

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of )
Requests for Waiver of Various ) PS Docket No. 06-229
Petitioners to Allow the Establishment )
of 700 MHz Interoperable Public Safety )
Wireless Broadband Networks )

ORDER

Adopted: May 11, 2010

Released: May 12, 2010

By the Commission:

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I. INTRODUCTION

1. By this order we grant, with conditions, those waiver Petitions listed in Appendix A, filed by public safety entities ("Petitioners") seeking early deployment of statewide or local public safety broadband networks in the 700 MHz public safety broadband spectrum (763-768 MHz and 793-798

MHz).<sup>1</sup> We find that these entities have generally met the standard for waiver of the Commission's rules, and that so long as the conditions imposed herein are met we may proceed with the Order in advance of resolution of the broader issues pending in this docket. By enabling early deployment in this band, we take a major step towards development of a nationwide interoperable public safety broadband wireless network.

2. We also deny the petition of New EA d/b/a Flow Mobile, finding that Flow Mobile fails to meet the eligibility criteria of Section 337 of the Communications Act.<sup>2</sup>

## II. BACKGROUND

3. The 700 MHz Band (698-806 MHz) was made available for wireless services as part of the digital television transition.<sup>3</sup> Pursuant to Congress's direction in the Balanced Budget Act of 1997, codified at section 337(a) of the Act, the Commission allocated, in the Upper 700 MHz Band (746-806 MHz), 24 megahertz of spectrum for public safety services and 36 megahertz for commercial services.<sup>4</sup>

4. In the *Second Report and Order* in this docket, the Commission designated the 763-768 MHz and 793-798 MHz bands for public safety broadband communications, and consolidated existing narrowband allocations to the 769-775 MHz and 799-805 MHz bands.<sup>5</sup> The Commission also created a single nationwide license, the Public Safety Broadband License, for the public safety broadband spectrum and specified the criteria, selection process, and responsibilities of the licensee assigned this spectrum.<sup>6</sup> The Public Safety Spectrum Trust ("PSST") was later designated as the nationwide Public Safety Broadband Licensee ("PSBL").<sup>7</sup>

5. The Commission also created a nationwide license for the commercial D Block, located adjacent to the public safety broadband spectrum at 758-763 MHz and 788-793 MHz.<sup>8</sup> The Commission required the D Block licensee to enter into a public/private partnership with the PSBL, and, using the spectrum associated with both licenses, construct and operate a nationwide network that would be shared by commercial and public safety users.<sup>9</sup>

6. The auction of the D Block and other 700 MHz Band licenses, designated Auction 73, began on January 24, 2008, and closed on March 18, 2008.<sup>10</sup> While the other 700 MHz Band commercial

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<sup>1</sup> See *infra* Appendix A.

<sup>2</sup> See 47 U.S.C. § 337.

<sup>3</sup> See Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4 (2006).

<sup>4</sup> See Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 § 3004 (1997) (adding new § 337 of the Communications Act); Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, *Report and Order*, 12 FCC Rcd 22953, 22955 ¶ 5 (1998), *recon.* 13 FCC Rcd 21578 (1998) (*Upper 700 MHz Reallocation Order*).

<sup>5</sup> See Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, WT Docket No. 06-150, PS Docket No. 06-229, *Second Report and Order*, 22 FCC Rcd 15289, 15406 ¶ 322 (*Second Report and Order*). We also created an internal guard band in the 768-769 MHz and 798-799 MHz bands located between the broadband and narrowband allocations. *Id.*

<sup>6</sup> See *Second Report and Order*, 22 FCC Rcd at 15406 ¶ 322.

<sup>7</sup> See Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, *Order*, 22 FCC Rcd 20453 (2007).

<sup>8</sup> *Id.* at 15428 ¶ 386.

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

<sup>10</sup> See Auction 73, 700 MHz Band, at [http://wireless.fcc.gov/auctions/default.htm?job=auction\\_summary&id=73](http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73).

licenses offered at Auction 73 were sold, no bidder met the reserve price for the nationwide D Block license.<sup>11</sup> In the *Second Further Notice* and *Third Further Notice*, the Commission sought comment on the best path forward for the D Block and the envisioned nationwide interoperable public safety broadband network.<sup>12</sup> To date, these proceedings remain open, and the envisioned partnership has not materialized.

7. Following the *Third Further Notice*, a number of public safety petitioners sought waiver of the Commission's rules in order to allow early deployment of local or regional public safety broadband networks in the public safety broadband spectrum.<sup>13</sup> On August 14, 2009, the Public Safety and Homeland Security Bureau ("PSHSB" or "Bureau") issued a public notice ("Waiver PN") that sought comment on the petitions received.<sup>14</sup> The Bureau sought comment generally, as well as on several specific topics, including, among other things, timing for action on the petitions, the appropriate mechanism for authorizing early deployment, and standards for ensuring such deployments are interoperable.<sup>15</sup> We received comments from a range of entities, including the PSST, several public safety associations, commercial providers, and the individual Petitioners. Commenters were generally supportive of the waiver requests, so long as any grant was appropriately conditioned to ensure the Commission's interoperability goals remain achievable.

8. The PSST also submitted, in an ex parte filing, a report completed by the National Public Safety Telecommunications Council ("NPSTC") Broadband Task Force ("BBTF"), which addressed

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<sup>11</sup> See *id.*; see also Auction of 700 MHz Band Licenses Closes, *Public Notice*, DA 08-595 (rel. Mar. 20, 2008) (700 MHz Auction Closing Public Notice). [http://wireless.fcc.gov/auctions/default.htm?job=auction\\_summary&id=73](http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73).

<sup>12</sup> See Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, WT Docket No. 06-150, PS Docket No. 06-229, 22 FCC Rcd 8047 (2008) (*Second Further Notice*); 23 FCC Rcd 14301 (2008) (*Third Further Notice*).

<sup>13</sup> See City of Boston Request for Waiver, PS Docket No. 06-229 (filed Dec. 11, 2008) (Boston Petition); City of Boston Amended Request for Waiver, PS Docket No. 06-229 (filed May 28, 2009) (Boston Amended Petition); City and County of San Francisco, City of Oakland, City of San Jose Request for Waiver, PS Docket No. 06-229 (filed Mar. 24, 2009) (Bay Area Petition); City and County of San Francisco, City of Oakland, City of San Jose Request for Waiver, PS Docket No. 06-229 (filed May 28, 2009) (Bay Area Amended Petition); State of New Jersey Petition, PS Docket No. 06-229 (filed Apr. 3, 2009) (New Jersey Petition); City of New York Petition for Waiver, PS Docket No. 06-229 (filed June 8, 2009) (New York City Petition); District of Columbia Request for Waiver, PS Docket No. 06-229 (filed June 26, 2009) (DC Petition); New York State Request for Waiver, PS Docket No. 06-229 (filed June 30, 2009) (NYS Petition); City of Chesapeake, Virginia, Request for Waiver, PS Docket No. 06-229 (filed July 8, 2009) (Chesapeake Petition); City of San Antonio, Texas, Petition for Expedited Waiver, PS Docket No. 06-229 (filed July 10, 2009) (San Antonio Petition); State of New Mexico, Petition for Expedited Waiver, PS Docket No. 06-229 (filed July 10, 2009) (New Mexico Petition); North Dakota Petition, note 1, *supra*; Petition for Waiver of the City of Charlotte, North Carolina, PS Docket No. 06-229 (filed Aug 4., 2009) (Charlotte Petition); Petition for Expedited Waiver, PS Docket No. 06-229 (filed Aug. 7, 2009) (Iowa Petition)(including the Counties of Blackhawk, Buchanan, Dubuque, Grundy, Johnson, Marshall, and Scott and the City of Cedar Rapids).

<sup>14</sup> Public Safety and Homeland Security Bureau Seeks Comment on Petitions for Waiver to Deploy 700 MHz Public Safety Broadband Networks, DA 09-1819 (rel. Aug. 14, 2009) (*Waiver PN*). Since the public notice was issued, additional petitions were filed, including LA-RICS Joint Power Authority (filed Nov. 16, 2009) (LA-RICS Petition), Pembroke Pines, FL (filed Nov. 18, 2009) (Pembroke Pines Petition), Adams County Communications Center, CO (filed Dec. 10, 2009) (Adams County Petition), City of Seattle, WA (filed Jan 15, 2010) (Seattle Petition), Calumet, Outagamie and Winnebago Counties, WI (filed Mar. 10, 2010) (Wisconsin Petition), the State of Mississippi (filed Mar. 23, 2010) (Mississippi Petition), the city of Mesa, AZ and the TOPAZ Regional Wireless Cooperative (filed Apr. 14, 2010) (Mesa Petition); the State of Oregon (filed Apr. 30, 2010) (Oregon Petition); and the State of Alabama (filed May 10, 2010).

<sup>15</sup> *Id.* at 6-7.

recommended conditions for the waiver petitions to help ensure such deployments are interoperable.<sup>16</sup> The Bureau sought comment on the PSST's filing and the NPSTC BBTF recommendations.<sup>17</sup> Commenters were generally supportive of the technical recommendations of the NPSTC BBTF, including the mandatory use of Long Term Evolution ("LTE") as an air interface, while recognizing that this standard is not yet fully developed.<sup>18</sup> It was noted, however, that all of the recommendations may not be capable of implementation on day one and additional requirements may be necessary to ensure interoperability, but that the framework offered by the BBTF provided a reasonable baseline.<sup>19</sup>

### III. DISCUSSION

#### A. Timing

9. In the *Waiver PN*, the Bureau sought comment on whether we could act on the waiver petitions in advance of completing the larger rulemaking addressing the public safety broadband spectrum.<sup>20</sup> Several public safety commenters urged the Commission to act expeditiously, citing the pressing need for access to broadband communications to facilitate life-saving services.<sup>21</sup> Others cite timing concerns related to funding,<sup>22</sup> or the experience and efficiencies that may be gained by allowing deployments now rather than waiting for completion of the rulemaking.<sup>23</sup> Others, however, urge the Commission to defer action on the Petitions, citing concerns about the ability to integrate any early deployments into a later network, harming interoperability.<sup>24</sup> Commenters also cite the uncertainty surrounding the D Block as a reason to delay action, suggesting that the Commission should wait until resolution of the Commission's ongoing proceeding, or until Congressional uncertainty regarding the fate of the D Block is resolved.<sup>25</sup>

10. As an initial matter, we find that we may act on the waiver requests in advance of a resolution of the larger rulemaking, and should do so here in light of the pressing need for public safety to begin development and deployment of wireless broadband network infrastructure. In particular, we agree that public safety must act expeditiously to take advantage of current and imminent development of 4G technology by commercial providers, which will provide the technological basis for deployment in the

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<sup>16</sup> See Public Safety Spectrum Trust Ex Parte Filing, PS Docket 06-229 (Dec. 15, 2009) (entering into the docket National Public Safety Telecommunications Council, 700 MHz Public Safety Broadband Task Force Report and Recommendations (2009) (*NPSTC BBTF Report*)).

<sup>17</sup> See Comment Sought on NPSTC Broadband Task Force and Public Safety Spectrum Trust Technical Recommendations for 700 MHz Public Safety Broadband Deployments, PS Docket. 06-229, *Public Notice*, DA 10-458 (rel. Mar. 17, 2010) (*NPSTC PN*).

<sup>18</sup> Motorola NPSTC PN Comments at 1-2; IP Wireless NPSTC PN Comments at 1; Harris Corp. NPSTC PN Comments at 3.

<sup>19</sup> New Mexico NPSTC PN Comments at 2-3; LA-RICS NPSTC PN Comments at 3; Bay Area NPSTC PN Comments at 2.

<sup>20</sup> See *Waiver PN*.

<sup>21</sup> Boston Comments at 2; American Association of State Highway and Transportation Officials (AASHTO) Reply Comments at 3; San Antonio Comments at 4; New York State Comments at 1; NPSTC Comments at 4; LeGrande Technical and Social Services, LLC at 3; Flow Mobile Comments at 2-4.

<sup>22</sup> Boston Comments at 2, 7; New Mexico Comments at 3.

