

Rebuilding Infrastructure in America: Investing in Next Generation Broadband

Testimony of Steven K. Berry

President & CEO

Competitive Carriers Association

Before the

United States Senate Committee on Commerce, Science, and Transportation
Subcommittee on Communications, Technology, Innovation, and the Internet

March 13, 2018

Chairman Wicker, Ranking Member Schatz, and members of the Subcommittee, thank you for the opportunity to testify about closing the digital divide and the policies necessary to provide ubiquitous mobile broadband throughout the United States.

I am testifying on behalf of Competitive Carriers Association (“CCA”), the nation’s leading association of competitive wireless providers. CCA is made up of nearly 100 carrier members ranging from small, rural providers serving fewer than 5,000 customers to regional and national providers serving millions of customers, as well as vendors and suppliers that provide products and services throughout the mobile communications ecosystem.

I commend the Subcommittee for its continued focus on closing the digital divide. Building infrastructure for the next generation of services and technologies includes preserving, upgrading, and expanding existing mobile broadband services. CCA is pleased that mobile broadband deployment in rural America is a top priority for Congress, the Federal Communications Commission (“FCC”), and the Administration.

Consumer demand for mobile broadband services is undeniable. In 2016, American consumers used 1.8 exabytes of data on their smartphones, tablets, and other devices connected to wireless networks each month. That amounts to 1.8 billion gigabytes, or by way of comparison, more than 7,000 times the total of all information stored in the Library of Congress. This insatiable use demand for data will grow exponentially, with projections of another five times growth over the next five years.

Ever-growing mobile data use reflects the limitless potential for innovations touching every industry and aspect of life in today’s mobile economy. For example, mobile networks and next generation services are transforming healthcare through remote monitoring and new health treatments, including in rural areas where patients must otherwise drive hundreds of miles to receive care. Precision agriculture technologies allow farmers to become agricultural engineers, reducing economic

resources and increasing productivity on our nation's farmlands and ranchlands. Mobile broadband supports distance learning and creates educational opportunities for students unimaginable only a few years ago. All of these applications are powered by mobile broadband today. As we move towards 5G technologies, applications once considered science fiction will become reality, with networks supporting drones, autonomous vehicles, and artificial intelligence continuing to change our lives.

However, reliance on mobile broadband networks only magnifies the problems associated with being on the wrong side of the digital divide. Indeed, the President's Interagency Task Force on Agriculture and Rural Prosperity recently presented a report focused on e-connectivity for rural America, finding that access to broadband "is not simply an amenity – it has become essential." The Administration has already taken steps to support expanding broadband, including the Presidential Executive Order on Streamlining and Expediting Requests to Locate Broadband Facilities in Rural America, finding that "Americans need access to reliable, affordable broadband Internet service to succeed in today's information-driven, global economy." But more needs to be done.

CCA is proud of our members' work to provide mobile broadband services in rural and remote areas. While they have invested millions of dollars into their communities, Congress, the Administration, and the FCC must work together to enact policies that connect the unconnected. Technology companies recently announced plans to deploy 4G LTE mobile broadband service on the moon – Americans living in rural America deserve no less. To close the digital divide and advance deployment in unserved and underserved communities, competitive carriers need sufficient and predictable sources of funding, streamlined deployment processes, and access to spectrum and equipment.

Legislative Proposals to Rebuild America's Infrastructure Must Include Funding for Mobile Broadband

Bipartisan infrastructure discussions from the campaign trail through the recent Administration proposal to Congress focus on the need for broadband deployment in rural America. As proposals move from ideas to concrete legislative language, it's clear broadband is the centerpiece driving economic growth and jobs in rural America. CCA agrees with this Committee and many other members of Congress that any infrastructure package should include dedicated funding for rural broadband.

