

**RE:** Eco-Site / T-Mobile  
**Site:** VA-0003 / 7FBU103  
Plank Road  
Fredericksburg, VA

Please accept the enclosed application and materials on behalf of Eco-Site in partnership with T-Mobile. Network Building + Consulting is representing Eco-Site in its request for a Special Use Permit to construct a wireless telecommunications facility on the 3900 block of Plank Road.

Eco-Site is a wireless infrastructure developer servicing carriers in need of solutions for network expansion and densification. T-Mobile is a national provider of wireless telecommunications services, operating consumer voice and data networks pursuant to exclusive licenses from the Federal Communications Commission (FCC).

Eco-Site is proposing to construct a 150-foot monopole on the property identified above. T-Mobile will install antennas and equipment on the tower and inside and associated fenced equipment compound.

Please feel free to contact me with any questions, concerns, or requests for information.

Sincerely,

Justin David Blanset  
Zoning Manager  
Network Building + Consulting

jblanset@nbcllc.com  
908.902.9110

**STATEMENT IN SUPPORT OF REQUEST**  
**FOR SPECIAL USE PERMIT**

T-Mobile Northeast LLC ("T-Mobile") has identified a need for expanded coverage and capacity in the area of Spotsylvania County, Virginia, west of the City of Fredricksburg along Route 3 (Plank Road). Eco-Site, in partnership with T-Mobile, is proposing to establish a new wireless facility to serve this need at the following location:

**Address:** Plank Road (approximately 3920)  
**Parcel:** 23-22-2

The parcel is a 1.4-acre lot owned by Central Crescent Investments, LLC. The lot contains a disused parking lot, and has no active uses. Pursuant to a lease with the property owners, Eco-Site would construct a 150-foot monopole tower. T-Mobile's antennas and some equipment would be mounted at the 150-foot level on the tower, and ground equipment would be placed within a fenced compound area.

The public has an interest in robust and complete network service, both for public safety and for convenience and general welfare. The FCC currently estimates that more than 70% of 9-1-1 calls are placed from mobile devices, and that percentage is expected to grow. Additionally, mobile devices account for over 55% of all internet traffic. More than 75% of "smartphone" owners use mobile data for navigation, a service which is used by utility companies, transportation services, and the general public.

T-Mobile's antennas and equipment will serve the Spotsylvania County area to the west of the City of Fredericksburg along the Route 3 corridor, supporting local uses of its data and voice networks for public service, commerce, and communication. Telecommunications carriers must locate antenna sites according to a network design within limited geographic parameters. Signal loss from areas unserved by the network create service disruptions. Such incomplete systems are not consistent with carriers' requirements to provide continuous coverage as defined by their FCC licenses.

Eco-Site submits and respectfully requests that Spotsylvania County grant this appeal for a Special Use Permit to establish the facility, for the use of T-Mobile and any future collocators.

**Statement of Need and**  
**Elimination of Alternative Candidates**

T-Mobile has identified this area as underserved on its voice and data networks within an area it serves under its exclusive FCC licenses. As evidenced by the attached coverage diagrams, the proposed site would allow T-Mobile to increase coverage to the surrounding area, including residential areas to the north and south of Plank Road and the commercial corridor along the highway. T-Mobile is required by its FCC licenses to provide continuous coverage in its market areas to an increasing percentage of the population within certain timeframes.

In addition to expanding the footprint of effective coverage in the area, this site will allow T-Mobile to address capacity issues at several of its other sites. T-Mobile's existing sites 7FBU001 and 7FBU011 have experienced peak and average demand that exceed the bandwidth those sites are able to

service, resulting in service interruptions and other failures. Upgrades have been performed at these and other surrounding sites, but an additional antenna location is needed to meet demand. The new proposed site will both assume some of the traffic from these sites and allow the operating profiles to be tweaked to further optimize coverage in the area.

Additionally, the existing towers at the Carl D. Silver (Central Park) and Spotsylvania County Landfill locations, including T-Mobile's 7FBU001 and 7FBU011, are at or near maximum capacity for structural loading. With new, stricter structural standards proposed to be adopted by the American National Standards Institute next year, these tower will likely not be able to accommodate many future modifications. As a result, the proposed new location will serve a function for carriers in the future (including, but not limited to, T-Mobile) seeking to upgrade coverage in the area.

The areas nearby the proposed facility lack any candidates for collocation to achieve the desired coverage goals. T-Mobile is already located at the two closest structures of sufficient height – the Central Park location and the Spotsylvania County Landfill. Although a second tower is located adjacent to T-Mobile's location 7FBU011 at the Spotsylvania County Landfill, collocating a second site in such immediate proximity to an existing site is not a viable way to increase network capacity or coverage. Due to zoning height district regulations, there are no other viable structures in the target area.

T-Mobile also considered collocation at the nearest existing structures of viable height. T-Mobile will need antennas at a certain height in order to obtain proper signal propagation. Most structures in the area are below the tree line and would thus be inappropriate for collocation. Two structures of viable height were identified: the existing water tank at 11919 Cherry Road and the approved Verizon tower to be constructed at 5325 Harrison Road. As shown by the enclosed coverage diagrams, neither site would have a significant effect on coverage in the targeted area surrounding Route 3, due to distance from the target area and topography.