<sup>23</sup> San Francisco Comments at 2-4; King County Comments at 9

<sup>24</sup> National Telecommunications and Information Administration (NTIA) Comments at 1-2; Sprint Nextel Comments at 1, 4.

<sup>25</sup> Sprint Nextel Reply Comments at 13-16.

700 MHz band beginning later this year.<sup>26</sup> By providing a framework for Petitioners to move towards initial deployment in the same time frame, subject to the conditions in this order, we enable public safety to become engaged in the broader 4G development process to ensure that the process addresses public safety as well as commercial needs.<sup>27</sup> We encourage Petitioners to participate in 4G standards development, as well as to identify opportunities for joint planning and deployment that can be incorporated into Requests for Proposal, which will help realize cost benefits.<sup>28</sup> While the pendency of the rulemaking and the goal of the Commission to ensure a nationwide interoperable public safety network require us to proceed cautiously, we find that the inclusion of certain conditions will allow us to act now, rather than later, expediting relief to the Petitioners.<sup>29</sup> Action now will provide Petitioners with a degree of certainty, allowing them to take advantage of funding opportunities and leverage existing deployment plans that may be time sensitive.<sup>30</sup>

11. In this respect, we disagree with the suggestion that we cannot proceed with consideration of these waivers before finishing the larger rulemaking proceeding.<sup>31</sup> Rather, by including carefully tailored conditions here, we mitigate any possible concern regarding “prejudgment.” Moreover, accommodating the pressing need for timely deployment, coupled with these conditions, will provide public safety with a viable path forward that will not interfere with the Commission’s resolution of any outstanding rulemaking issues. These early deployments may also assist the Commission in understanding what additional issues may arise for public safety in connection with the larger goal of establishing a nationwide interoperable broadband network and serve better to inform all parties as we proceed with the related rulemaking proceedings. In this regard, many of the Petitioners also plan to participate in the demonstration network sponsored by the Public Safety Communications Research (“PSCR”) program (which is a partnership between the National Institute of Standards and Technology (“NIST”) and the National Telecommunications and Information Administration (“NTIA”)) and the District of Columbia (“the PSCR/DC Demonstration Network”),<sup>32</sup> which will provide a complementary path to informing our decision making.

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<sup>26</sup> We note, for example, announced plans by Verizon Wireless and AT&T to begin LTE deployments this year. See, e.g., Matt Hamblen, AT&T and Verizon Race for 4G Deployment, Macworld (Feb. 10, 2010), available at [http://www.macworld.com/article/146287/2010/02/att\\_lte.html](http://www.macworld.com/article/146287/2010/02/att_lte.html); Matt Hamblen, Verizon Wireless Flexes LTE Muscle at CES, Computerworld (Jan. 7, 2010), available at [http://www.computerworld.com/s/article/9143398/Verizon\\_Wireless\\_flexes\\_LTE\\_muscle\\_at\\_CES](http://www.computerworld.com/s/article/9143398/Verizon_Wireless_flexes_LTE_muscle_at_CES); AT&T Selects LTE Equipment Suppliers (Feb. 10, 2010) available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30493&mapcode=financial|Wireless>.

<sup>27</sup> See Federal Communications Comm’n, Connecting America: The National Broadband Plan at 318 (2010) (*National Broadband Plan*); see also Federal Communications Comm’n, A Broadband Network Cost Model: A Basis for Public Funding Essential to Bringing Nationwide Interoperable Communications to America’s First Responders (2010) (*Cost Model Paper*).

<sup>28</sup> See *National Broadband Plan* at 315-16.

<sup>29</sup> See TOPAZ Regional Wireless Cooperative Comments at 2; Telecommunications Industry Association Comments at 3;

<sup>30</sup> See, e.g., Boston Amended Petition at 6; Bay Area Amended Petition at 3-4; Adams County Petition at 10; Oregon Petition at 2-3.

<sup>31</sup> See, Sprint Nextel Comments at 1, 4; Sprint Nextel Reply Comments at 13-16.

<sup>32</sup> See Press Release, Nat’l Inst. of Standards and Tech., Demonstration Network Planned for Public Safety 700 MHz Broadband (Dec. 15, 2009), available at [http://www.nist.gov/eel/oles/network\\_121509.cfm](http://www.nist.gov/eel/oles/network_121509.cfm) (last visited Apr. 26, 2010).

12. The Commission has always contemplated some opportunity for early build out.<sup>33</sup> Our decision allowing a conditioned early build, at the Petitioners' own risk, remains subject to our later determinations and is without prejudice to our resolution of any of these issues in the broader rulemaking. For this same reason, early build out will not, as Sprint Nextel contends, risk the implicit cross subsidization model that served as the premise for one of several proposals in the *Third Further Notice* for provisioning broadband to rural areas.<sup>34</sup>

#### **B. Waiver Standard**

13. To obtain a waiver of the Commission's rules, a petitioner must demonstrate either that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case, and that a grant of the waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.<sup>35</sup> We find that the waivers, as conditioned below, may be granted under either prong of this standard.

14. Under the first prong, we find that the underlying purpose of the rules would not be served by applying them to the instant cases, and that a conditional grant is in the public interest. The general purpose of the rules in question is to facilitate a nationwide interoperable public safety broadband wireless network. While the rules adopted prior to Auction 73 contemplated a mandatory partnership with the commercial D Block licensee, the circumstances that would have permitted that partnership to proceed did not materialize because no bid met the reserve price for the D Block at auction. We find that we may still advance the goal of nationwide interoperability by granting the waiver requests with appropriate conditions. In this regard, we note that our recent decision to establish the Emergency Response Interoperability Center ("ERIC") will promote appropriate technical requirements that will ensure interoperability for these early deployments from their inception, as well as for any future deployed networks.<sup>36</sup> Moreover, the public interest is served by allowing jurisdictions to begin deployment and speed services to the public safety community. This will also allow Petitioners to take advantage of available or potential funding, either through grants or planned budgetary expenditures, as well as to take advantage of economies of scale and other cost saving measures for deployments that are already planned.<sup>37</sup> In addition, Petitioners could benefit from the announced plans of some commercial carriers to begin construction of LTE-based networks this year and early next year, which would result in significant cost-savings.<sup>38</sup>

15. We find that the waiver standard may also be met under the second prong, in that unique or unusual factual circumstances exist that would make the application of the rules contrary to the public interest. In this regard, we note the critical public safety need for prompt deployment and access to broadband communications infrastructure that meets public safety's needs.<sup>39</sup> As noted previously, because the D Block did not receive a winning bid, the factual circumstances that the rules assumed

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<sup>33</sup> See *Second Report and Order* at 15453-58 ¶¶ 469-484; 47 C.F.R. § 90.1430.

<sup>34</sup> Sprint Comments at 6.

<sup>35</sup> 47 C.F.R. §§ 1.925(b)(3)(i-ii).

<sup>36</sup> See Establishment of an Emergency Response Interoperability Center, GN Docket No. 09-51, PS Docket No. 06-229, *Order*, FCC 10-67 (rel. Apr. 23, 2010). ERIC is tasked with implementing national interoperability standards and developing technical and operational procedures for the 700 MHz public safety broadband wireless network. *Id.* at 1.

<sup>37</sup> See, e.g., Bay Area Amended Petition at 7-8.

<sup>38</sup> See *Cost Model Paper* at 9-12.

<sup>39</sup> See, e.g., Boston Comments at 2, 7; AASHTO Reply Comments at 3; Ericsson Comments at 1.

would exist did not come to fruition. The waiver requests also have the support of the PSST, which holds the license to the spectrum in question. Also, some Petitioners assert they have funding options available to them presently, and thus timely relief that would allow the Petitioners to capitalize on these funding opportunities is in the public interest.<sup>40</sup> We also note that the potential for cost efficiencies from joint deployments, either with respect to commercial carriers deploying LTE or coupling broadband deployment with other planned public safety deployments, militates in favor of allowing Petitioners to proceed as soon as possible. Finally, the passage of time since Auction 73 also counsels in favor of granting relief.

16. However, while we have yet to resolve a number of related issues concerning the public safety broadband and D Block spectrum, our overarching goal remains finding the best method to enable public safety to have access to a state of the art nationwide interoperable public safety wireless broadband network. While the Petitions make clear the need for prompt action, they lack the details that would ensure the proposed deployments are compatible with our overall goals in the 700 MHz band. Accordingly, we find that the Petitions and associated pleadings to date provide a sufficient basis for *conditional* grant only, and that additional information is needed and will be required for submission to the Bureau and the newly-established ERIC prior to granting full authority to construct and operate 700 MHz public safety networks. We specify these conditions next.

### C. Conditions

17. The majority of commenters support some form of relief for Petitioners. Most, however, also suggest that relief must include certain conditions.<sup>41</sup> Conditions advocated include: (1) obtaining a lease, sublicense or other agreement from the PSST;<sup>42</sup> (2) use of a common technology or air interface;<sup>43</sup> (3) roaming capability;<sup>44</sup> (4) interoperability;<sup>45</sup> (5) compatibility with any subsequent network or decision of the Commission;<sup>46</sup> (6) concrete plans for deployment and/or funding;<sup>47</sup> (7) inclusion of satellite capability in any network deployed pursuant to waiver; and (8) compliance with existing rules that permit the PSBL to approval Federal use.<sup>48</sup> Several commenters also suggest that the conditions must be identical for all of the Petitioners.<sup>49</sup>

18. We agree that, in order to preserve the Commission's goals and to meet the standards for waiver in the first instance, our grant must include several conditions imposed equally and jointly on all

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<sup>40</sup> See, e.g., Alcatel-Lucent Comments at 4-5.

<sup>41</sup> See, e.g., Association of Public Safety Communications Officials-International (APCO) Comments; San Antonio Comments at 1-2.

<sup>42</sup> NPSTC Comments at 4; Pinellas County at 2; APCO Reply Comments at 4.

<sup>43</sup> APCO Comments at 9-10; PSST Comments at 16-18; Motorola at 10.

<sup>44</sup> National Emergency Number Association (NENA) Comments at 3; PSST Comments at 16-18; LeGrande Comments at 2-3; US Cellular Comments at 5; New York City Comments at 6-7.

<sup>45</sup> APCO Comments at 9-10; NPSTC Comments at 4; Pinellas County at 2; APCO Reply Comments at 4; NENA Comments at 3; PSST at 16-18; San Antonio Comments at 4; Connecticut Comments at 4; Boston Comments at 3-4; US Cellular Comments at 5.

<sup>46</sup> APCO Comments at 4-5; NENA Comments at 3; PSST Comments at 8-9; AASHTO Reply Comments at 3; Connecticut Comments at 3; San Francisco Comments at 6.

<sup>47</sup> NENA Comments at 3; North Dakota Comments at 27.

<sup>48</sup> MSS/ATC Coalition Comments at 3; Satellite Industry Association (SIA) Comments at 3-4; PSST Reply Comments at 10; NTIA Comments at 2.

<sup>49</sup> Connecticut Comments at 4; Boston Comments at 5; New Mexico Comments at 7-8; San Antonio Comments at 8.

Petitioners. The conditions we impose will help ensure that deployments that proceed pursuant to our decision today will be compatible with each other, and with any later actions to establish a nationwide interoperable public safety broadband network. Further, they will ensure that waiver applicants have equal access and comparable terms under which they must operate. These conditions will provide certainty that will aid Petitioners in developing networks that will serve their needs, and the needs of their communities in a timely and cost-efficient manner.

19. In this respect we disagree with King County, which suggests that we should grant the waivers without imposing any conditions.<sup>50</sup> King County argues “[t]he Commission’s first concern regarding its waiver decisions should be their impact on local and regional wireless public safety operability. Even if nation-wide, wireless public safety interoperability is a desirable and achievable goal, the Commission must not focus on that goal until local and regional wireless operability is first achieved. We are not near that point.”<sup>51</sup> While we agree that operability is vital, we disagree that the Commission can sacrifice its long term goals of interoperability in favor of a short term operability goal. Indeed, the lack of long term planning by public safety agencies is one of the reasons that interoperability remains elusive with respect to current public safety narrowband deployments. Moreover, deferring consideration of interoperability until a later date would likely result in missed opportunities for efficiency, driving up costs and creating communications gaps in the interim. We find, therefore, that imposition of conditions is the best way to facilitate both the goals of operability and interoperability. Indeed, our primary goal throughout this proceeding has been to fully take advantage of the opportunity that a new spectrum allocation presents for ensuring a nationwide level of interoperability from the start.

