

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Application of Alaska Communications)	Call Sign: E170205
Internet LLC to Modify its C-Band Very)	
Small Aperture Terminal Network License)	File No. SES-MOD-_____
)	

VSAT NETWORK LICENSE MODIFICATION APPLICATION

Pursuant to Section 25.117 of the rules of the Federal Communications Commission (the “FCC” or “Commission”), 47 C.F.R. § 25.117, Alaska Communications Internet LLC (“Alaska Communications Internet”) files this application to modify (the “Modification Application”) its existing C-band very small aperture terminal (“VSAT”) network license, Call Sign E170205,¹ by adding ten (10) additional earth station sites to its authorized VSAT network that will enable it to deliver critically needed broadband services supported by the Commission’s Schools and Libraries Universal Service Support Mechanism, commonly known as “E-rate,” to students, teachers, and staff of the Kuspuk School District, Alaska, and updating the operating parameters at the previously licensed Dimond D hub site and five remote sites to conform to this change. Consistent with the *ACI Network License* and recently granted modification application,² Alaska Communications Internet seeks to perform these new operations in portions of the C-band at fixed locations in Alaska while communicating with the EUTELSAT 115WB satellite located at the 114.9° W.L. orbital position.

In connection with this Modification Application, Alaska Communications Internet requests that the Commission maintain or extend, as necessary, the previously granted waiver of

¹ See Alaska Communications Internet LLC, File No. SES-LIC-20171116-01257, Call Sign E170205, and subsequent modification and amendment applications (“*ACI Network License*”).

² See Alaska Communications Internet LLC, File Nos. SES-MOD-20180413-00352 & SES-AMD-20180427-00401, Call Sign E170205 (“*ACI Modification Application*”).

Section 25.115(c)(2)(i)(B)'s bandwidth limitation to permit Alaska Communications Internet to use up to 144 megahertz of bandwidth on EUTELSAT 115WB. In addition, like the recently granted *ACI Modification Application*, Alaska Communications Internet requests that the Commission waive the current freeze on licensing of new C-band satellite earth stations in order to enable the delivery of critical broadband services to the Alaskan primary and secondary schools that will be served by the additional C-band VSAT earth stations proposed herein.

Grant of this Modification Application will strongly serve the public interest by allowing Alaska Communications Internet to further expand its network and provide broadband connectivity to schools and facilities in the Kuspuk School District, providing improved educational opportunities and resources, enabling distance learning, and supporting staff, students and teachers in these remote Alaska bush communities.³ Given the unique needs and circumstances of these Alaska communities, the critical public benefits resulting from grant of this Modification Application will be achieved without any adverse impact on other public policy objectives.

Alaska Communications Internet has concurrently filed a request for special temporary authorization ("STA")⁴ to serve the subject Kuspuk School District sites during the Commission's review of this Modification Application, to allow these schools and their students, teachers, and

³ Unlike Alaska's three largest population centers, and the surrounding rural communities, Alaska bush communities are isolated geographically from infrastructure resources commonly available elsewhere in the state, and the nation as a whole. Most bush communities cannot be accessed by road and are not connected to the state's power grid. To reach these communities, people, as well as goods and services, must arrive by plane, barge, snow machine, all-terrain vehicle, or other off-road transportation means. Communications services in these communities generally must rely on satellite or terrestrial point-to-point microwave transport links to Anchorage, Fairbanks, or Juneau.

⁴ See Alaska Communications Internet LLC, 60-Day STA (filed on June 26, 2018 with a requested grant date of June 29, 2018).

staff to realize the benefits of improved broadband services concurrently with the start of the school year, as well as the July 1, 2018 start of E-rate Funding Year 2018.

I. Background

Alaska Communications Internet is an affiliate of Alaska Communications Systems Group, Inc. (“Alaska Communications”), a publicly-traded company that, through its subsidiaries, provides terrestrial wireline telecommunications and broadband-enabled services throughout Alaska as the largest incumbent local exchange carrier in the state.⁵ Alaska Communications Internet provides essential broadband and voice-over-Internet Protocol (“VoIP”) services to enterprise, business, educational, health care, and residential customers throughout the state.