Given the lack of collocation candidates in the area, Eco-Site anticipates that this facility may also serve future demand from other carriers. The site will be designed to accommodate multiple collocators.

### **Compliance with Performance Standards**

Eco-Site, on behalf of itself or on behalf of T-Mobile as appropriate, hereby requests a finding that its proposal is in compliance with, or requests a waiver of, the requirements of Section 23-7A.4.1, as follows:

- 1) The structure is designed to accommodate at least two collocators in addition to T-Mobile, as per the enclosed tower design document.
- 2) The tower will be designed to trisect in case of failure, with an ANSI collapse zone of 50 feet. The required 110% setback (55 feet) is demonstrated on the enclosed design drawings. This 55-foot setback exceeds the minimum zoning district setback requirements in this zone in all directions.
- 3) T-Mobile is partnering with Eco-Site for this application and undertakes to operate equipment continuously on the proposed structure for more than 1 year.
- 4) The proposed facility will have no adverse impact on historic resources, per the enclosed report from the State Historic Preservation Office.

- 5) The proposed facility will be surrounded by an eight-foot fence that includes anti-climb wire. The fence will be secured from unauthorized access. The tower itself will also include industry standard anti-climb design.
- 6) All existing vegetation will be maintained except for a small portion in the southwest corner of the proposed compound area which is currently occupied by apparently invasive weeds and one decorative tree located within the proposed compound area. The proposed compound is screened by the existing tree line to the south, an existing evergreen row to the east, and by setbacks and existing commercial development on other sides. To the extent that any further vegetation could be required, Eco-Site requests relief from the requirement pursuant to subsection (15) because the area surrounding the proposed compound is almost entirely impervious concrete.
- 7) The proposed tower, at 150 feet AGL and 435 feet AMSL, is below the threshold required for FAA registration at this location. The structure will maintain a galvanized steel finish, and antennas and equipment located on the tower will be utility gray or a similar neutral color. To the extent that no lighting is required by federal regulations, no lighting will be installed on the tower, unless it is a condition of approval by Spotsylvania County, in which case Eco-Site will comply with the condition. All new utility lines will be trenched underground from the nearest access point to the compound.
- 8) T-Mobile represents that a 150 foot tower is the minimum height required to serve its target areas, which cannot be effectively served by surrounding existing structures. As demonstrated by the enclosed coverage diagrams, locations at lower elevations would result in significantly degraded coverage.
- 9) Per the enclosed letter from T-Mobile's RF engineer, the proposed site will not cause any interference with any Spotsylvania County emergency system or equipment for television and radio broadcast. In the event that interference does occur outside of the frequency ranges exclusively licensed to T-Mobile, they will take the necessary measures to resolve any issues.
- 10) Should Spotsylvania County request it, space will be made available on the proposed tower and in the associated equipment to collocate their equipment.
- 11) Eco-Site and T-Mobile both represent that they operate their facilities in compliance with all applicable federal, state, and local laws and regulations, and endeavor to do so at this facility.
- 12) Eco-Site and T-Mobile both endeavor to remove any equipment from this facility considered abandoned, in accordance with the County Code.
- 13) Eco-Site endeavors to conduct the required safety inspection in accordance with the most current version of ANSI EIA/TIA-22 annually once the proposed tower is constructed, and to submit the report to the Director of Planning.
- 14) For purposes of issues relating to this application only, the contact person during the approval process is the signor of this letter. For all other purposes once the facility is constructed, the contact for the tower owner is as follows:

John McAuliffe  
Northeast Project Manager, Eco-Site Inc.  
240 Farm Leigh Road, Suite 415  
Durham, NC 27707  
(631) 448-7373

## Enclosures and Exhibits:

- Check # [    ] for \$12,135 filing fee
- Completed Special Use Application including signed Power of Attorney
- Exhibits:
  - (a) Scaled drawings depicting the proposal in detail.
  - (b) Photo simulations based on the visual impact assessment (balloon fly) of July 18 and 19.
  - (c) Certification of T-Mobile RF engineer that facility will not exceed applicable NIER limits or cause harmful interference.
  - (d) Statement of T-Mobile RF engineer of coverage objectives.
  - (e) Inventory of existing T-Mobile sites. Eco-Site has no existing sites within the required area.
  - (f) Propagation maps showing existing and proposed coverage in the area. Comparative coverage at decreasing increments and at other existing/approved structures in the area are included.
  - (g) Structural drawing and calculation from tower designer showing the structural capacity of the proposed structure.
  - (h) Eco-Site's collocation policy for the proposed site.
  - (i) FAA air navigation analysis.
  - (j) NEPA environmental compliance report, including SHPO documentation.
  - (k) T-Mobile's active FCC licenses at this location.
  - (l) Letter certifying the ANSI fall zone design of the proposed structure.