The Bipartisan Budget Act, enacted last month, included \$20 billion over the next two fiscal years for rural infrastructure. As Congress determines how to appropriate these funds, it should dedicate resources specifically for mobile broadband deployment. The Administration also has proposed allocating an additional \$50 billion for rural infrastructure in its recent proposal. While the proposal provides funds as block grants to governors and even permits 100% of funding to be used for broadband projects—it does not *require* that any funds exclusively support broadband deployment. The goal of building infrastructure for the next generation cannot be met without specifically building broadband infrastructure.

Funding also should be available on a technologically-neutral basis. The American Recovery and Reinvestment Act of 2009 ("ARRA") included a scoring metric for certain applications for support through the Rural Utilities Service's ("RUS") Broadband Opportunities Program that placed the heavy thumb of the government on the scale to disadvantage wireless carriers. CCA encourages use of grants instead of loans due to the costly, unnecessary bureaucratic red tape that accompanies current RUS loans; however, if loans are provided, they should not be comingled with Universal Service Fund ("USF") resources.

Further, to ensure that funding is well spent, it is important that this Committee maintain jurisdiction over broadband funding programs. With oversight by this Committee, Congress should make

support available through the Department of Commerce National Telecommunications and Information Administration (“NTIA”) or through the FCC. If funding does flow through the FCC, any one-time investments should not jeopardize the critical and ongoing role of USF or place USF under the appropriations process. Commerce Committee oversight of rural broadband support is extremely important, leveraging Commerce Committee expertise and providing a safeguard against waste.

All Programs to Disburse Funding for Broadband in High Cost Areas Must Be Based on Reliable Data

You cannot manage what you cannot measure. Moving forward, it is critical to accurately measure the extent of unserved and underserved areas across the United States to implement practical, useful solutions to expand mobile broadband service to all consumers. As an example, the National Broadband Map was funded through ARRA. While important and well-intentioned, NTIA delivered the map after decisions for deployment funding awards had been made. We cannot afford to distribute funds in the future on a ready, fire, aim basis. Accurate data is an absolute for precisely targeting funds for future broadband buildout.

As another example, the FCC recently released mobile broadband data depicting areas initially deemed eligible for the Mobility Fund Phase II (“MF II”) mechanism of the USF High Cost Fund. While we understand that the map released does not determine final eligible areas, the technological parameters selected by the FCC were not sufficient to produce a map that would reflect the experience you have as you travel throughout your states. CCA has long supported an efficient challenge process that is robust and targeted without overly burdening small providers. Unfortunately, the initial map released by the FCC falls short. CCA cautions against using this data as the basis for MF II or any other funding program, including forthcoming support for broadband infrastructure. We share concerns raised by Senators Wicker, Hassan, Moran, King, Gardner, Klobuchar, Roberts, Blunt, Peters, and Tillis

last week that the map “misrepresents the existence of 4G LTE service in many areas” and accordingly a challenge process may not be robust enough to correct it.

At the same time, CCA appreciates actions by the FCC and other federal agencies to correct the digital divide. In testimony last week, NTIA Administrator Redl noted the need to improve broadband mapping data, including that data must be more accurate, granular, and verified. The President’s budget request included \$50 million to update the National Broadband Map, and as Administrator Redl highlighted the NTIA can also leverage relationships with state and local governments to ensure accuracy. If other agencies lack the resources to establish parameters for data collection to accurately reflect your constituents’ experience, NTIA should revisit the issue prior final to funding decisions.

CCA likewise commends the Senate for unanimously passing S. 1621, the Rural Wireless Access Act, and thanks Senators Wicker and Manchin for steadfastly championing this issue. We urge the House of Representatives to swiftly act to send this important legislation to the President for enactment so that the information used as a basis for USF decisions, or decisions for other similar programs including new infrastructure funding, are grounded in standardized, reliable data that reflects constituents’ expectations.

The Universal Service Fund Must Meet Congress’s Mandate

Regardless of any new support for mobile broadband through infrastructure efforts, ongoing support through USF remains critical. Congress created the USF high-cost program to provide Americans in rural areas with a “reasonably comparable” service as those in urban areas through support that is sufficient and predictable. In implementing this mandate, however, the FCC does not currently define “reasonably comparable” service. CCA supports S. 2418, the Rural Reasonable and Comparable Wireless Access Act of 2018 to establish this standard, and thanks Senators Hassan and Capito for introducing this important bill. If enacted, the FCC must promulgate regulations to establish

this standard, which provides an important step to clarify what services must be available to rural Americans.