### 1. Spectrum Leasing

20. First, we agree with commenters who suggest that, as a condition of waiver relief, Petitioners should be required to enter into spectrum leasing arrangements with the PSST, which holds the nationwide license for the spectrum in which Petitioners seek authority to operate.<sup>52</sup> While the Commission’s existing rules contemplate that the PSBL would lease the public safety broadband spectrum to individual public safety jurisdictions only in limited early-build situations,<sup>53</sup> we find that it is in the public interest to waive those rules to the extent necessary for the limited purpose of permitting the leasing arrangements described below.<sup>54</sup>

21. Some waiver petitioners and commenters have suggested that the Petitioners should be allowed to operate pursuant to a “sub-license” or other similar mechanism. However, we find that the existing spectrum leasing rules, with some modification, provide the most workable framework for granting conditional authority to Petitioners.<sup>55</sup> This is because we have considerable experience with secondary markets leasing for commercial services, and have found the secondary markets framework to be an effective way to ensure accountability to the Commission by both the licensee and the spectrum lessee, while still allowing the lessee adequate flexibility, as well as sufficient rights and certainty.<sup>56</sup>

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<sup>50</sup> King County Reply Comments at 1.

<sup>51</sup> *Id.*

<sup>52</sup> APCO Comments at 5-6.

<sup>53</sup> See *Second Report and Order* at 15453-58 ¶¶ 469-484; 47 C.F.R. §§ 27.1330, 90.1430.

<sup>54</sup> See 47 C.F.R. § 1.9001 et seq.

<sup>55</sup> See *id.*; see also Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order on Reconsideration and Second Notice of Proposed Rulemaking*, 19 FCC Rcd 17503, 17529 ¶ 53 (2004) (“*Secondary Markets Second Report and Order*”).

<sup>56</sup> *Secondary Markets Second Report and Order*.

22. For similar reasons, we reject the suggestion of Harris that we employ a “status-based” framework to designate primary and secondary status for deployments made pursuant to waiver.<sup>57</sup> The framework Harris suggests is overly complicated, and unnecessary in light of our determination to allow deployment only at Petitioners’ own risk and on the condition of compliance with any later determinations in the overarching proceeding. In this respect, we anticipate that we will address any concerns regarding how and when such integration will occur in that Order, and our determinations can be shaped by factual circumstances at that time including the progress of any waiver deployments and the information generated by the Demonstration Network.

23. We also recognize that, whereas commercial parties seeking to enter into a spectrum lease have many frequency bands and licensees (lessors) available to them, the Petitioners have only the PSST as a potential lessor. Moreover, it has been the Commission’s longstanding goal to promote interoperability for public safety in this band, the basis for which will be enhanced by ensuring consistent lease terms and equal access to this spectrum for public safety lessees. Given the unique licensing conditions of the public safety broadband spectrum, and in the interest of transparency and ensuring consistency of terms for waiver recipients, we also find that it is appropriate to provide additional structure for these leases.

24. First, we direct the PSST to enter into *de facto* transfer leases with each Petitioner that seeks a lease in accordance with the terms and conditions of this Order. We also agree with NENA that oversight of the agreements between the Petitioners and the PSST will encourage transparency, consistency, and facilitate enforcement.<sup>58</sup> As with our current secondary markets rules, we will require that these *de facto* transfer leases must be submitted for approval, in this case by the Public Safety and Homeland Security Bureau on delegated authority. We expect, however, that these leases will be approved expeditiously and on a pro forma basis, so long as they adhere to the Standard Lease appended hereto, and as described below.

25. *Lease Agreement.* We agree with the PSST and other commenters that a “term sheet” for these leases will provide greater consistency and help establish expectations for all involved.<sup>59</sup> Requiring adherence to a term sheet is also consistent with the nascent nature of deployment in this spectrum and the novel nature of the relationship between the PSST and the Petitioners, as well as the unique licensing scheme adopted by the Commission in the *Second Report and Order* in which we provided for a single, nationwide public safety broadband licensee. However, for these same reasons, we find it necessary to go one step further and provide a “Standard Lease” that the PSST and the Petitioners shall use. The Standard Lease, which is based on the term sheet that was proposed by the NPSTC BBTF and endorsed by the PSST, is appended to this Order in Appendix B.

26. We find that specific, standard terms are necessary to facilitate prompt deployment and the streamlined leasing process that we envision. In particular, given our establishment of ERIC, we find it appropriate to include in the Standard Lease provisions that govern: (1) interactions among the PSST, the lessee, and ERIC; and (2) the parties’ implementation of technical standards that ERIC, PSHSB and the Commission adopt. We also include in the Standard Lease additional provisions to reflect other conditions imposed by this Order. We expect that the PSST and Petitioners will not need to deviate from, or revise the terms of, the Standard Lease. However, in the event that the Standard Lease requires minor modification in individual cases to address issues specific to the lessee’s jurisdiction (*e.g.*, aspects of the jurisdiction’s contracting process or legal authority that we have not anticipated),<sup>60</sup> the PSST and the

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<sup>57</sup> Harris Comments at 4-5.

<sup>58</sup> NENA Comments at 4-5.

<sup>59</sup> NPSTC Reply Comments of PSST at 5-6; *see also*, New Mexico Comments at 4; New Mexico Reply Comments at 4.

<sup>60</sup> Charlotte, North Carolina NPSTC PN Reply Comments at 3-4.

lessee may make minor modifications to the Standard Lease with approval from the Bureau on delegated authority. More substantive changes will be entertained only upon sufficient demonstration of need and will be subject to full Commission approval.

27. Because we are providing a Standard Lease, we also find that it would be in the public interest to require such leases be executed and submitted to the Chief, PSHSB, within 60 days of approval by OMB. In this respect, again, if such a timeframe does not comport with a state or local review or contracting process, minor deviation from this timeframe may be permitted with the approval of the Bureau. We believe, however, that prompt execution is realistic, consistent with the expressed desire of the Petitioners and PSST for prompt action, and will ensure that jurisdictions are fully committed to moving forward with a productive relationship with the PSST, ERIC and the Commission to realize the public safety benefits that these early deployments can provide.

28. *Type of Lease – Long Term De Facto Transfer Lease.* We find that the use of a long term *de facto* transfer spectrum lease for purposes of these early deployments is appropriate.<sup>61</sup> Although our standard leasing rules provide for spectrum manager leases as an alternative to *de facto* leases, we conclude that under the circumstances presented here, the *de facto* transfer lease rules provide the appropriate balance between local control and national-level oversight that both Petitioners and the PSST seek.<sup>62</sup> Petitioners generally seek substantive operational rights, privileges, and responsibilities in the public safety broadband spectrum within their jurisdictions sufficient to justify investment of public funds and effort, while the PSST seeks appropriate retention of control over the spectrum commensurate with its status as the national public safety broadband licensee.<sup>63</sup> A long term *de facto* lease provides this balance, by placing upon the Petitioners the primary responsibility for complying with the Communications Act and applicable Commission policies and rules, including those established in this Order, while preserving *de jure* control of the spectrum license for the PSST.

29. *Leasing Fee and Role of PSST.* NPSTC and the PSST suggest that, as a part of any leasing arrangement, the PSST should be permitted to charge a lease fee to recover certain operating costs for the PSST.<sup>64</sup> Neither party proposes a specific fee level or amount, but both suggest that it should be subject to negotiation.<sup>65</sup> We conclude that the Standard Lease should include provision for a reasonable fee to be paid to the PSST for administrative activities associated with the leasing process, but that the fee should be strictly limited and subject to PSHSB approval as discussed below.

30. In assessing the appropriateness of a fee, we note the important role that the PSST serves in the leasing context. Clearly, the PSST will need to ensure that it meets its responsibility to retain *de jure* control of the public safety broadband spectrum. By virtue of its role, the PSST must enter into a lease with each Petitioner, and may enter into similar leases with other public safety entities as well as provided in this Order. We recognize that the PSST will incur limited but legitimate transaction costs in preparing and executing these leases, which we conclude they should be allowed to recover. The PSST will have a role in providing important input into the framework being developed by ERIC that defines the interoperability criteria for the Petitioners' early deployments. As described herein, we are also

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<sup>61</sup> We believe the Long Term *de facto* transfer lease is most appropriate, in that it allows the lessee, rather than the licensee, to exercise *de facto* control over the leased spectrum. Under this standard, the lessee is primarily responsible for adhering to the Commission's rules, although the licensee retains residual responsibility for ensuring compliance. *See Secondary Markets Report and Order* at 17566-81 ¶¶ 133-188.

<sup>62</sup> Iowa State Board Reply Comments at 2-3 (supporting use of a long term spectrum lease).

<sup>63</sup> Boston Comments at 3; Iowa Comments at 2; PSST Comments at 9-12.

<sup>64</sup> PSST Comments at 10-11.

<sup>65</sup> *Id.*; Bay Area NPSTC PN Comments at 4 (supporting a "reasonable" fee for coordination and management responsibilities). *But see* Charlotte Reply Comments at 5-6 (opposing any fees charged by the PSST).

including minimal reporting requirements on the PSST and the lessees, which we will require be coordinated with the PSST. Such coordination may warrant occasional meetings and interactions between the PSST and the Petitioners.

31. We also recognize the unique circumstance that the PSST has an exclusive nationwide license and is accordingly the only entity from which an entity seeking early deployment can obtain a lease. This results in a potential imbalance in bargaining positions, and accordingly we find it appropriate to limit any fee that the PSBL may assess in conjunction with these leases.

32. While the PSST has asserted that it should be allowed to charge a leasing fee that will recover operating expenses including a portion of the costs of the “past, current and future efforts” of the PSST that benefit the Petitioners, we are concerned that lack of specificity with respect to this element of the lease may create uncertainty, confusion or delay in executing the necessary agreements. We also anticipate that because we are specifying the terms of the lease, the costs for executing these leases will be minimal.<sup>66</sup> Accordingly, we limit the fee that the PSST may charge to an administrative fee that will provide for the PSST’s legitimate expenses incurred as a result of administering these leases.<sup>67</sup>

33. In this respect, before the PSST will be permitted to assess such a fee through the spectrum leases we authorize herein, we require the PSST to provide the Public Safety and Homeland Security Bureau with a budget for carrying out the responsibilities we identified above within 30-days of the release of this Order, including how the fee would be structured, collected, and expended. We delegate authority to the Bureau to review the PSST’s submission. We expect that the fees will be reasonable and limited, in that we are specifying the Standard Lease and expect the PSST’s role to be administrative. As an added safeguard, we also require the Bureau to seek public comment on the PSST’s submission before issuing any approval. Once approved, and as a condition of receipt of such fees, we require the PSST to submit monthly reports to the Bureau, providing a simple accounting of fees collected and how such fees are expended, based on generally accepted accounting principles. As we do not wish this requirement to add undue burden or expense, we expect that this can be done in conjunction with any financial reporting or recordkeeping that the PSST already maintains as a part of its business operations and to use generally accepted accounting procedures. We also require, as a condition of receipt of such fees, that the PSST shall be subject to periodic audit with respect to its collection and expenditure of these fees, at the discretion of the Chief, PSHSB.

34. *Eligible Users.* The 700 MHz public safety spectrum is governed by Section 337 of the Act.<sup>68</sup> In this respect, and consistent with the tentative conclusion in the *Third FNPRM*, we limit use of the 700 MHz spectrum to entities whose “sole or principal purpose” is “to protect the safety of life, health, or property” and who meet the remaining requirements of Section 337(f). Commenters agree with this assessment.<sup>69</sup> Issues concerning broader use of the 700 MHz public safety broadband spectrum will be addressed in the larger rulemaking proceeding, and deferral of consideration of this issue will not otherwise impair the Petitioners’ early deployment plans. We note, however, that permitted use does

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<sup>66</sup> We note that the issue of funding for the PSST’s activities generally remains an open issue in the rulemaking, and accordingly we defer any determination with respect to this issue until we consider the PSST’s role more globally.

