

**Harnett County, North Carolina**  
**Telecommunications Site Review**  
**Collocation Application**

**CityScape**

CONSULTANTS, INC.

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Orlando, Florida 32806  
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April 7, 2022

Mr. Jay Sikes  
Planning, Central Permitting & Inspections  
108 East Front Street  
Lillington, NC 27546

**RE:**

**PROVIDER/ID:** T-Mobile/5RA0965A  
**OWNER SITE NUMBER:** Utility Services Holly Springs  
**FACILITY OWNER:** Harnett Regional Water  
**ADDRESS:** 6908 Cokesbury Road, Duncan, NC, 27540  
**COORDINATES:** 35.564379 N; -78.870929 W  
**COUNTY NUMBER:** LUP#2202-0002

Dear Mr. Sikes,

At your request, on behalf of Harnett County, North Carolina (“County”), CityScape Consultants, Inc. (“CityScape”), as telecommunications consultant for the County, has considered the application provided by Telecad Engineering (“Submitter”) on behalf of T-Mobile (“Applicant”) to collocate equipment on an existing, one hundred fifty-six (156) foot *water tank (165 feet with appurtenances)*. The structure is owned by Harnett Regional Water and is located at 6908 Cokesbury Road, Duncan, North Carolina, 27540.

T-Mobile is adding the equipment to the water tank to enhance their cellular connectivity. The Applicant proposes to add six (6) antennas, six (6) remote radio units (RRU’s) and three (3) hybrid feed lines to an existing corral gate on the existing water tank. AT&T is also on the water tank and both T-Mobile and AT&T will be on the same corral gate at the one hundred sixty (160) foot elevation.

The Applicant proposes to add a new 10’ x 15’ concrete pad on which there will be (2) cabinets, a 48 kW diesel generator and other ancillary equipment. There will be a two (2) foot wide ice bridge going from the pad to the nearest leg of the water tower as a path for the three (3) new cables. All of the Applicant’s ground-level additions will be within the existing fenced compound.

The Applicant provided a structural analysis, dated December 4, 2021, prepared by Hagen Engineering International, Inc., signed and sealed by a North Carolina licensed Professional Engineer. The analysis was conducted according to the AWWA D100 with a design speed of 100 mph (fastest mile, 120 mph 3 second gust ASD). The report indicated that the structure will be adequate to support the proposed collocation by T-Mobile.

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The Applicant also submitted a mount analysis report dated December 6, 2021 for the existing corral and mounts on which the new antennas and RRU's will be installed. This analysis was conducted by FGV PLLC in accordance with the TIA-222-H Exposure Category C Risk Category II standards. The report indicated that the corral and mount connections were sufficient to support the proposed additional loads.

The Applicant has submitted the necessary FCC compliance letter, dated February 10, 2022 from T-Mobile stating they will comply with the FCC rules regarding interference to other radio services and safeguarding of human exposure of radio frequency energy.

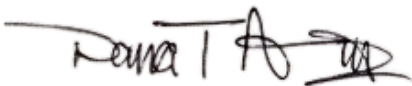
It is noted on the construction drawings that T-Mobile will paint the corral and all antenna mounts, mounting brackets and hardware to match the tower. Cables will be installed in the inside face of the tank leg and cables over the bowl of the tank must have four (4) foot separation from the tank logo and be shrouded with shrouding painted to match the tank.

The generator must be installed in accordance with all relevant building, electrical and fire codes, and the Applicant must observe the maximum acoustic noise level as well as the allowable testing hours as per the County ordinance.

To qualify as an eligible facilities request under FCC Rules (47 CFR§1.6100), a service provider cannot substantially change the physical dimensions of the support structure ("substantial change" being defined in 47 CFR §1.6100(b) (7)), and under North Carolina State law, the ground compound cannot be expanded by more than 2,500 square feet. Neither is applicable in this situation and therefore *CityScape recommends approval* as the proposed changes qualify for streamlined processing at staff level.

I certify that, to the best of my knowledge, all the information included herein is accurate at the time of the report. Cityscape only works for public entities and has unbiased opinions. All reviews are based on technical merit without prejudice per prevailing laws and codes. Regarding the structural analysis reports, Cityscape did verify that the proposed appurtenances shown by Applicant's construction drawings were listed in the structural reported, but did not independently verify the calculations, statements or the appropriateness of the analysis criteria contained therein. County staff should verify compliance with applicable building and fire codes prior to issuance of a permit for this modification.

Respectfully submitted,



Dana T. Moore  
Project Engineer  
CityScape Consultants, Inc.

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