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January 2, 2018

Bourbon County Joint Planning Commission
Attn: Andrea Pompei Lacy
525 High Street
Paris, KY 40361

RE: Supplemental Filings – Revised Tower Height
Uniform Application to Construct a Wireless Communications Facility
Applicant: New Cingular Wireless, PCS, LLC, a Delaware limited liability
company, d/b/a AT&T Mobility
Location: Roseberry Road, Carlisle, KY 40311
Site Name: Cane Ridge

Dear Ms. Pompei Lacy:

The following enclosed document is provided as a supplement to the filed Uniform Application in connection with the subject case:

1. A report prepared by AT&T Mobility Radio Frequency Engineers discussing the radio frequency need in this area and the suitability of the proposed 199' tower (195' monopole with a 4' lightning arrester).

Please file this correspondence in the case record for the subject Uniform Application.

Sincerely,

A handwritten signature in blue ink that reads 'David A. Pike'.

David A. Pike
Attorney for Applicant



Radio Frequency Engineering Statement

in support of Application for

Proposed AT&T Mobility Wireless Communications Facility

Roseberry Road, Carlisle, KY 40311

Site Name: Cane Ridge

BACKGROUND

AT&T Mobility (“AT&T”) is an FCC-licensed wireless communications service provider that provides essential wireless voice and data services to residential and commercial customers. AT&T delivers these services over a network of sites (i.e., antennas mounted on a support structure, with associated radio transmitting equipment) which are linked to one another and which transmit and receive signals to and from mobile phones and other wireless communication devices.

Each site provides coverage for users located in a particular area. The geographic area covered by a given site is determined by factors such as site elevation, local topography, relative location and elevation of adjacent sites and customer usage patterns for the area. The volume of usage that can be handled by an individual site is limited, and sites must be carefully located to provide sufficient coverage for users in a given area. Sites must also be located with reference to other sites in the network to provide seamless mobile connectivity while also avoiding interference with one another.

There is a significant gap in AT&T’s wireless coverage in the vicinity of the proposed site. The gap exists because there is insufficient wireless service infrastructure in the subject area. As part of AT&T’s overall plan for Bourbon County, a new wireless communications facility is needed to close this gap so that quality service may be provided to wireless service users.

To remedy this problem, new wireless communications antennas and associated equipment must be located within a prescribed area (as discussed further below) and at a specific elevation in order to be integrated into AT&T’s existing network to provide coverage in the subject area. Accordingly, AT&T proposes to install a 199-foot monopole tower on property located at Roseberry Road, Carlisle, KY 40311 (the “Proposed Facility”). The proposed tower height and selected location are necessary for the Proposed Facility to function properly within AT&T’s network to close the coverage gap.

BENEFIT TO THE COMMUNITY

As wireless communications carriers have evolved, they have become a vital link as a wireless data provider in addition to voice communications. Phones, tablets and even laptop computers can now access the internet quickly and efficiently without the need to be connected to a cable or restricted to a small Wi-Fi hotspot as was the case in the past. This has brought about many new innovations, including devices such as parking meters that can report their status, vending machines that can report their inventory levels, delivery vehicles that report package delivery and receipt and the “connected car,” which will not only stream audio but also be able to share diagnostic information, provide real-time traffic updates, report accidents and caution its owner about speeding or aggressive driving.

Wireless carriers also provide real-time internet access for law enforcement, fire and medical transport vehicles, which not only allows immediate access to information when needed, but can also help determine the closest unit to an area of need and help determine the fastest route to the site of an emergency based on current conditions.

Expanded wireless communications services are also important to businesses that use these services to support their operations. It is becoming common for AT&T to receive service quality inquiries from businesses when they are planning to locate to a new area. They want to know what infrastructure and technology is in place prior to making a move decision. This has also been the case with convention groups when planning future meetings and expositions.

In addition to expanding capacity for voice service in the subject area, AT&T is also expanding its 4G LTE high speed data service, with the goal of providing the most advanced personal wireless experience available to AT&T customers. 4G LTE is capable of delivering mobile broadband speeds up to 10 times faster than industry-average 3G speeds and features lower latency (i.e., the processing time it takes to move data through a network), which will shorten the time it takes to start downloading a webpage or file once a customer has sent. Additionally, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

FIRSTNET

AT&T is pleased to have been selected as the nationwide public safety broadband network provider for the First Responder Network Authority ("FirstNet"), an advanced broadband network dedicated specifically to public safety communications. Congress created FirstNet to address emergency response communications shortcomings that were initially identified in the aftermath of the September 11, 2001 terrorist attacks.

