (if required) shall be directed towards a berm and filter sack to promote infiltration into the ground.

EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs)

During construction, silt-laden runoff or discharge from dewatering operations (if necessary) will be prevented from exiting the construction area untreated. Siltation barriers consisting of a filter fabric silt fence, wood chip berms, straw bales or silt socks will be erected in advance of construction along the down-gradient edge of all disturbed areas and maintained throughout the construction period. The control of dust and erosion during the construction period will be managed using a number of Best Management Practices (BMPs) described below and as shown on the Erosion Control sheets (EC-1 and EC-2) of the Construction Drawings.

Stabilized Construction Entrance

An apron constructed of coarse aggregate over a geotextile fabric shall cover the transition between the existing driveway and the proposed driveway. The size and construction of the entrance is shown on the EC-1 and EC-2 sheets. This entrance shall be inspected daily and maintained throughout construction activities and optionally removed after completion.

Temporary Sediment Traps (During Construction)

Small depressions that have stormwater runoff directed into them for increase retention time that promotes settling out of suspended solids. Tributary drainage area shall be under 1 acre. The storage volumes should be 1,800 cubic feet per acre of tributary area.

Silt Fence, Reinforced with Straw Bales as Required (Compost Berms & Socks can be used as alternatives)

Silt fence or silt sock is installed at the down gradient limit of work. It should be trenched into the ground 6" and staked without drooping. The woven fabric will allow the passage of stormwater while filtering out suspended solids. Straw bales give added filtering and erosion control. Every 100' two bales or silt socks shall be placed and staked perpendicular to the fence. Straw bales shall be inert straw or salt hay type.



Chipping Trees & Slash Debris (wood chip berms)

Residual materials made available from tree and brush clearing and grubbing the site shall be used to intercept and retain sediment from the disturbed areas. A temporary sediment barrier constructed of wood chips may be installed along the perimeter of the disturbed areas. These barriers are stable and composed of natural materials reused on-site requiring small amounts of maintenance. At the completion of construction the shredded or chipped wood shall be spread as ground cover to provide stabilization over the disturbed areas.

<u>Dewatering</u>

Although groundwater is not anticipated, if dewatering is required, discharges shall be directed through a settling pool or filter bag prior to discharge and infiltration into the ground. Outflow of silt-laden runoff shall not be permitted to flow directly into resource areas. Upon completion of site stabilization, the BMP's and conveyance systems shall be thoroughly cleaned of silt and sediment and made ready for the proposed operation. Discharge points shall be set back from the edge of the resource areas and monitored by qualified personnel to ensure no impacts to resource areas and compliance with applicable federal and state regulations. Discharges shall be free from visible floating, suspended, and settleable solids that would impair the functions of the wetlands and downstream river.

Concrete Washout Pit

A concrete washout pit/area must be designated to receive wash water from washing of tools and concrete mixer chutes, liquid concrete waste from dump trucks, mobile batch mixers, or pump trucks. Concrete washout activities must be conducted in a manner that does not contribute pollutants to surface waters or stormwater runoff. Concrete washout areas may be lined or unlined excavated pits in the ground, commercially manufactured prefabricated washout containers, or aboveground holding areas constructed of berms, sandbags or straw bales with a plastic liner.

ON-GOING MAINTENANCE CONTRACT

The Responsible Party shall hire appropriate staff, contract with a maintenance company, or designate a qualified party to complete ongoing maintenance for the tower compound, access drive, and stormwater features for the facility.



LIVING DOCUMENT PROVISIONS

This document shall be updated as necessary to reflect new procedures, technologies or requirements over the life span of the facility. Ultimately, the Responsible Party will have the authority to implement a plan and frequency of maintenance as required.

MAINTENANCE LOG

The Responsible Party shall develop and maintain a log of inspections, maintenance, repairs, and disposal (including location of disposal) during the life of the project. Records shall be maintained for at least three years and be made available to regulatory agencies in accordance with the provisions of the Massachusetts Stormwater Handbook. A sample of such a maintenance log is provided.

GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION

The Responsible Party shall maintain good housekeeping practices by maintaining a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater and degrading water quality. This includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques.

Common areas where good housekeeping practices should be followed shall include: material storage areas, vehicle and equipment maintenance areas, and loading areas. Good housekeeping practices must include a designated and secure location for garbage. A schedule for regular pickup and disposal of garbage and waste materials during construction and routine inspections of containers for leaks and structural integrity shall be developed. After construction, no trash shall be kept on-site and shall be removed by service technicians or contractors when they leave. Portable toilets shall be installed on site and maintained throughout construction. Excess concrete and cleanout water from redi-mix vehicles shall be directed towards small excavations or constructed boxes for cleanup. Drainage conveyance systems shall not be used for this purpose.

MINIMIZING EXPOSURE

The Responsible Party shall minimize exposure of potential pollutant sources from coming into contact with precipitation and being picked up by stormwater and carried into drains and surface waters. All materials shall be plainly labeled and stored in an appropriate container in an appropriate location. All activities which can generate sources of contaminants shall be contained.



LONG-TERM DRIVEWAY: MAINTENANCE

The gravel driveway must be maintained during active use, after construction operations have been completed, and after major storm events to ensure that the drainage structures are functioning properly. Prior to final completion and full occupancy of the telecommunications facility, a representative of the Contractor and/or Engineer shall properly instruct the user of the required maintenance responsibilities to maintain the effectiveness of the driveway and drainage system. The Responsible Party will implement the procedures and frequencies under their current plan and inspect the systems as needed to maintain maximum effectiveness.

Gravel Driveway

During the construction of the gravel driveway, the contractor shall verify the subgrade provides adequate strength to support the gravel base and gravel top layers. If weak or soft spots are encountered during construction, an AASHTO Class III geotextile reinforcement or angular stone layer shall be installed along the subgrade prior to placing any structural fill or gravel base. Groundwater can affect the strength of the driveway subbase. In areas of cut, subdrains shall be installed and outletted to daylight to facilitate the removal of groundwater interaction with the driveway section.

After the completion of construction, maintenance items that should be performed routinely include:

- Grading and shaping the driveway surface to maintain a distinct in-sloped, out-sloped, or crown shape to move water rapidly off the road surface
 - Do not leave a berm on the side of the driveway that could channel stormwater down the driveway
- Compacting the graded driveway surface to keep a hard driving surface and prevent the loss of fines. Replace surfacing material when needed
- Removing ruts through rolling dips and water bars
- Replacing and/or repairing rock armor or vegetation used for slope protection, scour protection, or energy dissipation
- Trimming roadside vegetation adequately, but not excessively, for sight distance and traffic safety
- Cleaning sediment and debris accumulation within drainage culverts
- Check for slide debris and remove as needed
- Refer to "Matrix of Road Surface BMP's For Maintenance Work"



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Matrix of Road Surface BMP's For Maintenance Work				
What you observe	How bad is the problem	How to fix it		
Improper drainage	Minor	 ☑ Grade shoulders and ditches ☑ Clean ditches ☑ Install waterbars if appropriate 		
Improper drainage	Major	 ☑ Clean ditches ☑ Reconstruct surface, base, and drainage ☑ Install waterbars if appropriate 		
Dust	Minor	Apply liquid/solid dust control		
Dust	Major	Add minor gravel, regrade, compact		
Improper Cross Section	Minor	 Reshape (blading or dragging), Reshape with minor added material 		
Improper Cross Section	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Potholes	Minor	☑ Spot regravelling		
Potholes	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Rutting	Minor	 Reshape (blading or dragging) Reshape with minor added material 		
Rutting	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Loose Aggregates <i>or</i> Ravelling	Minor	 Reshape (blading or dragging) Reshape with minor added material 		
Loose Aggregates or Ravelling	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Corrugations	Minor	 ☑ Reshape (blading or dragging) ☑ Reshape with minor added material 		
Corrugations	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Soft Spots	Minor	 ☑ Reshape (blading or dragging) ☑ Reshape with minor added material 		
Soft Spots	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		
Depressions	Minor	 ☑ Reshape (blading or dragging) ☑ Reshape with minor added material 		
Depressions	Major	 ☑ Regrade ☑ Add major gravel, regrade, compact 		