The *ACI Network License* authorizes Alaska Communications Internet to operate a network of C-band satellite earth stations in order to provide satellite services to diverse users in remote locations in Alaska. Specifically, from the gateway hub in Anchorage, Alaska, the network currently serves the Alaska Native population of St. Paul Island, and the Tanadgusix Corporation (“TDX”), an Alaska Native corporation created pursuant to the Alaska Native Claims Settlement Act (“ANCSA”). In addition, the C-band VSAT network serves local businesses co-owned by the Bristol Bay Economic Development Corporation (“BBEDC”),⁶ providing broadband connectivity that supports the local fishing and seafood industries, as well as a test site located in Anchorage, Alaska. This Modification Application will enable Alaska Communications Internet to extend this

⁵ The incumbent local exchange carrier (“ILEC”) subsidiaries of Alaska Communications are: ACS of Anchorage, LLC; ACS of Fairbanks, LLC; ACS of Alaska, LLC; and ACS of the Northland, LLC; *see also* ACS Long Distance, Inc., File Nos. ITC-214-19960612-00248, ITC-T/C-20050822-00382, ITC-T/C-20040414-00190 (International Section 214 authorization).

⁶ The BBEDC is a not-for-profit company whose mission is to promote economic growth and opportunities for residents of BBEDC’s member communities through sustainable use of the Bering Sea resources. *See* <http://www.bbedc.com>.

network to deliver the well-recognized benefits of broadband telecommunications and Internet services to ten primary and secondary school locations supported by the Commission’s E-rate support mechanism in additional Alaska bush communities.

In the FCC Form 312 Schedule B and Technical Appendix, Alaska Communications Internet provides relevant information relating to the proposed operations at each new site, including earth station operating parameters and frequency coordination reports.⁷ At all ten new remote sites, Alaska Communications Internet will operate an identical 2.4m Prodelin Model 1244 (the “2.4m”) earth station, which is the same model that is currently licensed in the *ACI Network License* and on the Commission’s Approved Non-Routine Earth Station Antennas List (“Non-Routine Antenna List”).⁸ Moreover, Alaska Communications Internet will operate the earth stations below the maximum EIRP spectral density (“ESD”) levels authorized in the *ACI Network License* and consistent within levels previously approved by the Commission.⁹

II. Discussion

This Modification Application seeks to add ten remote earth stations to the *ACI Network License*, each of which completed coordination on June 22, 2018, to communicate with the EUTELSAT 115WB satellite in portions of the C-band. This Modification Application also

⁷ Alaska Communications Internet provides site-specific radiation hazard reports that include “worst-case scenario” transmit power levels. As demonstrated in the Schedule B, Alaska Communications Internet will operate the 2.4m antenna below these levels at all times.

⁸ See Approved Non-Routine Earth Station Antennas, <https://www.fcc.gov/approved-non-routine-earth-station-antennas>; Letter to Marlene H. Dortch, “Alaska Communications Internet LLC – Section 1.65 Letter Regarding Application for C-Band Very Small Aperture Terminal (“VSAT”) Blanket License, File No. SES-LIC-20171116-01257, Call Sign 170205” (filed on Dec. 22, 2017) (*citing* Harris Corporation, File No. SES-LIC-20060302-00342, Call Sign E060075; Intelsat LLC, File No. SES-LIC-20091027-01364, Call Sign E090186; Globe Wireless LLC, File No. SES-LIC-20120116-00058, Call Sign E120017).

⁹ Each site will utilize an iDirect modem, which assigns individual time slots for each earth station’s transmissions, and thus there is no potential for aggregation of transmissions resulting in an exceedance of the off-axis ESD levels provided in this application.

seeks to add additional C-band transmit frequencies and increase the antenna input power for the previously licensed Dimond D hub, in order to accommodate larger bandwidth carriers for the increased traffic to the new sites and add corresponding receive frequencies to the currently licensed remote sites.

A. Addition of Dimond D Hub Frequencies

Previously, the Commission granted Alaska Communications Internet a license to communicate with Transponder 01C on EUTELSAT 115WB, operating at 3704-3776 MHz (space-to-Earth) and 5929-6001 MHz (Earth-to-space). In order to effectively serve the ten new Kuspuk School District sites using the Dimond D hub, Alaska Communications Internet will require additional capacity on EUTELSAT 115WB. Alaska Communications Internet, therefore, has leased Transponder 07C, operating in the 3944-4016 MHz (space-to-Earth) and 6169-6241 MHz (Earth-to-space) bands.¹⁰ Utilizing the previously licensed 3.8m hub, Alaska Communications Internet intends to use the new EUTELSAT 115WB Transponder 07C uplink and downlink (*i.e.*, 72 megahertz in each direction in a single polarization) as the forward link (from the hub to each Kuspuk School District remote site). Virtually all of that bandwidth will be required to deliver the broadband service speeds to all ten locations required under the Kuspuk School District's contract. Any remaining bandwidth on Transponder 07C, in addition to the currently licensed bandwidth on Transponder 01C, will be used to continue to serve Alaska Communications Internet's existing customers and preserve operational flexibility and capacity to provide reliable connectivity to all customer locations.