Kentucky Governor Matt Bevin announced the decision for Kentucky to "opt in" to FirstNet in July. The proposed site is designed to be part of FirstNet and will provide coverage and capacity for the deployment of the FirstNet platform. Deployment of FirstNet in the subject area will improve public safety by providing advanced communications capabilities to assist public safety agencies and first responders.

The following documents are attached as addenda to this report to provide the Commission with additional information regarding the benefits of FirstNet:

1. AT&T Press Release: *AT&T Selected by FirstNet to Build and Manage America's First Nationwide Public Safety Broadband Network Dedicated to First Responders*
2. FirstNet.com Frequently Asked Questions

WIRELESS LOCAL LOOP

In addition to expanding and improving voice and data service for AT&T mobile customers, this site will be equipped with wireless local loop ("WLL") technology. As a participant in the FCC's Connect America Fund Phase II (CAF II) program, AT&T is aggressively deploying WLL service infrastructure to bring expanded internet access to residential and business customers in rural and other underserved areas, including the area served by the proposed facility.

WLL will support internet access at the high speeds required to use and enjoy the most current business, education and entertainment technologies. Broadband service via WLL will be delivered from the tower to a dedicated antenna located at the home or business receiving service and will support downloads at 10 Mbps and uploads at 1 Mbps.

SERVICE COVERAGE GAP

AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources, including terrain and clutter databases which simulate the environment and propagation models that simulate signal propagation in the presence of terrain and clutter variation.

The extent of service coverage provided by existing AT&T sites in the subject area is shown on the map included as Exhibit A (page 6) with this Report. The green shading indicates areas with a signal strength level that provides acceptable in-building service coverage (i.e., where users are able to place or receive a call on the ground floor of a building). The blue shading indicates areas with a signal strength level that provides acceptable in-transit service coverage (i.e., where users should be able to place or receive a call from within a vehicle). The red shading indicates areas with a signal strength level where a customer might have difficulty receiving consistently acceptable service, and white indicates areas where there is little or no measurable signal strength.

The quality of service experienced by any individual customer can differ greatly depending on whether the user is indoors, outdoors, stationary, or in transit. AT&T strives to provide consistent service to all users within a coverage area. Accordingly, the blue, red and white areas on Exhibit A are areas where there is currently inadequate service coverage, and a new facility is needed to close the coverage gaps that affect these areas.

AT&T proposes to construct the Proposed Facility to remedy the service issues and close the coverage gaps illustrated by Exhibit A. The map attached as Exhibit B (page 7) depicts coverage in the subject area once the Proposed Facility is built and integrated into AT&T's existing network. A comparison of Exhibit A (i.e., existing coverage) with Exhibit B (i.e., proposed coverage) clearly shows that gap areas will be significantly reduced once the Proposed Facility is operational, and this will expand coverage and improve service quality and availability in the subject area.

EXHIBIT A

Existing Service Coverage Without Proposed Site

This map illustrates existing coverage in the subject area. Note the clear gap in coverage in the vicinity of the Proposed Site location.