LONG-TERM BMPS: MAINTENANCE

Prior to final completion and full occupancy of the development, a representative of the contractor and/or Engineer shall properly instruct the user of the required maintenance responsibilities to maintain the effectiveness of the drainage system. The Responsible Party will implement the procedures and frequencies under their current plan and inspect the systems as needed to maintain effectiveness.

RIPRAP SWALES

During the construction phases of the project, riprap swales shall be inspected monthly and cleaned as necessary and/or after storms events with 1" of rainfall or greater. Thereafter, this structure shall be inspected every six months during the owner's regular maintenance of the grounds.

Cleanings shall include:

- Repairing stone
- Removal of large vegetation and trash
- Removal of excess sediment accumulation
- Check for signs of rilling/gullying and repair with soil, stone, and vegetation as needed
- Refer to "Matrix of Ditch BMP's for Maintenance"

Matrix of Ditch BMP's for Maintenance				
What you observe	How bad is the problem	How to fix It		
Erosion in Ditch	Minor	 Perform regular maintenance Line ditch appropriately Install velocity controls* 		
Erosion in Ditch	Major	 Perform regular maintenance Regrade ditch Line ditch appropriately Install velocity controls* 		
Ditch can't handle volume	Minor	 ☑ Install ditch turnouts ☑ Increase ditch width/depth 		
Ditch can't handle volume	Major	 Install ditch turnouts Construct diversion itches/berms Increase width/depth 		

* When making decisions about the use of velocity controls, keep in mind that the size of the ditch and amount and velocity of the water will determine the type and the design. The use of velocity controls in anything but a small shallow ditch should generally be referred to an engineer to ensure appropriate design.



Vegetated Swales

During the construction phases of the project, the vegetated swales shall be inspected monthly and cleaned as necessary and/or after storms events with 1" of rainfall or greater. Thereafter, this structure shall be inspected every six months during the responsible party's regular maintenance of the grounds.

Maintenance shall include:

- regularly (2-3 times a year) mowing the grass (4-6" height)
- cleaning sediment buildup, and reseeding bare spots
- Check for signs of rilling/gullying and repair with soil and vegetation as needed.

<u>Culvert Outlet Energy Dissipaters / Plunge Pools / Ditch Turnouts with Level Spreaders</u>

During the construction phases of the project, the Culvert outlet energy dissipaters, plunge pools, and ditch turnouts with level spreaders shall be inspected monthly and cleaned as necessary and/or after storms events with 1" of rainfall or greater. Thereafter, these structures shall be inspected and cleaned at least once per year or as needed during the responsible party's regular maintenance of the grounds.

Cleanings shall include:

- Removal of vegetation
- Removal of excess sediment accumulation and inspection of condition of stone

<u>Water Bars</u>

During the construction phases of the project, the water bars shall be inspected monthly and cleaned as necessary and/or after storm events with 1" of rainfall or greater. Thereafter, these structures shall be inspected and cleaned as necessary at least once per year. Important items to check for include signs of rilling/gullying and repair with gravel as needed.

Cleanings shall include:

- Removal of excess sediment accumulation and inspection of condition of gravel filled area
- Reshaping of the ridge
- Inspection of the outflow end of the water bar into the adjacent drainage swale.

Forested Vegetated Filter Strips

The forested vegetated filter strips shall be inspected monthly to monitor the vegetation growth and as necessary after storm events with 1" of rainfall or greater during the construction phases of the project. Thereafter, the forested vegetated filter strips shall be inspected at least once per year as needed during the responsible party's regular maintenance of the site. Maintenance shall include cleaning sediment buildup and verify sediment is not leaving the site.