<sup>67</sup> See, e.g., NENA Comments at 4-5 (suggesting that the Commission should make clear that any such fees may only be used to support activities directly related to the deployment and utilization of public safety wireless broadband networks).

<sup>68</sup> 47 U.S.C. § 337.

<sup>69</sup> See, e.g., PSST Comments at 19; Boston Comments at 5; New York State Comments at 4; Bay Area Comments at 8-9; Ericsson Comments at 4-5; AASHTO Reply Comments at 7; Alcatel-Lucent Reply Comments at 7-8).

include Federal government users, as already allowed by our rules.<sup>70</sup> Accordingly, we leave intact the current rules permitting Federal agency access to the 700 MHz public safety broadband spectrum.

## 2. Evidence of Funding

35. The Bureau sought comment in the *Waiver PN* on whether we should require evidence of financing as a condition precedent to acting on Petitioners' request. While APCO and others have urged the Commission to require "evidence that there *is sufficient* funding available to support all aspects of the deployment" prior to granting a waiver,<sup>71</sup> we find that requiring parties to submit plans to ERIC to ensure technical consistency and interoperability, as more fully explained below, is a sufficient safeguard to ensure that Petitioners' plans are concrete and viable. Moreover, as detailed below, we are requiring that Petitioners submit quarterly reports on their activity undertaken pursuant to this Order to ensure that progress is made, and that continued relief remains warranted.<sup>72</sup> This will also help ensure that deployments are undertaken with diligence. We also agree with the comments of the District of Columbia, which argues that local Petitioners may be unable to obtain financing without a waiver in the first instance, which would provide financiers or grant-making entities with the certainty necessary to justify commitment of funds.<sup>73</sup> Accordingly, we will not require evidence of funding at this time. Rather, we find that the other conditions and reporting requirements specified herein will be sufficient to ensure that the requests made are in earnest, and that deployments made pursuant to these requests are undertaken promptly.

## 3. Technical Conditions

36. In considering whether to permit early deployment pursuant to the waiver petitions, the Bureau sought comment on what technical, operational and governance standards, if any, should be required as a condition, including whether the Commission should require a common air interface, common technical or organizational governance structures, roaming capabilities, and interoperability with future national or regional networks.<sup>74</sup> Since the *Waiver PN* was issued, the Bureau also sought comment on the recommendations by NPSTC BBTF and the PSST with respect to these issues.<sup>75</sup> With respect to the BBTF Report, the District of Columbia notes that, while valuable, the recommendations of the BBTF are necessarily general, and that "disparate networks could comply with its requirements and still fall short of interoperability."<sup>76</sup> Similarly, while many of the Petitioners suggest that their proposed networks will conform to the technical parameters proposed by the *Third Further Notice*, complying with those standards alone may not achieve true interoperability without additional coordination, both technically and in terms of governance. Several commenters also endorse the recommendation of the NPSTC BBTF and the PSST that an "advisory group" of waiver recipients must work with the PSST in establishing and updating the technical criteria under which any early deployment operates.<sup>77</sup> Accordingly, we find it appropriate to require the petitioners to adhere to the technical criteria that ERIC will establish, through

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<sup>70</sup> *Second Report and Order* at fn. 822; see also 47 C.F.R. § 90.175(g); NTIA Comments at 2-3.

<sup>71</sup> APCO Comments at 9; see also Iowa Statewide Interoperable Communications Board Comments at 1; NENA Comments at 3.

<sup>72</sup> See APCO Comments at 8-9 (endorsing submission of periodic reports).

<sup>73</sup> District of Columbia Reply Comments at 5.

<sup>74</sup> *Waiver PN* at 7-8.

<sup>75</sup> See NPSTC *PN*.

<sup>76</sup> District of Columbia NPSTC *PN* Comments at 2.

<sup>77</sup> See, e.g., New Mexico Comments at 6; San Antonio Comments at 5; Bay Area Comments at 6. *But see* Charlotte Reply Comments at 3 (arguing that there should be no obligation for "preapproval" of deployment plans by the PSBL or the Commission).

rules adopted by the Commission or Bureau.<sup>78</sup> In this respect, we also agree with commenters who suggest that: (1) we should adopt a mandatory common air interface for all early deployments;<sup>79</sup> (2) in addition to the air interface, certain additional baseline interoperability criteria are timely and appropriate;<sup>80</sup> and (3) Petitioners should be required to submit further technical details regarding their deployments in order to ensure ongoing interoperability.<sup>81</sup> We also note that many of these obligations are a part of the 3GPP Release 8 standard, and as such will likely impose little burden to implement.

37. *Long Term Evolution.* As part of the *Waiver PN*, the Bureau sought comment on whether we should require a common air interface for Petitioners' deployments.<sup>82</sup> Many of the waiver petitioners have indicated that they plan to employ Long Term Evolution, or LTE, to build out their broadband networks.<sup>83</sup> Petitioners assert that "the selection of LTE is probably the first step to achieving the goal of nationwide interoperability"<sup>84</sup> and further assert that such networks "will meet the specifications proposed by the Commission in its *Third Further Notice*."<sup>85</sup> The PSST also supports use of LTE for these early deployments, to promote a uniform technology standard.<sup>86</sup> AT&T, Northrup Grumman, and Motorola support using LTE for these early deployments as well, stating that such a condition would ensure operability, interoperability and future roaming.<sup>87</sup>

38. We agree that, for these waiver deployments, the most expeditious and reasonable method of ensuring consistency and interoperability at this early stage is to require the use of LTE, and specifically the use of at least 3GPP Standard, Evolved Universal Terrestrial Radio Access ("E-UTRA"), Release 8 ("LTE"), and associated Evolved Packet Core ("EPC").<sup>88</sup> While we recognize that the Commission does not typically require the use of a particular technology or standard, exceptions have been made in the context of nascent technologies and in the context of public safety to facilitate interoperability. We do not impose a technical standard in the present case lightly. However, we find it necessary to establish this condition for these early 700 MHz public safety networks to provide a clear path for initial deployment and evolution, ensuring interoperability and roaming among these systems in

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<sup>78</sup> In this respect, we require the Bureau to issue a Public Notice to seek comment on the technical parameters adopted herein and other technical issues concerning broadband network deployment for consideration by the Commission in the broader rulemaking proceeding.

<sup>79</sup> See APCO Comments at 9-10; NENA Comments at 3; New York State Comments at 2; NTCH, Inc. Comments at 2.

<sup>80</sup> See APCO Comments at 9-10; Boston Comments at 3-4; NENA Comments at 7-8.

<sup>81</sup> See NENA Comments at 6-7; PSST Comments at 15-16.

<sup>82</sup> *Waiver PN* at 8.

<sup>83</sup> Seattle at 13; Hawaii at 9-10.

<sup>84</sup> Seattle at 13.

<sup>85</sup> Seattle at 13; Hawaii at 10.

<sup>86</sup> PSST Reply Comments at 1.

<sup>87</sup> Motorola at 4-5; Motorola Reply Comments at 2; Northrup Grumman at 7; AT&T at 10. See also US Cellular at 6; New York City at 6-7; New York State at 2; Alcatel-Lucent at 2-3; Iowa State Board at 2-3. *But see* Joint Comments of Sprint Nextel and Clearwire Corp. at 7-17.

<sup>88</sup> We also recognize that, because the Commission has not yet adopted final technical rules for the public safety broadband spectrum (*e.g.*, maximum power levels, out-of-band emission requirements, etc.), there will not likely be certificated equipment for operation in this band prior to entities initiating system build out. Accordingly, so long as Petitioners and their manufacturers adhere to the requirement to utilize 3GPP Release 8 as specified in this Order, we also waive on our own motion, the equipment authorization rules (47 C.F.R. § 90.203 as applicable) until such time as we adopt final rules.

light of the characteristics of the band at this point in time. Several unique circumstances in particular, counsel in favor of establishing LTE as the common air interface. First, because many of the Petitioners are geographically disparate, they may lack incentives to meet a nationwide interoperability standard without a mandatory Commission-established requirement to do so. Second, commercial providers in the 700 MHz band are planning LTE deployments in the band in the near term, providing a unique opportunity for public safety to leverage this build out to their benefit.<sup>89</sup> Accordingly, requiring LTE as a waiver condition will align deployments in the 700 MHz band among the Petitioners, as well as between Petitioners and commercial networks in the band.<sup>90</sup> We also find persuasive the broad support in the record for specifying LTE, and specifically Release 8, in this band.

39. As detailed *infra*, however, we are also requiring Petitioners to submit an interoperability showing to ERIC to ensure that planned deployments are consistent with the Commission's interoperability goals and in recognition that the minimum requirements imposed herein may not guarantee interoperability. While we are requiring 3GPP Release 8 as the minimum LTE standard, we recognize that there may in some instances be a legitimate need to employ a 3GPP air interface standard earlier than 3GPP Release 8. We will, therefore, allow ERIC and the Bureau to consider use of an earlier 3GPP release on a case-by-case basis, with a clear need demonstrated in the interoperability showing. Proponents of deploying a release earlier than 3GPP Release 8 must, at a minimum, demonstrate that (1) such use is on an interim basis only, (2) there is a clear and firm commitment and path towards upgrade to a later release within a reasonable time frame, and (3) the proponents fully assume all financial risk in upgrading to a later release.

40. In requiring LTE for these initial deployments, we disagree with those that argue that the Commission should decline to adopt a common air interface for all Petitioners.<sup>91</sup> Rather, we reiterate that our overriding consideration here is to provide a reasonable and clearly defined path towards public safety interoperability, a goal that has proven previously to be elusive in the public safety narrowband context.<sup>92</sup> In this respect, a significant number of commenters, including many Petitioners, argue that the Commission must establish a common air interface, and specifically LTE, to ensure this goal is met.<sup>93</sup> NPSTC, for example, argues that because technology migrations pose a challenge in practice, the Commission should avoid allowing deployment of technology other than LTE, and should rather require LTE from the outset.<sup>94</sup> APCO also argues that interoperability must be required of Petitioners, including mandatory use of LTE.<sup>95</sup> We agree, particularly in light of the unique circumstances presented by the state of deployment in the band and our ongoing proceeding. Accordingly, we find that establishing LTE Release 8 as the initial standard to which Petitioners must build is the best and shortest path to the Commission's goal for public safety interoperability in the specific environment presented by the 700 MHz band at this time.

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<sup>89</sup> Federal Communications Commission, A Broadband Network Costs Model: A Basis for Public Funding Essential to Bringing Nationwide Interoperable Communications to America's First Responders, Omnibus Broadband Initiative Technical Paper No. 2 (2010).

<sup>90</sup> Our selection of LTE in this regard is not an endorsement of this technology. Rather, it is a recognition of the fact that at this stage, LTE has become the technology of choice in the 700 MHz band, and that mandating compatibility with this air interface is appropriate for purposes of these waiver deployments to ensure interoperability.

<sup>91</sup> See Sprint and Clearwire National Broadband Plan Joint Comments at 13-17.

<sup>92</sup> See, e.g., 9/11 Commission Report at 280-300; United States Government Accountability Office, First Responders: Much Work Remains to Improve Communications Interoperability (Apr. 2007)

<sup>93</sup> See New York City comments at 6-7; San Antonio Comments at 7-8; New York State Comments at 2.

<sup>94</sup> NPSTC Comments at 6.

<sup>95</sup> APCO Comments at 9-10.

41. *Coordination among Petitioners.* Because public safety agencies will share the radio frequency band allocated to broadband services of common interest to these agencies, it is essential that advance planning and post-launch operational coordination be carried out with a common goal of minimizing radio frequency interference between them. Accordingly, we also establish a common methodology for coordination in the case where adjacent jurisdictions utilizing the public safety broadband spectrum build out local networks. This coordination requirement includes both pre- and post-operation obligations for all adjacent or bordering public safety networks.

