



March 10, 2020

***VIA ELECTRONIC DELIVERY***

Ms. Vanessa A. Countryman  
Secretary  
U.S. Securities and Exchange Commission  
100 F Street, NE  
Washington, DC 20549-1090

RE: NYSE Rule Filings Seeking SEC Approval to Establish Fee Schedules for the Provision of Wireless Connections

Dear Ms. Countryman:

Virtu Financial, Inc. (together with its affiliates, “Virtu” or “we”)<sup>1</sup> respectfully submits this comment letter strongly objecting to a set of ten rule filings (the “Rule Filings”) submitted on February 11, 2020<sup>2</sup> and February 19, 2020<sup>3</sup> by NYSE LLC, NYSE National, NYSE Arca, NYSE American, and NYSE Chicago (collectively, “NYSE”) seeking SEC approval to establish fee schedules for the establishment of (i) wireless connectivity services that transport market data, and (ii) private wireless bandwidth connection services, that can be purchased by market participants to connect to NYSE’s Mahwah, New Jersey data center and three data centers located in Carteret, New Jersey, Secaucus, New Jersey, and Markham, Canada<sup>4</sup> (together, the “Wireless Connections”). Virtu’s objection to the Rule Filings is simple and straightforward: NYSE’s Wireless Connections are anti-competitive and inconsistent with the Securities Exchange Act of

---

<sup>1</sup> Virtu is a leading financial firm that leverages cutting edge technology to deliver liquidity to the global markets and innovative, transparent trading solutions to its clients. Virtu operates as a market maker across numerous exchanges in the U.S. and is a member of all U.S. registered stock exchanges. Virtu’s market structure expertise, broad diversification, and execution technology enables it to provide competitive bids and offers in over 25,000 securities, at over 235 venues, in 36 countries worldwide. As such, Virtu broadly supports innovation and enhancements to transparency and fairness which enhance liquidity to the benefit of all marketplace participants.

<sup>2</sup> See Notices of Filing of Proposed Rule Change to Establish a Schedule of Wireless Connectivity Fees and Charges with Wireless Connections, New York Stock Exchange LLC (Release No. 34-88168; File No. SR-NYSE-2020-05), NYSE Arca, Inc. (Release No. 34-88170; File No. SR-NYSEArca-2020-08), NYSE American LLC (Release No. 34-88169; File No. SR-NYSEAMER-2020-05), NYSE Chicago, Inc. (Release No. 34-88172; File No. SR-NYSECHX-2020-02), NYSE National, Inc. (Release No. 34-88171; File No. SR-NYSENAT-2020-03) (Feb. 11, 2020).

<sup>3</sup> See Notices of Filing of Proposed Rule Change to Amend the Schedule of Wireless Connectivity Fees and Charges to Add Wireless Connectivity Services, New York Stock Exchange LLC (Release No. 34-88237; File No. SR-NYSE-2020-11), NYSE Arca, Inc. (Release No. 34-88239; File No. SR-NYSEArca-2020-15) NYSE American LLC (Release No. 34-88238; File No. SR-NYSEAMER-2020-10), NYSE Chicago, Inc. (Release No. 34-88240; File No. SR-NYSECHX-2020-05), NYSE National, Inc. (Release No. 34-88241; File No. SR-NYSENAT-2020-08) (Feb. 19, 2020).

<sup>4</sup> Our understanding is that the Mahwah to Markham connections do not utilize the antennae on the Monopole (as defined below) within the NYSE’s Mahwah data center. Accordingly, the comments in this letter are focused on the Secaucus and Carteret connections.

1934 (the “Exchange Act”), which mandates that fees for market data and market access be “fair and reasonable” and not “unfairly discriminatory”. The Rule Filings are yet another example of NYSE using its dominant monopolistic position to impose another connectivity fee.

Virtu has been a strong and vocal critic of the imposition of unreasonable market data and connectivity fees by the leading U.S. exchanges. Virtu has publicly voiced its concerns and objections to these unfettered “tariffs”, including petitioning the Commission with 23 other diverse market participants to engage in rulemaking to address fees charged by exchanges for market data and market access.<sup>5</sup> In addition, Virtu participated in the Securities and Exchange Commission’s Market Data Roundtable on October 25 and 26, 2018 and in conjunction submitted a letter expressing its position on this contentious issue.<sup>6</sup>

We strongly support the efforts of the Commission to date to introduce needed reforms in this space, and respectfully urge the Commission to institute proceedings to review the Rule Filings and to seek modifications to them to ensure that the Wireless Connections are offered in a fair, reasonable, and not unduly discriminatory fashion.

### Background

In May 2019, the NYSE Group, Inc. applied for – and was granted – a variance from the Town of Mahwah Zoning Board to permit it to install microwave dishes and antenna on its rooftop and on a 160 foot pole (the “Monopole”) located within NYSE’s Mahwah compound to reduce the latency of the data that it transmits.<sup>7</sup> Conveniently, NYSE’s variance proposal only sought permission to add enough capacity for one provider due to purported resource, security, and engineering constraints (constraints we find puzzling as NYSE for years has operated a thriving business allowing third-party firms to collocate on its premises through other means). This in turn means that only one wireless provider (as selected by the NYSE) is able to locate antennas on the Monopole inside the NYSE compound – a fact NYSE has admitted in the Rule Filings.