¹⁰ In Section III, below, Alaska Communications Internet respectfully requests that the Commission extend its existing of Section 25.115(c)(2)(i)(B) of the Commission's rules, to the extent necessary, to permit the use of this additional spectrum as part of the Alaska Communications Internet network, as described in this Modification.

Full use of Transponder 07C in this way will allow Alaska Communications Internet to utilize wider carriers with greater bandwidth capacity at the Dimond D hub, maximizing its ability to deliver high-speed connectivity to the Kuspuk School District. As demonstrated in the Schedule B, while the utilization of a 72 megahertz carrier bandwidth results in a lower EIRP density – thus reducing the potential for interference with other operations in the band – it also requires that Alaska Communications Internet slightly increase the input power into the antenna. Alaska Communications Internet provides an updated radiation hazard study for the Dimond D hub reflecting the increased input power.

B. New Site Locations

Alaska Communications Internet seeks to add the following ten sites to its *ACI Network License* (together, the “Kuspuk School District sites”):

- Aniak School District Office (“*Aniak DO*”)
(geographic coordinates: 61° 34' 55.6" N, 159° 32' 18.3" W)
- Junior Senior High School (“*JSHS*”) - Aniak, AK
(geographic coordinates: 61° 34' 48.8" N, 159° 33' 06.7" W)
- Auntie Mary Nicoli Elementary School (“*AMNES*”) - Aniak, AK
(geographic coordinates: 61° 34' 49.0" N, 159° 31' 51.7" W)
- Crow Village Sam School (“*CVSS*”) - Chuathbaluk, AK
(geographic coordinates: 61° 34' 23.7" N, 159° 14' 57.8" W)
- Jack Egnaty Senior School (“*JESS*”) - Sleetmute, AK
(geographic coordinates: 61° 42' 9.7" N, 157° 10' 14.9" W)
- Johnnie John Sr School (“*JJSS*”) - Crooked Creek, AK
(geographic coordinates: 61° 51' 48.6" N, 158° 08' 18.2" W)
- Gusty Michael School (“*GMSHS*”) - Stoney River, AK
(geographic coordinates: 61° 47' 13.6" N, 156° 35' 17.7" W)
- George Morgan Senior High School (“*GMHS*”) - Kalskag, AK
(geographic coordinates: 61° 31' 57.9" N, 160° 20' 50.0" W)

- Joseph & Olinga Gregory Elementary School (“*JOGES*”) - Kalskag, AK
(geographic coordinates: 61° 32' 41.9" N, 160° 19' 3.7" W)
- Zackar Levi Elementary School (“*ZLES*”) - Kalskag, AK
(geographic coordinates: 61° 30' 43.6" N, 160° 21' 41.5" W)

Each site will use an identical 2.4m VSAT earth station of the same model that is authorized in the *ACI Network License* for similar fixed C-band operations and is on the Commission’s Non-Routine Antenna List.¹¹ Although the 2.4m earth station does not comply with the gain mask in Section 25.209 of the Commission’s rules, Alaska Communications Internet demonstrates in the attached Schedule B that it will operate the terminals at maximum ESD levels below those currently authorized in the *ACI Network License* and in compliance with the ESD mask set forth in Section 25.218(d) of the Commission’s rules.¹²

At each site, the earth station will be mounted on an existing rooftop in an area inaccessible to the general public. Their planned locations are not among any “districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places,”¹³ and thus they fall within the exemptions of Section 1.1306(a)-(b) and Note 1 to that rule.¹⁴ Accordingly, no environmental assessment is required as part of this application because each proposed site is categorically exempt under Section 1.1306 of the Commission’s rules, 47 C.F.R. § 1.1306.

¹¹ *Supra* n. 8; *see, e.g.*, Harris Corporation, File No. SES-LIC-20060302-00342, Call Sign E060075.

¹² *See* 47 C.F.R. § 25.218(d).

¹³ 47 C.F.R. § 1.1307(a)(4).

¹⁴ *See* 47 C.F.R. § 1.1306, Note 1 (“The provisions of §1.1307(a) requiring the preparation of EAs do not encompass the mounting of antenna(s) and associated equipment (such as wiring, cabling, cabinets, or backup-power), on or in an existing building, or on an antenna tower or other man-made structure, unless §1.1307(a)(4) is applicable.”).

The flexibility to use additional transponder capacity is essential to enable Alaska Communications Internet to offer reliable connectivity to the Kuspuk School District sites. Not only is 72 megahertz of spectrum insufficient to enable service to all current customers of Alaska Communications Internet, but the entire Transponder 01C frequency range is unavailable at three of the new remote sites, necessitating an alternative solution. In all cases, Alaska Communication Internet seeks to receive hub transmission of the forward link in Transponder 07C frequencies from 3944-4016 MHz (space-to-Earth). With respect to the return links from each remote site back to the hub, the individual carriers will be narrower in bandwidth and Alaska Communications Internet needs flexibility to position those return link carriers within up to 72 MHz of bandwidth on EUTELSAT 115WB, depending on certain site-specific limitations. Specifically, for seven of the Kuspuk School District sites, the return link (from the remote site back to the hub) will utilize Transponder 01C frequencies already included in the *ACI Network License*. As discussed below, however, Alaska Communications Internet has encountered co-frequency terrestrial operations in the entire range covered by the Transponder 01C uplink band at three Kuspuk School District sites in the area of Kalskag, Alaska, and will thus need to utilize alternative frequencies for the uplink to EUTELSAT 115WB at those locations to avoid interference.¹⁵ Without this flexibility, Alaska Communications Internet will be unable to serve these rural Kuspuk School District sites, inhibiting “the delivery of earth station services, including broadband access, to rural Americans.”¹⁶

¹⁵ Those three sites will utilize a portion of the Transponder 07C frequency range previously discussed, but on the opposite polarity, in order to avoid interference with the forward link from the hub.

¹⁶ See *FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum*, Report and Order, FCC 01-177, RM-9649 (2001), ¶ 25 (“*CSAT Report & Order*”).

C. Adding the Transponder 07C Downlink Frequencies to Currently Licensed Remote Sites

Alaska Communications Internet also requests that the Commission add licensed authority to the operating parameters for its five currently licensed remote earth station sites to receive downlink (space-to-Earth) transmissions from the Dimond D hub on Transponder 07C (*i.e.*, 3944-4016 MHz).¹⁷ Currently, the *ACI Network License* includes five remote sites, each of which is authorized to receive the downlink frequencies in the range of 3704-3776 MHz, used by EUTELSAT E115WB Transponder 01C, as follows:

- Site 1: 100 Harbor View Drive, St. Paul, AK
Geographic Coordinates: 57° 7' 23.0" N, 170° 16' 45.0" W
- Site 2: 600 Telephone Ave., Anchorage, AK
Geographic Coordinates: 61° 11' 10.5" N, 149° 52' 15.57" W
- Site 3: Excursion Inlet, Alaska
Geographic coordinates: 58° 24' 55.3" N, 135° 26' 36.4" W
- Site 4: Kodiak Island, Alitak, AK
Geographic Coordinates: 56° 53' 52.2" N, 154° 14' 43.0" W
- Site 5: Naknek, AK
Geographic Coordinates: 58° 43' 43.7" N, 157° 00' 0.90"

Alaska Communications Internet plans, to the extent possible, to consolidate its transmit and receive operations over time so that the forward link from the Dimond D hub to *all* remote sites, including the previously licensed sites identified above, takes place using a single 72 megahertz wide carrier that saturates Transponder 07C. In order to put this plan into effect, all remote sites must be authorized to receive the Transponder 07C downlink frequencies in the range of 3944-4016 MHz.

¹⁷ In addition, in the FCC Form 312 Schedule B, Alaska Communications Internet updates the Site ID (Schedule B, E1) for the previously licensed remote sites.

D. Frequency Coordination

Alaska Communications Internet engaged Micronet Communications, Inc. (“Micronet”) to perform frequency coordination in support of this Modification Application, which was completed on June 22, 2018. Pursuant to Sections 25.115(c)(2)(ii) and 25.203 of the Commission’s rules, 47 C.F.R. §§ 25.115(c)(2)(ii) and 25.203, Micronet has conducted a coordination analysis on behalf of Alaska Communications Internet that considers all existing, proposed, and prior coordinated microwave facilities within the contours of the proposed earth stations at the Kuspuk School District sites. Moreover, Micronet has fully coordinated the Transponder 07C frequencies at the Dimond D hub, as well as the new Transponder 07C receive frequencies at the five existing remote sites.

As demonstrated in the attached frequency coordination reports, as coordinated and limited, there is no potential for interference into other users of the C-band spectrum sought herein by Alaska Communications Internet. First, Alaska Communications Internet’s proposed operations at the Dimond D hub in Transponder 07C frequencies in the 3944-4016 MHz (space-to-Earth) and 6169-6241 MHz (Earth-to-space) bands are fully compatible with other FCC-licensed operations in the band.

Second, as noted, at each Kuspuk School District site, Alaska Communication Internet plans to receive in Transponder 07C frequencies from the 3944-4016 MHz (space-to-Earth). Depending on certain site-specific frequency limitations, Alaska Communications Internet will either transmit in the 5929-6001 MHz band (Transponder 01C)¹⁸ or the 6189.565-6237.565 MHz

¹⁸ To prevent interference to nearby terrestrial microwave operations, Alaska Communications Internet will limit its transmit operations to the 5960.2-6001 MHz band at the *Aniak DO*, *JSHS*, *CVSS* and *AMNES* sites.

band (Transponder 08C).¹⁹ Transponder 08C was selected specifically to support three Kuspuk School District sites – *GMHS*, *JOGES* and *ZLES* (the “Kalskag Sites”) – because Micronet was unable to clear any available spectrum on Transponder 01C. Such site-specific spectrum limitations illustrate the need for operational flexibility to permit use of the additional 72 megahertz frequency range from 6169-6241 MHz (Earth-to-space, across two transponders), as well as the corresponding downlink frequencies, on EUTELSAT 115WB.

Micronet received no objections in response to its Prior Coordination Notices, and Alaska Communications Internet currently operates its network with no reported cases of interference. Alaska Communications Internet will coordinate any additional hub or remote operations prior to bringing them into use as part of the C-band VSAT network.

III. Waiver Requests

Alaska Communications Internet seeks certain waivers in connection with this application to modify its C-band VSAT network license. As discussed below, grant of the requested waivers will enable Alaska Communications Internet to provide reliable and effective broadband services to the students, teachers, and staff of the Kuspuk School District. The Commission may waive its rules for “good cause shown.”²⁰ Specifically, the Commission may waive its rules where the particular facts make strict compliance inconsistent with the public interest.²¹ In addition, the

¹⁹ The Transponder 08C frequencies are within the Transponder 07C transmit frequency range, such that the use of Transponder 08C does not result in any additional frequency bandwidth being used by the network, and enabling Alaska Communications Internet to limit its Section 25.116(c)(2)(i)(B) waiver request to the 144 megahertz total. Transponder 08C operates on the opposite polarity to Transponder 07C, enabling re-use of those frequencies for the return link at the Kalskag Sites.

²⁰ See 47 C.F.R. § 1.3. *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

²¹ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (“*Northeast Cellular*”).

Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.²² Waiver is appropriate if special circumstances warrant a deviation from the general rule, and such deviation would better serve the public interest than strict adherence to the general rule.²³ The requests below amply meet that standard.

A. Waiver of Section 25.115(c)(2)(i)(B) of the Commission’s Rules

Alaska Communications Internet respectfully requests that the Commission extend, as necessary, its previously granted waiver of Section 25.115(c)(2)(i)(B) of the Commission’s rules, which requires that a C-band VSAT network limit its operational bandwidth to 20 MHz of spectrum in each direction of transmission with up to three satellites (*i.e.*, up to 60 megahertz total).²⁴ In granting the *ACI Network License*, the Commission waived Section 25.115(c)(2)(i)(B) to permit Alaska Communications Internet to use 72 megahertz of spectrum in each direction on Transponder 01C of EUTELSAT 115WB.

Growing demand for Alaska Communications Internet’s C-band satellite services in Alaska now necessitates use of an *additional* 72 megahertz of spectrum (*i.e.*, 144 megahertz total) on EUTELSATSAT 115WB in its network. Specifically, Alaska Communications Internet seeks to add the following frequency bands to the *ACI Network License*:

Transponder 07C: 6169-6241 MHz (Earth-to-space);

Transponder 07C: 3944-4016 MHz (space-to-Earth); and

²² *WAIT Radio v. FCC*, 418 F.2d 1153, 1157, (D.C. Cir. 1969), *affirmed by WAIT Radio v. FCC*, 459 F.2d 1203 (D.C. Cir. 1972), *cert. denied*, 409 U.S. 1027 (1972).

²³ *Northeast Cellular*, 897 F.2d at 1166.

²⁴ *See* 47 C.F.R. § 25.115(c)(2)(i)(B); *see FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum*, Report and Order, FCC 01-177, RM-9649 (2001), ¶ 13 (“*CSAT Report & Order*”).

Transponder 08C: 6189.565-6237.565 MHz (Earth-to-space).²⁵

The additional transponder capacity is imperative to be able to properly scale and offer the most reliable connectivity solutions to the remote communities of Alaska. The additional spectrum is necessary to deliver the required services to the ten Kuspuk School District locations, which cannot be added to the current network within the currently licensed 72 megahertz range. The additional spectrum will thus enable the delivery of critically needed broadband telecommunications and Internet access services in the Alaska bush, where terrestrial connectivity is simply unavailable.

Not only do the Kuspuk School District requirements necessitate additional total spectrum, this waiver is particularly important given the limitations in the terrestrial spectrum environment. As discussed above, none of the Transponder 01C spectrum is available for satellite earth station operations at the three Kalskag Sites. Additional spectrum options are essential to provide Alaska Communications Internet with the operational flexibility and capacity to effectively serve its customers.

Furthermore, consolidating all of the spectrum on a single satellite allows Alaska Communications Internet to deliver service in a more efficient, cost-effective manner, because it requires only a single satellite earth station antenna at each site. Communication with additional satellites, located elsewhere on the geostationary arc, would necessitate additional antennae, pointing in different directions, at each site. Such an arrangement would multiply the cost of procuring, deploying, servicing, and maintaining the necessary earth station equipment. Especially in the context of this Modification Application, where the cost of the services will be

²⁵ Transponder 08C frequencies are within the range also used by Transponder 07C, resulting in no additional frequency bandwidth sought. *Supra* n. 19.

borne in significant part by the Commission's E-rate support mechanism, such efficiency carries even greater public interest benefits.²⁶

The 20 MHz limitation was adopted by the Commission as part of its rulemaking to permit the licensing of C-band VSAT networks in the United States, wherein the Commission acknowledged that importance of the rule to enable the provisioning of satellite broadband communications to rural and underserved areas in the United States.²⁷ Moreover, the Commission noted that the spectrum limitation was not derived as a means to hinder C-band VSAT deployments, but rather as a streamlined licensing mechanism for C-band VSAT networks.²⁸ The Commission stated that applications that do not meet the specific criteria of the rule (*e.g.*, the 20 MHz limitation) will be considered on a "case-by-case" basis.²⁹ Thus, Alaska Communications Internet's request for a waiver is consistent with Commission policy of evaluating applications that do not meet the criteria in Section 25.115(c)(2) on a case-by-case basis, and it is consistent with Commission's rules and precedent to permit the utilization of additional frequency bandwidth on EUTELSAT 115WB to support the VSAT network.

Grant of this waiver will also improve Alaska Communications Internet's ability to more efficiently and effectively reach the underserved, rural areas of Alaska. This waiver, in

²⁶ *E.g.*, *Modernizing the E-Rate Program for Schools and Libraries*, WC Docket No. 13-184, Report and Order and Further Notice of Proposed Rulemaking, FCC 14-99, 29 FCC Rcd 8870 (2014), at ¶ 50 (adopting a goal of "maximizing the cost-effectiveness of spending for E-rate supported purchases, thereby minimizing the contribution burden on consumers and businesses and maximizing the benefit of each dollar spent on services for schools and libraries") ("*E-rate Modernization Order*").

²⁷ *CSAT Report & Order* ¶ 14.

²⁸ *Id.* ¶ 6 ("We will refer to the CSAT network licensing as a 'streamlined licensing' procedure . . . we believe that the streamlined procedures adopted here will provide much needed relief while preserving the ability of satellite and terrestrial services to share the C- band in an equitable manner.").

²⁹ *Id.*

particular, will allow Alaska Communications Internet to utilize wider carriers with greater bandwidth capacity at the Dimond D hub, maximizing the company's ability to deliver high-speed service to meet the needs of schools and other educational facilities in the Kuspuk School District. These wider carriers also operate with lower EIRP density, minimizing the potential for interference with other operations in the band.

Based on the foregoing, grant of the requested waiver is in the public interest because it will allow Alaska Communications Internet the flexibility to dependably provide critical satellite communication services to the Alaska bush.

B. Waiver of the Temporary Freeze Public Notice

Prior to the filing of this Modification Application, the Commission released a Public Notice placing a temporary freeze on the filing of all new or modification applications for earth stations in the 3.7-4.2 GHz band, effective as of April 19, 2018.³⁰ The *Temporary Freeze Public Notice* contains an exception stating that “entities that own or operate existing FSS earth stations in the 3.7-4.2 GHz band . . . may file an application to modify a current registration or license” during the freeze period.³¹

Although Alaska Communications Internet operates existing FSS earth stations in the C-band under the *ACI Network License*, because the earth stations proposed in this Modification

³⁰ See Public Notice, *Temporary Freeze on Applications for New or Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band, 90-Day Window to File Applications for Earth Stations Currently Operating in the 3.7-4.2 GHz Band*, DA 18-398 (rel. on April 19, 2018) (“*Temporary Freeze Public Notice*”). See also, Public Notice, GN Docket Nos. 17-183, 18-122, “International Bureau Announces 90-Day Extension of Filing Window, to October 17, 2018, to File Applications for Earth Stations Currently Operating in 3.7-4.2 GHz Band; Filing Options for Operators with Multiple Earth Station Antennas,” DA 18-639 (rel. Jun. 21, 2018).

³¹ *Temporary Freeze Public Notice*, at 1.

Application are not currently “constructed and operational”³² and because this Modification Application is being filed after the release of the *Temporary Freeze Public Notice*, Alaska Communications Internet respectfully requests a waiver of the *Temporary Freeze Public Notice*, consistent with precedent, to permit licensing of the operations proposed herein.³³

First, this Modification Application would add ten additional sites for service in the Alaska bush, all of which will support Kuspuk School District schools and offices. The proposed operations will greatly advance the public interest goals of E-rate, as mandated by Sections 254(h)(1)(B) and 254(h)(2)(A) of the Communications Act, 47 U.S.C. §§ 254(h)(1)(B), (h)(2)(A) and numerous Commission orders.³⁴ The educational resource and distance learning opportunities supported by E-rate are particularly important in the Alaska bush, where schools in small communities have limited resources and may struggle to reach the 10-student enrollment

³² *Id.*

³³ In the *ACI Modification Application*, Alaska Communications Internet was granted a waiver of the *Temporary Freeze Public Notice* under similar circumstances. Although the original *ACI Modification Application* was filed prior to the release of the *Temporary Freeze Public Notice*, a subsequent amendment added additional sites after that date.

³⁴ *E.g. E-rate Modernization Order*, at ¶ 2 (“High-speed broadband, to and within schools, connects students to cutting-edge learning tools in the areas of science, technology, engineering and math (STEM) education, necessary for preparing them to compete in the global economy. High-speed broadband also creates opportunities for customized learning, by giving our students and their teachers access to interactive content, and to assessments and analytics that provide students, their teachers, and their parents real-time information about student performance while allowing for seamless engagement between home and school. Finally, high-speed broadband expands the reach of our schools and creates opportunities for collaborative distance learning, providing all students access to expert instruction, no matter how small the school they attend or how far they live from experts in their field of study.”), ¶ 4 (“[W]e recognize the critical role the E-rate program plays in the lives of our students and communities and the importance of ensuring that the program supports sufficient, equitable, and predictable support for high-speed connectivity to and within schools and libraries. It is a crucial part of the Commission’s broader mandate to further broadband deployment and adoption across our nation.”).

minimum to qualify for state education funding.³⁵ (Indeed, the Kuspuk School District schools covered by this Modification Application serve between 15 and 94 students each.³⁶)

Disproportionately, these bush villages are home to vulnerable communities of Alaska Natives, for whom the enhanced educational opportunities offered by broadband are particularly critical. Without a grant of this waiver, Alaska Communications Internet will be unable to serve these additional sites and the educational benefits of the proposed services will be lost to these communities.

Second, applying the *Temporary Freeze Public Notice* to the Kuspuk School District sites that are the subject of this Modification Application would not serve the purpose of the freeze. The Commission imposed the freeze “to preserve the current landscape of authorized operations in the 3.7-4.2 GHz band pending Commission action as part of its ongoing inquiry into the possibility of permitting mobile broadband use and more intensive fixed use of the band,”³⁷ with particular focus on terrestrial “5G” mobile broadband service. The Kuspuk School District sites are located in remote areas of the Alaska bush, and are not candidates for 5G deployment anytime in the foreseeable future. Today, mobile wireless service at those sites is limited and the prohibitive cost of backhaul, coupled with the small size of the potential market in the area,

³⁵ See, e.g., Tegan Hanlon, “Two Small Schools in Southeast Alaska Shut Their Doors,” Anchorage Daily News (Sept. 15, 2016) (reporting that public schools in Port Protection and Tenakee Springs, Alaska had failed to reach the 10-student minimum and would close, having exhausted savings that kept the schools open after enrollment declined, and observing that, “[e]ach year, two to three schools typically close in Alaska”), available at: <https://www.adn.com/alaska-news/education/2016/09/14/two-small-alaska-schools-shut-their-doors/>; Michelle Theriault Boots, “The Last Kid in Cold Bay,” Anchorage Daily News (Aug. 8, 2015) (reporting school closure), available at: <https://www.adn.com/features/alaska-news/rural-alaska/2016/12/22/the-last-kid-in-cold-bay/>.

³⁶ Alaska Department of Education and Early Development, Public Schools Database, available at: https://education.alaska.gov/DOE_Rolodex/SchoolCalendar/Home/SchoolsList?districtId=29

³⁷ *Temporary Freeze Public Notice* at 1.

makes additional terrestrial broadband deployment challenging. While terrestrial wireless use of this band and initial 5G deployments may occur in densely populated urban areas far removed from the remote Alaskan bush communities served by Alaska Communications Internet, it is highly unlikely that grant of this application will hinder the Commission's analysis of additional mobile and fixed use of this band.³⁸

Third, the potential impact on future terrestrial deployment of 5G data services is very low in any event. Frequency coordination process has revealed few terrestrial users of 4 GHz spectrum in these areas. Given the extremely small size and remote location of these communities, even when terrestrial 5G services arrive, providers will require only a small fraction of the entire 500 MHz of spectrum between 3.7-4.2 GHz to fully serve any reasonably foreseeable level of demand.

Alaska Communications Internet currently operates satellite earth stations at multiple locations in the Alaska bush with no reported cases of implementation constraints. There is no reason to expect a different result here, even in the context of access to an additional C-band downlink transponder. Alaska Communications Internet is also limiting its usage in the C-band as necessary to avoid any potential interference with other authorized spectrum users in the band, although these constraints have primarily arisen in the 5.925-6.425 GHz uplink portion of the band. These operations were deemed compatible with terrestrial operations and entered into frequency coordination databases as of the date of the filing of this application. Thus, there is no potential for any adverse impact or other prejudice to terrestrial systems or services from grant of the requested waiver.

³⁸ *Id.*

IV. Public Interest

Grant of this application will strongly serve the public interest by allowing Alaska Communications Internet to provide reliable broadband services to multiple Kuspuk School District elementary and secondary schools, as well as the district office, in remote Alaskan bush communities, helping to improve educational opportunities by providing advanced satellite connectivity that will support access to educational resources, research materials, distance learning, and cloud based record storage and other services. By directly supporting the Kuspuk School District, Alaska Communication Internet is helping to enhance regional well-being and promote educational programs for students and teachers. Moreover, waiver of the Commission's spectrum limitation to allow for additional transponder capacity on EUTELSAT 115WB (144 megahertz total for uplink and downlink) will allow Alaska Communications Internet to be able to properly scale and offer the most reliable connectivity solutions to the Kuspuk School District facilities. Finally, because remote areas of Alaska are unique in their need for satellite broadband connectivity and unlikely candidates for the 5G deployment contemplated by the Commission, waiver of the *Temporary Freeze Public Notice* will further rather than undermine the Commission's broadband objectives and will allow Alaska Communications Internet to bring essential connectivity services to the Alaskan bush.

V. Conclusion

Based on the foregoing, Alaska Communications Internet respectfully requests that the Commission grant this application to modify its *ACI Network License* by including additional frequencies as described herein, amending the operating parameters of the Dimond D hub, and adding ten remote sites to serve the Kuspuk School District.