42. These coordination requirements are necessary for deployments under this Order to ensure equitable access to the spectrum. In order to facilitate coordination of operations in adjacent jurisdictions, an agreed upon process for initial and ongoing communication among jurisdictions, in consultation with ERIC, will provide a solid mechanism for ensuring efficient, interference-free implementation and evolution of regional, statewide or local early-deployed networks. Accordingly, as a condition of waiver, we require each Petitioner, before deployment, to coordinate and address interference mitigation needs with any adjacent or bordering jurisdictions that also plan deployment. Any later jurisdictions that seek to deploy should coordinate with the prior-deployed system. Our goal is to ensure an open communications among adjacent regions. In this respect, in light of the nascent nature of these deployments, we believe it will be helpful to memorialize these agreements in writing, and require submission of these agreements to ERIC within 30 days of their completion. Similarly, we require that parties provide ERIC with notice of any changes or updates within 30 days. Should the parties be unable to reach an agreement within 90 days after coordination begins, they may submit the dispute to the Public Safety and Homeland Security Bureau for resolution.

43. *Out of Band Emissions.* A number of measures can be considered to reduce the impact of interference to mobile wireless systems. Agencies should use mutually agreed upon practical solutions for eliminating out of band emissions (“OOBE”) or other interference, such as software parameter changes, site configuration modifications, ensuring a reasonable distance of site equipment beyond the border, or the reduction of transmitter power levels towards the border. We note that we will separately consider the issue of rules for OOBE from public safety broadband spectrum into the D Block, and from the D Block into the public safety broadband spectrum.

44. As a condition of the waivers, for operations in the 763-768 MHz band and the 793-798 MHz band, the power of any emission outside the lessee’s frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- On any frequency outside the 763-768 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB; and
- On any frequency outside the 793-798 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB.

Compliance with the provisions of paragraphs above in this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. Moreover, we note that OOBE standards are already in place with respect to the public safety narrowband spectrum, and the 700 MHz public safety spectrum allocation already includes a guard band between the public safety broadband and narrowband allocations.<sup>96</sup>

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<sup>96</sup> 47 C.F.R. § 90.543(e).

45. *Roaming.* We agree with commenters and the NPSTC BBTF Report assertion that roaming is a fundamental requirement that must be addressed as a condition of early deployments, even with respect to initial operations.<sup>97</sup> Accordingly, we require each Petitioner's system to be capable of supporting roaming by all other Petitioners' systems, and to support roaming by additional future regional, state, Tribal and local public safety broadband systems. In this respect, two categories of roaming as specified in 3GPP Release 8 (TS 23.401) and the NPSTC BBTF Report must be supported: (1) home-routed traffic, such that a "visiting" user's traffic is routed back to the home network to enable the use of home resources, and (2) local breakout traffic, such that a visiting user can utilize the resources of the host network. We expect that ERIC will build on these roaming requirements as it considers the additional interoperability and governance requirements.

46. *Applications.* We also agree that there are several applications that can and should be supported by initially deployed systems.<sup>98</sup> In this respect, consistent with the NPSTC BBTF Report and to ensure that there are a common set of initial applications available on an interoperable, nationwide basis, we require, as a condition of waiver, that Petitioners' systems initially support the following applications: (1) Internet access; (2) VPN access to any authorized site and to home networks; (3) a status or information "homepage;" (4) access to responders under the Incident Command System;<sup>99</sup> (5) and field-based server applications.<sup>100</sup>

47. *System Characteristics, Interfaces and Testing.* The NPSTC BBTF recommends a number of technical specifications related to system characteristics, interfaces and testing in Section 6.3 of the report. We agree that the following technical specifications are reasonable, and can be sustained by initially deployed systems. Accordingly, we require Petitioners to incorporate the following system elements:

- Interfaces: All 3GPP Release 8 (LTE) interfaces that are in support of the required applications and the required roaming in this order are required to be supported. These interfaces are:
  - U<sub>u</sub>- LTE air interface
  - S6a – Visited MME to Home HSS
  - S8 – Visited SGW to Home PGW
  - S9 – Visited PCRF to Home PCRF for dynamic policy arbitration
  - S10 – MME to MME support for Category 1 handover support
  - X2 – eNodeB to eNodeB

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<sup>97</sup> See NPSTC BBTF Report at 1 (identifying as the Report's mission the development of "minimum recommendations necessary to ensure roaming and interoperability among localities and regions that have submitted waivers to the Federal Communications Commission (FCC) to build out 700 MHz broadband networks ahead of a nationwide network"); see also New Mexico Comments at 4; New York City Comments at 6-7; U.S. Cellular Comments at 5; PSST Comments at 16-18.

<sup>98</sup> See NPSTC BBTF Report at 13-15.

<sup>99</sup> First responders, emergency response support, and all other mutual aid responders managed under ICS structure of a requesting agency served by a public safety broadband network shall be provided access to that network to carry out incident objectives and communicate with their home networks." NPSTC BBTF Report, Section 6.2.5.

<sup>100</sup> "The regional systems shall support the use of field-deployed server applications. This requirement includes the need for client devices to consistently and continuously reach each server-based system from any other location on the Internet. The capability is not required for every subscriber device on the broadband network but is limited to a subset of the users that actually require such a feature." NPSTC BBTF Report, Section 6.2.7.

- Interface Interoperability Testing: The Interoperability Testing (IOT) must be performed on the following 3GPP Release 8 (LTE) interfaces:
  - S1-MME (interface between eNodeB and MME)
  - S1-u (interface between eNodeB and SGW)
  - U<sub>u</sub>- LTE air interface

Initially, we will permit Petitioners to demonstrate interoperability of the interfaces specified above by self-certification, which may be supplemented through demonstrations to ERIC. As 3GPP standards progress, however, we will require Petitioners to meet more detailed IOT requirements consistent with those standards.

- Devices: As recommended by Section 6.3.1.5 of the NPSTC BBTF Report, band class 14 must be supported for 5 MHz public safety broadband channel (763-768 MHz, 793-798 MHz) in Frequency Division Duplex (FDD) mode as per 3GPP TS 36.101 v8.6.0.
- Standards Conformance Testing: Standards conformance testing must be based on 3GPP test suites that are developed by the PCS Type Certification Review Board (“PTCRB”).<sup>101</sup> If PTCRB testing is not fully available within the timeframe of network deployment, the vendors and public safety network operators will have the option to perform specific testing as determined by the Bureau.
- Security: The optional security features<sup>102</sup> as specified in 3GPP TS 33.401 must be supported as recommended by Section 6.3.3 of the NPSTC BBTF report. Additionally, the use of network layer VPN must be allowed on the deployed network.

48. Although not an initial requirement, the scheme by which the networks would adopt the use of PLMN ID will be considered by ERIC. ERIC will also consider the use of a common/single 3rd party clearing house as recommended by Section 6.3.1.4 of the NPSTC BBTF Report for the purpose of Internetwork authentication and connectivity. The Bureau, with ERIC’s recommendation, would then select the clearing house.

49. *Governance and Coordination with the State.* We also find that it is critical that we ensure not only technical interoperability for these early deployments, but compatible governance as well. In this respect, the Bureau sought comment on whether we should mandate a particular geographic size for early deployments, and how we should address petitions from multiple parties seeking to deploy in the same or overlapping geographic areas.<sup>103</sup> The Bureau also sought comment on whether waiver recipients should be required to offer service to any public safety eligible within their deployed area.<sup>104</sup> New York City suggests that Petitioners with overlapping geographies be required to reconcile their plans to achieve seamless operations in overlapping areas, or to eliminate overlapping deployments.<sup>105</sup> The PSST supports

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<sup>101</sup> PTCRB is a global organization created by mobile network operators to provide an independent evaluation process where GSM / UMTS type certification can take place. The technical evaluation is based on standards as well the needs of the operators, who determine the requirements for the type certification process. The PTCRB authorizes third party laboratories to conduct testing. See <http://www.ptcrb.com/>

<sup>102</sup> While these optional features are technologically required to be supported, the selection of security features for operation of the network will be determined by ERIC in future.

<sup>103</sup> *Waiver PN* at 8.

<sup>104</sup> *See id.*

<sup>105</sup> New York City Comments at 7.

a requirement that Petitioners be required to offer service to any eligible public safety entity requesting service within the system's footprint.<sup>106</sup>

50. We conclude that waivers for early deployment should meet certain criteria for geographic scope of the proposed deployment. For several reasons, we believe that states provide the most appropriate geographic size for consideration of waiver relief. States offer a reasonable delineation, both geographically and politically, to ensure that deployments are undertaken with sufficient authority, planning and coordination among all state and local public safety agencies within the state.<sup>107</sup> States can also ensure that early deployments are developed to be consistent with overall plans for intra-state interoperability, and can, consistent with existing mechanisms concerning narrowband interoperability, serve as a single interface with the PSST and ERIC to minimize the complexity that would otherwise be inherent in coordinating numerous interactions on a jurisdiction-by-jurisdiction basis. Further, we believe that state-level waiver deployments will facilitate equipment development and purchase, by ensuring that there is a critical mass of potential users even in the early deployment phase to encourage vendors to compete to provide reasonably priced equipment. The public safety community also has experience with interoperability planning at the state level. For example, under a Department of Homeland Security-administered Public Safety Interoperable Communications ("PSIC") grant program, each state and territory has developed a statewide communications interoperability plan ("SCIP").<sup>108</sup> The established governance mechanisms of a state will also facilitate execution of spectrum leases, and coordination of deployments within states and with adjacent states. Finally, we note that state-level systems have the advantage of including a mix of populations, including both urban and rural areas. Thus, state-level governance mechanisms are more likely to ensure that rural areas are included as part of overall deployment plans.

51. We also recognize, however, that a number of Petitioners represent cities and counties, or groups thereof, within a state that have legitimate plans and the means to proceed with deployment.<sup>109</sup> While we believe state-level deployments offer significant advantages, we conclude that these Petitioners should also receive waiver relief, provided that they do so in coordination with state authorities. We believe coordination is critical for a number of reasons, primarily to ensure that there is an opportunity for state-level participation in the planning and deployment of networks within the state. Coordination will also facilitate seamless operation of adjacent networks and development of mutually agreed-upon protocols within the state. If a Petitioner or future deployment involves an area larger than a state or that crosses state lines, coordination would be required for each state involved.

52. In this respect, we require, prior to construction or deployment, that any non-state Petitioner submit evidence of coordination with the state to ERIC. Specifically, petitioners must certify

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<sup>106</sup> PSST Comments at 18.

<sup>107</sup> For these purposes, we would also treat a request by a Tribal government in the same manner as a request by a state.

<sup>108</sup> See, e.g., Statewide Communications Interoperability Plans, at [http://www.dhs.gov/files/programs/gc\\_1225902750156.shtm](http://www.dhs.gov/files/programs/gc_1225902750156.shtm) (last visited May 3, 2010). Similarly, grants are administered at the state/territory level under the ENHANCE 911 Act by the NTIA. See, States and Territories Receive \$40 Million in Grants to Improve 911 Services, *available at* [http://www.ntia.doc.gov/press/2009/E911grants\\_090929.html](http://www.ntia.doc.gov/press/2009/E911grants_090929.html) (last visited May 3, 2010).

<sup>109</sup> Petitioners representing cities and counties, or groups thereof, include: City of Boston; City and County of San Francisco, City of Oakland, City of San Jose, CA; City of New York; City of San Antonio, TX (San Antonio UASI); City of Chesapeake, VA; City of Charlotte, NC; City of Seattle, WA; Adams County, CO Communications Center; City of Pembroke Pines, FL; Los Angeles Regional Interoperable Communications System (LA-RICS); City of Mesa, AZ and the TOPAZ Regional Wireless Cooperative; and the Counties of Calumet, Outagamie and Winnebago, WI.

that they have provided notice to the appropriate state official, such as a state Chief Information Officer, or other appropriate officer or entity, to advise such officer or entity of the Petitioner's intent to deploy, including a brief description of the Petitioner's plans and Petitioner's affirmative commitment to work on an ongoing basis with the state, the Commission, and ERIC to ensure interoperability both technically and as a matter of governance. The petitioner must also provide evidence that the state official or entity has acknowledged receipt of the notice and has interposed no objection to the Petitioner's intended deployment. This can be accomplished by providing either the written consent of the state official or entity or written acknowledgement by the state official or entity that notice has been received without objection to the Petitioner's intended deployment, either of which may be evidenced by letter or other instrument from the state Chief Information Officer or other appropriate official or entity, or through any other official means permitted by the state. If, however, no consent or acknowledgement is forthcoming from the state 60 days after such contact is made, we will allow a Petitioner to nonetheless submit to ERIC a certification of its reasonable attempt to contact the state and the state's lack of response for the Bureau's consideration. Finally, if the state objects for any reason to the Petitioner's proposed deployment, the Petitioner may refer the matter to the Bureau for further resolution consistent with this Order, taking the views of both parties into account.