Unsurprisingly, NYSE selected an affiliated entity as the provider that would receive this preferential treatment on its premises. In our view, this is blatantly anti-competitive – it is no different in form and substance from the antiquated days of the NYSE selling real estate directly adjacent to the specialists on the floor to the highest bidder. As such, NYSE’s 2019 variance request to add additional antennas to the pole (as well as its previous variance request in 2015 to have the 160-ft pole erected in the first place)<sup>8</sup> has the effect of granting a monopoly to NYSE’s affiliated collocation and market data entities to charge exorbitant fees for access to its antenna, while other wireless providers that could provide competition to the NYSE vendor are arbitrarily blocked from participating fairly in the market.

---

<sup>5</sup> See letter to Brent J. Fields, Secretary, Securities Exchange Commission (Dec. 6, 2017), *available at* <https://www.sec.gov/rules/petitions/2017/petn4-716.pdf>

<sup>6</sup> See letter to Brent J. Fields, Secretary, Securities Exchange Commission (Oct. 23, 2018), *available at* <https://www.virtu.com/uploads/2019/02/2018.10.23-Virtu%E2%80%99s-Comment-Letter-Roundtable-on-Market-Data-and-Market-Access.pdf>

<sup>7</sup> See Resolution of Zoning Board of Adjustment, Township of Mahwah, Variance Approval for Co-Location of Additional Antennas, Height, and Setback Variances, May 1, 2019.

<sup>8</sup> See Township of Mahwah Board of adjustment minutes (Nov. 4, 2015), *available at* <http://www.mahwahtwp.org/uppages/BOA%20MINUTES%20NOVEMBER%204.%202015.pdf>.

On June 25, 2019, we submitted a letter to the SEC’s Division of Trading and Markets highlighting this monopolistic, anti-competitive practice.<sup>9</sup> In that letter, we explained that the NYSE’s actions constitute anti-competitive behavior inconsistent with Section 6 of the Exchange Act and impose “unfairly discriminatory terms” that limit efficient access to the quotations of an NMS stock at a national securities exchange’s trading facility inconsistent with Rule 610 under Reg NMS. We observed that, in practice, the new “floor” of the New York Stock Exchange is actually now located on the premises of a nondescript datacenter in Mahwah, New Jersey. In the same manner that the NYSE would never have been permitted to sell positions on the floor of the NYSE on Wall Street within ear shot of the specialists to the detriment of the rest of the members for a premium price, so too should it be impermissible for the NYSE to do the same with access to the new exchange “floor” on the datacenter’s rooftop or on the Monopole located within the Mahwah compound. (Notably, since we submitted our letter in June 2019, we understand that NYSE has abandoned its plan to establish the Wireless Connections on its rooftop, but is still using the Monopole inside the NYSE controlled compound to grant customers an exclusive latency edge, which has an equal effect on its anti-competitive objective.)

On February 11 and 19, 2020, NYSE submitted ten fee filings to the SEC seeking approval to establish fees for the Wireless Connections.<sup>10</sup> In those filings, NYSE contended that the Wireless Connections are not “facilities” of an exchange and therefore NYSE is not required to submit fee filings for them under the Exchange Act. NYSE further – and boldly – asserted that it was submitting the fee filings “solely because the Staff of the Commission has advised the Exchange that it believes the Wireless Connections are facilities of the Exchange and so must be filed as part of its rules.”<sup>11</sup> Indeed, NYSE contended that the SEC Staff “has not set forth the basis of its conclusion beyond verbally noting that the Wireless Connections are provided by an affiliate of the Exchange and a market participant could use a Wireless Connection to trade on, or receive the market data feeds of the Exchange and its Affiliate SROs.”<sup>12</sup>

As described further below, we strongly agree with the SEC Staff’s apparent view that the Wireless Connections that NYSE controls and operates constitute facilities of an exchange and therefore are subject to the Rule 19b-4 process and are required to be filed with the Commission. Furthermore, we respectfully submit that the Wireless Connections are anti-competitive, inconsistent with the NYSE Exchanges’ obligations under the Exchange Act, and inconsistent with the Commission’s continued efforts to introduce competition to the marketplace and level the playing field for all market participants.

To be clear, Virtu does not oppose the concept of NYSE offering microwave access on the rooftop or Monopole located on its premises. Rather, our concern is that if NYSE offers such access, it should be made available to non-NYSE market participants in a fair and competitive marketplace.

---

<sup>9</sup> Letter from Thomas M. Merritt to Brett Redfearn (June 25, 2019), *available at* <https://www.virtu.com/uploads/documents/Virtu-Comment-Letter-06.25.19.pdf>.

<sup>10</sup> *Supra* n. 2-3.