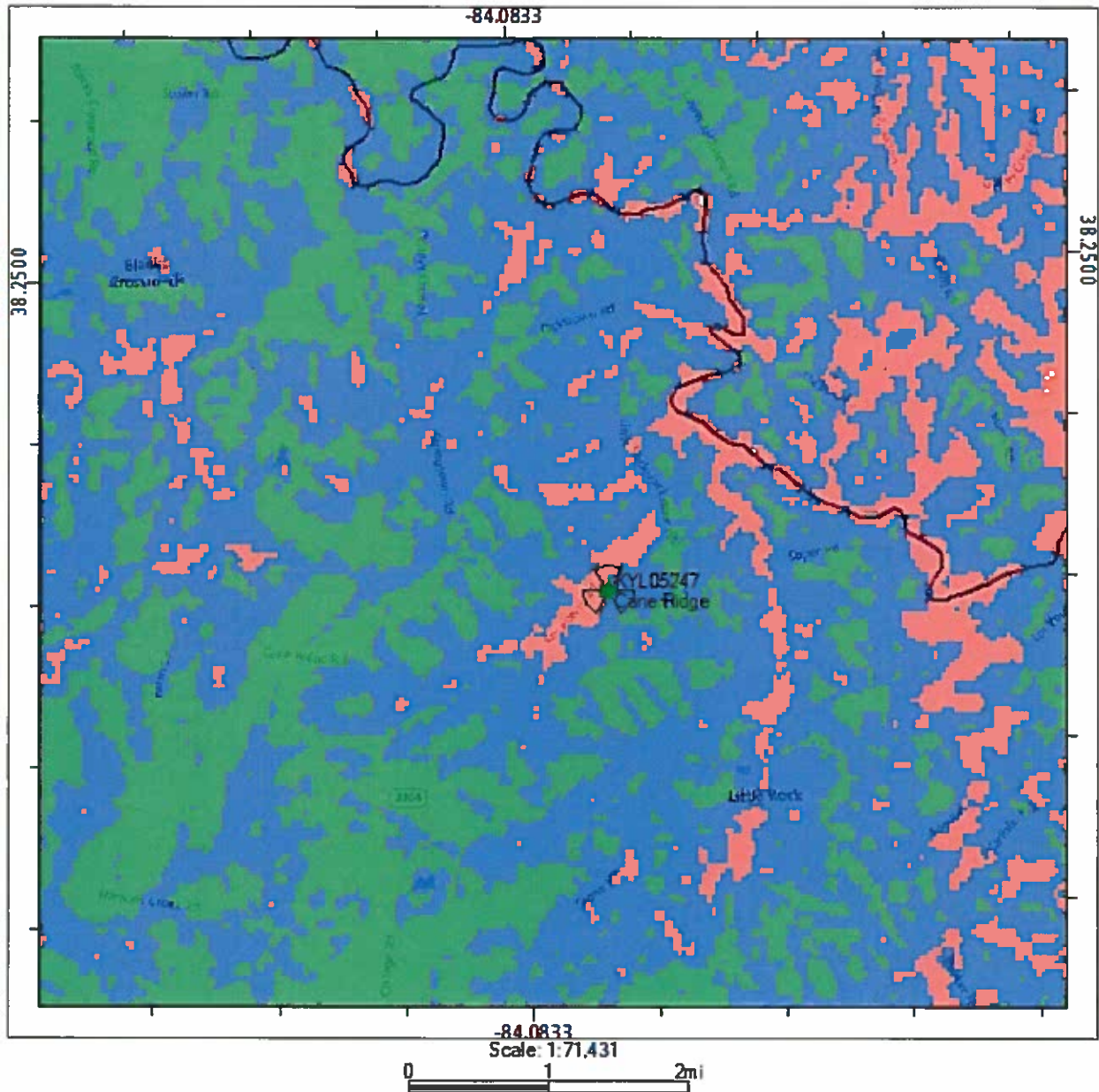
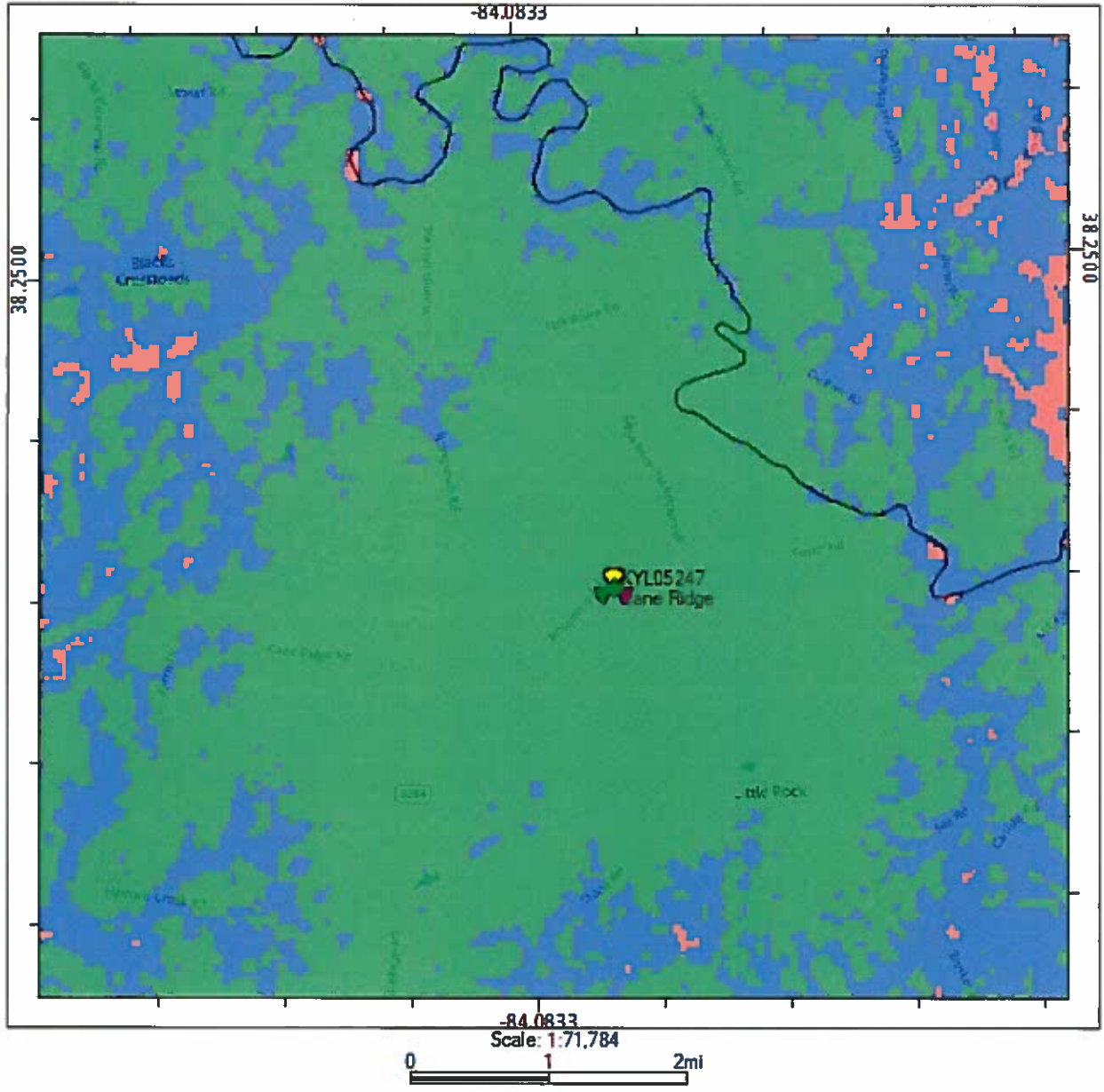