53. With respect to potential overlap of Petitioners' proposed areas of operation, we note that this issue appears primarily to affect the petitions filed by New York City and the State of New York. In its comments, the State of New York indicates that:

[w]hile the State's petition currently overlaps with New York City's petition in terms of spectrum access, the State's network implementation strategy recognizes build autonomy for regional initiatives, including New York City. In other words, the State of New York fully supports New York City's desire to build, maintain, and operate their own 700 MHz wireless broadband network for public safety, assuming compliance with LTE technological requirements are instituted. Given both New York State and New York City are in agreement on this build approach, a resolution of the waiver overlap should be straightforward.<sup>110</sup>

New York City states that the Commission "should require entities applying for waivers covering the same geography to present a plan detailing a mechanism to achieve seamless network operation transparent to the user, in overlap areas. Alternative, petitioners may choose to amend their petitions to eliminate any overlap areas."<sup>111</sup> In light of the comments of both parties, we find sufficient assurance that both waivers may be granted, and both networks may proceed. We also find the comments of the State of New York represent sufficient affirmative consent to allow New York City to proceed, and expect, based on New York City's comments, that the City will engage with the State to develop, under the auspices of ERIC, the suggested plan for achieving seamless network operations that are transparent to the user.

54. Finally, we agree with the PSST that all Petitioners must offer service or access to all eligible public safety entities within their proposed geographic service area.<sup>112</sup> This will facilitate inclusiveness and collaboration, and will further the Commission's interoperability goals by allowing all those eligible to utilize a common, compatible network.

55. *Submission of Interoperability Plans to ERIC.* Recognizing that in addition to the mandatory use of LTE 3GPP Release 8 and the other technical specifications prescribed in this Order, there are technical and governance specifications that must be consistent in order to ensure

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<sup>110</sup> New York State Comments at 4.

<sup>111</sup> New York City Comments at 7.

<sup>112</sup> See PSST Comments at 17.

interoperability and roaming among these early deployments, and in light of the generalized nature of the information supplied in the waiver petitions, we find it is also appropriate to require the petitioners to work with ERIC prior to deployment and operation to develop more detailed network interoperability plans. Accordingly, as a condition of waiver, we require that Petitioners submit to ERIC, during a specific filing window, their detailed plans to achieve interoperability.<sup>113</sup> Such showings must be properly detailed and reflective of the complex nature of 4G wireless broadband networks. For example, the showings may include detailed deployment and technical data and information that Petitioners obtain from industry partners. To the extent such information is confidential or proprietary, Petitioners may submit this information under request for confidential treatment.<sup>114</sup> ERIC will thereafter recommend for Bureau approval on delegated authority, the initial set of technical requirements that will be applicable to those Petitioners submitting plans. Once the Bureau adopts these technical requirements, Petitioners will then be permitted to commence operations upon certification to ERIC that they will meet these technical requirements.

56. Further, the ongoing 3GPP standards development process will continue during this time. Our approach strikes a balance by defining the initial parameters applicable to early, waiver-based deployments, while allowing enough flexibility to enable deployments to proceed in a manner consistent with further evolution of technical requirements. In this respect, we find it appropriate to require Petitioners' technical filings with ERIC to occur within a set window of time. This window will open upon OMB approval of the information collection we are specifying for Petitioners, and close 30 days thereafter. We direct PSHSB to issue a Public Notice to this effect upon OMB approval. ERIC will consider only those technical interoperability showings that are timely submitted during this filing window.

57. Recognizing that some parties have suggested the need for certainty and expediency in terms of securing deployment rights in order to either seek public funding or justify investment of taxpayer resources,<sup>115</sup> we also find it appropriate to assure prompt action on the Commission's part as well. In this respect, we require the Bureau, in consultation with ERIC, to act on the interoperability showing submissions within 60 days of the close of the filing window.

58. The additional technical interoperability showing we require is consistent with the lack of any detailed information in the record to date, the complex and novel nature of LTE technology, and the importance of ensuring deployments will be interoperable. The specific filing window we impose is similarly important in order to provide for a coordinated and streamlined administrative process for the Bureau to issue a timely and well-informed set of initial technical requirements governing early deployments. We also are cognizant that we are permitting Petitioners to move forward in an evolving technical and regulatory environment that will require rapid adaptation. Accordingly, while there are significant benefits of allowing Petitioners to move forward, the evolving nature of 3GPP deployments and standards and the paramount importance of the Commission's overall goals also require us, and Petitioners, to take a cautious and measured approach.

59. *PSCR/DC Demonstration Network.* We also recognize that as these early deployments move forward, the Commission will continue the rulemaking process, including additional considerations of rules governing technical interoperability among public safety networks and between public safety networks and commercial deployments, either through partnerships or in roaming relationships. We expect these early waiver-based efforts to provide us with valuable insight into this process.

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<sup>113</sup> The Bureau shall issue an informational Public Notice providing guidance on this submission.

<sup>114</sup> See 47 C.F.R. § 0.459.

<sup>115</sup> See, e.g., New Mexico Comments at 3; LeGrande Technical and Social Services Comments at 3; New York State Comments at 1.

60. In this regard, the recently announced PSCR/DC Demonstration Network will provide an open platform for development and testing of public safety 700 MHz LTE broadband equipment.<sup>116</sup> This is a key development because currently there are no other government or independent laboratory facilities in the United States to test and demonstrate the public safety-specific LTE implementation requirements. We believe public safety and vendor participation in the Demonstration Network will contribute significantly to the development of a 700 MHz broadband equipment “ecosystem” that includes LTE equipment suitable for use by public safety. Particularly in the early deployment stage, it will be important to verify that new broadband equipment being developed to support the network meets public safety's use expectations, will work in a multivendor environment, and allows for roaming across multiple networks, including commercial as well as public safety networks. The Demonstration Network will also stimulate early development of equipment for public safety systems, support the inclusion of public safety requirements in the 3GPP standards process, and demonstrate broadband air-interface and core network capabilities.

61. For this reason, as a condition of the waiver relief granted by this Order, we require the Petitioners and other public safety entities seeking early deployment waivers to participate in the Demonstration Network. As part of this participation, waiver recipients must certify that their vendors are participating actively in the Demonstration Network through submission of their equipment to be evaluated under the test plan established by NIST.<sup>117</sup> We will consider showings of such vendor participation favorably in evaluation of the interoperability showings submitted by waiver recipients.

#### 4. Network Integration

62. While the need for prompt access to this spectrum to begin deployment motivates our action here, it does not affect the overarching goal of ensuring a nationwide interoperable public safety broadband network is available to all public safety personnel. In this respect, and as recognized by the Petitioners themselves,<sup>118</sup> any deployment or other expenditures made by the requesting jurisdictions pursuant to this Order is undertaken at their own risk and with the understanding that any deployments will be subject to the outcome of the larger proceeding, including possible integration into a nationwide network and compliance with future technical requirements adopted by ERIC or the Commission.<sup>119</sup> This may include, for example, interoperability requirements for voice applications. Our action on these waiver petitions, therefore, is subject to and without prejudice to our resolution of any of these issues in the broader rulemaking.

#### 5. Milestones and Reporting

63. In the *Waiver PN*, the Bureau sought comment on the best method to enforce any waiver conditions. Some commenters supported the imposition of milestones to ensure that Petitioners pursue deployment diligently, perhaps in lieu of requiring evidence of financing.<sup>120</sup> We find that, in light of the conditions imposed herein, particularly the necessary interaction with ERIC to ensure interoperability and

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<sup>116</sup> See Press Release, Nat'l Inst. of Standards and Tech., Demonstration Network Planned for Public Safety 700 MHz Broadband (Dec. 15, 2009), available at [http://www.nist.gov/eeel/oles/network\\_121509.cfm](http://www.nist.gov/eeel/oles/network_121509.cfm) (last visited Apr. 26, 2010).

<sup>117</sup> See *id.*

<sup>118</sup> See, e.g., Charlotte Petition at 6-7; New York State Petition at 2; San Antonio Petition at 5.

<sup>119</sup> In this respect, we decline New Mexico's invitation to require, as part of this Order, that Petitioner be guaranteed compensation by the D Block auction winner. New Mexico Comments at 5.

<sup>120</sup> NPSTC Comments at 9; Charlotte Reply Comments at 3; San Francisco Comments at 5-6 (supporting waiver of build out requirements in favor of deployment “within a reasonable time” with the requirement to provide “milestone” updates).

technical compatibility, it is in the public interest to require quarterly reporting by Petitioners addressing progress made pursuant to this Order.

64. While we find it unnecessary at this time to impose particular deadlines or milestones in light of the novel nature of these deployments and the ongoing standards and equipment development for LTE, we emphasize that diligent pursuit of deployment is expected. In this respect, we require Petitioners to file, in consultation with the PSST, 30 days after approval by OMB and quarterly thereafter, status reports with the Public Safety and Homeland Security Bureau addressing the Petitioners' progress in 3 areas: (1) planning; (2) funding; and (3) deployment. As with the interoperability showings detailed above, to the extent such information is confidential or proprietary, Petitioners may submit this information under request for confidential treatment.<sup>121</sup> We also require the Bureau to issue a Public Notice upon OMB approval, including any additional requirements addressing filing mechanisms for the submissions required by this Order. Substantive information in each category should include the following:

- Planning
  - Expected timing for development and issuance of any RFI/RFP
- Funding
  - Status of efforts to obtain funding for planning and/or deployment, including budgeting, assessments, grants or other means
- Deployment
  - Status of equipment development and purchase, including number of devices and users
  - Site development, including use of existing towers
  - Deployments and upgrades (commencement and completion), including site information and location
  - Applications in development or in use

#### **6. Permitted Spectrum Bands**

65. We decline at this time to allow operations outside of the public safety broadband spectrum. Furthermore, as we deny the Petition of Flow Mobile on eligibility grounds, no other party has requested permission to use spectrum for purposes of these Petitions other than the public safety broadband spectrum licensed to the PSST.

#### **D. Other Issues**

66. We decline to act on other issues raised in the waiver petitions and comments, as they are not essential to our decision here.

67. *D Block.* We decline to address Petitioners' and commenters' position that the D Block should be reallocated for public safety use.<sup>122</sup> Under Section 337 of the Act, the Commission is bound by Congress' directive that the D Block is allocated for commercial use for licensing through competitive bidding. Barring any alternate directive from Congress, we have no authority to consider reallocation in the context of these Petitions. Moreover, although several Petitioners advocate reallocation, they also

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<sup>121</sup> See *supra* note 114.

<sup>122</sup> See, e.g., APCO Comments at 12-13.

generally only request authority to operate on the spectrum currently licensed to the PSST.<sup>123</sup> We note that the NBP recommends certain obligations be considered for the D Block with respect to supporting a nationwide wireless interoperable public safety network, and that additional proceedings addressing the D Block are anticipated later this year.<sup>124</sup>

68. *Deployment without Waiver.* Pinellas County urges the Commission to modify its rules to allow deployment within the PSBL spectrum without a waiver.<sup>125</sup> We find that this is not the appropriate venue to consider this request. Rather, this issue is already presented in the ongoing proceeding, and consideration of the instant waivers is not the appropriate procedural vehicle to consider rule changes. However, we expect that the Bureau will be able to act on future waiver requests quickly and consistent with our decision here, after issuance of an appropriate Public Notice seeking comment when a new waiver is received.