<sup>11</sup> *See, e.g.*, New York Stock Exchange LLC at 2-3 (Release No. 34-88168; File No. SR-NYSE-2020-05) (Feb. 11, 2020).

<sup>12</sup> *Id.*

## The Wireless Connections Are “Facilities” of the Exchanges

### *Corporate Affiliate Argument*

As an initial matter, we respectfully submit that NYSE’s contention that the Wireless Connections are not facilities of an exchange because they are being offered by corporate affiliates fails on a number of fronts, and is merely an effort to obfuscate the facts with a false narrative of form over substance.

Although the Wireless Connections commercially are being marketed by “ICE Data Services”, the variance application to the Town of Mahwah Zoning Board (which included installing antennae on the Monopole inside the NYSE compound) was filed by NYSE Group, Inc. (a copy of the variance approval noting that NYSE Group, Inc. applied to the Town of Mahwah Zoning Board is attached hereto as Exhibit “A”). And, as reflected in its marketing materials, NYSE Group, Inc. holds itself out as operating the five exchange entities that submitted the Rule Filings:

**“About NYSE Group:** NYSE Group is a subsidiary of Intercontinental Exchange (NYSE:ICE), a leading operator of global exchanges and clearing houses, and a provider of data and listings services. NYSE Group’s equity exchanges -- the New York Stock Exchange, NYSE American, NYSE Arca, NYSE Chicago and NYSE National -- trade more U.S. equity volume than any other exchange group. The NYSE is the premier global venue for capital raising, including technology IPOs. NYSE Arca Options and NYSE Amex Options are leading equity options exchanges.”<sup>13</sup>

Thus, the ICE subsidiary that sought for and was granted the variance was not a distant ICE affiliate far removed from the exchanges in the ICE corporate structure. Instead, it was the direct operating affiliate of the exchanges.

Further, in the proceedings before the Mahwah Zoning Board, an NYSE engineer testifying about the Wireless Connections in no uncertain terms indicated that their purpose was to allow for the transfer of data from customers to the NYSE data center, and for the provision of NYSE market data to its customers:

***“NYSE data center to Secaucus data center and Carteret data center ... This is primary for market data transmission from one exchange to another ... This is only for New York Stock Exchange market data going across and its customers ...***

---

<sup>13</sup> See, e.g., Press Release, NYSE Ranks Once Again As The Global Leader in Capital Raised (Dec. 13, 2019), available at <https://ir.theice.com/press/press-releases/all-categories/2019/12-13-2019-162845961>.

This would just make it more faster ... The closer you are to the data center, the faster you would be ... The whole point is ... make the data delivery faster.”<sup>14</sup>

The NYSE Group, Inc.’s Zoning Board application and the testimony of the NYSE engineer before the Zoning Board demonstrate that, regardless of which corporate affiliate sells the service, its only purpose is to facilitate faster connections for more competitive trading by the five NYSE exchanges. The corporate affiliate arguments offered by NYSE are a red herring and should be rejected.

### *Property / Premises Arguments*

Virtu also disputes NYSE’s contention that the Wireless Connections’ private bandwidth and market data offerings are not facilities of an exchange because they are not located on NYSE’s premises and are not NYSE’s property. As NYSE notes in the Rule Filings:

“The term ‘facility’ when used with respect to an exchange includes [1] its premises, [2] tangible or intangible property, whether on the premises or not, [3] any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticker or otherwise, maintained by or with the consent of the exchange), and [4] any right of the exchange to the use of any property or service.”<sup>15</sup>

Contrary to the illogical arguments advanced by NYSE, the fact is that the Wireless Connections are a **system of communication** from NYSE, ***maintained*** by NYSE, that exist, in part, ***on NYSE’s premises***, where NYSE’s affiliated colocation and connectivity vendors are given preferential treatment relative to other competitive offerings. And, contrary to NYSE’s assertions, the sole purpose of the Wireless Connections is to provide market data or a private bandwidth connection to NYSE customers to assist them in “***effect[ing]...transactions on an exchange.***”

Let’s break down NYSE’s flawed arguments on this point one at a time:

First, NYSE contends that the Wireless Connections are not facilities of an exchange “because the Exchange does not have the right to use the Wireless Market Data Connections to effect or report a transaction on the Exchange.”<sup>16</sup> This argument conveniently ignores the second, very clear half of definition of a facility – specifically “(including, among other things, any ***system of communication to or from the exchange, by ticker or otherwise, maintained by or with the consent of the exchange.***)” There can be no dispute that both the private bandwidth and market data offerings constitute systems of communication 100% controlled and maintained by NYSE, for its own benefit and for the benefit of its customers.

---

<sup>14</sup> Testimony available at <http://mahwahnj.swagit.com/play/03202019-1419>.

<sup>15</sup> See, e.g., New York Stock Exchange LLC at 8 (Release No. 34-88168; File No. SR-NYSE-2020-05) (Feb. 11, 2020).

<sup>16</sup> *Id.* at 10.