EXHIBIT B

Proposed Service Coverage With Proposed Site

This map illustrates coverage improvements that will be realized with the addition of the Proposed Facility.



- Best Signal Level (dBm) >= -75
- Best Signal Level (dBm) >= -85
- Best Signal Level (dBm) >= -95

AT&T SEARCH AREA

The following Search Area map included as Exhibit C (page 9) shows the area where a new wireless communications facility is needed in order to fulfill the coverage objectives and network design criteria discussed herein. AT&T carefully examined the Search Area to select the Proposed Facility location and has concluded that there is no more suitable location reasonably available for the Proposed Facility.

Whenever possible, AT&T seeks to co-locate its equipment on existing structures, since co-location speeds deployment of new facilities and reduces tower proliferation. However, there are no reasonably available opportunities to co-locate AT&T's antennas on an existing structure that will satisfy the service objectives for this site.

EXHIBIT C

Search Area Map



CONCLUSION

The Proposed Facility will provide a necessary link in AT&T's wireless network infrastructure. The location for the Proposed Facility was chosen to address the service issues described in this report, and the height of the tower proposed as part of the Proposed Facility is the minimum necessary to provide adequate service to the area. Once operational, the Proposed Facility will provide and improve the wireless communications services in the area.



Mike Salvo
Area Manager - RAN Engineering TN-KY
AT&T Mobility