69. *800 MHz Rebanding.* Sprint Nextel notes that several of the Petitioners have not yet completed retuning their 800 MHz narrowband voice communications systems, and urges the Commission to delay action on the subject Petitions until that process is completed in order to avoid diverting Petitioners' attention.<sup>126</sup> We decline to do so. Although rebanding in the 800 MHz band has taken longer than originally anticipated, rebanding has made substantial progress and the Commission has sufficient mechanisms to deal with unwarranted delays. We do not believe that taking action on the current Petitions will "distract" Petitioners from their other Commission obligations, nor does Sprint Nextel offer any proof to the contrary beyond a speculative concern that some Petitioners may not have sufficient resources to manage both rebanding at 800 MHz and deployment pursuant to a waiver at 700 MHz.

70. *Satellite handsets.* Although the *Waiver PN* did not specifically seek comment on the Commission's requirements for availability of satellite-capable devices, several commenters raised this issue. Commenters including the MSS/ATC Coalition and the Satellite Industry Association argue that Petitioners should be required to obtain and deploy dual-mode satellite-terrestrial devices when such devices become available.<sup>127</sup> They argue that if Petitioners are allowed to deploy prior to the auction of the D Block, then no party has any responsibility for development and deployment of dual mode devices. They further assert that obligating Petitioners to purchase these devices, however, will enhance the likelihood that manufacturers will make them available.<sup>128</sup> The PSST supports a requirement for Petitioners to comply with the same satellite capability requirements that are adopted for the nationwide network.<sup>129</sup>

71. We decline to require Petitioners, as part of their deployment under this Order, to purchase and deploy such equipment. The Commission's original Order and questions in the ongoing proceeding have not contemplated mandatory purchase and use of such dual mode equipment by public safety localities. Further, while we agree that such equipment can be highly valuable, we believe it is premature to consider this issue until the LTE equipment market develops. We further note, however, that the issue of the appropriate mechanism to ensure the availability of dual mode devices is open in the

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<sup>123</sup> See, e.g., Bay Area Petition at 1; Hawaii Petition at 7; LA-RICS Joint Power Authority Petition at 1; New York State Petition at 7.

<sup>124</sup> See *National Broadband Plan* at 315-16.

<sup>125</sup> Pinellas County Comments at 2.

<sup>126</sup> Sprint Nextel Comments at fn. 4; Sprint Nextel Reply Comments at 18-19.

<sup>127</sup> MSS/ATC Comments at 3; SIA Comments at 3-4.

<sup>128</sup> *Id.*

<sup>129</sup> PSST Reply Comments at 10.

larger docket, and we are conditioning our waiver here on compliance with the Commission's later determinations.

#### **E. Narrowband Relocation**

72. We recognize that in some instances, there may be existing 700 MHz narrowband operations outside of the consolidated narrowband channels in a geographic area in which a waiver has been requested or in which a public safety entity may later seek to deploy pursuant to this Order. We agree with the PSST and US Cellular, that the most appropriate resolution of this overlapping use, in light of the ongoing nature of this proceeding, is to require each Petitioner to relocate, at its own expense, any narrowband operations in its intended area of operation from the public safety broadband spectrum to the appropriate public safety narrowband spectrum.<sup>130</sup> Alternatively, Petitioners may protect incumbent narrowband operations, either through appropriate engineering measures or geographic exclusion of the narrowband system's footprint. If a Petitioner opts to protect incumbent narrowband operations rather than relocate them, we require that the Petitioner obtain the consent of the incumbent as to its proposed method of protection. Petitioners must also account for narrowband operations in adjacent regions that occur outside of the consolidated narrowband channels, and take all measures necessary to protect such operations from interference from broadband deployments.

73. We decline to address more generally at this time the costs for such relocation and any potential reimbursement. As noted elsewhere herein, the relief we grant now is fully subject to the outcome of the pending rulemaking, and is undertaken at Petitioner's own risk. While the Commission had earlier held that the winner(s) of the D Block should be responsible for payment of relocation expenses for certified systems deployed prior to August 30, 2007, we defer our decision on reimbursement of any expenses to the larger rulemaking. To the extent, however, that the Commission ultimately provides a mechanism for funding of relocation expenses for public safety narrowband operations, we will also consider at that time the possible inclusion of reimbursement for permitted relocation expenses incurred by an entity undertaking early build out pursuant to this Order.

#### **F. Flow Mobile**

74. The *Waiver PN* sought specific comment on the petitions submitted by North Dakota and New EA d/b/a Flow Mobile.<sup>131</sup> The Bureau sought comment on whether Flow Mobile was eligible under Section 337 to seek such a waiver, or whether North Dakota could seek such a waiver on its behalf. The Bureau also sought comment on whether the proposed services were permissible under Section 337, Flow Mobile's proposed use of public safety narrowband spectrum for broadband purposes, and whether a "4-G like" network could meet the Commission's interoperability goals.

75. As an initial matter, we note that North Dakota has withdrawn both its initial request and its amended Petition.<sup>132</sup> Accordingly, any questions or issues related to the North Dakota petitions have been rendered moot.

76. With respect to Flow Mobile's petition, parties were largely opposed to Flow Mobile's proposals. APCO opposes Flow Mobile's petition on eligibility and technical grounds, stating that the proposed commercial uses are not permitted under current law.<sup>133</sup> The PSST similarly argues that the

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<sup>130</sup> PSST Comments at 14-15; US Cellular Comments at 5.

<sup>131</sup> *Waiver PN* at 9.

<sup>132</sup> See Letter from David A. Sprynczynatyk, Major General, North Dakota National Guard, to Jamie Barnett, Chief, Public Safety and Homeland Security Bureau (Mar. 25, 2010) (withdrawing North Dakota's amended Petition); see also Letter from David A. Sprynczynatyk, Major General, North Dakota National Guard, to Jamie Barnett, Chief, Public Safety and Homeland Security Bureau (Aug. 28, 2009) (withdrawing North Dakota's initial request).

<sup>133</sup> APCO Comments at 13-14.

“commercial and residential services” Flow Mobile proposes do not qualify as “public safety services” under Section 337. In addition, they argue that Flow Mobile does not meet Section 337’s requirement that public safety services be provided by “State or local government entities” or “by nongovernmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services.”<sup>134</sup>

77. Flow Mobile argues that it is working closely with the North Dakota, it can otherwise satisfy the criteria of Section 337, and that it is eligible to use public safety spectrum for public safety purposes.<sup>135</sup> In this respect, Flow Mobile argues that it is already licensed 700 MHz spectrum for commercial purposes, and that it can ensure that no commercial services will be offered with the public safety spectrum to which it seeks access.<sup>136</sup>

78. *Discussion.* We deny Flow Mobile’s petition. We find that Flow Mobile, a commercial entity, is not statutorily eligible to operate on the subject spectrum, as it does not meet all three prongs of the definition of “public safety services” under Section 337(f)(1) of the Act, which requires that such services: (1) are services “the sole or principal purpose of which is to protect the safety of life, health or property;” (2) are provided by a State or local government, or a nongovernmental organization that is authorized by a governmental entity whose primary mission is the provision of such service; and (3) are “not made commercially available to the public by the provider.”<sup>137</sup>

79. Rather, as evidenced by its petition, Flow Mobile proposes a “dual use” network that will provide “emergency communications service for first responders and [provide] commercial and residential services.”<sup>138</sup> In this respect, Flow Mobile is a commercial entity, seeking to provide commercial services to public safety entities, essentially as enterprise consumers without the designation of the state as an eligible nongovernmental organization. Offering commercial services to public safety entities, even services tailored to public safety needs, does not render a company eligible under Section 337 as an entity providing services “sole or principle purpose of which is the safety of life, health, or property.”<sup>139</sup> To find otherwise would vitiate Section 337 as well as the Commission’s public safety eligibility requirements, in that any commercial entity that has public safety customers could then be deemed eligible to directly hold a public safety license. This was clearly not the intent of Congress, nor is it a valid reading of our rules implementing these eligibility restrictions.

80. With respect to the second prong of Section 337, Flow Mobile’s argument that it “could” be designated by the state as a non-governmental entity to provide such services does not provide a basis for finding that it meets this requirement. There is no evidence that North Dakota *has* made this designation. The mere “potential” for such designation is not sufficient. Moreover, as indicated earlier, both the initial petition and the amended petition filed by North Dakota have been withdrawn, so is no colorable argument in the record that Flow Mobile’s proposal is endorsed by the State. Accordingly, we need not address this argument.

81. Finally, Flow Mobile fails to meet the third prong of Section 337’s requirements. This prong requires that public safety services must “not [be] made commercially available to the public by the provider.” Again, based on Flow Mobile’s pleadings, it appears that it is seeking to provide “enterprise customer” services to public safety. They also indicate that they intend to provide service to commercial

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<sup>134</sup> PSST Comments at 8; *see also*, NDRTC Comments at 12.

<sup>135</sup> Flow Mobile Comments at 7-8.

<sup>136</sup> *Id.*

<sup>137</sup> *See* 47 U.S.C. § 337(f)(1).

<sup>138</sup> Flow Mobile Petition at 5.

<sup>139</sup> *See* 47 U.S.C. § 337(f)(1)(A).; *see also* NTCA Comments at 3-4.

and residential consumers as a way to bridge the gap in the provision of broadband services in the state.<sup>140</sup> While both goals are very laudable, these are clearly services that will be offered on a commercial basis.

82. Because we deny Flow Mobile's request on eligibility grounds, we also need not address its request to operate on the public safety narrowband spectrum, its proposed "4-G like" technology, or the potential interference and interoperability objections raised by commenters.<sup>141</sup> We also note, however, that in light of our determination to require the use of LTE for these deployments, Flow Mobile's proposed "4-G like" technologies do not appear to conform to this requirement. Flow Mobile's Petition, therefore, is denied.

#### IV. PROCEDURAL MATTERS

83. *Paperwork Reduction Act of 1995.* This document contains new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding.

#### V. ORDERING CLAUSES

84. Accordingly, IT IS ORDERED that pursuant to sections 1, 4(i), 301, 303, 332 and 337 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 301, 303, 332 and 337, and Section 1.925 of the Commission's rules, 47 C.F.R. § 1.925, THIS ORDER in PS Docket No. 06-229 is ADOPTED.

85. IT IS FURTHER ORDERED that the Waiver Requests filed by those parties listed in Appendix B, are GRANTED WITH CONDITIONS, as specified herein.

86. IT IS FURTHER ORDERED that the Waiver Request filed by New EA d/b/a Flow Mobile, is DENIED, as specified herein.

87. IT IS FURTHER ORDERED that any new or modified information collection requirements SHALL BE EFFECTIVE upon approval by the Office of Management and Budget, and the Bureau SHALL ISSUE a Public Notice announcing such approval.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

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<sup>140</sup> Flow Mobile Petition at 3-4.

<sup>141</sup> See, e.g., North Dakota Rural Telecom Coalition Comments at 20-21.

## APPENDIX A

## Waivers Conditionally Granted

<b>Petitioner</b>	<b>Date Filed</b>
City of Boston	12/11/08; amended 5/28/09
City and County of San Francisco, City of Oakland, City of San Jose, CA	3/24/09; amended 5/27/09
State of New Jersey	4/3/09
City of New York	6/8/09
City of San Antonio, TX, on behalf of the San Antonio Urban Area Security Initiative Region	7/10/09
City of Chesapeake, VA	7/8/09
State of New Mexico	7/10/09
City of Charlotte, NC	8/4/09
State of New York	6/30/09
District of Columbia	6/26/09
County of Maui, County of Hawaii, County of Kauai, City and County of Honolulu, and the State of Hawaii	8/19/09
City of Seattle, WA	1/15/10
Adams County, CO Communications Center	12/10/09
City of Pembroke Pines, FL	11/18/09
Los Angeles Regional Interoperable Communications System (LA-RICS)	11/16/09
Iowa Statewide Interop. Comms. System Bd.	10/15/09
Calumet, Outagamie and Winnebago Counties, WI	3/10/10
Mississippi Wireless Communications Commission	3/23/10
City of Mesa, AZ and the TOPAZ Regional Wireless Cooperative	4/14/10
State of Oregon	4/30/10
State of Alabama	5/10/10

**APPENDIX B****Standard Lease****LONG TERM DE FACTO TRANSFER SPECTRUM LEASE AGREEMENT**

This Long Term *De Facto* Spectrum Lease Agreement (“Lease” or “Agreement”) is entered into by the Public Safety Spectrum Trust Corporation (“PSST” or “Lessor”), the Federal Communications Commission (“FCC”) licensee of the public safety broadband spectrum in the 700 MHz Band (Call Sign WQHW226) (the “Leased Spectrum”), and [state or locality] (“Lessee”) (each a “Party,” and, collectively, “the Parties”). This Lease is subject to the FCC’s May 12, 2010 Order, FCC 10-79 (“FCC Order”). Further, this Lease is a long term *de facto* transfer spectrum lease pursuant to Section 1.9030 of the FCC’s rules, 47 C.F.R. § 1.9030, subject to all applicable FCC rules, regulations and policies. [If Lessee is not a state, Lessee shall comply with the requirements and procedures of the FCC Order concerning notification and coordination with the relevant state authority.]