Second, NYSE contends that the “Wireless Connection does not connect to the Exchange trading and execution systems, nor is it a system of communication from the customer’s server in co-location to the trading and execution systems of the Exchange or the Affiliate SROs.”<sup>17</sup> NYSE further asserts that the Wireless Connections facilitate “the customer’s interaction with itself. Essentially, a Wireless Connection is an empty pipe that a customer can use to communicate between its equipment in co-location and its equipment in the Third Party Data Center.”<sup>18</sup> This is another form over substance argument. Even though the customer’s equipment is sitting in between NYSE and the Wireless Connections, the Wireless Connections are an integral and necessary part of a competitive transaction on the NYSE exchanges and a “must have” for the market makers in a competitive world where speed is critical. As a useful analogy, no one would spend the money to buy a seat on an exchange floor just to sit in it. The same logic applies to the Wireless Connections. Why would anyone spend significantly more money for a wireless connection that has less bandwidth and is less reliable than a fiber-only circuit between the two exact points? Indeed, the only benefit of a wireless connection over fiber-only circuit is the latency, which NYSE now controls by virtue of its preferential treatment of its own affiliated vendors offering Wireless Connections that terminate on its premises. NYSE clearly admits this in the Rule Filings:

“Wireless connections involve beaming signals through the air between antennas that are within sight of one another. Because the signals travel a straight, unimpeded line, and because light waves travel faster through air than through glass (fiber optics), *wireless messages have lower latency than messages travelling through fiber optics*. At the same time, as a general rule wireless networks have less uptime than fiber networks.... Even under normal conditions, a wireless network will have a higher error rate than a fiber network of the same length.”<sup>19</sup>

Customers paying for the Wireless Connections clearly are doing so only in order to competitively trade on the NYSE exchanges.

Third, NYSE argues that “the Wireless Connections are not premises of the Exchange.”<sup>20</sup> Those words, taken in isolation, are actually true. The services they offer are, indeed, not the premises themselves. However, the fact of the matter is that the Wireless Connections exist – with preferential treatment given to NYSE – specifically *on* the NYSE premises. On the one hand NYSE acknowledges that the Commission has the right to regulate the NYSE’s premises, but on the other hand makes an untenable argument that everything that exists on those premises is shielded from SEC regulation.

Fourth, NYSE further contends that that it does not have access to, or even know what kind of, data is going through the Wireless Connections:

“Customers have control over the data they send over their Wireless Connections. They may, but are not required to, use them to send trading orders to their

---

<sup>17</sup> *Id.* at 5.

<sup>18</sup> *Id.*

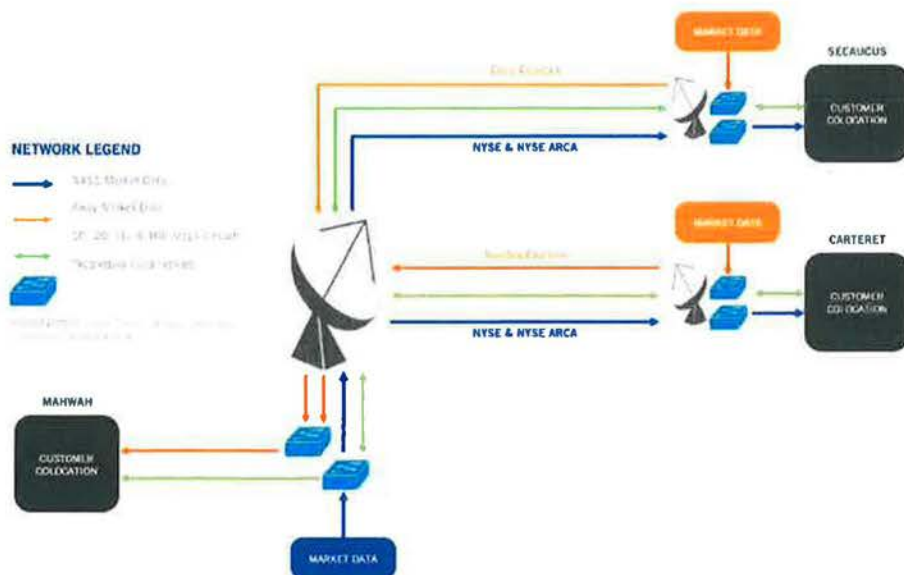
<sup>19</sup> *Id.* at 17-18.

<sup>20</sup> *Id.* at 9.

equipment in co-location; relay Exchange market data, third party market data and public quote feeds from Securities Information Processors; send risk management, billing, or compliance information to their preferred location; or to carry any other market information or other data they wish to and from their equipment in the Third Party Data Centers and Mahwah data center. The Exchange does not, and cannot, know what data customers send over the Wireless Connections. The Exchange does not send or receive any data over the Wireless Connections.”<sup>21</sup>

This assertion strikes us like an ostrich sticking its head in the sand. While the NYSE may not know the exact content of the data that is being sent, it is abundantly clear – to us, to other market participants, and to the NYSE – that the data is being sent over the Wireless Connections to facilitate competitive transactions being effected on the NYSE Exchanges. NYSE’s argument ignores the reality of market connectivity. And similarly non-sensical is the claim that “the Exchange does not have the right to use the Wireless Market Data Connections.”<sup>22</sup> If not, then how is the data being transmitted to and from the Mahwah premises? The Exchanges have control over the data transmission.

