



Q4 2021

**Wireless Infrastructure Industry:
Market Analysis Report**

Data Centers & Wireless Infrastructure

The Value of Mid-Band Spectrum

Industry Expert Perspectives

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In This Issue: Data, Data Everywhere!

Data centers are integral to digital infrastructure and are becoming closely associated with wireless networks. But the size and type of data centers in operation today, and how they are used, run the gamut from large standalone hyperscale facilities to edge data centers. Our lead article “Data Center and Wireless Infrastructure” takes a close look at the data center business and the tie-in to wireless networks.

There has been much talk about mid-band spectrum in the aftermath of several key FCC auctions in 2021. Is mid-spectrum the Holy Grail of advanced wireless services? That depends, but the fact of the matter is that upper mid-band spectrum in the 2-6 GHz range seems to offer optimal coverage and capacity performance for the MNO capex being invested, as we discuss in “Why Mid-band Spectrum Has Become So Valuable.”

Our updated Wireless Infrastructure Value Index shows how the companies that make up the Index performed through Q4 2021 and into 2022.

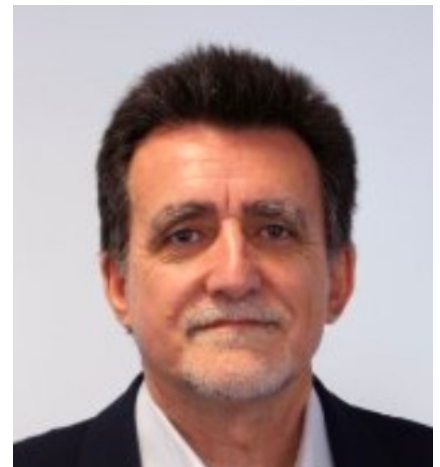
In our M&A Advisory, Brian Pryor at [Houlihan Lokey](#) offers his perspectives on “Valuing Data Centers.”

Chris Stark and Craig Berry of [Stark Capital Solutions](#), in our Investor Perspective article entitled “Small Tower Companies are Attractive Investments”, discuss how small tower deals are being overlooked and available financing options.

In our D.C. Watch section, industry legal veteran Andrew Lipman at [Morgan Lewis](#) provides his insights in “Broadband Needs More Than Money – Watch Out for Deployment Speed Bumps.”

Another jam-packed issue with market intelligence that you can use!

As always, we value your feedback.





D.C. Watch

Broadband Needs More Than Money - Watch Out for Deployment Speed Bumps

By Andrew D. Lipman, Partner, [Morgan Lewis](#)

Congress has given the go ahead for the government to inject an unprecedented amount of federal funding into the nationwide economy in the form of infrastructure funding with a “once-in-a-generation” \$65 billion for broadband deployment as part of the Infrastructure Investment and Jobs Act (IIJA). This funding will build upon the federal funding already in play including the FCC’s Connect America Fund and Rural Digital Opportunity Fund, NTIA’s Broadband Infrastructure Program along with half a dozen other broadband programs funded through the U.S. Department of Treasury and U.S.D.A.

Now that there is plenty of money to spend, deploying broadband to unserved and underserved communities across the country should be a simple matter, right? Not so fast. While funding is obviously a necessary and key first step, there are several potential speed bumps that could slow down deployment in this (almost) post-pandemic world. Federal agencies, state broadband offices, and broadband providers should be aware of these potential obstacles and begin to make preparations now in several key areas before the money is even allocated.

Supply Chain Shortfalls and Buy America Requirements

Broadband construction and service providers are already struggling with national supply chain concerns. While shortages of key technology equipment such as semiconductors has made the news and is expected to remain a very real concern into 2023, providers are also having difficulties obtaining necessary basic equipment such as bucket trucks and construction equipment. NTIA has acknowledged these issues in their request for comment and sought input on how these shortages may impact these new funds.

Further exasperating the supply chain shortage is the Buy America requirement applicable to this federal funding. The IIJA Buy America standard is more robust than similar prior requirements in other broadband funding programs and applies not only to the purchase of iron and steel products but also to “nonferrous construction materials” including plastic and polymer-based products such as fiber optic cables. However, it does allow agencies to waive the requirement (1) where it is not in the public interest, (2) when there are insufficient products manufactured in the U.S. to meet demand, and (3) where such a requirement would increase the total project cost more than 25 percent.

Certain telecommunications trade associations have recently lobbied NTIA to adopt a “Buy America” waiver similar to the limited programmatic waiver used in 2009 for the \$4 billion Broadband Technology Opportunities Program funding initiative. Newly appointed NTIA Administrator Alan Davidson has walked a very careful line on Buy America waivers, as well as the prohibition on Chinese equipment, during public hearings in Congress earlier this year.

During the hearings, Davidson generally stated that NTIA would work towards ensuring that the vast majority of the IIJA funds will go to U.S. manufacturers and workers but did not reveal what kind of waiver mechanisms the agency may establish with respect to the Buy American requirements. Instead, he shared that any waiver of the Buy American requirements will have to meet a “high bar” tailored to the circumstances of the party seeking waiver, indicating that broad waivers applicable to parties that meet certain criteria is not currently under consideration by NTIA. Likewise, Davidson did not provide any details on potential waivers in relation to the prohibition on Chinese equipment, other than that any waiver would have to meet a “very high bar.”

We view this as Davidson adopting a “never say never” approach rather than a change in what we expect will be a high-impossible bar to purchase Chinese equipment with funds made available through IJJA. At the end of the day, we expect NTIA to be fairly flexible as to Buy America, especially for fiber and other broadband inputs where there are limited U.S. vendors.

Workforce Availability Challenges

The COVID-19 pandemic launched the Great Resignation, but two years into the pandemic, millions of workers continue to shift between jobs and employers. In early 2022, American workers continue to show unprecedented shifts in employment with significant turnover.

While some economists predict this great churn will slow down as the economy continues to reopen and workers return to their offices, it will take time for the economy to settle. At the same time, there is the lesser discussed, but equally important, Great Retirement taking place – workers who simply choose to leave the workforce, sometimes earlier than planned, instead of dealing with the uncertainty of pandemic employment. These changes have left broadband providers and telecom construction companies scrambling for skilled, trained, and experienced employees to work on existing projects and to be ready on the ground for the next wave of deployments.

During public hearings earlier this year, members of Congress questioned NTIA’s administrator about the workforce - or more pointedly the lack thereof - required for the massive volume of deployment activity that will follow disbursement of Broadband Equity, Access & Deployment (BEAD) program funds to the states.

Davidson acknowledged that NTIA was very much aware of the workforce issues concerning industry in relation to buildout deadlines and emphasized that the agency envisioned that the jobs created by the IJJA broadband programs will go to the local communities. However, Davidson did not confirm whether or not NTIA will explicitly set aside BEAD funds for workforce training and development programs, instead sharing that the agency was actively coordinating with the White House and other federal agencies. He added that he viewed the IJJA broadband funding as a giant opportunity for vocational training programs and community college programs, even if he could not share how that opportunity may materialize right now.

The Secretary of Commerce, who oversees NTIA as part of the U.S. Department of Commerce, has also spoken to Congress about workforce challenges. Secretary Raimondo emphasized that NTIA expects the BEAD program to create over 100,000 jobs nationally, and that the agency envisions states will have the ability to use their broadband money to fund apprenticeship schemes, job training programs, and workforce development initiatives as the states see fit for their own deployment needs.

This continues to be a critical issue for both contractors and telecom carriers. As part of comments and listening groups, NTIA staff is getting an earful as to how desperately those parties support broadband workplace training for fiber splicers and many other broadband related job positions.

Permitting and Rights of Way

While it hasn’t gotten as much attention as workforce shortage and supply chain challenges, access to pole attachments, rights of way, permitting, and the associated costs will present real challenges to broadband deployment, especially in meeting the applicable deadlines.

Certain approvals must be obtained at the federal level, which is a notoriously slow process. For example, there is currently a two-year backlog of permit review and approvals pending at the U.S. Army Corp of Engineers.

NTIA has indicated that it is already working with other federal agencies, in coordination with the White House, to help streamline these processes and ensure that federal permitting is not an impediment to completion of broadband deployment. Beyond federal lands, however, the vast majority of permits and rights of way access is obtained at the state and local levels.

Given the vast difference in these requirements, not only state to state but even between local jurisdictions within states, it is essential to look to the existing requirements and begin communications with state broadband offices and administrations on any adjustments that are necessary to ensure there is no impediment to deployment.

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He practices in most aspects of communications law and related fields, including regulatory, transactional, litigation, legislative, and land use. Andy's clients in the private and public sectors include those in the areas of local, long distance, and international telephone common carriage; Internet services and technologies; conventional and emerging wireless services; satellite services; broadcasting; competitive video services; telecommunications equipment manufacturing; and other high-technology applications.

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For more information about Morgan Lewis, please visit: <https://www.morganlewis.com/>.

Intelligence Briefing – early May 2022

- A subscriber-exclusive, 1-hour interactive briefing call by John Celentano, highlighting new developments and updating key market metrics since the Q4 2021 issue release.
- An opportunity for direct dialogue and to ask your most pressing questions.
- Check your email for the scheduled briefing date announcement.

Q1 2022 Issue – mid June 2022

- Wireless CapEx update and forecast based on MNO Q1 2022 guidance
- Market analysis of primary and backup systems used to power wireless networks
- Insights from contributing Industry Experts
- Update Wireless Infrastructure Value Index data and recent transactions
- Subscribers will receive email announcements for the Q1 2022 report release date

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