Without a set standard, it is not clear that resources allocated by the FCC are sufficient. It is widely understood that the \$4.53 billion budgeted for MF II will not ubiquitously expand mobile broadband networks. Reasonable and comparable standards can inform what parameters should be set for future data collections to revisit the goal of reliable mapping data.

With the focus on securing immediate funds for broadband infrastructure through appropriated resources, Congress also should consider directing the FCC to maintain current USF support for mobile broadband services and conduct the MF II auction after new infrastructure funds are disbursed. This practical action would allow the FCC to more accurately assess the ongoing needs to preserve and expand service after one-time infusions of support, and direct limited resources to areas in need.

Streamlined Infrastructure Siting Policies Increase Certainty and Reduce Costs to Deploy Mobile Broadband

While consumers have come to rely on wireless connectivity, the network itself depends on physical infrastructure, including towers, small cells, wires, and fiber, to connect. Competitive carriers must timely and efficiently deploy this infrastructure. Currently, however, providers must navigate a regulatory maze to gain approval to serve their communities, facing significant application review delays and burdensome, unforeseen fees while working through the federal, state, and local siting processes. To visualize the multitude of regulatory steps it takes to site mobile wireless infrastructure at the local, state, and federal levels, with potential costs and delays at each step, please see the chart attached to this testimony.

Adding another barrier to infrastructure deployment, fees and administrative burdens attached to historic and environmental review processes have escalated sharply in recent years, and these costs

and permitting delays will continue to rise as CCA members deploy to meet consumers' increasing data demands. Without Congressional and FCC intervention, deployment fees will become an increasingly exorbitant cost barrier to ubiquitous broadband deployment. For example, one CCA member operating in portions of Kansas, Colorado, and Nebraska paid over \$107,000 to 36 Tribes for the deployment of just seven towers, in a seven-month period. This is an average of over \$15,000 per tower, solely for Tribal review fees. One CCA associate member was assessed nearly \$3 million in Tribal fees to deploy just under 3,000 nodes across the United States in a one-year period, from 2017-2018. It is not sustainable for carriers to continue expending these enormous funds, especially considering future networks will require denser deployment scenarios.

Fortunately, help is on the horizon. CCA applauds Congress's focus on the issue, and recent steps taken by the Administration and FCC to reduce regulatory burdens, increase certainty, and eliminate needless costs. The bipartisan legislation stemming from this Subcommittee alone demonstrates your commitment to closing the digital divide and connecting all Americans. S. 19, The Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless Act or MOBILE NOW, led by Committee Chairman Thune and Ranking Member Nelson, makes common-sense reforms to federal government siting process, while freeing up valuable spectrum resources for commercial mobile use. S. 1988, the Streamlining Permitting to Enable Efficient Deployment of Broadband Infrastructure Act of 2017 or SPEED Act, spearheaded by Subcommittee Chairman Wicker and Senator Cortez Masto will make it easier to deploy small cells by exempting them from repetitive installation reviews. S. 2381, the Streamlining and Investing in Broadband Infrastructure Act introduced by Senators Klobuchar, Daines, Gardner, and Gillibrand would ensure broadband conduits be included in highway projects, a critical step in the rural buildout process. And S. 1363, The Rural Broadband Deployment Streamlining Act offered by Senators Heller and Manchin would establish best practices at the Department of Interior and Forestry Service by enforcing accountability in the

broadband application process with uniform applications, streamlined processes, direct points of contact with the agencies, and a deemed granted provision.

Further, later this month the FCC plans to vote on a Second Report and Order (“Order”) that will streamline infrastructure siting policies for mobile broadband. As proposed, this Order will exclude small wireless facilities from the environmental and historic review procedures that were designed for large macrocell deployments, update the Section 106 Tribal consultation process, and adopt a shot clock for the FCC’s own processing of Environmental Assessments. Under current siting policies, the same regulations apply to tall towers and macro deployments as to small cells and distributed antenna systems. Building the networks of the future cannot be completed with yesterday’s rules and regulations. Updating these policies for small wireless facilities meets a key proposal from the Administration’s “Legislative Outline for Rebuilding Infrastructure in America,” which finds that small cells are materially different than their predecessors, regarding both size, and visual or actual impact on historic or environmental property. CCA urges Congress to support these efforts and stands ready to help ensure these policies are enacted.

To be clear, small cells are not only deployed in urban areas. In recent conversations with CCA members serving the most rural portions of our country, CCA has heard stories of using small cells to enhance coverage in county seats, schools and meeting centers, and even a popular boat ramp in a recreation area. Last week, I joined CCA member Shentel and FCC Commissioner Brendan Carr in rural Shenandoah Valley, Virginia, to discuss the importance of small cell deployment to Shentel’s network and to the communities it serves. Shentel’s customers use an average of 10 gigabytes of data per month and in some cases, wireless devices are their only connection to broadband. Shentel plans to build out 20 small cells on their network this year in an effort to meet growing consumer data demands. Eliminating costly federal reviews could provide Shentel enough savings to deploy an additional 13 sites, strengthening and expanding their network service area.

Shentel is not alone. Just two weeks ago, twenty-three other CEOs and senior executives from non-nationwide CCA member companies joined together to urge the FCC to streamline infrastructure policies by providing regulatory certainty around siting processes, timelines, and fees to deploy and upgrade mobile broadband services. These companies serve rural populations represented by this Committee: from the upper Midwest, across Appalachia, throughout the Gulf Coast, over the Great Plains, into the desert Southwest and up to Alaska – each committed to bridging the digital divide in their communities. A copy of that letter is attached.

It is important to underscore that infrastructure reform need not pit wireless carriers against the municipalities and states they serve. Instead, streamlined processes will save resources for both carriers and government agencies by eliminating redundant and unnecessary reviews and spurring investment in local communities. Enhancing access to rights-of-way, reducing and eliminating fees, and streamlining siting processes will allow rural communities to connect exciting and innovative new technologies, including precision agriculture, telehealth, and the Internet of Things. Your constituents deserve nothing less, and CCA commends this Committee’s unwavering leadership to address these issues.

Next Generation Services Depend on Increased Access to Spectrum

Beyond funding and streamlined deployment policies, the next generation of mobile broadband services depends on a myriad of spectrum resources. Spectrum is the invisible infrastructure connecting users to towers and base stations. It also is a finite resource, and only available for use through a license or lease by the FCC. As demand for mobile service explodes, all carriers must have access to low-, mid-, and high-band spectrum to deploy next-generation mobile broadband and, eventually, 5G networks. Competitive carriers, in particular, must deploy spectrum that is interoperable within bands to support an equipment ecosystem driven by the scaled economies of the largest carriers. It is equally important that spectrum is auctioned in sufficiently small geographic license sizes that balance local access to

spectrum and the laws of physics with regard to power levels and interference. CCA urges Congress to consider the following policies to ensure that taxpayer-owned spectrum is properly managed.

Auction Deposits. Absent Congressional action to allow depositing auction upfront payments in the U.S. Treasury, FCC Chairman Pai has indicated that the FCC will be hamstrung from auctioning spectrum in the near-term. Auctions are particularly important for competitive carriers that may not have the size, resources, or access to purchase spectrum licenses on the secondary market. While other nations are moving forward with spectrum auctions, particularly to support 5G services, it is critical that the United States does not fall behind. Congress must authorize this change in the auction process and encourage the FCC to auction all bands suitable for mobile broadband use as soon as possible, and the FCC should move forward with a proceeding to begin the auction process.

600 MHz. The first-of-its-kind 600 MHz spectrum auction closed on March 30, 2017, with total bids nearing \$20 billion and most of the winning bids coming from CCA members. CCA commends this Committee for the leadership in authorizing the auction and establishing a new model for spectrum reallocation now proven in the market. Now that the auction has closed, both the wireless and broadcast industries are in the midst of a Congressionally-based 39-month “repack” process to clear broadcasters out of the 600 MHz band as safely and efficiently as possible to allow winning bidders to put this spectrum to use to serve consumers and monetize their investment. The propagation characteristics of the 600 MHz band make this spectrum particularly important for serving rural America. For this reason, completing the transition within the timeline or sooner is critical for economic stimulation and job opportunities across rural areas, as well as setting important precedent for future auctions. Any delay would be detrimental to competition, the public interest, and the economy. CCA commends recent action by the House of Representatives, which passed legislation creating a reserve fund to keep the process on time in the event the allocated resources to repack broadcasters proves inadequate, and encourages the Senate to swiftly consider similar legislation. It is important for

Congress to make funds readily available to ensure that delays do not prevent winning bidders from putting this spectrum into operation as quickly as possible.

mmW. As carriers seek to densify their networks, and as standards are developed for tomorrow's 5G technologies, unique spectrum bands that are newly allocated for mobile broadband use are in high demand. To ensure that competitive carriers are not left behind, policymakers must rapidly auction several high frequency millimeter-wave ("mmW") bands, including the 24 GHz, 28 GHz, 37 GHz, 39 GHz, and 47 GHz bands. CCA commends Senators Gardner and Hassan for introducing S. 1682, the Advancing Innovation and Reinvigorating Widespread Access to Viable Electromagnetic Spectrum Act or the AIRWAVES Act. This bipartisan legislation sets a timeline for future auctions to keep the FCC focused and provide certainty to carriers with regard to when spectrum will come up for auction. We support this legislation and urge inclusion of all bands ready for mobile broadband use to ensure sufficient spectrum is available for all carriers to have a meaningful opportunity to bid and win licenses. The nation's two largest carriers have a foothold in several of these bands through secondary market transactions, necessitating an auction as soon as practicable.

Demand for mobile broadband shows no signs of slowing down. Policymakers must remain focused on promoting the efficient use of spectrum and reallocating frequencies to ensure this finite resource is available for carriers of all sizes to access for mobile broadband use.

All Carriers Require Access to Equipment

Finally, carriers cannot provide next generation mobile broadband service without access to next generation equipment and devices. Even as iconic devices may seem ubiquitous, many smaller carriers serving rural America continue to struggle to get access to the latest devices and are often 12 to 24 months delayed as compared to the largest providers. This harms competition, and results in

technology denial for certain rural Americans. As the industry shifts to next generation technologies and 5G, competitive carriers need access to equipment that is available, affordable, and secure.

As equally frustrating for consumers as it is for competitive carriers, lack of access to devices and other equipment also can make it harder or nearly impossible to comply with regulatory mandates that are premised on the latest technology, including Next Generation 9-1-1 services and Wireless Emergency Alerts, two priorities for this Committee. Even where rural and regional carriers have access to devices or network equipment, they may face increased costs based on reduced economies and purchase order size. While competitive carriers have taken steps to help themselves through business relationships, including CCA's Device Hub, policymakers should ensure that rural areas are not left behind in the mobile world because of inaccessible equipment.

Today's hearing on investing in next generation broadband provides a timely examination of important issues as Congress considers next steps for infrastructure policies and the FCC seeks to solve the persistent digital divide. CCA looks forward to continued collaboration with Congress, the Administration, and the FCC to ensure that rural America is not left behind without the critical mobile broadband networks of today and the eventual tectonic shift to 5G services in the future.

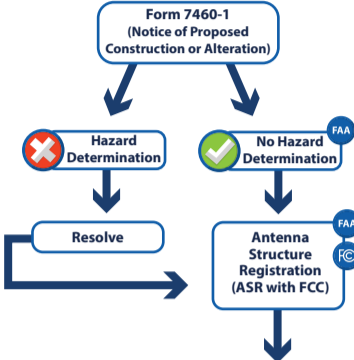
Thank you for your attention to these issues and for holding this important hearing. I welcome any questions you may have.



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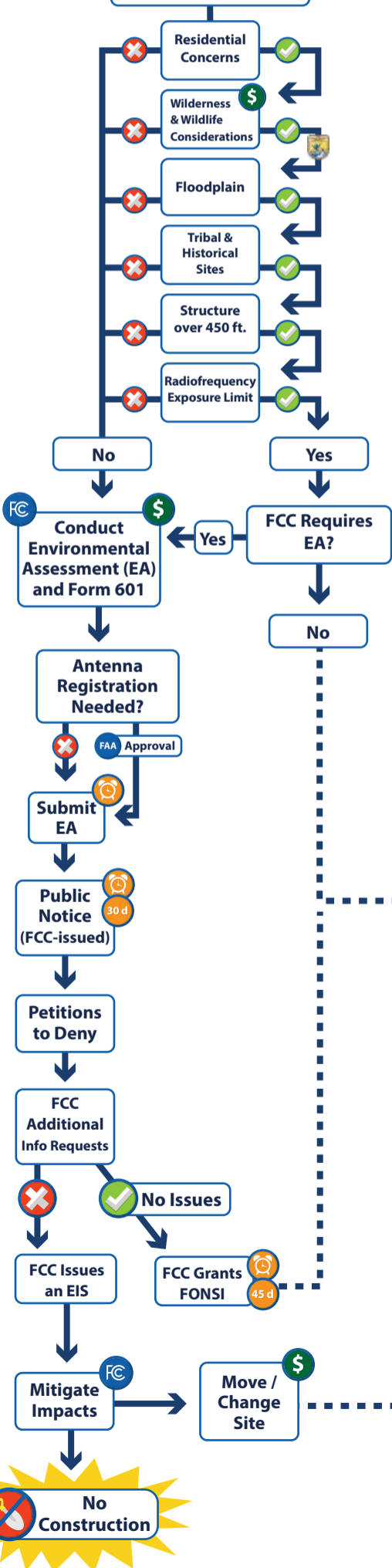
FAA Compliance

Towers near airports or over 200 ft.

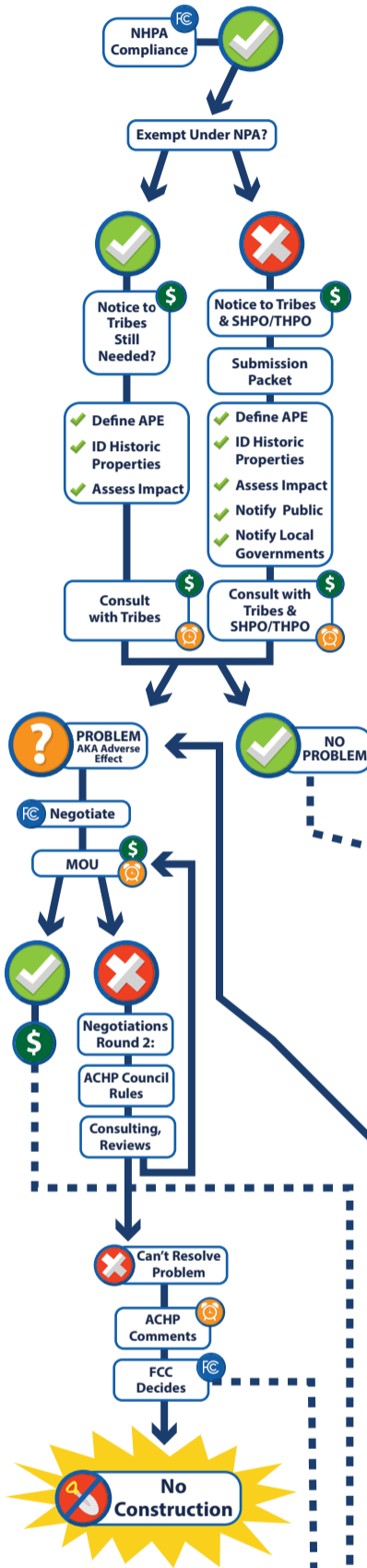


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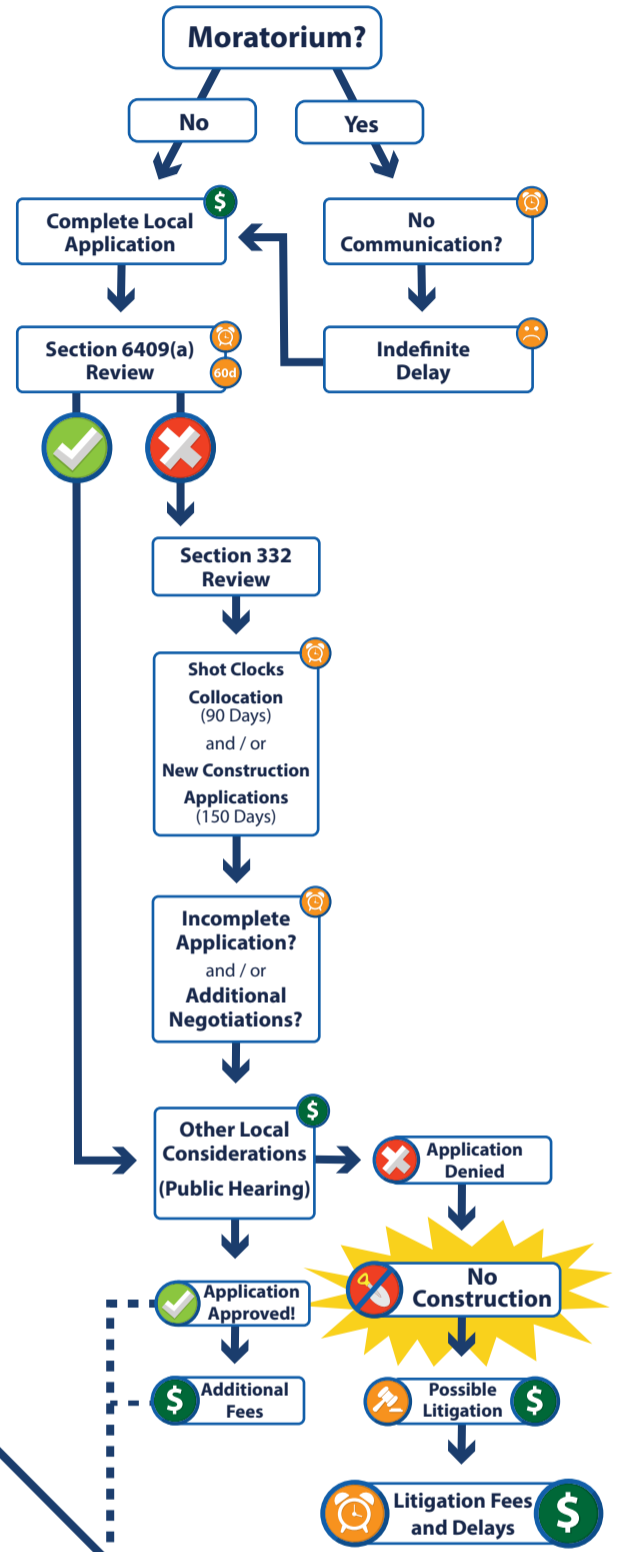
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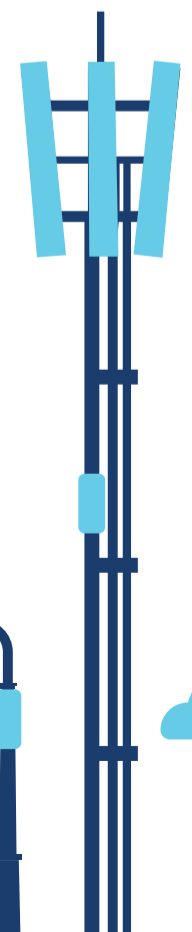
Section 106/NHPA



State/Local Authority



Start Construction





February 27, 2018

BY ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **NOTICE OF EX PARTE**
WT Docket No. 17-79: *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment;*
WT Docket No. 15-180: *Revising the Historic Preservation Review Process for Wireless Facility Deployment;*
WC Docket No. 17-84: *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*

Dear Ms. Dortch:

We are CEOs and senior-ranking officers representing wireless carriers serving customers in cities, small towns, and rural areas throughout the United States. Streamlined infrastructure reform is critical to serving consumers in low density, hard-to-reach areas, and we support the Federal Communications

Commission's ("FCC" or "Commission") work to address barriers to mobile broadband deployment. To bridge the digital divide in rural America, we urge immediate action by the Commission to spur investment and increase certainty as we work to preserve and expand service in the most challenging locales in the United States.

Non-nationwide carriers serving rural and regional consumers are actively engaged in the communities they serve. We connect critical services such as telehealth to patients for monitoring and cutting-edge cures, and enable students to access the same educational resources as their peers in urban centers. On farmlands and ranchlands, our networks often cover more cattle than people, and mobile broadband helps farmers leverage modern farm equipment in today's thriving agriculture community to conserve resources and increase yields. And in times of emergency or disaster, we are the critical link to public safety networks and services.

With the move towards next-generation technologies, the time is ripe to adopt streamlined infrastructure policies that promote investment, expedite processes, and remove red tape. Specifically, streamlined regulations should reflect advancement in technology, and regulations for tall towers should not apply to small cells and Distributed Antenna System ("DAS"). The FCC should take immediate steps to declare that small cells and DAS technology do not require duplicate and redundant review actions which slow or cease mobile infrastructure deployments. Likewise, the Commission should adopt targeted policy reforms that streamline historic and environmental application review processes, and encourage collaboration between Tribal entities and state and local governments, to reduce or eliminate burdensome deployment procedures for all stakeholders.

The Commission's commitment to reforming mobile broadband infrastructure deployment processes is shared by nationwide, rural, and regional carriers alike. We commend the work done thus far and remain eager for continued collaboration with the Commission, Congress, Tribes, and states to streamline and update infrastructure siting policies and help close the digital divide in rural America.

This letter is being filed electronically with your office pursuant to Section 1.1206 of the Commission's rules.

Respectfully submitted,



W. Allen Gillum
East Kentucky Network, LLC
d/b/a Appalachian Wireless



Michael Prior
Atlantic Tele-Network



Brian Gelfand
Blue Wireless



Ron Smith
Bluegrass Cellular



Ben Moncrief
C Spire



Slayton Stewart
Carolina West



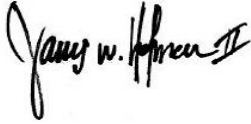
Steven K. Berry
CCA



Jonathan Foxman
MTPCS, LLC d/b/a Cellular One



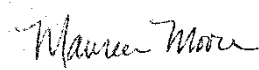
Brian Spurgeon
Chat Mobility



James W. Hofman, II
Docomo Pacific



F. Bradley Erwin
FTC Communications



Maureen Moore
GCI



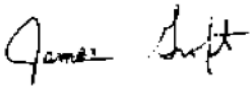
Brent Groome
HTC



Nathan Weiss
Inland Cellular



Craven Shumaker
iWireless



James Groft
James Valley
Telecommunications



Jon Lightle
Nex-Tech Wireless



Roger Bundridge
Northwest Missouri Cellular



Willy Pirtle
Shentel



Michael Beehn
SI Wireless



Edwin Eichler
Thumb Cellular



Craig Gates
Triangle Communications



Eric Woody
Union Wireless



Ken Meyers
U.S. Cellular



Frank DiRico
Viaero

cc (via email): Rachael Bender
Jay Schwarz
Claude Aiken
Louis Peraertz
Erin McGrath
Amy Bender
Will Adams
Travis Litman
Umair Javed