Fifth, contrary to NYSE’s claim that the Wireless Connections are “one-way connections away from the Mahwah data center,” NYSE has consistently marketed its bi-directional wireless market data offering as bringing wireless market data from other exchanges in the New Jersey triangle, as shown in the diagram below extracted from its website.<sup>23</sup> By providing faster market data such as Cboe Equities and Nasdaq Equities for NYSE’s customers, NYSE is effectively providing preferential treatment and latency edge for those customers on the NYSE exchanges.



<sup>21</sup> *Id.* at 5.

<sup>22</sup> *Id.* at 12.

<sup>23</sup> ICE Global Network, New Jersey Metro, available at <https://www.theice.com/market-data/connectivity-and-feeds/wireless/new-jersey-metro>.

In sum, the Wireless Connections are “core functions” of NYSE and therefore constitute facilities of an exchange under the Exchange Act. As the SEC itself recently acknowledged, “[t]oday, the U.S. equity markets have evolved into high- speed, latency-sensitive electronic markets where trading is dispersed among a wide range of competing market centers, and even small degrees of latency affect trading strategies.”<sup>24</sup> NYSE’s arguments fail to recognize this fact and are predicated on a highly technical and grammatically awkward interpretation of otherwise very clear words. NYSE’s attempt at such a conclusion exposes its deliberate efforts to keep these exchange services in a separate entity with preferential treatment outside the purview of regulators.

### The Wireless Connections Are Anti-Competitive

As usual, a picture is worth a thousand words:



As reflected above, NYSE has built a Monopole (NYSE OnPrem Pole) with Wireless Connections inside its compound immediately next to the data center. NYSE’s affiliated colocation and connectivity vendors are the only entities with access to those Wireless Connections. Unaffiliated third parties can access poles nearby (the CCI Pole and the Cross River Pole). However, each of those poles is approximately one quarter of a mile further away.

Contrary to NYSE’s assertions, speed matters. Plain and simple, NYSE can offer lower latency to its customers because its Monopole is closer to the data center than poles available to other providers. As we explained in our June 25, 2019 letter, access to the lowest-latency market

<sup>24</sup> U.S. Securities and Exchange Commission, Proposed Rule, *Market Data Infrastructure* at 13 (Release No. 34-88216; File No. S7-03-20) (Feb. 14, 2020), available at <https://www.sec.gov/rules/proposed/2020/34-88216.pdf>.



data feed and private bandwidth is critical for the execution of orders from market participants like Virtu. NYSE's contention that there is competition for exchange connectivity, and that other providers can offer the same or similar access and latency, is simply false.

Indeed, NYSE itself specifically touts in its marketing materials that access to the Wireless Connections will provide a latency advantage:

**"Our New Jersey Metro hybrid wireless route combines free space optics and millimeter wave technologies to establish point-to-point connectivity between the ICE Mahwah data center and the major New Jersey Metro area trading hubs of Carteret and Secaucus. This "Dual Spectrum" technology, provided by Anova Technologies, facilitates superior reliability and availability when compared to other wireless solutions and removes many of the limitations caused by weather conditions. *At the same time, it allows for faster data transfer and order execution than any fiber route, enabling firms to achieve higher fill rates.*"<sup>25</sup>**

Again, the testimony from the NYSE engineer at the Mahwah Zoning Board hearing is telling. Although this testimony was focused on the Mahwah rooftop offering (which NYSE has abandoned), the same logic applies to the Monopole located inside NYSE's compound:

**"NYSE data center to Secaucus data center and Carteret data center .... This is primary for market data transmission from one exchange to another .. Currently fiber from outside tower to inside data center ... *Our network relies on this fiber tail to provide latency advantage .... So this antenna provides a better latency and reliability* ... This would reduce the fiber length to a few feet ... Data center roof would have direct line of site to the monopoles outside the data center ... *This is more desirable than the other three monopoles [east of property].*"**

**"This is only for New York Stock Exchange market data going across and its customers ... *This would just make it more faster ... The closer you are to the data center, the faster you would be ... The whole point is ... make the data delivery faster.*"<sup>26</sup>**

Similarly, in the 2015 Mahwah Zoning Board hearing in which the original construction of the Monopole was approved, the latency benefits of the placement of the pole next to the data center featured prominently:

**"Mr. Greg Meese, Esq., of Price, Meese, Shulman & D'Arminio, approached on behalf of the Applicant. Mr. Cascio indicated all notices were in order. The application proposes the construction of a 160 foot cell tower *as close to the front door of the data center as possible* along with a small shelter at the base. The**

---

<sup>25</sup> *Supra* n. 23.

<sup>26</sup> *Supra* n. 14.

Applicant is requesting a temporary tower be constructed first until the permanent tower has been constructed and is operational.”

“The questions lead to a discussion on the location of manholes and the access point to the data center, which is the front entrance. There is a zero manhole located there, which *allows for the least amount of fiber to be used to the site*. The number of transmission hops and the migration of tenants onto the new tower were also discussed.”<sup>27</sup>

The fact of the matter is that NYSE has given itself an insurmountable latency advantage, stifling competition by giving its own affiliated entity preferential treatment. By granting only its own vendor preferential treatment on NYSE premises, NYSE is intentionally blocking competition from other, potentially lower-cost providers. Contrary to NYSE’s assertions, at any given time, there is only one fastest connection and that provider is granted monopoly pricing during its “reign”.

NYSE has provided no bona fide rationale for their actions which, we believe, may be prohibited by Section 6 of the Act.<sup>28</sup> NYSE’s actions also directly implicate Rule 610 (the “Access Rule”) under Reg NMS, which prohibits a trading center from imposing unfairly discriminatory terms that would prevent or inhibit the access of any person through members, subscribers, or customers of such trading center. The SEC’s stated objective in adopting Rule 610 was to promote the use of private linkages between exchanges by precluding unfair interference by those same exchanges.<sup>29</sup> NYSE’s maneuver contravenes Rule 610 by interfering in high-speed wireless linkages between data centers.

\* \* \*

Virtu appreciates the opportunity to register its objections to the NYSE Rule Filings. As described above, Virtu does not oppose the concept of NYSE offering microwave access on the roof or Monopole located on its premises. Rather, our concern is that if NYSE offers such access, it should be made available to non-NYSE market participants in a fair and competitive marketplace.

---

<sup>27</sup> See Township of Mahwah Board of Adjustment Minutes (Nov. 4, 2015), available at <http://www.mahwahtwp.org/uppages/BOA%20MINUTES%20NOVEMBER%204.%202015.pdf>.

<sup>28</sup> Requiring Exchange rules be designed to “prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and are not designed to permit unfair discrimination between customers, issuers, brokers, or dealers... [and] not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.”

<sup>29</sup> SEC Release No. 34-51808 (Reg NMS final rules and amendments to joint industry plans).

As we noted in our June 2019 letter, perhaps it is time to offer fixed latency numbers from data center to data center. All providers could have circuits with the same wireless latency in accessing the three data centers and pay the same amount for that access. Existing providers could be incentivized by cementing in revenue at a reasonable rate, but the “wireless” arms race could be ended. Instead of spending money on eliminating the next microsecond, money could be spent elsewhere as firms compete on non-latency grounds. We believe this will in turn benefit the investor community by lowering costs associated with latency reducing technology and focusing firm resources on improving other marketplace resources.

Respectfully submitted,



Thomas M. Merritt  
Deputy General Counsel

cc: Walter J. Clayton, III, Chairman  
Allison H. Lee, Commissioner  
Hester M. Peirce, Commissioner  
Elad L. Roisman, Commissioner  
Brett W. Redfearn, Director, Division of Trading and Markets

**EXHIBIT "A"**

**RESOLUTION  
ZONING BOARD OF ADJUSTMENT  
TOWNSHIP OF MAHWAH**

**DOCKET NO. 1456-19**

**NYSE GROUP, INC.**

**VARIANCE APPROVAL FOR CO-LOCATION OF ADDITIONAL ANTENNAS,  
HEIGHT AND SETBACK VARIANCES**

**WHEREAS**, NYSE GROUP, INC., located at 11 Wall Street, New York, New York, has applied to the Zoning Board of Adjustment of the Township of Mahwah for Variance Approval to modify the existing telecommunications monopole and building by the addition of additional equipment, as hereinafter described, for property located at 1700 Macarthur Boulevard, also known as Block139, Lot 4, on the Tax Assessment Map of the Township of Mahwah; and

**WHEREAS**, the property is located in the IP-120 Zone where wireless communication towers are a conditional use; and

**WHEREAS**, Variance Approval to construct the existing tower was originally granted to Anova Technologies, LLC. on November 18, 2015; and

**WHEREAS**, the Applicant submitted the following plans and exhibits:

a. Site Plan entitled "NYSE Roof and Monopole, ID: NYSE RFT/NYSE MP Address: 1700 MacArthur Blvd, Mahwah, NJ" prepared by Ahead Engineering, dated 11/29/18;

b. As-built Survey, By Jeffrey H. Klein for Lapatka Associates, Inc. dated 12/15/09, revised 11/6/18;

c. Monopole Analysis prepared by Robert Pictrocola, PE. for Ahead Engineering, dated 1/3/19;

d. Radiofrequency-Electromagnetic Energy Compliance Report, prepared by EBI Consulting, dated 11/15/18;

e. Photo Simulations, prepared by James T Kyle, PP, AICPA, dated 12/2/18

**WHEREAS**, the Applicant has submitted proof that it has notified all property owners within 200 feet of the extreme limits of the property in question and in accordance with the provisions of the Zoning Ordinance of the Township of Mahwah and the Land Use Statutes of the State of New Jersey as amended and supplemented. All property taxes have been paid; and

**WHEREAS**, a public hearings were held on March 20, 2019 and April 3, 2019, at which time the Zoning Board of Adjustment of the Township of Mahwah heard testimony by the applicant and it's witnesses, and gave due consideration to all individuals desiring to be heard, and after deliberation did hereby find and determine that:

1. The subject property, located at 1700 Macarthur Boulevard, also known as Block 139, Lot 4 is owned by Macarthur Boulevard, LLC., c/o Russo Development, 570 Commerce Blvd., Carlstadt, NJ 07072. The Applicant is NYSE Group, Inc, located at 11 Wall Street, New York, NY 10005.
2. The property is located in the IP-120 Zone and contains an existing data center building, as well as an existing 160 foot wireless telecommunications monopole facility, previously granted approval on November 18, 2015. The 28.28 acre site is located at the northwest corner of Macarthur Boulevard and N. Central Ave., west of Route 17. The site is irregularly shaped and contains a two-story Data Center building, with on site parking, an accessory one-story building, a 160 foot monopole tower, and a steel platform located at grade.
3. The applicant is seeking a conditional use variance pursuant to N.J.S.A. 40:55D-70d(3), a rear yard setback variance, and preliminary and final site

plan approval, in order to permit the installation of additional wireless telecommunications equipment consisting of four additional microwave dish antennas, each having a diameter of 1 foot, to be located at a height of 122 feet on the existing 160 foot monopole, 2 microwave dish antennas each having a diameter of 1 foot to be located on the rooftop of the existing building, and one additional equipment cabinet attached to the existing steel platform located at grade, located 31.5 feet from the rear property line.

4. The applicant is seeking relief from the following conditional use standards under the Mahwah Township Zoning Ordinance 24-17.6a1(a)(1), which requires that when antennas are co-located on an existing building, the antennas are not permitted to exceed the maximum building height permitted in the zone. The maximum building height permitted in the IP-120 Zone is 40 feet, however the height of the existing building is 47 feet (as permitted by prior variance relief), and the height of the top of the proposed 1 foot diameter roof mounted antennas will be 51 feet 8 inches. The applicant is also seeking rear yard setback variances (65 feet required) of 24.5 feet to the existing telecommunications equipment, 49 feet to the existing building, and 31.5 feet for the proposed additional equipment cabinet.

5. The proposal will require the following variances:

- a. A "d-3" Conditional Use: The original approval under docket 1397-15 granted conditional use variance approval; however, the use is being expanded and, therefore, another "d-3" variance must be granted;

b. Height: The Applicant has requested a height variance from the provisions of Article 24-17.6, which limits a tower height up to 120 feet for two users and 150 feet for three users. A variance for 160 feet was previously approved.

Although the applicant does not request any increase to the height of the proposed tower, the additional antennas are proposed to be located at a height of 122 feet;

c. Rear Yard Setback: required 65 feet, existing 24.5 feet for the antenna and 49 feet for the building. A setback of 31.5 feet is proposed for the new equipment cabinet which will be mounted on the existing steel platform.

6. After hearing the testimony of the Applicant and witnesses, the Board finds that the Applicant has demonstrated that the proposed use complies with the criteria required to permit the location of the additional antennas and equipment.

7. The Board finds that the Applicant has demonstrated that the proposed use promotes the general welfare because the New Jersey Supreme Court has held that in the case of Smart SMR of New York, Inc., d/b/a Nextel Communications v. Borough of Fair Lawn Board of Adjustment, 152 N.J. 309 (1998), that all communications facilities holding an FCC license is a use that promoted the general welfare. In addition, the applicant must also show that the site is particularly suited for the proposed use. In order to do so, an applicant must show both the need for the facility at that location, and that the site itself is particularly suitable. New Brunswick Cellular Telephone Co. v. Borough of South Plainfield, 160 N.J. 1 (1999).

8. With respect to the second proof for the positive criteria (i.e. - that the proposed site is particularly suited to that use) the Coventry Square Court held proofs shall be sufficient to satisfy the Board that the site proposed for the conditional use, in the context of the applicant's proposed site plan continues to



be an appropriate site for the conditional use notwithstanding the deviations from one or more conditions imposed by the ordinance. Coventry Square, supra. 138 N.J. at 298.

9. In addition to the positive criteria, an applicant must also demonstrate the negative criteria in that the variance can be granted without substantial detriment to the public good and will not substantially impair the intent and purpose of the zone plan and zoning ordinance. The Board finds that the addition of the four additional antennas at the 122 ft. level on the existing and previously approved 160 foot tower, the installation of the two 1 foot diameter dish antennas on the rooftop of the existing building, and the one additional equipment cabinet attached to the existing steel platform located at grade, will not cause any substantial detriment to the public good, nor will it substantially impair the intent and purpose of the zone plan and zoning ordinance.

10. The proposed use will not produce any noise, vibrations, smoke, dust, odors, heat or glare. It will not require any municipal services such as water, sewer, police or fire and will require only infrequent maintenance. The use will not have any adverse impact on adjoining properties. The additional tower antennas will not materially affect the surrounding area, and the roof top dishes or equipment cabinet cannot be seen from anywhere in the immediate vicinity.

**NOW, THEREFORE, BE IT RESOLVED** by the Zoning Board of Adjustment of the Township of Mahwah that the Applicant's request for Conditional Use Variance, Height Variance, and Site Plan approval to add four additional 1 foot diameter microwave dish antennas to the existing 160 foot tower at the 122 foot elevation, two microwave dish antennas, each having a 1 foot diameter, to be located on the rooftop of the existing building, and one additional equipment cabinet to be located 31.5 feet from

the rear property line on the existing steel platform located at grade, are all hereby GRANTED subject to the following terms and conditions:

1. All construction shall be performed in accordance with all federal, county and municipal state rules, codes and regulations.
2. All conditions contained in the previously approved Resolutions, where not in conflict herein, shall continue and apply as if fully set forth herein.
3. The applicant shall pay all required application fees, escrow fees and bonds required by the municipality and this Resolution of Approval.

**BE IT FURTHER RESOLVED**, this approval shall not constitute a recommendation or approval of any application or variance not specifically delineated herein.

**BE IT FURTHER RESOLVED**, that a copy of this Resolution shall be provided to the applicant, the Construction Code Officer of the Township of Mahwah, and a notice of this decision of the Board of Adjustment shall be published in the official newspaper of the municipality within ten (10) days of the date hereof and thereafter be published according to law.

**MOTION TO TAKE ACTION**

DATE: April 3, 2019

MOVED BY: Mr. Montroy

SECONDED BY: Mr. Straffin

AFFIRMATIVE VOTES (5)      NEGATIVE VOTES (0)      ABSTENTIONS (0)

- 1) Mr. Calijone
- 2) Mr. Jackson
- 3) Mr. Montroy
- 4) Mr. Rabolli
- 5) Mr. Straffin

TOTAL VOTES: (5)

APPROVAL BY RESOLUTION

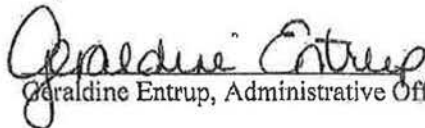
MOVED BY: Mr. Straffin

SECONDED BY: Mr. Calijone

AFFIRMATIVE VOTES (4)      NEGATIVE VOTES (0)      ABSTENTIONS (0)

- 1) Mr. Calijone
- 2) Mr. Jackson
- 3) Mr. Rabolli
- 4) Mr. Straffin
- 5) Mr. Whiteman

Dated: May 1, 2019

  
Geraldine Entrup, Administrative Officer

  
Charles Rabolli, Chairman

Prepared by: Ben R. Cascio, Esq.

Page Intentionally Left Blank

## Township of Mahwah Zoning Permit

Application #: 6523	Permit No: 20190030.000	Issue Date: 02/28/2019	Voucher/Receipt #: 0 Check #: 22669 Amount collected: \$100.00
Construction Control Number :			
Block: 139	Lot: 4	Qualifier:	
Work Site: 1700 MACARTHUR BOULEVARD		Zone: Default	
Owner: MACARTHUR BLVD LLC C/O RUSSO		Agent: GREGORY D. MEESE, ESQ.	
Address: DEVELOPEMENT 570 COMMERCE BLVD		Address: 50 TICE BLVD	
City/State/Zip: CARLSTAD NJ 07072		City/State/Zip: WOODCLIFF LAKE NJ 07677	
Telephone: _____		Telephone: <span style="background-color: black; color: black;">[REDACTED]</span>	Redacted Tel. # 
Fax: ( ) _____		Fax: ( ) _____	
E-Mail:		E-Mail:	
Tenant: ANOVA TECHNOLOGIES, LLC			

This is to certify that the above-described premises together with any building thereon, are approved for use as indicated below and as depicted on the Plot Plan:

**COLLOCATION OF ADDITIONAL WIRELESS TELECOMMUNICATIONS FACILITIES ON EXISTING MONOPOLE AS THE INSTALLATION OF TWO (2) NEW DISH ANTENNAS WITHOUT EXTENDING HEIGHT.**

Which is a:

- Use permitted by Zoning Ordinance, Article - ARTICLE Section - STAT.
- Use permitted by variance approved on \_\_\_\_\_, # \_\_\_\_\_ subject to any special conditions attached to the grant thereof.
- Valid nonconforming use as established by ( ) findings of the Zoning Board of Adjustment or by ( ) the undersigned zoning officer or by ( ) Planning Board on the basis of evidence supplied by applicant. Conditions, if any:
- There is a nonconforming structure on the premises by reason of insufficient
- Other: MUST OBTAIN APPROPRIATE BUILDING/CONSTRUCTION PERMITS

Geraldine Entrup

Zoning Officer

**This is NOT a Construction Permit**