**1. Agreement.**

- a. Conditioned on first obtaining the consent of the Chief of the Public Safety and Homeland Security Bureau of the FCC (the “Bureau”) to the creation of this Lease, Lessor hereby grants to Lessee the exclusive right to use the Leased Spectrum within Lessee’s jurisdiction during the term of this Agreement and in accordance with the provisions hereof. It is the intent of the Parties that this Agreement create a long term *de facto* transfer spectrum leasing arrangement within the meaning (and subject to the requirements) of 47 C.F.R. Section 1.9030.
- b. The PSST retains all rights and obligations under its FCC license and as a spectrum lessor, as specified in the Communications Laws (as defined in section 5 of this Agreement), and as subject to the terms of this Agreement. Lessee is subject to the rights and obligations under this Agreement and the Communications Laws. Consistent with FCC rules governing long term *de facto* transfer spectrum leases, Lessee is primarily responsible for complying with the FCC Order and the Communications Laws, including all FCC filing requirements related to the Leased Spectrum, and Lessor retains de jure control of its spectrum license.
- c. Lessee shall be responsible to relocate, at its own expense, the operations of any incumbent 700 MHz narrowband licensee in the Lessee’s area of operation, from the Leased Spectrum to the appropriate public safety narrowband spectrum. Alternatively, Lessee agrees to protect such incumbent narrowband operations, either through appropriate engineering measures or geographic exclusion of the narrowband system’s footprint, and to obtain the consent of the incumbent as to its proposed method of protection. Lessee shall also account for narrowband operations in adjacent regions that occur outside of the consolidated narrowband channels, and take all measures necessary to protect such operations from interference.
- d. Lessee’s network shall be fully interoperable with any other regional public safety deployments permitted by a waiver granted by the FCC pursuant to the FCC Order, and with any future nationwide or regional public safety broadband networks, including adherence to any technical requirements adopted by the FCC’s Emergency Response Interoperability Center (“ERIC”), the Bureau, or the FCC, and shall be consistent with other nationally coordinated technical standards and operating requirements that the ERIC, Bureau, or FCC may impose from time to time.
- i. Lessee must make its network available to all public safety entities eligible under Section 337 of the Communications Act within its jurisdiction.

- ii. Lessee must adhere to all other technical conditions specified in the FCC Order or FCC rule or imposed by ERIC, the Bureau or the FCC.
  - iii. Lessor may not require a bond, letter of credit or other instrument by way of security in connection with the execution of this Agreement for the use of the spectrum; Lessee's sole consideration for use of the Leased Spectrum will be its remittance of the Administrative Fee to the Lessor and compliance with the terms of this Agreement, and any and all FCC, Bureau and ERIC requirements. The Administrative Fee is the fee to be remitted by Lessee to Lessor, as defined and ultimately approved by the Chief of the Bureau, in accordance with the procedures outlined in the FCC Order.
  - iv. Lessor shall maintain *de jure* control over its spectrum license, in accordance with FCC rules.
  - v. Lessor shall submit the monthly reports as required by the FCC Order providing an accounting of the Administrative Fee remitted by Lessee, based upon generally accepted accounting procedures.
  - vi. Lessor shall timely comply with any audit as may be requested at the discretion of the Chief of the Bureau with respect to its collection and expenditure of the Administrative Fee.
- e. Lessee shall be responsible for: (a) obtaining, paying for, operating and maintaining all equipment necessary to build out its network; (b) acquiring all necessary permits, authorizations or consents required for construction and operation of the network; (c) paying any and all other costs and expenses incident to use of the spectrum; and (d) paying the Administration Fee to the PSST. The Lessee has no other financial obligation to the PSST under this Agreement.
- f. Lessee agrees to file, in consultation with the PSST, the quarterly status reports required under the FCC Order on a timely basis. The Lessor and the Lessee jointly and severally agree to timely submit any other filings or information as the FCC, the Bureau, or ERIC may require.
- g. The PSST may rely upon Lessee's operations in demonstrating compliance with any construction or substantial service requirements the FCC may adopt in the future.
- h. The Parties shall maintain such records as may be necessary to comply with FCC reporting requirements and FCC rules, including the specific FCC obligations pertinent to long term *de facto* transfer spectrum leases, lessors and lessees.

## **2. Scope of Spectrum Usage Rights.**

- a. Lessor grants to Lessee the maximum usage rights that Lessor is capable of granting as set forth in the Agreement, including, without limitation, use and operation on the Leased Spectrum in the geographic area of operation within its jurisdiction as permitted under FCC rules and ERIC requirements.
- b. The geographic area of operation within the Lessee's jurisdiction shall be [delineate geographic jurisdictional boundaries].

## **3. Term and Renewal.**

- a. The Agreement shall have an initial term of two years, commencing on the Effective Date. The Parties have an expectation of renewal, for additional two-year terms as long as the PSST holds the nationwide

license, including any renewals or extensions of the PSST's current license term, except as otherwise agreed to by the Parties or required by the FCC.

#### **4. Termination.**

- a. Lessee may terminate this Agreement at the Lessee's option, upon 30-days written notice to the PSST and the Bureau. Lessee agrees to remit any remaining or prorated Administration Fee to the PSST no later than 30 days following termination.
- b. While Lessee remains in compliance with the Agreement and the Communications Laws (as defined by section 5 of this Agreement), PSST may not terminate the Agreement or otherwise curtail Lessee's use of the spectrum for any reason.

#### **5. Compliance with FCC Rules, Other Applicable Law and Requirements of This Agreement.**

- a. The Parties agree to comply with all of the rules, regulations, policies, decisions, and Orders of the FCC, the Bureau, and the ERIC, both currently and as may be adopted in the future, as well as any other applicable laws, including the Communications Act of 1934, 47 U.S.C. Section 151 et seq. (the "Communications Act") (collectively, the Communications Laws).
- b. The PSST shall have the right to make scheduled inspections upon reasonable notice to the Lessee to ensure compliance with the Agreement.
- c. Each Party must notify the other Party and the Chief of the Bureau within five (5) business days if the Party becomes or expects to become non-compliant with the Communications Laws.
- d. If Lessee fails to comply with any of the Communications Laws, this Agreement may be terminated by the FCC, the Bureau, or by the Lessor, but by the Lessor only with the consent of the FCC or the Chief of the Bureau, and only then if such failure of compliance by Lessee is of such a nature that (i) Lessee is causing harmful interference to other spectrum operations protected by FCC Rules, or (ii) if such failure of compliance had been committed by the Lessor in respect of its license, would be reasonably expected to result in the revocation, cancellation or termination of its license by the FCC (either (i) or (ii) constituting a Material Breach).
- e. In the event the PSST believes that Lessee has committed a Material Breach, the PSST shall provide written notice to the Chief of the Bureau and the Lessee no later than five (5) days after discovering the Material Breach. The PSST may only terminate this Agreement with the consent of the Bureau or the FCC.
- f. In the event the PSST believes that Lessee has committed a non-Material Breach, the PSST shall provide written notice of noncompliance to the Lessee and the Bureau within thirty (30) days after discovering such breach. The Lessee shall have 30 days to cure the breach. If Lessee has failed to cure the breach within 30 days, the PSST shall provide written notice of failure to cure to the Chief of the Bureau. The Chief of the Bureau will then render a decision or finding, which may include an order for the Lessee to cure or such other remedy as the Chief of the Bureau, in his or her discretion, considers reasonable.

#### **7. Representations and Warranties.**

Each of the Lessor and the Lessee severally represents and warrants to the other:

- a. that each of them has the requisite corporate power and authority and has taken all corporate action necessary in order to execute and deliver this Agreement.
- b. that each of them is a corporation or other entity duly organized, validly existing and in good standing under the laws of its respective jurisdiction of incorporation or organization.
- c. that the execution and delivery of this Agreement by each of them does not and will not, and the transactions contemplated hereby and thereby will not, with respect to each of the Parties, violate or conflict with any contract or other instrument to which it or he is a party or by which it or he is bound or conflict with any law, regulation, ordinance, judgment, order, writ, injunction or decree or any other requirement of any court or governmental or regulatory body of any jurisdiction.
- d. that the facts stated herein to the extent that they are within such Party's knowledge, are true, complete and accurate.

### **8. Indemnity.**

- a. The Lessor agrees to indemnify, defend, and hold harmless the Lessee from, against, for, and in respect of any and all losses asserted against, imposed upon, or incurred by such the Lessee by reason of, resulting from, based upon, or arising out of:
  - i. the breach of any representation or warranty of the Lessor contained in this Agreement; and
  - ii. the breach of any covenant or agreement of the Lessor contained in or made pursuant to this Agreement.
- b. The Lessee agrees to indemnify, defend, and hold harmless the Lessor from, against, for, and in respect of any and all losses asserted against, imposed upon, or incurred by the Lessor by reason of, resulting from, based upon, or arising out of:
  - i. the breach of any representation or warranty of the Lessee contained in this Agreement; and
  - ii. the breach of any covenant or agreement of the Lessee contained in or made pursuant to this Agreement.

### **9. Miscellaneous.**

- a. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of the Lessor and Lessee. This Agreement may not be assigned without the express written consent of both the Chief of the Bureau and the other Party. Such consent will be given only upon the proposed assignee demonstrating that it will be able to meet all applicable FCC requirements and the terms of this Agreement.
- b. Governing Law. This Agreement shall be governed by the law of the District of Columbia.
- c. Disputes. The Parties have a duty and obligation to make all reasonable efforts to resolve any disputes that arise under this Agreement. If the Parties are unable to reach a settlement on their own, they agree to submit their dispute to the FCC, which will have sole authority to arbitrate or judge any disputes that would then be binding upon the Parties..

d. Specific Performance. The Parties shall be entitled to specific performance in the event that either Party fails to perform its obligations hereunder.

e. Counterparts. This Agreement may be executed in one or more counterparts, each of which when so executed shall be an original, but all of which together shall constitute one agreement. Facsimile signatures shall be deemed original signatures.

f. Amendments. This Agreement shall not be amended, altered or modified except in accordance with the limitations and procedures specified in the FCC Order.

10. Effective Date. The Parties shall submit for approval an executed copy of this Agreement to the Chief of the Bureau. The Effective Date of this Agreement is the date that the Chief of the Bureau consents to the creation of this Agreement (as specified in section 1).

11. Notices

Public Safety Spectrum Trust Corporation  
Chairman of the Board  
[Address]  
[phone]  
[fax]  
[email address]

Lessee:

[Name of contact person]  
[Name of agency]  
[Address]  
[phone]  
[fax]  
[email address]

Bureau:

Federal Communications Commission  
Public Safety and Homeland Security Bureau  
445 12<sup>th</sup> St. SW  
Washington, DC 20554  
(202) 418-1300  
(202) 418-2817  
[email address]

In WITNESS WHEREOF, the Parties have executed this Agreement as of the date approval is provided by the Chief of the Bureau.

PUBLIC SAFETY SPECTRUM TRUST CORPORATION

By:  
Name:

Title:  
Dated:

LESSEE

By:  
Name:  
Title:  
Dated: