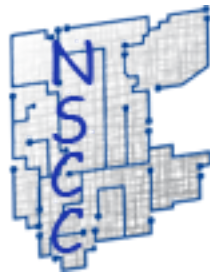


# **NORTH SUBURBAN COMMUNICATIONS COMMISSION**

## **REPORT ON CABLE-RELATED NEEDS AND INTERESTS AND THE PAST PERFORMANCE OF COMCAST OF MINNESOTA, INC.**



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## **I. BACKGROUND AND PURPOSES OF THE STAFF REPORT**

### **A. Why Renewal is Important, and Why this Report is Being Prepared and Submitted to the North Suburban Communications Commission.**

Cable television systems operate pursuant to franchises issued by local governments. A franchise authorizes a cable system operator to provide cable service, and to occupy valuable public rights-of-way for private profit. A cable franchise also sets out the terms and conditions under which cable service is to be provided using public rights-of-way. The North Suburban Communications Commission (the “NSCC” or the “Commission”) is a municipal joint powers consortium organized by Arden Hills, Falcon Heights, Lauderdale, Little Canada, Mounds View, New Brighton, North Oaks, Roseville, St. Anthony and Shoreview, Minnesota (individually, a “Member City” and, collectively, the “Member Cities”) pursuant to Minn. Stat. § 471.59, as amended, to administer and enforce cable franchises awarded by the Member Cities. Comcast of Minnesota, Inc. (“Comcast”) is currently the only franchised cable operator providing cable service in the Member Cities. Comcast’s existing franchises for the Member Cities, other than Roseville, are currently scheduled to expire on October 1, 2013; Roseville’s franchise is set to expire on November 23, 2013. Both Comcast and the NSCC have agreed that an extension of the existing franchise terms, through November 23, 2014, is appropriate, in order to accommodate the ongoing formal franchise renewal process, and have approved the content of a legal document (either a resolution or an ordinance, as appropriate) by which the Member Cities can extend the term of their cable franchises. At its July 11, 2013, meeting, the NSCC formally approved a motion to recommend to the Member Cities an extension through November 23, 2014. All the Member Cities will now need to adopt or enact the requisite franchise extension resolution/ordinance.

When a franchise is about to expire or has expired, a local franchising authority has a rare opportunity to review the performance of the cable operator (in this case, Comcast) and to ensure that the operator will meet the future cable-related needs and interests of the community. This opportunity is rare because franchises are typically issued for periods of years. The Member Cities delegated to the Commission, in the Amended North Suburban Cable Commission Joint and Cooperative Agreement for the Administration of a Cable Communications System, dated June 1990, the authority to carry out the various steps and requirements of the formal franchise renewal process set forth in 47 U.S.C. § 546(a)-(g), including (but not limited to) assessing cable-related needs and interests, reviewing Comcast’s past performance, conducting a public hearing, requiring Comcast to submit such information as may be deemed appropriate, holding and participating in an administrative hearing, and making recommendations to the Member Cities concerning whether or not Comcast should be awarded renewal cable franchises. This authority was confirmed and ratified in resolutions adopted by the Member Cities concerning the commencement of formal renewal proceedings under the federal Cable Communications Policy Act of 1984, as amended.<sup>1</sup> The individual Member Cities, however, retained the ultimate authority to award or deny renewal cable franchises to Comcast.

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<sup>1</sup> See, e.g., Resolution No. 2011-007 adopted and issued by the City of Arden Hills, Minnesota on February 14, 2011. All the Member Cities’ resolutions are available for inspection and copying as public data under the Minnesota Government Data Practices Act- Chapter 13 of Minnesota Statutes.

By letters dated October 11, 2010, and November 23, 2010, Comcast informed the Member Cities that it was invoking its formal renewal rights set forth in Section 626 of the Cable Act, 47 U.S.C. § 546. In response, the Commission adopted Resolution No. 2011-02 on April 7, 2011.<sup>2</sup> That resolution commenced the past performance review and needs ascertainment proceedings delineated in 47 U.S.C. 546(a)(1) and delegated certain authority to NSCC staff and committees, including (but not limited to) the power to require Comcast and its subsidiaries and affiliates to submit information in connection with the § 546(a)(1) proceedings, to take all steps and actions necessary or desired to assess the needs and interests of the Member Cities' communities, to review Comcast's past performance under the existing franchises and applicable laws and regulations, and to comply with applicable laws, regulations, orders and decisions. On April 4, 2013, the Commission adopted and issued Resolution No. 2013-04, which specifically empowers the Commission's Executive Committee, Franchise Renewal Committee, NSCC staff (including the Executive Director and Business Manager) and Commission designees to take all steps and actions necessary to implement, conduct and engage in the entire formal franchise renewal process described in Section 626(a)-(g) of the Cable Act, 47 U.S.C. § 546(a)-(g), and to comply with any and all related or applicable federal, state and local laws, regulations, ordinances, orders, decisions and agreements. These steps and actions include (by way of example and not limitation) issuing data requests to Comcast, conducting franchise compliance/violation proceedings, preparing and issuing this Report and a Request for Renewal Proposal ("RFRP"), which is attached hereto, setting appropriate deadlines, evaluating and making recommendations concerning any formal franchise renewal proposal submitted by Comcast, and to hold any administrative hearing required by 47 U.S.C. § 546(c).<sup>3</sup>

As part of the franchise renewal process, the NSCC, on behalf of its Member Cities, can establish requirements for system improvements to ensure that the community has adequate infrastructure for cable services and communications. The Member Cities can also ensure that residents and local organizations have real opportunities to originate, as well as receive, video programming and other programming services over Comcast's cable system. In addition, the Member Cities can ensure that cable service will be reliable and that Comcast will be in a position to bring the benefits of advances in cable technology into the Member Cities' homes and schools. This Report is intended to look to the past, and to identify what is needed for the future. Based on NSCC staff's findings, the Member Cities may ultimately determine whether or not the existing cable franchises currently held by Comcast should be renewed.

Overall, the conclusions of NSCC staff (referred to herein as "staff") are quite simple: staff believes the Member Cities and their respective communities of interest require high-quality cable service and an advanced cable system. Moreover, there is a great deal of demand in the Member Cities and within identified communities of interest for channels, facilities and equipment that will permit members of the public, community organizations, NSAC employees, educational institutions and government agencies to produce and disseminate video programming and other programming services. This type of programming – so-called "public,

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<sup>2</sup> Resolution No. 2011-02 is attached hereto and incorporated herein as Exhibit E.

<sup>3</sup> See Resolution No. 2013-04, which is attached hereto and incorporated herein as Exhibit F.

educational and governmental” access (or “PEG” access) – serves critical public interests.<sup>4</sup> PEG access requirements help eliminate the danger that our society will be sharply divided between information “haves” and “have-nots.” As the National Telecommunications and Information Administration has noted, “[b]ecause information means empowerment – and employment – the government has a duty to ensure that all Americans have access to the resources and job creation potential of the Information Age.”<sup>5</sup> However, our review shows that Comcast is not currently providing adequate support for PEG video programming and other programming services. For example, as shown in the *Needs Assessment Report*, many items in the North Suburbs Access Corporation (“NSAC” or “CTV”) equipment inventory are more than (or nearly) 10 years old, and must be replaced/updated soon and on a regular replacement schedule over the life of a renewal franchise.<sup>6</sup> Additionally, the equipment packages for the Member Cities’ Council Chambers have a wide range of quality and sophistication.<sup>7</sup> Many equipment items in these packages are more than 10 years old and need to be replaced/updated, including cameras, camera control systems, ceiling/wall mounts for the cameras, switchers, graphics units, audio mixers, microphones, video recorders, monitors, etc.<sup>8</sup> All PEG access equipment should be able to record and transmit programs in both standard definition digital (“SD”) and high-definition digital (“HD”) formats.<sup>9</sup> According to the *Technical Review Report*, this will require upgrading equipment (such as encoders) at the PEG access master control facility and at PEG access origination sites.<sup>10</sup>

Additionally, the *Technical Review Report* makes clear that Comcast’s system may be adequate to meet the immediate cable-related needs and interests of the Member Cities and their citizens, but that the limited amount of available spectrum inherent in a network with an upper frequency limit of 750 MHz could prevent the deployment of advanced, bandwidth-intensive applications over the term of a renewal franchise, particularly a franchise of more than a few years in duration.<sup>11</sup> Consequently, a mid-term system review, or a similar process, with the ability to require a system upgrade, if necessary, should be included in a renewal franchise with Comcast. There is also an extremely important need to retain and properly equip the existing end-to-end fiber-optic institutional network, and to ensure there are high-quality, reliable upstream feeds for originating PEG signals/data from throughout the Member Cities, and for delivering SD and HD PEG signals/data from the PEG access master control facility (regardless of where it is located) to Comcast’s master headend (regardless of its location).

By issuing this Staff Report, the NSCC, or its designee, will be: (i) making it clear that changes in the level of PEG support need to occur, as discussed in the *Needs Assessment Report* and herein, that an institutional network (“I-Net”) needs to be provided, free of charge, as described

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<sup>4</sup> As Congress has pointed out, one of the primary purposes of PEG access is to afford “groups and individuals who generally have not had access to electronic media with the opportunity to become sources of information in the electronic marketplace of ideas.” H.R. Rep. No. 934, at 30 (1984), *reprinted in* 1984 U.S.C.C.A.N. 4655, 4667 (“1984 House Report”).

<sup>5</sup> *The National Information Infrastructure: Agenda for Action*, 58 Fed. Reg. 49025 (1993).

<sup>6</sup> See the *Needs Assessment Report*, Exhibit B, at 35 and Appendix 4.

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

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

<sup>10</sup> *Technical Review Report*, Exhibit A, at 35-40.

<sup>11</sup> *Technical Review Report*, Exhibit A, at 4-5 and 20

in the *Technical Review Report* and herein, and that functional upstream feeds for PEG access/signal origination should be retained and provided, as specified herein and in the *Needs Assessment Report* and *Technical Review Report*; and (ii) specifying what types of changes, facilities, equipment, network capacity and funding are necessary.

Cable systems once served merely to retransmit broadcast television signals. They have now, however, become a “dominant nationwide video medium.”<sup>12</sup> As the Federal Communications Commission (“FCC”) recently found:

[t]he major MVPDs now offer hundreds of television channels as well as thousands of video programs through VOD services, [and] many are offered in high-definition (“HD”). The major MVPDs offer delivered video programming as a standalone service or in combination with Internet access and telephone services. Cable MVPDs typically offer video, Internet access, and telephone services using their own facilities.<sup>13</sup>

Today, the major multichannel video programming distributors (“MVPDs”) offer hundreds of linear television channels, which are streams of programming that offer video programs on a specific channel at a specific time of day.<sup>14</sup> Many MVPDs also offer thousands of non-linear video-on-demand (“VOD”) programs, including pay-per-view (“PPV”) programs, which allow consumers to select and watch video programs whenever they request them.<sup>15</sup> While cable operators have traditionally delivered video programming to television sets, some MVPDs are moving beyond the television and delivering video programming to computer screens, tablets, and smartphones - a service generally known as TV Everywhere.<sup>16</sup> Some MVPDs are also deploying cloud-based user interfaces that take advantage of IP connectivity in leased set-top boxes.<sup>17</sup> For example,

Comcast’s Xfinity TV uses a cloud-based interface that allows subscribers to search content from live television, on demand, or on their DVRs, in addition to providing access to weather and traffic applications, and social networking features. Comcast has also begun a trial of a more robust IP based program guide and video delivery platform that targets delivery to IP enabled devices.<sup>18</sup>

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<sup>12</sup> H.R. Rep. No. 862, at 50 (1992), *reprinted* in 1992 U.S.C.C.A.N. 1231, 1232 (1992).

<sup>13</sup> *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 26 (Rel. July 20, 2012) (“*Fourteenth Report*”). *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fifteenth Report, at ¶ 18 (Rel. July 22, 2013).

<sup>14</sup> *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 19 (Rel. July 20, 2012). *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 13-99, Fifteenth Report, at ¶ 18 (Rel. July 22, 2013).

<sup>15</sup> *Fourteenth Report* at ¶ 19. *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 13-99, Fifteenth Report, at ¶ 18 (Rel. July 22, 2013).

<sup>16</sup> *Fourteenth Report* at ¶ 21. *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 13-99, Fifteenth Report, at ¶ 18 (Rel. July 22, 2013).

<sup>17</sup> *Fourteenth Report* at ¶ 391. *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 13-99, Fifteenth Report, at ¶ 358 (Rel. July 22, 2013)

<sup>18</sup> *Fourteenth Report* at ¶ 391. *See also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 13-99, Fifteenth Report, at ¶ 358 (Rel. July 22, 2013) (referring to Comcast’s X1 project, which has already launched in Boston and Atlanta).

The inexorable deployment and ongoing development of these electronic highways has the potential to significantly change the way people live, work, and interact with each other by providing users access to vast quantities of information, services and entertainment in a variety of forms. As a result, local governments have a compelling interest in ensuring that a cable system is adequately designed and constructed to help satisfy their communities' cable-related needs and interests, that good service is provided at a fair price, that services are available to as many residents as possible, that access PEG users can take advantage of advances in technology, and that the flow of information is not monopolized by the companies that own the cable networks and/or the infrastructure. These interests are reflected in federal, state and local law.<sup>19</sup>

The foregoing interests are particularly strong because, in order to operate, cable systems must occupy scarce and valuable public property – property that the public effectively pays to acquire and maintain. Comcast's wires are located on poles and under rights-of-way throughout the Member Cities. The Member Cities, as trustees of the public's interest in public rights-of-way, have a compelling interest in ensuring that Comcast utilizes this public property in a way that benefits the entire community. This means, among other things, that the NSCC and the Member Cities must ensure that public property is used in optimal ways and that the public receives fair consideration – in the form of franchise fees and other conditions – for Comcast's use of valuable and scarce public property.

These interests and others are protected, in part, through the franchising process. For example, during renewal proceedings a community is permitted to establish basic requirements for system design and to require that cable operators provide facilities and equipment and set aside channel capacity for public, educational and governmental use. Thus, the legislative history of the Cable Communications Policy Act of 1984, as amended by the Cable Television Consumer Protection and Competition Act of 1992 and the Telecommunications Act of 1996, 47 U.S.C. § 521, *et seq.*, (the "Cable Act") explains:

The ability of a local government entity to require particular cable facilities (and to enforce requirements in the franchise to provide those facilities) is essential if cable systems are to be tailored to the needs of each community [and the legislation] explicitly grants this power to the franchising authority.<sup>20</sup>

This is why the franchise renewal process is so important to both cable operators and local franchising authorities.<sup>21</sup> The NSCC is responsible for protecting the interests of cable subscribers and the general public through the franchising process by identifying present and

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<sup>19</sup> For federal law, *see e.g.*, 47 U.S.C. § 544 (requiring facilities and equipment); § 546 (c)(1)(D) (satisfying community's cable-related needs and interests); § 543 (ensuring reasonable rates); § 541(a)(3) (anti-redlining); and § 531 (access channels). For state law, *see generally*, Minn. Stat. Ch. 238.

<sup>20</sup> 1984 House Report at 26, 1984 U.S.C.C.A.N. at 4663.

<sup>21</sup> Congress intended that: "the franchise process take place at the local level where [local] officials have the best understanding of local communications needs and can require cable operators to tailor the cable system to meet those needs." 1984 House Report at 24, 1984 U.S.C.C.A.N. at 4661. However, the Cable Act does not give local government unlimited authority to impose conditions on cable operators. For example, it limits local authority to require an operator to carry a specific programming service. *Id.* at 4663.

future cable-related needs and interests, and translating those needs and interests into franchise requirements.

## **B. The Renewal Process Under Federal Law.**

Certain individuals and organizations in the Member Cities no doubt want the NSCC and the Member Cities simply to put the Comcast cable franchises up for competitive bidding and then award individual franchises to the best operator. That, however, is not an option. In 1984, the federal government passed a law that was intended to provide cable operators with a fair opportunity to obtain renewal. To that end, the Cable Act establishes two possible ways a local franchising authority can respond to a request for a franchise renewal.

Under the informal renewal process, the NSCC, on its Member Cities' behalf, and Comcast can meet informally at any time and attempt to resolve franchise issues through negotiations.<sup>22</sup> If the issues are resolved, the Member Cities can, after providing the public with adequate notice and an opportunity to comment, adopt a renewal franchise. An informal proposal can be rejected at any time and for any reason. Most renewals are settled informally, and in issuing this Report, staff is not intending to foreclose the possibility that the NSCC and the Member Cities will be able to resolve issues informally with Comcast. Indeed, staff has conducted informal renewal discussions with Comcast,<sup>23</sup> although, to date, the parties have not been able to mutually agree on the terms and conditions of a renewal franchise for the Member Cities that meets the communities' cable-related needs and interests.

Either Comcast or the NSCC, pursuant to delegated authority, could invoke the more formal renewal procedures set out at 47 U.S.C. § 546(a)-(g) during a six-month window which begins with the thirty-sixth (36<sup>th</sup>) month prior to franchise expiration. These "formal" procedures give Comcast the opportunity for a fair hearing on its renewal request. At the same time, the procedures insure that the Member Cities can ultimately deny renewal if Comcast has performed poorly in the past, or is not qualified, or is not willing to make a reasonable proposal for meeting the communities' needs and interests for the future (taking into account the cost of meeting those needs and interests). Under the formal process, the NSCC, on behalf of the Member Cities, is given broad authority to define what the cable-related needs and interests of the communities are for purposes of franchise renewal.<sup>24</sup> Comcast must then submit a proposal that is reasonable to meet the communities' cable-related needs and interests, taking into account the costs of meeting those needs and interests (the focus is the communities, not the individual subscribers who may receive service today).

More specifically, the formal renewal process under the Cable Act is a four-stage process.

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<sup>22</sup> 47 U.S.C. § 546 (h).

<sup>23</sup> Informal franchise renewal meetings were held with Comcast on February 19, 2012, March 5, 2013 and March 15, 2013. In addition, Comcast and staff exchanged informal renewal "deal points" on several occasions, including January 4, 2013, February 19, 2013, and March 12, 2013. NSCC staff informed Comcast of its understanding of Comcast's informal renewal negotiating position by correspondence dated March 22, 2013. Comcast formally stated its position on staff's January 4, 2013, deal points for the first time in written correspondence dated April 1, 2013.

<sup>24</sup> See, e.g., *Union CATV, Inc. v. City of Sturgis*, 107 F.3d 434 (6<sup>th</sup> Cir. 1997).



First, the NSCC must conduct a proceeding to identify future cable-related needs and interests of the communities, and to review Comcast’s past performance.<sup>25</sup>

Once that proceeding is complete, the NSCC may issue a request for renewal proposals (“RFRP”). Because each renewal proposal is evaluated on its own merits, this RFRP cannot simply be a competitive bidding document.<sup>26</sup> The Cable Act allows the Commission to establish requirements in an RFRP:

- (1) “that channel capacity be designated for public, educational, or governmental use, and channel capacity on institutional networks be designated for educational or governmental use . . .” 47 U.S.C. § 531(b).
- (2) “for facilities and equipment.” The legislative history explains that this includes requirements for institutional networks, studios, equipment for public, educational and government use, two-way networks, and so on. 47 U.S.C. § 544.

The Cable Act also states that “[a] franchising authority may establish and enforce (1) customer service requirements of the cable operator and (2) construction schedules and other construction-related requirements, including construction-related performance requirements of the cable operator.”<sup>27</sup> Staff believes that this language permits the NSCC and the Member Cities to establish these requirements unilaterally in a franchise (or through a regulatory ordinance), along with various other requirements established pursuant to the Member Cities’ police and other governmental powers.

In the next stage of the formal renewal process, Comcast submits a renewal proposal in response to the NSCC’s RFRP. “[A]ny such proposal shall contain such material as the franchising authority may require . . .” 47 U.S.C. § 546(b)(2). If Comcast submits a timely, complete and proper response,<sup>28</sup> the NSCC has four months to evaluate the proposal, and to recommend whether to grant renewal based on the proposal or to preliminarily deny renewal. 47 U.S.C. § 546(c)(1).

Finally, if renewal is preliminarily denied, and Comcast desires it, the NSCC must commence an administrative proceeding to consider whether the franchises should be renewed. Comcast must be given adequate notice and a fair opportunity for full participation in the proceeding, including the right to introduce evidence, to require the production of evidence and to question witnesses.<sup>29</sup> Four issues are considered at that proceeding:

- (A) whether the cable operator has substantially complied with the material terms of the existing franchise and with applicable law;

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<sup>25</sup> 47 U.S.C. § 546(a)(1).

<sup>26</sup> 47 U.S.C. § 546(b).

<sup>27</sup> 47 U.S.C. § 552(a)(1)-(2).

<sup>28</sup> The proposal must be submitted by a deadline established by the NSCC. If the Comcast fails to do so, then its rights are ended.

<sup>29</sup> 47 U.S.C. § 546(c)(2).

- (B) whether the quality of the operator's service, including signal quality, response to consumer complaints, and billing practices, but without regard to the mix or quality of cable services or other services provided over the system, has been reasonable in light of community needs;
- (C) whether the operator has the financial, legal, and technical ability to provide the services, facilities and equipment as set forth in the operator's proposal; and
- (D) whether the operator's proposal is reasonable to meet the future cable-related community needs and interests, taking into account the cost of meeting such needs and interests.<sup>30</sup>

These criteria do not include considerations such as programming selection or rate levels. A franchise renewal request can be denied on any one (or more) of the foregoing grounds. At the end of the administrative proceeding, the NSCC issues a written decision recommending whether the Member Cities should grant or deny franchise renewal, based on the record and stating its reasons.<sup>31</sup> The Member Cities, as local franchising authorities, retain the final authority to award or deny Comcast renewal franchises. Comcast can appeal the Member Cities' decisions in state or federal court.

This Report is being submitted to discharge one of the NSCC's important responsibilities under the Cable Act. With the submission of this Report, the Commission should be prepared to end step one of the formal renewal process. This Report reviews Comcast's past performance, and concludes that the company has likely failed to comply fully with its existing franchises and applicable laws, and that certain issues may merit further investigation.<sup>32</sup> This Report also identifies the Member Cities' and their respective communities' future cable-related needs and interests.

Consistent with the Cable Act, this Report and the accompanying RFRP identify the requirements, needs and interests that must be satisfied in a renewal proposal, in accordance with the Cable Act sections quoted above. Staff has also included an RFRP which, in addition to restating some of the key points of this Report, identifies "model" provisions that could satisfy the requirements staff recommends should be established.

While this Report identifies needs and interests broadly, not every need and interest identified has been translated into a requirement that is included in the RFRP. That is because the federal law includes some limitations on what may be required in an RFRP. Nevertheless, Comcast's formal renewal proposal must satisfy the communities' identified cable-related needs and interests, taking into account the costs of meeting such needs and interests.

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<sup>30</sup> 47 U.S.C. § 546(c)(1)(A)-(D).

<sup>31</sup> 47 U.S.C. § 546(c)(3).

<sup>32</sup> See Section IV of this Report, below, at 71.

### C. The Needs Ascertainment Process, and How NSCC Staff Arrived At Its Conclusions on Cable-Related Needs and Interests.

In correspondence dated October 11, 2010, and November 23, 2010, Comcast requested that the Member Cities commence renewal proceedings under Section 626 of the Cable Act, 47 U.S.C. § 546. Thereafter, the Commission commenced the renewal process and delegated to its staff, committees and designees the authority to conduct the needs ascertainment and past performance proceeding by means they deemed appropriate (e.g., interviews, surveys, etc.). Based on the data gathered and developed during the needs assessment and past performance proceeding, staff prepared this Report of its findings and conclusions for consideration by the Commission. The Buske Group, (“TBG”), CBG Communications, Inc., (“CBGCI”), Group W Communications, LLC, (“Group W”), Front Range Consulting, Inc., (“FRC”) and Bradley & Guzzetta, LLC (“B&G”) have assisted staff with its responsibilities.

As part of the formal renewal process, NSCC staff commissioned several studies. TBG, together with Group W, researched and prepared a report titled “Community Needs Ascertainment-North Suburban Communications Commission (Arden Hills, Falcon Heights, Lauderdale, Little Canada, Mounds View, New Brighton, North Oaks, Roseville, St. Anthony and Shoreview, Minnesota)” (July 15, 2013) (the “*Needs Assessment Report*”).<sup>33</sup> The *Needs Assessment Report* includes TBG’s analysis and discussion of Group W’s telephone survey and report titled “North Suburban Communications Commission- Cable Subscriber Survey (September 2011)” (the “*Telephone Survey Report*”),<sup>34</sup> and recommendations to address identified issues, needs and interests. Section III of the *Needs Assessment Report* details TBG’s findings and conclusions with respect to public, educational and governmental (“PEG”) access-related needs and interests in the Member Cities and their respective communities.

Staff’s needs ascertainment and compliance review also took the results of CBGCI’s July 2013, “Final Report- Evaluation of Comcast’s Subscriber System, Evaluation of the Existing Institutional Network and Evaluation of PEG Access Signal Transport and Distribution for the North Suburban Communications Commission” (the “*Technical Review Report*”) into consideration.<sup>35</sup> That report analyzed Comcast’s compliance with various provisions of the Member Cities’ current franchise ordinances/agreements, including (but not limited to) those concerning: system design and architecture; system facilities; system spectrum or bandwidth; system performance; standby power; status monitoring; outage documentation; and compliance with the National Electrical Code and National Electrical Safety Code. In addition, CBGCI identified and addressed needs and interests for an institutional network and PEG access signal transport and distribution. Several franchise violations were uncovered as part of the technical audit and were discussed in the *Technical Review Report*. Some of those violations may have been remedied, while others likely remain. Several of the issues addressed in the *Technical Review Report* show that there are specific needs and interests with regard to system design and performance, system construction and maintenance, PEG signal/data transport and an institutional network that should be met or continue to be met during the term of any renewal franchises with Comcast.

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<sup>33</sup> The *Needs Assessment Report* is appended hereto as Exhibit B and incorporated herein.

<sup>34</sup> The *Telephone Survey Report* is appended hereto as Exhibit C and incorporated herein.

<sup>35</sup> The *Technical Review Report* is appended hereto as Exhibit A and is incorporated herein.

In early May 2013, FRC produced a report for staff detailing the financial performance and financial condition of Comcast Corporation for 2012. This report, entitled “Financial Analysis of Comcast Corporation-2012 SEC Form 10K” (the “*Comcast Financial Report*”),<sup>36</sup> sets forth and explains important data about Comcast Corporation’s overall financial health and capabilities and the profitability of the cable television operations unit (which includes Comcast of Minnesota, Inc.), in general, and the operating income generated from subscribers in the Member Cities, in particular. The *Comcast Financial Report* also discusses how Comcast Corporation values its “Franchise Rights” as a national and local asset. All of this information is extremely important because it provides insight into Comcast’s financial qualifications to hold renewal franchises, to satisfy the cable-related needs and interests specified in this Report and associated documents, and the requirements of the RFRP, and to follow through on and fully perform its franchise commitments, such as financial (*e.g.*, capital and operating) and in-kind support for PEG access and an institutional network.<sup>37</sup>

Based on data in the *Needs Assessment Report*, the *Telephone Survey Report*, the *Technical Review Report*, the *Comcast Financial Report* and trends in the cable industry, TBG, CBGCI, FRC and B&G worked with staff to develop recommendations for system design requirements, PEG channels and channel capacity, PEG access funding, facilities and equipment, upstream PEG transport links, institutional network facilities, equipment and capacity, customer service requirements, construction-related requirements and miscellaneous cable-related requirements. These requirements are intended to ensure that Comcast’s cable system is capable of adapting to and meeting the needs and interests of subscribers and the communities throughout the term of any renewal franchises. The attached RFRP, among other things, contains system, PEG access and institutional network requirements and model provisions that would meet system-related needs and interests.

Staff has reviewed TBG’s, Group W’s, CBGCI’s and FRC’s findings in light of its own familiarity with the Member Cities and their respective communities. Information developed by Comcast during the informal renewal process was also reviewed and taken into account. Finally, staff considered information on developments in the cable industry (such as trends and best practices) and in cable renewal franchising both to help identify cable-related needs and interest and to determine whether it was reasonable to expect Comcast to meet those needs and interests.

Aside from ascertaining the ten communities’ cable-related needs and interests, staff reviewed Comcast’s performance under its franchises and applicable law. As discussed above, the *Technical Review Report* was considered, and a general compliance audit was performed (which included looking at internal records, documents and correspondence). This review, which is summarized in Section IV of this Report, identified a number of issues that warrant further investigation and may constitute substantial and material violations of the Member Cities’ franchises. The NSCC must decide how to address staff’s noncompliance review findings, including whether notices of violation should be issued to Comcast.

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<sup>36</sup> The *Comcast Financial Report* is appended hereto as Exhibit D and is incorporated herein.

<sup>37</sup> See 47 U.S.C. § 541(a)(4)(B) (“[i]n awarding a franchise, the franchising authority . . . may require adequate assurance that the cable operator will provide adequate public, educational, and governmental access channel capacity, facilities, or financial support . . .”).

By issuing this Report, the NSCC and the Member Cities do not waive any known or unknown substantial breaches of material provisions of the Member Cities' franchises and applicable laws that exist on or after the date the NSCC officially terminates the § 546(a) past performance review. Both the NSCC and the Member Cities reserve their rights: (i) to identify additional material violations of the franchises and applicable laws; (ii) to take appropriate enforcement actions, including (but not limited to) issuing notices of violation and affording Comcast an opportunity to cure; and (iii) to avail themselves of all available remedies (*e.g.*, drawing on Comcast's line of credit) and defenses. The material violations and/or compliance issues identified in this Report shall not limit the past performance issues that may be considered in any administrative proceeding conducted pursuant to 47 U.S.C. § 546(c)(1) or that may serve as a basis for denying renewal of the franchises pursuant to 47 U.S.C. §§ 546(c)(1)(A), § 546(c)(3) and § 546(d).

In sum, the *Needs Assessment Report*, the *Telephone Survey Report*, and the *Technical Review Report* accurately and reasonably reflect the PEG- and institutional network-related needs and interests of the Member Cities and their communities. Other needs and interests have been independently identified and verified by staff during the course of the needs ascertainment and past performance proceeding conducted pursuant to 47 U.S.C. § 546(a). The *Comcast Financial Report* fairly presents Comcast's financial condition and financial capabilities. Accordingly, the staff believes the Commission and the Member Cities can and should properly rely on TBG's *Needs Assessment Report*, Group W's *Telephone Survey Report*, CBGCI's *Technical Review Report*, FRC's *Comcast Financial Report*, and staff's analysis of and input on needs and interests addressed separately. Accordingly, the *Needs Assessment Report* (along with its supporting data and documents (*e.g.*, the *Telephone Survey Report*)), the *Technical Review Report*, along with its supporting data and documents, and the *Comcast Financial Report*, along with its supporting documents, are attached hereto and made a part hereof. In addition, all the needs and interests identified in the *Needs Assessment Report*, the *Telephone Survey Report* and the *Technical Review Report* are expressly incorporated herein.

Based on the work performed to date, and in connection with the issuance of this Report, NSCC staff asks the Commission, or its designee, to take two actions:

1. Adopt the findings of this Report (and the *Needs Assessment Report*, the NSCC-commissioned surveys, the *Telephone Survey Report*, the *Technical Review Report* and the *Comcast Financial Report*) and the draft RFRP with respect to the cable-related needs and interests of the Member Cities and their communities, and the past performance of Comcast. Once this is done, we ask that the Commission, which may act through its designee, to close the first stage of the formal cable renewal proceedings.
2. Authorize the issuance of the RFRP as attached to this Report with a deadline for response of 5 p.m. Central Standard Time on November 22, 2013, and confirm that the requirements and models are the requirements and the models that the Commission, on behalf of the Member Cities,

believes will help meet the needs and interests of the Member Cities and their communities.

Staff believes that Comcast has already carried out much of the preliminary work needed to respond to the RFRP in the course of its informal renewal negotiations, such as PEG channel capacity, PEG funding and institutional network planning and design. The specified deadline should therefore provide Comcast with sufficient time to respond, while preventing unnecessary delay. In fact, Comcast has agreed, in writing, that the November 22, 2013, deadline is reasonable.

Once Comcast submits a complete renewal proposal in response to the RFRP, federal law requires the Commission to provide prompt public notice of such proposal. During the four-month period which begins on the date of submission of the proposal, the NSCC must either recommend renewal the franchises or issue a preliminary assessment that the franchises should not be renewed. If the NSCC recommends renewing Comcast's cable franchises, the Member Cities must take action prior to the 4-month deadline provided for in the Cable Act. If the NSCC concludes on the basis of Comcast's proposal that the existing franchises should not be renewed, the NSCC shall, at Comcast's request or on its own initiative, commence an administrative proceeding as described above. Thus, the NSCC will have no more than four (4) months to evaluate Comcast's proposal, once it is submitted and accepted.

Under federal law, Comcast is free to pursue informal renewal discussions with the Commission after the issuance of the RFRP, and the Member Cities may, after affording the public adequate notice and opportunity for comment, grant or deny an informal renewal proposal from Comcast at any time.<sup>38</sup>

#### **D. Structure of this Staff Report.**

The remainder of this Report is divided into several parts. In the next two parts, we summarize the key future cable-related community needs and interests that have been identified through the needs ascertainment process, and, where appropriate, the requirements that are associated with those needs and interests. In the fourth part of this Report, we discuss the past performance of Comcast. Attached to this Report are a draft Request for Renewal Proposals ("RFRP") and a Model Franchise Ordinance/Agreement.

The Cable Act specifies what requirements a franchising authority may establish in a request for renewal proposals.<sup>39</sup> The requirements set forth in the draft RFRP are those authorized by federal law. According to the Cable Act, however, the Member Cities may deny renewal to Comcast in a formal proceeding based on the four criteria described above, including whether the Comcast's proposal is reasonable to meet the future cable-related community needs and interests, taking into account the cost of meeting such needs and interests. Thus, this Report and the supporting documents described above may refer to cable-related needs and interests for

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<sup>38</sup> 47 U.S.C. § 546(h).

<sup>39</sup> See, e.g., 47 U.S.C. § 544(b)(1) (franchising authority may in its request for proposals establish requirements for facilities and equipment, but may not generally establish requirements for video programming or other information services).

which specific requirements are not established in the draft RFRP. Comcast’s renewal proposal should satisfy those articulated needs and interests.

## II. IDENTIFICATION OF FUTURE CABLE-RELATED NEEDS AND INTERESTS

### A. GENERAL SYSTEM DESIGN AND CAPABILITY

#### 1. *Federal Law.*

Under the Cable Act, franchising authorities may establish requirements for “facilities and equipment.”<sup>40</sup> In particular:

[f]acility and equipment requirements may include requirements which relate to channel capacity; system configuration and capacity, including institutional and subscriber networks; headends and hubs; two-way capability; addressability; trunk and feeder cable; and any other facility or equipment requirement, which is related to the establishment and operation of a cable system, including microwave facilities, antennae, satellite earth stations, uplinks, studios and production facilities, vans and cameras for PEG use.<sup>41</sup>

Accordingly, a local franchising authority may not only determine certain requirements for the facilities and equipment used in the subscriber network, but may also require that a cable operator provide an institutional network and PEG support, as further discussed below.<sup>42</sup>

#### 2. *Developments in the industry.*

The cable industry has changed and is continuing to change dramatically. What was once an industry primarily focused on delivering one-way television signals to the home has developed into an industry that is providing a critical part of the “information highway” that has changed the way people send and receive information, consume and view media, shop and communicate.<sup>43</sup> Cable system operators now deliver a variety of two-way cable services, such as video-on-demand and subscription video-on-demand, as well as sophisticated

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<sup>40</sup> *Id.*

<sup>41</sup> 1984 House Report at 68, *reprinted in* U.S.C.C.A.N. at 4705. The exercise of this authority, however, must take into consideration 47 U.S.C. § 544(e), which states that no local franchising authority “may prohibit, condition, or restrict a cable system’s use of any type of subscriber equipment or any transmission technology.”

<sup>42</sup> *See, e.g., Implementation of Section 302 of the Telecommunications Act of 1996: Open Video Systems*, CS Docket No. 94-46, Third Report and Order and Second Order on Reconsideration, 11 FCC Rcd. 20227, ¶ 146 (Aug. 8, 1996) (FCC acknowledges that “a local franchising authority may require a cable operator to provide institutional networks as a condition of the initial grant, renewal or transfer of a franchise”). *See also Implementation of the Cable Act Reform Provisions of the Telecommunications Act of 1996*, CS Docket No. 96-85, Report and Order, 14 FCC Rcd. 5296, ¶142 (March 29, 1999) (“Section 621(b)(3)(D) [of the Cable Act] allows an LFA to require institutional networks.”).

<sup>43</sup> National Cable & Telecommunications Association, *2008 Industry Overview* at 3 (“In 2008 we celebrate the first 60 years of cable in America. Our industry got started in Arkansas, Oregon and Pennsylvania to enhance reception of broadcast TV in hilly regions. I’m quite certain no one ever imagined how cable would transform the entertainment, information and communications experience for millions of customers.”).

telecommunications services and high-speed Internet access service. Many cable systems, including Comcast, now provide interactive programming guides (which, for example, can be used in conjunction with a digital video recorder to schedule program recordings), digital video recorders (which allow subscribers to “time shift” when they watch programming and to store programming, either locally on cable company servers or “in the cloud,” that can be viewed at any time) and authentication services, such as TV Everywhere, that permit subscribers to view programming on networks or channels to which they subscribe on mobile devices, such as tablets and smart phones. “As a significant competitive strategy, cable MVPDs are replacing their analog video services and transitioning to all-digital video services. Comcast, for example, has been reclaiming bandwidth from analog video services to deliver more digital channels and more HD channels.”<sup>44</sup> This transition was completed in the Member Cities earlier this year.

According to the National Cable and Telecommunications Association, over 37 million people utilized cable Internet connections, which involve the uploading and downloading of data over cable system infrastructure for high-speed Internet access, as of the end of 2007.<sup>45</sup> This number reflects a consistent upward trend in cable high-speed Internet usage, as there were approximately 7.3 million cable modem subscribers at the end of 2001, and 31.1 million subscribers at the end of the 2006.<sup>46</sup> Comcast, in fact, has seen a steady uptick in the number of high-speed Internet customers, which has grown from just under 17 million subscribers in 2010 to almost 19.5 million subscribers in 2012 – a 14% increase in just two years.<sup>47</sup> The growth in cable high-speed Internet subscribers reflects the steady increase in total broadband users since 2000. In this regard, a Center for the Digital Future report on broadband use found that the number of households with a broadband connection has grown from 10% of households in 2000 to 83% of households in 2012.<sup>48</sup> A large number of these connections are attributable to the presence of modern cable systems. Indeed, as of 2008, approximately 93% of households in the United States were passed by high-speed Internet capable cable plant.<sup>49</sup>

In addition to cable modem/high-speed Internet service, cable operators are deploying video-on-demand and other interactive cable and non-cable services. As the FCC has indicated, “the major MVPDs offer hundreds of linear television channels” as well as thousands of “non-linear video-on-demand (‘VOD’) programs, including pay-per-view (‘PPV’) programs, which allow consumers to select and watch video programs whenever they request them.”<sup>50</sup> Comcast, for instance, provides digital cable subscribers with more than 30,000 SD and HD programming choices on-demand (including some for a specified fee and some for free to subscribers of

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<sup>44</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 91 (Rel. July 20, 2012). Unlike some cable operators, such as Time Warner Cable, BrightHouse, Cox and Charter, Comcast has elected not to implement a large-scale deployment of switched digital video technology. *Id.* at ¶ 93.

<sup>45</sup> *2008 Industry Overview* at 10.

<sup>46</sup> *Id.*

<sup>47</sup> See Appendix D to the *Comcast Financial Report*.

<sup>48</sup> See CENTER FOR THE DIGITAL FUTURE, *THE DIGITAL FUTURE REPORT: SURVEYING THE DIGITAL FUTURE, YEAR ELEVEN* at 15 (2013), available at <[www.digitalcenter.org](http://www.digitalcenter.org)> (the “*Digital Future Report*”).

<sup>49</sup> *2008 Industry Overview* at 9.

<sup>50</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 26 (Rel. July 20, 2012).



premium networks).<sup>51</sup> In addition, Comcast's X1 cloud-based platform delivers "the world's largest collection of video with a sleek user interface, social media integration and customized apps."<sup>52</sup> Verizon's FiOS network offers 35,000 VOD choices each month.<sup>53</sup> CenturyLink's PRISM TV also makes VOD content available to subscribers.<sup>54</sup>

One of the newer products that has been rolled out by the cable industry is the "TV Everywhere" initiative mentioned above. This service typically allows consumers to access both linear video programming and VOD content on in-home and mobile Internet-connected devices.<sup>55</sup> Comcast, in particular, makes available to digital subscribers 150,000 on-line video selections, such as television shows, movies and video clips (but very little linear or "real time" video programming).<sup>56</sup> According to Comcast, "[o]ur video customers . . . have the ability to use XFINITY.net or our mobile apps for smartphones and tablets to view certain live programming and some of our On Demand content, browse program listings, and , in select markets, schedule and manage DVR recordings. In 2012 we launched our Streampix video service that allows customers to view additional movies and other content through on Demand or XFINITY.net or by using our mobile apps."<sup>57</sup> FiOS FlexView "gives customers streaming video to televisions, computers, tablets, and smartphones."<sup>58</sup>

DVR services offered by cable operators also continue to develop. In this regard, some companies offer a "whole-home" DVR that enables subscribers to view video programming recorded on a DVR throughout their homes.<sup>59</sup> For example,

AT&T U-verse offers a DVR that can record up to 65 hours of HD content, record and play back programs from any room, pause a recorded show in one room and pick it up in another, and can be programmed remotely from a computer or wireless phone. Time Warner Cable offers a DVR that enables subscribers to restart a program already in progress. Cablevision offers a DVR service that enables subscribers to record programs that are stored on Cablevision's servers instead of storing the programs on the hard

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<sup>51</sup> See Comcast Corporation, Form 10-K (Annual Report) for the Period Ending 12/31/12 (Filed 02/21/13) at 4. Approximately 6,000 of these VOD titles are available in 3D format. See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 107 (Rel. July 20, 2012).

<sup>52</sup> See <<http://corporate.comcast.com/news-information/company-overview#accordion-0>> (visited June 11, 2013).

<sup>53</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 129 (Rel. July 20, 2012).

<sup>54</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 129 (Rel. July 20, 2012).

<sup>55</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 96 (Rel. July 20, 2012).

<sup>56</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 109 (Rel. July 20, 2012).

<sup>57</sup> Comcast Corporation, Form 10-K (Annual Report) for the Period Ending 12/31/12 (Filed 02/21/13) at 4.

<sup>58</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 130 (Rel. July 20, 2012).

<sup>59</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 97 (Rel. July 20, 2012).

drive within the DVR cable box.<sup>60</sup>

In some markets, Comcast offers its “AnyRoom DVR” service, which “allows subscribers to share recorded programs with any television in the house.”<sup>61</sup>

Large cable operators, including Comcast, Cablevision, Time Warner Cable, Cox and Charter, are moving to all-digital cable systems. Comcast and Cablevision are the “early adopters” of this strategy. In this regard, 20% of Comcast’s network footprint was completely digital as of 2012.<sup>62</sup> As noted above, Comcast transitioned the cable system in the Member Cities to a purely digital format in March 2013.<sup>63</sup> This change did initially cause some problems with PEG access signal quality and viewability, but staff believes those signal quality and viewability problems have been rectified through discussions with Comcast and the relocation of PEG channels to a part of the frequency spectrum that is much less susceptible to interference. However, this experience makes clear that there is a very important need to clearly define PEG channel signal quality standards and to maintain control over the location PEG channels, as discussed elsewhere in this Report.

Other cable industry trends include:

- Deploying cloud-based interfaces that take advantage of IP connectivity in leased set-top devices. Comcast, for example, utilizes a cloud-based interface “that allows subscribers to search content from live television, on demand, or on their DVR, in addition to providing access to weather and traffic applications, and social media features.”<sup>64</sup> Likewise, Time Warner Cable has begun implementing a cloud-based subscriber guide providing improved search and navigation features through set-top boxes equipped with a DOCSIS IP connection.<sup>65</sup>
- Rolling out set-top boxes with an “open-standard” IP-based output that will make it easier for consumers to use retail-purchased equipment to network with and view content from MVPD-provided devices.<sup>66</sup>

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<sup>60</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 97 (Rel. July 20, 2012).

<sup>61</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 107 (Rel. July 20, 2012).

<sup>62</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 97 (Rel. July 20, 2012).

<sup>63</sup> The Member Cities’ franchise documents define PEG capacity in terms of 6 MHz channels, and make clear that the NSCC will retain control over the entire 6 MHz spectrum that equals one channel. See Section 6 of the franchise ordinances/agreements and Exhibit A, Section E (“Commitment to Access Programming”). When it transitioned the cable system in the Member Cities to an “all digital” platform, it confiscated PEG channel capacity without obtaining permission from the NSCC. Accordingly, based on available information, and as discussed in Section IV of this Report, staff believes Comcast has substantially violated the material PEG channel capacity provisions of the Member Cities’ franchise ordinances/agreements.

<sup>64</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 391 (Rel. July 20, 2012).

<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at ¶ 397.

- Making video content accessible over portable Internet-connected devices. “For example, Comcast’s Xfinity TV service provides on-demand video to laptops, smartphones, and tablets.”<sup>67</sup>

Based on the foregoing, the results of the needs ascertainment and staff’s own experience, the Member Cities’ needs and interests include facilities and equipment that continue to make Comcast’s cable system fully interactive. Many of today’s cable system applications (including those mentioned above), such as high-speed Internet access, VOD, and interactive electronic programming guides, require such two-way functionality. Future interactive applications will also need this functionality. Because the number of digital, HDTV and IPTV services already developed (and continuing to be developed) may continue to grow over any renewal franchise term, and additional interactivity may consume more available system bandwidth, there is a need and interest in a cable system that can accommodate the demand for new services through flexibility, scalability and easy upgradability (with minimal impact on public rights-of-way).

Interactive television provides a unique opportunity for PEG access programmers to better serve the community, as well. In fact, because of the very nature of PEG – public/community access allows viewers to actively participate in producing and editing programming; government access allows for increased citizen involvement and participation in government; and educational access involves participation by students and teachers in learning – PEG access and interactive television “complement each other because both focus on a specialized interactive community of specific interests in a specific geographic area.”<sup>68</sup> One such application is the interactive city council/county board meeting, which allows viewers at home to participate in council/board meetings by text, voice or video link, depending on technical capabilities. There are several other applications, such as GIS mapping services and enhanced interactive distance learning, as well as enhanced interactive services for government information that are not available on the Internet. Interactive television functionality can be provided for digital television channels, and if the technology is present on the cable system, then PEG access programmers can use the technology to enhance the services they provide to their communities of interest. Future PEG interactive applications could embrace both video-on-demand and information retrieval. Thus, to ensure that the system is capable of providing services to meet future needs and interests, it is essential that the system continue to provide clean, reliable, high-quality and effective transmissions in both directions. One aspect of this two-way functionality is the need to ensure sufficient upstream bandwidth.

The benefits of an advanced bidirectional cable system to the Member Cities and their communities include, but are not limited to: (i) providing small businesses and government agencies with high-quality, high-speed access to the Internet and VoIP services; (ii) permitting high-speed interaction between Member City/Ramsey County government agencies, citizens, community groups, non-profit corporations and local businesses to allow the exchange of information (*e.g.*, information retrieval and transmission), and to make government services and data more readily accessible; and (iii) allowing the home entrepreneur and corporate employees

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<sup>67</sup> See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC 12-81, Fourteenth Report, at ¶ 401 (Rel. July 20, 2012).

<sup>68</sup> Andrew Afflerbach, *Interactive PEG: A Technical Strategy for Implementation*, COMMUNITY MEDIA REVIEW, THE JOURNAL OF THE ALLIANCE FOR COMMUNITY MEDIA, Winter 2000.

to “telecommute.” By supporting various modes of electronic communication, a cable system can save local governments and their constituents (*i.e.*, businesses and residents) significant amounts of time and money.<sup>69</sup> In this regard, Comcast has recognized the demand for advanced business services and is currently using its two-way system in the Member Cities to provide voice, video and data solutions to small and medium-sized businesses.<sup>70</sup>

The benefits of advanced cable systems are not just limited to high-speed Internet access or VoIP telephony. New programming services are developing every year. By the end of 1992, there were 87 national programming networks. By 1996, there were 145 national cable networks. That number increased to 287 as of 2001.<sup>71</sup> At the end of 2002, 308 national cable networks were available to cable television subscribers.<sup>72</sup> As of 2012, there were 800 national cable programming services.<sup>73</sup> To accommodate the increase in digital programming services, most cable systems are now being built with or upgraded to an upper frequency limit of 860 MHz or 1,000 MHz.<sup>74</sup> In fact, as of year-end 2004, “over 99 million cable homes [were] passed by systems with a capacity of 750 MHz or higher.”<sup>75</sup> Thus, there is no doubt the cable industry has discovered that high capacity systems are required and will continue to be required in order to provide advanced services adequately<sup>76</sup> and in order to meet subscriber demand for SD and HD services. In this regard, “systems being upgraded today are using equipment capable of between 860 MHz and 1,000 MHz (1 GHz)” of spectrum.<sup>77</sup>

Traditionally, television was delivered via an analog signal. Analog technology, however, is quickly becoming a thing of the past. Local broadcasters, for example, have transitioned to fully digital service. Cable operators are doing the same. In the Twin Cities metropolitan area, Comcast recently phased out analog channels and programming services and is currently operating an “all digital” cable system in the Member Cities. There are significant advantages to delivering video in a digital format for both Comcast and its subscribers. It allows delivery of brilliant, high-definition signals of substantially better quality than the signal delivered to “analog” devices. A digital signal can also include multiple layers of information that a viewer can select and manipulate as desired – for example, a video news program could carry with it additional text information on a story that could be called up interactively. A viewer could also order desired products instantaneously. Moreover, the use of digital video frees up bandwidth

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<sup>69</sup> National Cable & Telecommunications Association, 2008 Industry Overview at 4-5 (“Competition resulting from cable’s entrance into the residential and small business voice marketplace has already saved consumers more than \$23 billion, including \$13 billion in 2007 alone . . .”).

<sup>70</sup> *See, e.g.*, Comcast Corporation, Form 10K (Annual Report) for the Period Ending Dec. 31, 2012 (filed Feb. 21, 2013) at 4. In addition to cable service, Comcast provides website hosting, an interactive cloud storage product, hosted voice service using cloud network servers and Ethernet network services.

<sup>71</sup> National Cable & Telecommunications Association, 2002 Industry Overview at 12-13.

<sup>72</sup> *Id.*

<sup>73</sup> *See* <[www.ncta.com/industry-data](http://www.ncta.com/industry-data)> (visited July 14, 2013).

<sup>74</sup> *See Technical Review Report* at 4.

<sup>75</sup> National Cable & Telecommunications Association, 2004 Industry Overview at 4.

<sup>76</sup> Leslie Ellis, *New Snags Plague Upstream Path*, BROADBAND WEEK, January 25, 1999; Chiddiz, Jim, Donald Gall and Gerry Shimirak, *A Migration Strategy to High Capacity Return on HFC*.

<sup>77</sup> *Technical Review Report* at 4.

than can be utilized for other advanced services.<sup>78</sup> As the FCC has described it, “the arrival of digital television (“DTV”) . . . promises to be one of the most significant developments in television technology since the advent of color television in the 1950’s.”<sup>79</sup> DTV has the capability to provide clearer and sharper, cinema-like pictures as well as multi-channel, CD-quality sound. It can provide new uses such as multiple video programs or other services on a single television channel, including data services. The use of DTV technology “will also allow for television to enter the digital world of the personal computer and the internet.”<sup>80</sup>

The Member Cities’, and their communities’, needs and interests include facilities and equipment that provide a carrying capacity at least comparable to that of other modern systems so as to be able to accommodate all types of existing and future digital services (*e.g.*, SD, current HD and 4K once it is a more common native format). The 750 MHz of bandwidth now available on the system in the Member Cities is not far from the current state of the art (as noted above, new construction or upgrades in cable systems tend to be at 860 MHz or 1 GHz).<sup>81</sup> It is important, however, that the system keep up with improvements in cable system technology over the term of any renewal franchises.

In sum, existing facilities, equipment and bandwidth (both upstream and downstream) required for the traditional and advanced services we have discussed should, at a minimum, be retained during any renewal franchise term. However, as CBGCI points out in the *Technical Review Report*:

as subscribers’ needs and desires change and increase, Comcast may need to upgrade its system, depending on the length of any franchise renewal term, to gain additional bandwidth in order to provide these new services. Such upgrades could include using new electronic equipment to increase the system capacity to 1,000 MHz (1 gigahertz or 1 GHz), deploying fiber to the premises or home (FTTP or FTTH) as well as utilizing technologies that conserve bandwidth such as Switched Digital Video (SDV).<sup>82</sup>

Accordingly, there is clearly a need and interest in assessing the adequacy and capabilities of Comcast’s system going forward and to require system upgrades needed to keep the network state-of-the-art so that it is capable of delivering the services demanded by subscribers and potential subscribers in the Member Cities. CBGCI states that this need and interest could be

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<sup>78</sup> See, *e.g.*, the *Technical Review Report* at 4 (“compression technologies allow for Standard Definition TV channels (SD) to commonly utilize one 6 MHz channel to transmit between 7-12 SD channels. Furthermore, 2-3 High Definition digital channels occupy one 6 MHz channel.”).

<sup>79</sup> FCC Office of Engineering and Technology, *FCC Releases Digital Television Consumer Bulletin*, Report No. ET 98-10 (Nov. 16, 1998) (visited July 11, 2013) <[http://transition.fcc.gov/Bureaus/Engineering\\_Technology/News\\_Releases/1998/nret8015.html](http://transition.fcc.gov/Bureaus/Engineering_Technology/News_Releases/1998/nret8015.html)> (visited July 11, 2013).

<sup>80</sup> FCC Office of Engineering and Technology, *Digital Television Consumer Information Q&A*, November 1998 <[http://transition.fcc.gov/Bureaus/Engineering\\_Technology/News\\_Releases/1998/nret8015.html](http://transition.fcc.gov/Bureaus/Engineering_Technology/News_Releases/1998/nret8015.html)> (visited July 11, 2013).

<sup>81</sup> *Technical Review Report* at 4.

<sup>82</sup> *Technical Review Report* at 5.

satisfied though the performance of a mid-term technical review and an enforceable mechanism for integrating system upgrades.<sup>83</sup> Staff agrees with this approach.

The potential impact of an advanced cable system on a community cannot be underestimated. As the cable industry has itself concluded, “[c]able’s development of the nation’s most widely available broadband infrastructure ensures that the industry’s economic impact is felt through every state and nearly every community.”<sup>84</sup> Indeed, advanced networks, like Comcast’s, are important to the continued economic health and viability of communities throughout the country and the world. Ensuring Comcast’s network remains state-of-the-art is particularly crucial in the Member Cities because the needs ascertainment made clear that economic development is an important concern.<sup>85</sup> Roseville, for example, has specifically recognized that “development relies upon the availability of private utilities, notably electricity, natural gas, and communications . . . The City will continue to facilitate the development of these private utilities, while minimizing associated adverse impacts.”<sup>86</sup> Thus, there is no doubt Comcast’s cable system is an integral component of the modern electronic infrastructure in the Member Cities. As such, the cable system, like other advanced networks, can function as a platform for the delivery of modern services demanded by businesses (including home-based businesses) and telecommuters, and can play a valuable role in the ongoing economic development of the Member Cities. Accordingly, the current franchise renewal process will function as part of the Member Cities’ overall plan for promoting economic growth and stability.

In order to fully realize the promise of available cable technology, cable systems not only need to have significant capacity (in terms of bandwidth), but also extremely reliable facilities and equipment and the ability to deliver high-quality signals to consumers’ homes. Reliable service is an important ingredient in service quality for the home subscriber.<sup>87</sup> It is becoming even more important as the Member Cities’ residents increasingly come to depend on the cable system for continuing, up-to-the-minute information, whether through news reports, weather and traffic information, emergency alerts, or Internet access. Reliability is necessary in a different sense for public, educational, and governmental (“PEG”) access users, who cannot disseminate their PEG programming if the system does not function properly or suffers from reliability issues. Last, but not least, if governmental entities and/or businesses are to make effective use of the system for advanced institutional network applications, and business services, it must be highly reliable.

At the same time, the Member Cities’ (and their communities’) needs and interests include the facilities and equipment necessary to provide signals of an acceptable quality. The need for good signal quality has become still more crucial as cable systems have come to offer interactive services, due to the need for a clean return path as well as a clean downstream signal. Digital video also requires close attention to signal quality, since below a certain threshold a digital signal will fail completely. Thus, Comcast must maintain the necessary signal quality. With respect to PEG signals, this means ensuring the picture and audio quality of PEG access channels is as good as or better than the picture and audio quality of the best local broadcast channel

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<sup>83</sup> *Technical Review Report* at 5.

<sup>84</sup> National Cable & Telecommunications Association, 2008 Industry Overview at 3.

<sup>85</sup> See, e.g., the *Needs Assessment Report* at 20 and 50

<sup>86</sup> City of Roseville, 2030 COMPREHENSIVE PLAN, UTILITIES, at 10-11 (Oct. 26, 2009).

<sup>87</sup> Cf. 47 U.S.C. § 546(c)(1)(B) (“quality of the operator’s service” may be taken into account in denying renewal).

carried on the cable system in the same format (*i.e.*, SD PEG channels must be compared to the best/highest quality SD local broadcast channel and HD PEG channels must be compared to the best/highest quality HD local broadcast channel).

There are several reasons why the development of information highways ultimately depends on the development, operation and maintenance of fiber-based cable systems. Fiber-optic technology provides much greater usable capacity or “bandwidth” than coaxial cable and twisted pair, and, as equipment improves, the difference in the superior capabilities of fiber will become even more dramatic. This additional capacity is critical now for potential high-volume users such as schools, businesses and government.

Moreover, radio signals lose strength and degrade significantly as they travel through coaxial cable. As additional electronics are added to increase the capacity of a coaxial system, the system suffers even higher signal losses. To compensate for these losses, which are almost non-existent for fiber-optic cable, the coaxial cable signals have to be amplified at regular intervals,<sup>88</sup> and every amplifier distorts the signal by adding “noise.” In addition, these amplifiers require regular maintenance in order to operate most efficiently and effectively; reliable high-quality upstream transmissions are particularly hard to maintain because of the aggregate introduction of signal-distorting noise. For this reason and others, there are typically much higher maintenance costs associated with coaxial cable, compared to fiber-optic cable. And, because each amplifier is a potential “failure point,” hybrid fiber-coaxial cable systems suffer from more outages than fiber-to-the-home or fiber-to-the-premises systems, which do not require amplifiers. This makes a difference for the home subscriber, and an even more significant difference for the potential business owner, who is often less able to tolerate system failures, or signal errors when transmitting video or data.

This does not mean that fiber must immediately be brought directly to every building and home. For residential service, the cable systems being built and operated today use fiber trunk lines to carry signals into neighborhoods, to a point called a “node,” where fiber lines and optical signals transition to coaxial cable and radio signals. While it is considered cost-effective to use fiber as a “backbone” for cable systems, there is a significant question as to whether it is necessary or cost effective to use fiber to carry signals from the trunk all the way to the home. So long as the distance the coaxial cable must carry the signal is limited (so that the system does not use many amplifiers), a system using a combination of coaxial cable and fiber can deliver high-quality signals to the home and provide enough two-way capacity to send video and data from the home to various locations on the cable system. Many modern cable systems are being built with scalable nodes of limited size, in anticipation of future consumer demand for advanced services requiring increased bandwidth. In fact, this is precisely how Comcast’s cable system in the Member Cities was constructed under the terms of the current franchises.<sup>89</sup> At the time of construction, the system was developed with fiber bundles and nodes that were capable of being sub-divided, so that node sizes could be reduced from 2000 homes to 500 homes or less.<sup>90</sup>

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<sup>88</sup> It is not uncommon for amplifiers to be required every 2000 feet in a traditional system.

<sup>89</sup> See Exhibit A, Section A (“Subscriber System Upgrade Design and Construction”) of the franchise proposal incorporated into the Member Cities’ franchise ordinances/agreements.

<sup>90</sup> *Id.*

According to CBGCI, “[t]hrough node splitting or node size reduction, the number of homes passed per node and subscribers per node are consistent with industry standards.”<sup>91</sup>

While the amount of capacity available on a hybrid fiber-coaxial cable system is less than that of an all-fiber system (such as the FiOS network built and activated by Verizon), it will still allow other uses, including transfers of data at speeds much faster than are supported by existing coaxial cable and twisted pair networks. The residual coaxial cables on a hybrid fiber-coaxial system may be upgraded to fiber later. In addition, using coaxial cable lines to individual homes enables those customers who use cable solely to receive traditional television service to avoid paying for the special and potentially expensive devices that would be required in all-fiber systems.<sup>92</sup> By contrast, it makes sense to bring fiber all the way to any building containing high-volume users and to eliminate coaxial cable when the capacity available on coaxial links is inadequate to satisfy the location’s known needs. Thus, trends in the industry suggest that, for now, it makes sense to build and maintain high-capacity fiber systems to neighborhood nodes that can be sub-divided, to serve residences from those nodes using coaxial cable, and to serve other high-demand users (*e.g.*, businesses) from the node using fiber optic cable.<sup>93</sup>

The Member Cities’ needs and interests also include facilities and equipment that provide for access by the deaf or hearing-impaired and other people with disabilities. These individuals must be able to benefit from the programming and information available over the cable system, including (but not limited to) government programming and information, cultural programming and educational opportunities. At a minimum, the Member Cities’ needs and interests require facilities and equipment ensuring:

- that all transport and other equipment at the headend and in the plant allows transmission of the closed captioning signal in a manner that renders that signal available to subscriber equipment used to decode the captioning.
- that subscribers can reach Comcast via TTD/TTY (or equivalent) via a publicly listed, toll-free telephone number or via the Internet. Comcast’s response to deaf or hearing-impaired subscribers by these means must meet the same customer service standards as its response to other subscribers by telephone (for example, with respect to response time and percentage of busy signals).

Federal statutes and FCC regulations impose requirements regarding system compatibility with subscriber equipment. Among other things, such federal requirements are designed to address

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<sup>91</sup> *Technical Review Report* at 4.

<sup>92</sup> Adding new services is relatively easy on a fiber-based system, at least in part, because the fiber-optic systems that are being constructed have the capacity and capability to operate as several different “networks.” Cable companies that build fiber-based systems install cables with several fiber strands bundled together. Each strand can carry more video channels than are currently being delivered to subscribers in the Member Cities. This means that on completion of its cable system, a cable company has a number of unused strands that could be used to deliver more programming services; to transmit data to and from various locations within a franchise area; to provide certain types of advanced services; and so on. To think of it another way, this type of design allows the fiber to be used to serve the needs of both residential and non-residential subscribers.

<sup>93</sup> Where the high-capacity user also wishes to receive more traditional cable services, it may make sense to provide a fiber drop and a traditional coaxial drop to that user.



the problem that subscribers may be unable to take advantage of certain features of their equipment, such as picture-in-picture, interacting with Comcast's system (*e.g.*, to select VOD titles) or the ability to watch one program and simultaneously record a different program, due to the use of leased set-top devices. Subscribers in the Member Cities have a strong interest in such compatibility in order to be able to use their own equipment as intended. However, as required by federal law, the NSCC and the Member Cities do not prohibit, condition, or restrict Comcast's use of any type of subscriber equipment or any transmission technology, and thus do not establish specific requirements in this Report or the RFRP.<sup>94</sup> However, Comcast should comply with all applicable laws and regulations, as amended from time to time, addressing equipment compatibility.

Staff notes federal law requires Comcast to provide (by sale or lease) devices by which a subscriber can prohibit viewing of a particular cable service during selected periods or at all times, and that Comcast block a premium channel upon a subscriber's request.<sup>95</sup> Comcast must also refrain from providing any cable services that are obscene.<sup>96</sup> To restrict the viewing of adult-oriented programming on or available over the cable system, Comcast must make parental control capabilities available to subscribers.

Franchising authorities in many communities are taking advantage of the advances in technology to require operators to provide "institutional networks"<sup>97</sup> and to devote significant two-way capacity for public, educational and government use of the cable system. These obligations can include requirements, for example, for connecting schools, libraries and government agencies together, and providing links to the Internet. The goal is not simply to allow these agencies to communicate more effectively internally (or with one another). The goal is also to obtain the resources required to provide better and more cost-effective and reliable services to the public. Thus, in addition to other sorts of PEG channels, facilities and equipment, a franchising authority may require as part of a cable operator's proposal that channel capacity be designated on institutional networks for educational or governmental use.<sup>98</sup> Such networks may carry not only video, but also voice and data transmissions.

The Member Cities can benefit their taxpaying residents generally by obtaining I-Net facilities and equipment as part of the reasonable compensation they receive from Comcast for the use of public rights-of-way. Institutional network capabilities can reduce the Member Cities' communications costs, which would otherwise fall on taxpayers. Thus, in-kind compensation in the form of an I-Net provides significant benefits to the residents of the Member Cities, whose rights-of-way are being used by Comcast in conducting its for-profit business, and at little cost to the company. Subscribers typically bear the costs of I-Net facilities, and other forms of compensation received from Comcast for the use of public rights-of-way, because these costs have historically been passed through to subscribers in cable service rates. Such an outcome is

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<sup>94</sup> See 47 U.S.C. § 544(e).

<sup>95</sup> See 47 U.S.C. § 544(d)(2)-(3).

<sup>96</sup> See 47 U.S.C. § 544(d)(1).

<sup>97</sup> Institutional networks are communications networks constructed by cable operators to provide service primarily to non-residential customers, such as government agencies and schools. See <[www.buskegroup.com](http://www.buskegroup.com)> for a table of some local franchising authorities that have required the cable operator serving their communities to construct an institutional network.

<sup>98</sup> 47 U.S.C. § 531(b).

not unjust or inappropriate, however, as cable subscribers directly benefit from Comcast's use of public rights-of-way.

The potential benefits of advanced networks to communities are widely recognized, particularly when connected to other communications networks, such as the Internet. For instance, advanced network interconnectivity benefits governments by giving them the capability to: (i) put public services on-line where they are conveniently accessible to residents; (ii) make forms and applications available to the public, thereby saving businesses and residents time and money; (iii) perform electronic procurement, which may improve efficiency and reduce costs; and (iv) facilitate communication between government agencies and their internal and external customers. Many of these same needs and objectives have been expressed by the Member Cities, as discussed in Section II.A.3.(iii) of this Report, which lists some of the services currently furnished over the existing Institutional Network.

One of the Member Cities' fundamental facilities- and equipment-related needs and interests is the need for a system design that minimizes the burden of construction, installation, upgrades and repairs on public rights-of-way. Each intrusion into the rights-of-way imposes burdens on the Member Cities and their residents. One major burden is the cost of repaving roads and restoring landscaping. While Comcast can (and should) be required to bear the immediate costs of repaving and restoration, each such repaving significantly decreases the useful life of a street.<sup>99</sup> In addition, the Member Cities incur the administrative costs of issuing permits and coordinating such construction work. Moreover, residents and other persons passing through the Member Cities must suffer the less tangible, but real, costs of traffic disruption and delays during construction. Thus, the NSCC and the Member Cities have needs and interests in minimizing and coordinating such work, so that intrusions into the public rights-of-way need not be repeated unnecessarily.

In summary, current industry trends suggest that there are needs and interests in having: (1) a high-capacity, reliable, high-quality fiber-based (or equivalent) cable system, with activated, interactive capabilities; (2) a cable system that is scalable and can be easily upgraded to remain state-of-the-art, as necessary, to deliver new advanced services that may be developed in coming years, while minimizing the need for repeated intrusions into public rights-of-way, to the extent possible; (3) a system that includes an institutional network and that devotes a significant amount of capacity to video programming channels, including channels for public, educational and government use; and (4) a system interconnected to other networks, including (but not limited to) other local cable systems and the Internet. Further, because of the importance of these systems, a community would be remiss if it did not insure that as many of its citizens as possible, taking cost and population density into consideration, have an opportunity to take advantage of system benefits.<sup>100</sup>

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<sup>99</sup> See, e.g., studies cited in Frederick E. Ellrod III and Nicholas P. Miller, *Property Rights, Federalism, and the Public Rights-of-Way*, 26 Seattle U. L. Rev. 475, 492-93 (2003).

<sup>100</sup> During the 1993 House Oversight Hearings, Chairman Markey stated that "it is essential for the nation to upgrade its telecommunications systems so that digital signals can travel without interruption not just between institutions, but also to the home . . . we must promote this technological advance."

One constant in the area of communications is that technologies and needs are subject to rapid and continuing change. To ensure that Comcast's cable system can satisfy the Member Cities' and their citizens' cable-related needs and interests throughout the term of a renewal franchise, Comcast must ensure that its system has the necessary capabilities throughout the term. In a relatively short franchise term – for example, five to seven years – the problem of obsolescence may not arise if Comcast is generally required to maintain and improve its existing facilities in accordance with good industry practice and as dictated by marketplace demands. The normal review at the end of such a franchise term would allow the NSCC and the Member Cities to revisit changes in technology and the market, as well the community's changing needs and interests, in the near future. In a longer franchise term, however, the Member Cities have a need and interest in a mechanism (*e.g.*, such as a mid-term technical review) by which the cable system can be evaluated at an appropriate time and improved to ensure that it remains state-of-the-art and capable of meeting community cable-related needs and interests.

3. *The results of the ascertainment in the Member Cities.*

The NSCC engaged The Buske Group (“TBG”)<sup>101</sup> and CBG Communications, Inc. (“CBGCI”) to assist it in identifying the Member Cities' cable-related community needs and interests. TBG conducted an on-line survey and held focus groups and face-to-face meetings/brainstorming sessions, and performed equipment/facility inspections to ascertain the Member Cities cable-related needs and interests.<sup>102</sup> Group W conducted a telephone survey, in which it completed 400 telephone interviews of cable subscribers in the 10 member cities drawn and selected at random from active residential telephone numbers.<sup>103</sup> The interviews were conducted from September 21-October 1, 2011.<sup>104</sup> CBGCI conducted a technical review and needs ascertainment of the cable system, I-Net and PEG signal/data transport facilities and equipment.

Based upon its own knowledge and experience, and the findings and recommendations set forth in the *Needs Assessment Report*, the *Technical Review Report* and the *Telephone Survey Report*, staff has identified the cable-related needs and interests set forth below and elsewhere in this Staff Report.

(i) *The Member Cities.*

**Arden Hills**

The City of Arden Hills covers 9.6 square miles within Ramsey County, Minnesota, and had a population of approximately 9,381 as of 2011.<sup>105</sup> According to 2011 Metropolitan Council data, there were 2,960 households in Arden Hills.<sup>106</sup> By 2020, the Metropolitan Council anticipates that Arden Hills' population will rise to 12,900 (a 27% increase), while the number of

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<sup>101</sup> TBG retained Group W Communications, L.L.C. (“Group W”) to conduct a statistically significant survey of cable subscribers in the ten Member Cities.

<sup>102</sup> See Exhibit B, at 2-3 and 47.

<sup>103</sup> See Exhibit C at 1.

<sup>104</sup> *Id.*

<sup>105</sup> See Metropolitan Council, *Community Profile for Arden Hills*, available at stats.metc.state.mn.us (visited May 30, 2013).

<sup>106</sup> *Id.*

households will grow to 4,600 (a 36% increase).<sup>107</sup> The largest two population categories in Arden Hills, by age, are males and females from 15 to 19 and 20-24, which suggests there is a substantial number of relatively young, and technologically savvy, residents living in the city.<sup>108</sup> At the same time, the Metropolitan Council's statistical data show that a significant portion of the population in Arden Hills is 55 years old or older.<sup>109</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services, and to perform transactions, from the home. Over half of all Arden Hills residents possess a bachelor's degree or a graduate/professional degree. Nineteen percent of Arden Hills residents have at least attended college (without obtaining a degree) and 16% earned a high school diploma.<sup>110</sup>

There were 12,641 people employed in the City of Arden Hills as of 2012, based on data from the Minnesota Department of Employment and Economic Development.<sup>111</sup> The two largest employment sectors in Arden Hills are "Manufacturing" (with 30% of total employees) and "Administrative and Waste Services" (with 19% of total employees). "Personal and Technical Services" and management companies employed 9% and 7%, respectively, of all persons employed in Arden Hills.<sup>112</sup> The Metropolitan Council forecasts that the number of people employed within Arden Hills will grow to 17,100 (an increase of 26%) by 2020 and remain at that level until at least 2030.<sup>113</sup>

### **Falcon Heights**

The City of Falcon Heights encompasses 2.2 square miles in Ramsey County and had a population of 5,385 in 2011.<sup>114</sup> According to 2011 Metropolitan Council estimates, there were 2,146 households in Falcon Heights.<sup>115</sup> By 2020, the Metropolitan Council anticipates that Falcon Heights' population will rise to 6,100 (a 12% increase), while the number of households will grow to 2,400 (an 11% increase).<sup>116</sup> The largest two population categories in Falcon Heights, by age, are males and females from 15 to 19, and 25-29, which (when coupled with available data for persons under 5 years of age through 14 years old and for persons from 20-24) indicates there is a considerable number of relatively young, and technologically adept, residents living in the city.<sup>117</sup> At the same time, the Metropolitan Council's statistical data show that a considerable portion of the population in Falcon Heights is 50 years old or older.<sup>118</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to

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<sup>107</sup> *Id.*

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*

<sup>111</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> See Metropolitan Council, *Community Profile for Falcon Heights*, available at stats.metc.state.mn.us (visited May 30, 2013).

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> *Id.*

access information and services, and to perform transactions, from the home, particularly as they continue to age over the life of any renewal franchise.

Over a quarter of Falcon Heights' population is non-white.<sup>119</sup> The two largest minority groups in Falcon Heights are "Asian alone" (14.96% of the population) and "Black or African American alone" (7.91% of the population).<sup>120</sup> Staff therefore believes there is a continued need to be able to communicate effectively with and deliver services to these groups and to take cultural differences into consideration in developing communications channels, which include (but are not limited to) targeted PEG programming that is available over the cable system and the Internet, and services and information accessible from the city's website and offices.

Seventy percent of Falcon Heights residents possess a bachelor's degree or a graduate/professional degree. Twelve percent of the city's residents have at least attended college (without obtaining a degree) and 9% earned a high school diploma.<sup>121</sup> These data strongly suggest that the population of Falcon Heights is highly educated and dependent on Comcast's cable system (and other critical communications infrastructure) for the transmission, reception and consumption of all types of information and media.

There were 4,205 people employed in the City of Falcon Heights as of 2012, based on data from the Minnesota Department of Employment and Economic Development.<sup>122</sup> The two largest individual employment sectors in Falcon Heights are "Accommodation and Food Services" (with 7% of total employees) and "Retail Trade" (with 4% of total employees).<sup>123</sup> The "All Other Industries" category includes 86% of all employees in Falcon Heights.<sup>124</sup> The Metropolitan Council forecasts that the number of people employed in Falcon Heights will decrease to 4,050 by 2020, before growing to approximately 4,200 by 2030.<sup>125</sup>

### Lauderdale

The City of Lauderdale encompasses 0.4 square miles in Ramsey County and had a population of 2,398 in 2011.<sup>126</sup> According to 2011 Metropolitan Council estimates, there were 1,138 households in Lauderdale.<sup>127</sup> The Metropolitan Council anticipates that Lauderdale's population will rise to 2,600 (an 8% increase) by 2020, while the number of households will grow to 1,250 (a 9% increase).<sup>128</sup> The largest two population categories in Lauderdale, by age, are males and females from 20 to 24 and 25-29, which indicates there is a significant number of young inhabitants who either are making use or will make significant use of advanced technologies

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<sup>119</sup> *Id.* (citing to the U.S. Census Bureau, *Decennial Census*, and the *American Community Survey*).

<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> See Metropolitan Council, *Community Profile for Lauderdale*, available at stats.metc.state.mn.us (visited May 30, 2013).

<sup>127</sup> *Id.*

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

personally and professionally during the term of a renewal cable franchise.<sup>129</sup> A large segment (39%) of the residents in Lauderdale lived alone in 2010, while 26% of the households are considered families without children.<sup>130</sup> These data, together with the data above, suggest that Lauderdale is home to many young couples and single people who are typically heavy technology users.

Over 30% of Lauderdale's population is non-white.<sup>131</sup> The two largest minority groups in Lauderdale are "Asian alone" (19.21% of the population) and "Black or African American alone" (5.25% of the population).<sup>132</sup> As with Falcon Heights, staff believes this diversity gives rise to a continued need for effective communications channels that cater to all ethnic groups in the city, such as targeted PEG programming that is available over the cable system and the Internet and services, and information that are accessible from the city's website and offices.

Sixty-five percent of Lauderdale residents possessed a bachelor's degree or a graduate/professional degree as of 2011. Ten percent of the city's residents had at least attended college (without obtaining a degree) and 11% earned a high school diploma.<sup>133</sup> These data strongly suggest that the population of Lauderdale is well educated and probably dependent on Comcast's cable system (and other critical communications infrastructure) for the transmission, reception and consumption of personal and business-related data.

There were 511 people employed in the City of Lauderdale as of 2012, according to the Metropolitan Council.<sup>134</sup> The two largest individual employment sectors in Lauderdale are "All Other Industries" (with 96% of total employees) and "Public Administration" (with 4% of total employees).<sup>135</sup> The Metropolitan Council forecasts that the number of people employed in Lauderdale will increase to 750 (a 32% upturn) by 2020, before growing to approximately 800 (a 36% expansion) by 2030.<sup>136</sup>

### **Little Canada**

The City of Little Canada encompasses 4.5 square miles in Ramsey County and had a population of 9,839 in 2011.<sup>137</sup> The Metropolitan Council estimates there were 4,433 households in Little Canada as of 2011.<sup>138</sup> Little Canada's population is expected to rise to 10,800 (a 9% increase) by 2020, while the number of households is forecasted to grow to 4,810 (an 8% increase).<sup>139</sup> The largest two population categories in Little Canada, by age, are males and females from 20 to 24 and 25-29, which indicates there is a significant number of young inhabitants who either are

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<sup>129</sup> *Id.*

<sup>130</sup> *Id.* (citing to the U.S. Census Bureau, *Decennial Census*, and the *American Community Survey*).

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

<sup>133</sup> *Id.* (citing to the *American Community Survey*).

<sup>134</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>135</sup> *Id.*

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

<sup>137</sup> See Metropolitan Council, *Community Profile for Little Canada*, available at stats.metc.state.mn.us (visited May 30, 2013).

<sup>138</sup> *Id.*

<sup>139</sup> *Id.*

making use or will make significant use of advanced technologies personally and professionally during the term of a renewal cable franchise.<sup>140</sup> At the same time, a large part of the population is 45-64 years of age.<sup>141</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions, from the home, particularly as they continue to age over the life of any renewal franchise.

A large segment (38%) of the residents in Little Canada lived alone in 2010. Thirty percent of households are considered families without children.<sup>142</sup> These data, together with the data above, suggest that Little Canada is home to many young couples and single people who are typically frequent users of technology.

Over 25% of Little Canada's population is non-white.<sup>143</sup> The three largest minority groups in Little Canada are "Asian alone" (13.05% of the population), "Black or African American alone" (6.46% of the population) and "Hispanic or Latino" (5.79%).<sup>144</sup> As with Falcon Heights and Lauderdale, staff believes this diversity gives rise to a continued need for effective communications channels that cater to all ethnic groups in the city, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city's website and offices.

Twenty-nine percent of Little Canada residents possessed a bachelor's degree or a graduate/professional degree as of 2011. Twenty-four percent of the city's residents had at least attended college (without obtaining a degree) and 27% earned a high school diploma.<sup>145</sup> These data strongly suggest that the population of Little Canada needs access to high-quality technology training to help residents that may not be familiar with state-of-the-art media and communications tools. Critical infrastructure must be in place to enable this training and to cement communications skills.

There were 6,572 people employed in the City of Little Canada as of 2012, according to the Metropolitan Council.<sup>146</sup> The largest individual employment sectors in Little Canada are "All Other Industries" (with 20% of total employees), "Administrative and Waste Services" (with 17% of total employees), "Health Care and Social Assistance" (9% of total employees), "Construction" (9% of total employees), "Wholesale Trade" (8% of total employees), "Retail Trade" (7% of total employees), "Transportation and Warehousing" (7% of total employees), "Educational Services" (7% of total employees) and "Accommodation and Food Services" (5% of total employees).<sup>147</sup> The Metropolitan Council predicts that the number of people employed

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<sup>140</sup> *Id.*

<sup>141</sup> *Id.* (citing 2010 Census data).

<sup>142</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

<sup>145</sup> *Id.* (citing to the *American Community Survey*).

<sup>146</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>147</sup> *Id.*

in Little Canada will increase to 6,900 (a 5% upturn) by 2020, before rising to approximately 7,300 (a 10% upswing) by 2030.<sup>148</sup>

### **Mounds View**

The City of Mounds View is located at the juncture of Interstate 35W and State Hwy 10, just ten miles from Minneapolis and St. Paul.<sup>149</sup> Mounds View is home to 130 businesses and is known for its large, wooded residential lots and life-cycle housing.<sup>150</sup> The City of Mounds View covers 4.1 square miles in Ramsey County and had a population of 12,136 in 2011.<sup>151</sup> The Metropolitan Council estimates there were 4,972 households in Mounds View as of 2011.<sup>152</sup> According to the Metropolitan Council, the population in Mounds View is expected to rise 10% to 13,400 by 2030, while the number of households is forecasted to grow to 6,000 (a 20% increase).<sup>153</sup> Over 60% of the population in Mounds View is males and females under the age of 60, with a median age of 33.5.<sup>154</sup> This indicates there is a significant number of young inhabitants who either are making use or will make significant use of advanced technologies personally and professionally during the term of a renewal cable franchise.<sup>155</sup> Additionally, a large part of this population could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions, from the home, particularly as they continue to age over the life of any renewal franchise.

A large segment (28%) of the residents in Mounds View lived alone in 2010. Thirty four percent of households are considered families without children.<sup>156</sup> These data, together with the data above, suggest that Mounds View is home to many young couples and single people who are typically frequent users of technology. The City's communications goal is to encourage and promote communication with the public to help achieve a high level of citizen participation and community involvement.<sup>157</sup> This objective can be accomplished through PEG access uses of the cable system.

Over 20% of Mounds View's population is non-white.<sup>158</sup> The three largest minority groups in Mounds View are "Asian alone" (6.91% of the population), "Black or African American alone" (5.33% of the population) and "Hispanic or Latino" (5.03%).<sup>159</sup> Staff believes this diversity gives rise to a continued need for effective communications channels that cater to all ethnic

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<sup>148</sup> *Id.*

<sup>149</sup> City of Mounds View webpage, available at <http://www.ci.mounds-view.mn.us/> (visited June 27, 2013).

<sup>150</sup> *Id.*

<sup>151</sup> See Metropolitan Council, [Community Profile for Mounds View](http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118), available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013); see also 2008 Mounds View COMPREHENSIVE PLAN, at 2-5 (Demographics).

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>157</sup> 2008 Mounds View COMPREHENSIVE PLAN, at 1-4.

<sup>158</sup> See Metropolitan Council, [Community Profile for Mounds View](http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118), available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013) (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>159</sup> *Id.*



groups in Mounds View, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city's website and offices.

Twenty-four percent of Mounds View residents possessed a bachelor's degree or a graduate/professional degree as of 2011. Twenty-three percent of the city's residents had at least attended college (without obtaining a degree) and 35% earned a high school diploma.<sup>160</sup> These data strongly suggest that the population of Mounds View needs access to high-quality technology training to help residents that may not be familiar with state-of-the-art media and communications tools. Critical infrastructure must be in place to enable this training and to cement communications skills.

There were 6,472 people employed in the City of Mounds View as of 2012, according to the Metropolitan Council.<sup>161</sup> The largest individual employment sectors in Mounds View are "Manufacturing" (with 57% of total employees), "All Other Industries" (with 14% of total employees), and "Wholesale Trade" (12% of total employees).<sup>162</sup> The Metropolitan Council predicts that the number of people employed in Mounds View will increase to 8,900 (a 20% upturn) by 2020, before rising to approximately 9,400 (a 27% upswing) by 2030.<sup>163</sup>

### **New Brighton**

The City of New Brighton covers 7.1 square miles in Ramsey County and had a population of 21,496 in 2011.<sup>164</sup> The Metropolitan Council estimates there were 8,940 households in New Brighton as of 2011.<sup>165</sup> New Brighton's population is expected to rise to 22,800 (a 6% increase) in the coming decades, while the number of households is forecasted to grow to 10,000 (a 12% increase).<sup>166</sup> The largest two population categories in New Brighton, by age, are males and females (combined) from 20 to 24 and 25-29, which indicates there is a significant number of young inhabitants who either are making use or will make significant use of advanced technologies personally and professionally during the term of a renewal cable franchise.<sup>167</sup> At the same time, a large part of the population is 45-64 years of age.<sup>168</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services, and to perform financial and other transactions from the home, particularly as they continue to age over the life of any renewal franchise.

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<sup>160</sup> *Id.* (citing to the *American Community Survey*).

<sup>161</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

<sup>164</sup> See Metropolitan Council, *Community Profile for New Brighton*, available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013).

<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

<sup>167</sup> *Id.*

<sup>168</sup> *Id.* (citing 2010 Census data).

A large segment (29%) of the residents in New Brighton lived alone in 2010. Thirty-six percent of households are considered families without children.<sup>169</sup> These data, together with the data above, suggest that New Brighton is home to many young couples and single people who are typically frequent users of technology.

Approximately 20% of New Brighton's population is non-white.<sup>170</sup> The three largest minority groups in New Brighton are "Asian alone" (6.05% of the population), "Black or African American alone" (6.55% of the population) and "Hispanic or Latino" (4.35%).<sup>171</sup> Staff believes this diversity gives rise to a continued need for effective communications channels that cater to all ethnic groups in the New Brighton, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city's website and offices.

Forty-one percent of New Brighton residents possessed a bachelor's degree or a graduate/professional degree as of 2011. Twenty-three percent of the city's residents had at least attended college (without obtaining a degree) and 22% earned a high school diploma.<sup>172</sup> These data strongly suggest that the population of New Brighton needs access to advanced communications infrastructure for personal and business use.

There were 8,971 people employed in the City of New Brighton as of 2012, according to the Metropolitan Council.<sup>173</sup> The largest individual employment sectors in New Brighton are "Manufacturing (22% of total employees), Health Care and Social Assistance (13% of total employees), "All Other Industries" (with 11% of total employees), and "Wholesale and Retail Trade" (combined 12% of total employees).<sup>174</sup> The Metropolitan Council predicts that the number of people employed in New Brighton will remain static through 2020 and then increase to 9,400 (a 5% upturn) by 2030.<sup>175</sup> One of the goals of the City of New Brighton is to maintain a healthy business environment.<sup>176</sup> Having advanced communications networks, such as Comcast's cable system, available in the city promotes this important goal.

### North Oaks

The City of North Oaks is located in northern Ramsey County and is considered a "third ring suburb" of St. Paul.<sup>177</sup> North Oaks generally lies within boundaries formed by County Highway 96 and the Soo Line Railroad tracks on the south; County Highway 49, also known as Hodgson Road, on the west; Turtle Lake Road and County Road J on the north; and Centerville Road (also a county road) on the east. To the south lies the city of Vadnais Heights; to the north the city of

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<sup>169</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

<sup>172</sup> *Id.* (citing to the *American Community Survey*).

<sup>173</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>174</sup> *Id.*

<sup>175</sup> *Id.*

<sup>176</sup> City of New Brighton 2030 COMPREHENSIVE PLAN UPDATE (Nov. 24, 2009), Vision Goals, at 2-1.

<sup>177</sup> City of North Oaks, 2008 COMPREHENSIVE PLAN, at 4.

Lino Lakes in Anoka County; to the west the city of Shoreview and to the east the township of White Bear and the city of White Bear Lake.

The City of North Oaks covers 8.6 square miles in Ramsey County and had a population of 4,539 in 2011.<sup>178</sup> The Metropolitan Council estimates there were 1,752 households in North Oaks as of 2011.<sup>179</sup> North Oaks' population is expected to rise to 6,000 (a 32% increase) by 2020, while the number of households is forecasted to grow to 2,130 (a 21% increase).<sup>180</sup> The largest population categories in North Oaks, by age, are males and females from 45 to 69.<sup>181</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions, from the home, particularly as they continue to age over the life of any renewal franchise. There is also a significant portion of the population between the ages of 5 to 19. Undoubtedly, this younger generation will make significant use of advanced technologies for educational and social purposes while in school and subsequently for business purposes as they enter the work force during the term of a renewal cable franchise.<sup>182</sup>

A large segment of the population, 52% of households, is considered families without children.<sup>183</sup> Another 19% of the residents in North Oaks lived alone in 2010. This data, together with the data above, suggest that North Oaks is home to many couples and single people who are typically frequent users of technology.

About 8% of North Oaks' population is non-white.<sup>184</sup> The largest minority group in North Oaks is "Asian alone" (5.19% of the population).<sup>185</sup>

Residents of North Oaks are highly educated with 76% of North Oaks residents possessing a bachelor's degree or a graduate/professional degree as of 2011. An additional 15% have obtained an Associate Degree or attended some college and another 7% earned a high school diploma.<sup>186</sup> These data strongly suggest that many North Oaks residents are probably dependent on Comcast's cable system (and other critical communications infrastructure) for the transmission, reception and consumption of personal and business-related data.

There were 1,285 people employed in the City of North Oaks as of 2012, according to the Metropolitan Council.<sup>187</sup> The largest individual employment sectors in North Oaks are "All Other Industries" (with 83% of total employees) and "Professional and Technical Services (7%

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<sup>178</sup> See Metropolitan Council, *Community Profile for North Oaks*, available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013).

<sup>179</sup> *Id.*

<sup>180</sup> *Id.*

<sup>181</sup> *Id.* (citing 2010 Census data); see also City of North Oaks COMPREHENSIVE PLAN at 29, Table 5.

<sup>182</sup> *Id.*

<sup>183</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>184</sup> *Id.*

<sup>185</sup> *Id.*

<sup>186</sup> *Id.* (citing to the *American Community Survey*).

<sup>187</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

of total employees).<sup>188</sup> The Metropolitan Council predicts that the number of people employed in North Oaks will remain static.<sup>189</sup>

### **Roseville**

Roseville is a vibrant city known for its strong, safe neighborhoods, excellent business climate, quality schools and outstanding parks.<sup>190</sup> Conveniently located in Ramsey County, just minutes from downtown Minneapolis and St. Paul, Roseville is a dynamic city with many civic, philanthropic and service organizations which strengthen the community.<sup>191</sup> The City of Roseville covers 13.8 square miles in Ramsey County, and had a population of 33,807 in 2011.<sup>192</sup> The Metropolitan Council estimates there were 14,705 households in Roseville as of 2011.<sup>193</sup> Roseville’s population is expected to rise to 38,300 (a 13% increase) by 2020, while the number of households is forecasted to grow to 16,500 (a 12% increase).<sup>194</sup> The largest population categories in Roseville, by age, are males and females from 20 to 29, which indicates there is a significant number of young inhabitants who either are making use or will make significant use of advanced technologies personally and professionally during the term of a renewal cable franchise.<sup>195</sup> At the same time, a large part of the population is 45-59 years of age.<sup>196</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions from the home, particularly as they continue to age over the life of any renewal franchise. The residents of Roseville value “[l]eading-edge technology.”<sup>197</sup>

A large segment (70%) of the residents in Roseville either lived alone or in households considered families without children.<sup>198</sup> These data, together with the data above, suggest that Roseville is home to many couples and single people who are typically frequent users of technology.

Roseville has a diverse population with over 20% of residents being non-white.<sup>199</sup> The three largest minority groups in Roseville are “Asian alone” (7.24% of the population), “Black or African American alone” (6.05% of the population) and “Hispanic or Latino” (4.61%).<sup>200</sup> The City of Roseville has adopted the following strategies to foster diversity: (1) make Roseville a livable community for all; (2) respect and encourage diversity; and (3) ensure city staff and

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<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

<sup>190</sup> City of Roseville webpage, available at <http://www.ci.roseville.mn.us/> (visited June 27, 2013).

<sup>191</sup> *Id.*

<sup>192</sup> See Metropolitan Council, *Community Profile for Roseville*, available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013).

<sup>193</sup> *Id.*

<sup>194</sup> *Id.*

<sup>195</sup> *Id.*

<sup>196</sup> *Id.* (citing 2010 Census data).

<sup>197</sup> IMAGINE ROSEVILLE 2025, FINAL REPORT, at p. 3 (January 2007), available at <http://www.ci.roseville.mn.us/DocumentCenter/Home/View/1134> (visited June 27, 2013).

<sup>198</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>199</sup> *Id.*

<sup>200</sup> *Id.*

elected and appointed officials respect and reflect the diversity of the city’s population.<sup>201</sup> Staff believes these policies, as well as the current minority population in Roseville, give rise to a continued need for effective communications channels that cater to all ethnic groups in the city, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city’s website and offices.

Forty-two percent of Roseville residents possessed a bachelor’s degree or a graduate/professional degree as of 2011. Twenty-one percent of the city’s residents had at least attended college (without obtaining a degree) and another 22% earned a high school diploma.<sup>202</sup> These data strongly suggest that many Roseville residents are probably dependent on Comcast’s cable system (and other critical communications infrastructure) for the transmission, reception and consumption of personal and business-related data. It is a city goal to have technology that gives its citizens a competitive advantage.<sup>203</sup> The City also wants to foster meaningful opportunities for community engagement.<sup>204</sup> An advanced cable system, and PEG and institutional network uses of that system, can help to satisfy these particular goals.

The City of Roseville has a strong and diverse business climate.<sup>205</sup> There were 37,043 people employed in the City of Roseville as of 2012, according to the Metropolitan Council.<sup>206</sup> The largest individual employment sectors in Roseville are “Retail Trade” (17% of total employees), “Health Care and Social Assistance” (14% of total employees), “All Other Industries” (with 13% of total employees), “Accommodation and Food Services” (10% of total employees), and “Administrative and Waste Services” (10% of total employees).<sup>207</sup> The Metropolitan Council predicts that the number of people employed in Roseville will increase to 44,700 (a 21% upturn) by 2020, before rising to approximately 46,100 (a 24% upswing) by 2030.<sup>208</sup>

### **St. Anthony**

St. Anthony Village is a first-ring suburb located just east of northeast Minneapolis, straddling the border of Hennepin and Ramsey Counties.<sup>209</sup> It is a small city, surrounded by larger cities. Roseville lies directly to the east, New Brighton to the northeast, and Columbia Heights to the northwest. Interstate Highway 35W touches the city’s southern edge and County State-Aid Highway 88 (New Brighton Boulevard) separates the Gross Golf Course and Sunset Memorial Park from the rest of the community. The City of St. Anthony covers 2.4 square miles in

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<sup>201</sup> IMAGINE ROSEVILLE 2025, FINAL REPORT, at p. 4 (January 2007), available at <http://www.ci.roseville.mn.us/DocumentCenter/Home/View/1134> (visited June 27, 2013).

<sup>202</sup> *Id.* (citing to the *American Community Survey*).

<sup>203</sup> IMAGINE ROSEVILLE 2025, FINAL REPORT, at p. 14-15 (January 2007), available at <http://www.ci.roseville.mn.us/DocumentCenter/Home/View/1134> (visited June 27, 2013).

<sup>204</sup> IMAGINE ROSEVILLE 2025, FINAL REPORT, at p. 7 (January 2007), available at <http://www.ci.roseville.mn.us/DocumentCenter/Home/View/1134> (visited June 27, 2013).

<sup>205</sup> IMAGINE ROSEVILLE 2025, FINAL REPORT, at p. 3 (January 2007), available at <http://www.ci.roseville.mn.us/DocumentCenter/Home/View/1134> (visited June 27, 2013).

<sup>206</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>207</sup> *Id.*

<sup>208</sup> *Id.*

<sup>209</sup> City of St. Anthony Village 2008 COMPREHENSIVE PLAN, at 1-1

Ramsey and Hennepin Counties and had a population of 8,333 in 2011.<sup>210</sup> The Metropolitan Council estimates there were 3,881 households in St. Anthony as of 2011.<sup>211</sup> St. Anthony's population is expected to rise to 11,000 (a 32% increase) in the coming decades, while the number of households is forecasted to grow to 5,100 (a 31% increase).<sup>212</sup> The largest population categories in St. Anthony, by age, are males and females from 20 to 34, which indicates there is a significant number of young inhabitants who either are making use or will make significant use of advanced technologies personally and professionally during the term of a renewal cable franchise.<sup>213</sup> At the same time, a large part of the population is 45-59 years of age.<sup>214</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions, from the home, particularly as they continue to age over the life of any renewal franchise.

A large segment (39%) of the residents in St. Anthony lived alone in 2010. Thirty-two percent of households are considered families without children.<sup>215</sup> This data, together with the data above, suggest that St. Anthony is home to many couples and single people who are typically frequent users of technology.

About 16% of St. Anthony's population is non-white.<sup>216</sup> The three largest minority groups in St. Anthony are "Asian alone" (5.85% of the population), "Black or African American alone" (4.98% of the population) and "Hispanic or Latino" (2.88%).<sup>217</sup> Staff believes this diversity gives rise to a continued need for effective communications channels that cater to all ethnic groups in the city, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city's website and offices.

Thirty-five percent of St. Anthony residents possessed a bachelor's degree or a graduate/professional degree as of 2011. Twenty-two percent of the city's residents had at least attended college (without obtaining a degree) and 26% earned a high school diploma.<sup>218</sup> These data strongly suggest that the population of St. Anthony needs access to high-quality technology training to help residents that may not be familiar with state-of-the-art media and communications tools. Critical infrastructure must be in place to enable this training and to cement communications skills.

There were 3,253 people employed in the City of St. Anthony as of 2012, according to the Metropolitan Council.<sup>219</sup> The largest individual employment sectors in St. Anthony are "All Other Industries" (with 45% of total employees), "Health Care and Social Assistance" (22% of

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<sup>210</sup> See Metropolitan Council, *Community Profile for St. Anthony*, available at <http://stats.metc.state.mn.us/profile/detail.aspx?c=02395118> (visited June 26, 2013).

<sup>211</sup> *Id.*

<sup>212</sup> *Id.*

<sup>213</sup> *Id.*

<sup>214</sup> *Id.* (citing 2010 Census data).

<sup>215</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>216</sup> *Id.*; see also City of St. Anthony Village 2008 COMPREHENSIVE PLAN, at 1-8 – 1-15 for additional demographic information.

<sup>217</sup> *Id.*

<sup>218</sup> *Id.* (citing to the *American Community Survey*).

<sup>219</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

total employees), “Administrative and Waste Services” (with 17% of total employees), “Construction” (9% of total employees), and “Educational Services” (9% of total employees).<sup>220</sup> The Metropolitan Council predicts that the number of people employed in St. Anthony will increase to 5,000 (a 53% upturn) by 2020, before rising to approximately 5,450 (a 67% upswing) by 2030.<sup>221</sup>

### Shoreview

Shoreview lies north of the Twin Cities, equidistant from both Minneapolis and St. Paul.<sup>222</sup> The community is in north central Ramsey County and also borders Anoka County.<sup>223</sup> Adjacent cities include Mounds View and Arden Hills to the west; Blaine, Circle Pines and Lino Lakes to the north; North Oaks, Vadnais Heights, and Little Canada to the east; and Roseville to the south.<sup>224</sup> Interstate 35W is adjacent to the city’s western boundary, while Interstate 694 runs through the southern portion of the community.<sup>225</sup> The City of Shoreview covers 12.7 square miles in Ramsey County and had a population of 25,118 in 2011.<sup>226</sup> The Metropolitan Council estimates there were 10,436 households in Shoreview as of 2011.<sup>227</sup> Shoreview’s population is expected to rise to 29,000 (a 15% increase) by 2020, while the number of households is forecasted to grow to 11,300 (an 8% increase).<sup>228</sup> The largest population category in Shoreview, by age, is males and females from 45-64.<sup>229</sup> These residents could benefit from high-tech infrastructure and applications that make it easier to access information and services and to perform financial and other transactions, from the home, particularly as they continue to age over the life of any renewal franchise.

A large segment (27%) of the residents in Shoreview lived alone in 2010. Thirty-nine percent of households are considered families without children.<sup>230</sup> These data, together with the data above, suggest that Shoreview is home to many couples and single people who are typically frequent users of technology.

About 14% of Shoreview’s population is non-white.<sup>231</sup> The three largest minority groups in Shoreview are “Asian alone” (7.15% of the population), “Black or African American alone” (2.22% of the population) and “Hispanic or Latino” (2.16%).<sup>232</sup> The diversity of the population is increasing at a rapid rate.<sup>233</sup> Staff believes current and future demographic diversity gives rise to a continued need for effective communications channels that cater to all ethnic groups in the

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<sup>220</sup> *Id.*

<sup>221</sup> *Id.*

<sup>222</sup> City of Shoreview Comprehensive Plan, Community Profile, at 3-1.

<sup>223</sup> *Id.*

<sup>224</sup> *Id.*

<sup>225</sup> *Id.*

<sup>226</sup> See Metropolitan Council, *Community Profile for Mounds View*, available at stats.metc.state.mn.us (visited May 30, 2013).

<sup>227</sup> *Id.*

<sup>228</sup> *Id.*

<sup>229</sup> *Id.* (citing 2010 Census data).

<sup>230</sup> *Id.* (citing to the U.S. Census Bureau, *2010 Decennial Census*).

<sup>231</sup> *Id.*; see also City of Shoreview Comprehensive Plan at 3-4 – 3-11 for additional demographic information.

<sup>232</sup> *Id.*

<sup>233</sup> See City of SHOREVIEW COMPREHENSIVE PLAN at 3-10, Table 3-8.



city over the life of a renewal franchise, such as targeted PEG programming that is available over the cable system and the Internet, and services and information that are accessible from the city’s website and offices.

Forty-seven percent of Shoreview residents possessed a bachelor’s degree or a graduate/professional degree as of 2011. Twenty-three percent of the city’s residents had at least attended college (without obtaining a degree) and another 19% earned a high school diploma.<sup>234</sup> These data suggest that many Shoreview residents are probably dependent on Comcast’s cable system (and other critical communications infrastructure) for the transmission, reception and consumption of personal and business-related data.

The City of Shoreview has a diverse workforce.<sup>235</sup> There were 11,182 people employed in the City of Shoreview as of 2012, according to the Metropolitan Council.<sup>236</sup> The largest individual employment sectors in Shoreview are “Manufacturing” (15% of total employees), “Information” (14% of total employees), “Wholesale Trade” (13% of total employees), “Management of Companies” (10%), “Health Care and Social Assistance” (9% of total employees), “Educational Services” (6% of total employees) and “Accommodation and Food Services” (6% of total employees).<sup>237</sup> The Metropolitan Council predicts that the number of people employed in Shoreview will increase to 15,800 (a 41% upturn) by 2020, before rising to approximately 16,800 (a 50% upswing) by 2030.<sup>238</sup>

### **Independent School Districts - 623, 282 and 621**

The Member Cities are served primarily by three public school districts. The Roseville Area School District (ISD No. 623) is located just north of the City of St. Paul and east of the City of Minneapolis.<sup>239</sup> It serves all or portions of several member communities within district boundaries - Arden Hills, Falcon Heights, Little Canada, Lauderdale, Roseville, and Shoreview.<sup>240</sup> The district is a K-12 school system and has an enrollment of 6,400 students. The district also serves several hundred pre-school and adult students.<sup>241</sup>

The Mounds View Public Schools (ISD No. 621) also serves some of the Member Cities.<sup>242</sup> Located approximately nine miles north of the downtown areas of Minneapolis and St. Paul, Mounds View Public Schools provides instructional services for children and adult learners who live in the Cities of

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<sup>234</sup> See Metropolitan Council, *Community Profile for Mounds View*, available at stats.metc.state.mn.us (visited May 30, 2013), (citing to the *American Community Survey*).

<sup>235</sup> For a summary of the City of Shoreview’s economic development goals, see City of Shoreview COMPREHENSIVE PLAN, at Ch. 6 (Economic Development).

<sup>236</sup> *Id.* (citing to the Minnesota Department of Economic Development, *Quarterly Census of Employment and Wages: Second Quarter Data*).

<sup>237</sup> *Id.*

<sup>238</sup> *Id.*

<sup>239</sup> See Roseville Area School District webpage, available at <http://www.isd623.org/about/> (visited June 27, 2013).

<sup>240</sup> *Id.*

<sup>241</sup> *Id.*

<sup>242</sup> See Mounds View Public Schools webpage available at <http://www.moundsviewschools.org/about.asp> (visited June 27, 2013).



Arden Hills, Mounds View, New Brighton, North Oaks, Roseville, Shoreview, Vadnais Heights and portions of Spring Lake Park and White Bear Township.<sup>243</sup>

The St. Anthony-New Brighton Independent School District (ISD No. 282) serves the remaining Member Cities.<sup>244</sup> This district serves the City of St. Anthony Village and a portion of New Brighton and is located six miles northeast of downtown Minneapolis. The District serves over 1,700 students at Wilshire Park Elementary School (grades K-5), St. Anthony Middle School (grades 6-8) and St. Anthony Village High School (grades 9-12).<sup>245</sup>

The public schools, as well as two institutions of higher education – Bethel University and the University of Northwestern-St. Paul – are active producers of local programming. These educational access producers use CTV equipment and facilities to create a variety of programs, from school board meetings to sporting events, and concerts to informational documentaries.

### **Local Businesses**

All the various business sectors in the Member Cities need robust, reliable and flexible networks that can efficiently and economically carry a variety of voice, video and data communications if they are to remain competitive and to succeed in an economy that is becoming increasingly information-based. Comcast's cable system must be one of these networks.

In summary, taking into consideration the demographics of the Member Cities, the Member Cities' critical goals for growth, economic development, and the communities' emphasis on the use of technology, staff believes that it is particularly important that the Member Cities, and their communities of interest, be served by high-quality, communications infrastructure that, among other things (a) can provide reliable service, including advanced and interactive services, to the Member Cities and their residents; (b) provides schools and government facilities with high-quality, high-speed networking and Internet access; and (c) affords the public real opportunities to receive and develop programming relevant to the Member Cities' residents, and the neighborhoods in which they live and work. Aside from local programming opportunities provided by cable television, there is not an enormous opportunity for individuals and organizations in the Member Cities to take advantage of electronic media. As a result, the history, demographics and economies of the Member Cities suggest that, among other things, it is appropriate to require the operation and maintenance of a reliable, scalable, advanced cable system, to require an institutional network (including capacity on the subscriber network for data connectivity and PEG signal transport), and to require the dedication of significant capacity for PEG access use (e.g., for SD and HD programming and channels).

#### *(ii) Comcast's existing cable system in the Member Cities.*

Comcast's predecessor in interest, Media One North Central Communications Corp., performed a major cable system upgrade in the Member Cities during the term of the current franchise

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<sup>243</sup> *Id.*

<sup>244</sup> *See* St. Anthony-New Brighton Independent School District webpage, available at <http://www.stanthony.k12.mn.us/node/4> (visited June 27, 2013).

<sup>245</sup> *Id.*

ordinances/agreements that were awarded in 1998.<sup>246</sup> Pursuant to Section 4.2.a of the Cable Television Ordinances, this upgrade was to be completed no later than November 30, 2000. Since that time, AT&T Broadband, and then Comcast, has incrementally and continuously improved the cable system during the term of the current franchises.<sup>247</sup> According to information obtained during the NSCC’s technical review of the system, which was conducted by CBGCI, Comcast’s network, which uses a hybrid fiber-coaxial architecture, has an upper frequency limit of 750 MHz and is capable of carrying hundreds of digital “channels” and providing high-speed Internet and VoIP “telephone” service to subscribers.<sup>248</sup> The spectrum from 5 to 42 MHz is used for upstream transmissions (e.g., for video-on-demand, Internet access and VoIP traffic) and the spectrum from 50 MHz to 750 MHz is used for downstream transmissions, such as high-definition (“HD”) and standard definition (“SD”) digital video channels, Internet data downloads and VoIP transmissions.<sup>249</sup> Homes passed per node and subscribers served per node ratios in the system are consistent with current industry standards.<sup>250</sup>

Comcast’s network in the Member Cities is served by a master headend located on Fairview Avenue in Roseville, Minnesota.<sup>251</sup> According to CBGCI, the master headend “is among the better designed and maintained headends we have toured.”<sup>252</sup> In addition, based on the *Technical Review Report*, it appears that the master headend is operated and maintained in a manner that comports with industry-accepted engineering practices, particularly with respect to back-up power, equipment cooling, fire suppression and space for future expansion.<sup>253</sup> From the master headend, signals are sent to and received at a hub located at 4640 Churchill Street in Shoreview via fiber connections. Like the master headend, this hub appears to be designed, maintained and operated in accordance with good engineering practices. In this regard, the Shoreview hub has its own uninterruptible back-up power supply, fire suppression equipment and monitoring system.<sup>254</sup> At both the Roseville headend and the Shoreview hub, Comcast has installed large back-up generators that can operate for an extended period of time and increase network reliability in the event of a power outage.<sup>255</sup> The headend also has large battery banks that operate for at least 8.5 hours during any switchover to generator power or generator failure in order to avoid power interruptions that can cause system down-time.<sup>256</sup> Uninterruptible power supplies are available at both the headend and the hub for all critical equipment that operates at 120V AC power.<sup>257</sup> These power supplies are used until the cable system’s back-up generators come on-line during a loss of power. Additional power supplies equipped with batteries are deployed throughout the cable system’s distribution plant to provide back-up power at nodes and amplifiers in the event of a commercial power outage.<sup>258</sup> CBGCI has indicated that these power

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<sup>246</sup> See, e.g., Sections 4.1 and 4.2 of the Member Cities’ franchise ordinances/agreements. Each Member City’s individual franchise ordinance/agreement is known as and cited to as the “Cable Franchise Ordinance.”

<sup>247</sup> See, e.g., the *Technical Review Report* at 4.

<sup>248</sup> See, generally, *Technical Review Report* at 3-5.

<sup>249</sup> *Id.*

<sup>250</sup> *Technical Review Report* at 4.

<sup>251</sup> *Id.* at 5

<sup>252</sup> See *Technical Review Report* at 5.

<sup>253</sup> *Id.* at 5 and 8-9

<sup>254</sup> *Id.*

<sup>255</sup> *Technical Review Report* at 8-9.

<sup>256</sup> *Id.*

<sup>257</sup> *Id.*

<sup>258</sup> *Id.*

supplies have apparently been rated to perform for at least six (6) hours without external power.<sup>259</sup> Several distribution plant power supplies also have natural gas fueled back-up generators installed for even greater reliability.<sup>260</sup> Overall, Comcast's combination of generators, batteries and uninterruptible power supplies should enable the "seamless transfer between commercial power and backup or standby power in the event of a power failure at the headend or hub" or in the distribution system.<sup>261</sup>

Status monitoring tools are used to check and evaluate critical system functions in real-time, such as cable modem functionality, signal-to-noise ratios, carrier-to-noise ratios and other technical parameters and measurements affecting network performance and signal quality, and the health and activation of power supplies.<sup>262</sup> This technology is very important, because it enables Comcast technicians to anticipate and prevent problems before they occur and to respond quickly and accurately to issues after they arise. Comcast's status monitoring system is comparable to that used in other cable systems around the country.<sup>263</sup> The system appears to be working effectively, as CBGCI's review of Comcast's outage documentation "does not indicate a large number of outages or an overall pattern of longer than acceptable repair times when outages occur."<sup>264</sup> Accordingly, existing status monitoring capabilities should be retained, or improved equipment and software should be installed, as necessary, based upon system performance, during the term of any renewal franchises.

While Comcast's system was considered state-of-the-art at the time it was upgraded, it is no longer at the cutting edge of network design, as newer networks are frequently using equipment with upper frequency limits between 860 MHz and 1,000 MHz (1 GHz).<sup>265</sup> That said, the system in the Member Cities is still a fairly common design<sup>266</sup> and has transitioned to an entirely digital video platform (*i.e.*, analog video programming is no longer carried on the system in the Member Cities), which means Comcast is able to take advantage of digital compression technology to utilize available bandwidth to deliver hundreds of HD and SD video channels to subscribers.<sup>267</sup> According to CBGCI, the

system, as constructed, equipped and operated today, can provide the services desired by Comcast's subscribers. However, as more services become available (particularly high definition video programming services) and as subscribers' needs and desires change and increase, Comcast may need to upgrade its system,

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<sup>259</sup> *Id.*

<sup>260</sup> *Id.*

<sup>261</sup> *Technical Review Report* at 5 and 8-9.

<sup>262</sup> *Id.* at 9.

<sup>263</sup> *Id.*

<sup>264</sup> *Technical Review Report* at 9-10.

<sup>265</sup> *Id.*

<sup>266</sup> *Id.*

<sup>267</sup> As CBGCI notes, "compression technologies allow for Standard Definition digital TV channels (SD) to commonly utilize one 6 MHz channel to transmit between 7-12 SD channels. Furthermore, 2-3 High Definition channels occupy one 6 MHz channel" *Technical Review Report* at 4.

depending on the length of any franchise renewal term, to gain additional bandwidth in order to provide these new services.<sup>268</sup>

Comcast has expressed an interest in 10-year renewal franchises. It is staff's opinion that significant changes in technology and services can, and likely will, occur over ten years. CBGCI agrees with this assessment.<sup>269</sup> Under these near certain circumstances, there is no guarantee that Comcast's existing system, in its current form and with an upper frequency limit of 750 MHz, will be scalable or adaptable enough to meet the communities' future needs and interests in new technologies or for advanced cable services. As CBGCI correctly points out, Comcast's "DOCSIS cable modem technology now allows the operator to expand available Internet access speeds and throughputs by using additional channels or space on the system" but at the expense of decreasing available bandwidth for new cable services.<sup>270</sup> Accordingly, there is a need and interest in ensuring that Comcast's cable system in the Member Cities remains modern, expandable and capable of furnishing new and advanced services desired by subscribers now and in the future. It is for this very reason that CBGCI recommends any renewed franchises "require a mid-term review of the system to determine if it is still capable of meeting the communities' cable-related needs and interests, and providing the needed bandwidth for new services that become available in the future."<sup>271</sup> Staff agrees with this recommendation.

CBGCI completed a review and audit of Comcast's system during the first quarter of 2012. In the course of performing its audit and review, CBGCI did discover certain issues that needed to be addressed. Many, if not all of these problems may have been completely rectified since the review and audit was conducted. However, the existence of the problems in the first place suggests that certain types of provisions should be included in any renewal franchises to ensure that the identified issues and concerns do not recur.

One issue CBGCI uncovered during its review was the cable system's failure to meet the FCC's technical standards for analog channels at two out of ten test locations, or 20% of the sites tested.<sup>272</sup> While there are no longer any analog channels carried on Comcast's cable system, CBGCI's findings show that the cable system's performance can easily fall below acceptable levels in the ordinary course of business, particularly if routine and preventative maintenance is not regularly performed (*e.g.*, to identify a damaged cable). This suggests there is a continued need and interest in NSCC authority to perform system performance audits, and an important need and interest in reviewing and approving Comcast's testing practices and procedures, to the extent consistent with applicable law. One of the overarching problems encountered by CBGCI in performing its audit was Comcast's unwillingness or inability to provide requested data in a timely manner, particularly within clear and unambiguous deadlines set by the NSCC.<sup>273</sup> Any

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<sup>268</sup> *Technical Review Report* at 4-5.

<sup>269</sup> *Technical Review Report* at 20 ("[i]t is difficult to predict what bandwidth needs will be in just a few years, let alone over the course of a 10 year or longer franchise term.")

<sup>270</sup> *Id.*

<sup>271</sup> *Technical Review Report* at 5 and 20.

<sup>272</sup> *Technical Review Report* at 6-7.

<sup>273</sup> *See, e.g.*, the January 4, 2012, letter from Coralie A. Wilson, NSCC Executive Director, to Anthony S. Mendoza, Esq., outside counsel for Comcast, and the August 12, 2011, and August 2, 2011, letters from Coralie A. Wilson, NSCC Executive Director, to Kathi Donnelly-Cohen, Comcast's Director of Government Affairs.

renewal franchises should therefore require Comcast to provide requested technical data to the NSCC within timelines set by the NSCC.

A significant problem CBGCI discovered during its audit and review of the cable system was Comcast's repeated failure to comply with applicable safety codes and good engineering and maintenance practices.<sup>274</sup> Section 3.6.a of the Member Cities' Cable Television Ordinances requires Comcast to "at all times employ ordinary and reasonable care and shall install and maintain in use nothing less than commonly accepted methods and devices for preventing failures and accidents which are likely to cause damage or injuries." In addition, Section 3.6.b states that Comcast must "install and maintain its System and other equipment in accordance with [the Member Cities'] codes and the requirements of the National Electric Safety Code and all other applicable FCC, state and local regulations . . ." Minn. Stat. § 326B.35 also requires Comcast to adhere to the NESC, as well as the NEC. Finally, Section 3.6.c of the Cable Television Ordinances specifies that "[a]ll System structures, and lines, equipment and connections in, over, under and upon the Rights-of-Way [of the Member Cities], wherever situated or located, shall at all times be kept and maintained in good condition, order and repair so that the same shall not menace or endanger the life or property of [the Member Cities] or any Person."

Based on its system drive-out, CBGCI identified approximately 300 cases where Comcast's cable system did not comply with the NESC and/or NEC, or follow good engineering practices in accordance with Section 3.6 of the Cable Television Ordinances.<sup>275</sup> For instance, there were problems and/or violations concerning: (i) attachments of cable television drops to poles; (ii) hardline cables not properly secured to poles or protected; (iii) slack, missing and loose guy wires; (iv) underground drop cables exposed above-ground; and (v) unlocked power supply and service boxes.<sup>276</sup> The terms of any renewal franchises should therefore ensure that Comcast has appropriate maintenance practices and procedures in place to prevent these types of problems from occurring in the future, and to promptly repair such problems, some of which present serious public safety issues (e.g., unlocked power supplies). In addition, any renewal franchises should: (i) permit the NSCC to require or perform regular system inspections, and to compel the production of necessary data and documents; (ii) contain adequate enforcement mechanisms, including (but limited to) letters of credit, liquidated damages and/or fines; and (iii) mandate documentation of in-house inspections and repairs as part of an ongoing preventative and routine maintenance plan, particularly with respect to multiple dwelling units, which appear to suffer from a large number of problems.<sup>277</sup>

(iii) *The needs ascertainment studies.*

The NSCC's needs ascertainment confirms that there is a substantial need and interest in having the Member Cities served by a high-capacity, two-way cable system that is well-built and highly reliable, and flexible enough to respond to changing needs and the development of new services over the term of any renewal franchises. In addition, Comcast's system should be able to

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<sup>274</sup> See *Technical Review Report* at 10-19.

<sup>275</sup> *Id.* at 10.

<sup>276</sup> *Id.* at 10-18 and Attachment A.

<sup>277</sup> *Id.* at 19.

provide advanced services to as many residents in the Member Cities as possible, taking population/housing density into consideration.

### ***Subscriber Network.***

The needs ascertainment telephone survey conducted by TBG and Group W shows a substantial interest in a system that makes a significant number of channels available to consumers.<sup>278</sup> The *Needs Assessment Report* also indicates that the subscriber network is generally capable of delivering high-quality video to subscribers' homes. Specifically, 90% of telephone survey respondents rated Comcast's picture quality as either "good" or "very good."<sup>279</sup> At the same time, however, concerns were expressed about PEG channel signal quality.<sup>280</sup> Accordingly, there is a need and interest in a system that continues to deliver high-quality video programming throughout the Member Cities. With regard to PEG channels, there is an extremely important need and interest in making sure that PEG signals/data have technical characteristics (e.g., in terms of picture and audio) that meet or exceed the technical characteristics of the highest quality local broadcast channel (ABC, NBC, CBS and Fox) carried on the cable system in the same format (e.g., SD or HD).

Further, there is substantial interest in having advanced services available. Indeed 36% of all cable subscribers pay extra to receive Comcast's high-definition channels.<sup>281</sup> This means there are about 11,160 high-definition service subscribers in the Member Cities out of approximately 31,000 cable subscribers in the NSCC franchise area. Staff believes this is a significant take rate, reflecting the communities' desire for a state-of-the-art cable system. It is also important to note that approximately 46% of telephone survey respondents subscribed to high-speed Internet service and telephone service, in addition to cable service.<sup>282</sup> Accordingly, there is a continued need for a bidirectional, reliable cable system with sufficient upstream and downstream capacity to offer these interactive services and future advanced services that may be deployed during the course of a renewal franchise.

On the subject of reliability, almost 90% of telephone survey respondents indicated that they believed the "reliability of Comcast's cable TV service" was "good" or "very good."<sup>283</sup> This conclusion comports with CBGCI's finding that outages are not a significant problem for Comcast's cable system, likely due to the use of status monitoring equipment, back-up generators and power supplies at appropriate locations throughout the cable system.<sup>284</sup> There is a need and interest in retaining this equipment going forward.

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<sup>278</sup> See, e.g., *Needs Assessment Report* at 52 (showing that 75 percent of telephone survey respondents believe the number and variety of channels on the system is "very good" or "good."). Given that there are hundreds of channels available over the system, this suggests that subscribers believe a substantial channel line-up is a positive thing.

<sup>279</sup> *Needs Assessment Report* at 52

<sup>280</sup> See, e.g., the *Needs Assessment Report* at 43 (meeting participants state that there are "[a]udio problems on PEG access channels" and that "[s]ignal quality on PEG channels is not good.") and 54.

<sup>281</sup> See, e.g., the *Telephone Survey Report* at 3.

<sup>282</sup> *Telephone Survey Report* at 3.

<sup>283</sup> *Telephone Survey Report* at 9.

<sup>284</sup> See the *Technical Review Report* at 9-10.

With regard to general system design, TBG reached the following conclusions as a result of the information gathered during the needs assessment process:

- The cable system serving the Member Cities should include features, facilities and equipment typically found in state-of-the-art systems.<sup>285</sup>
- The cable system should utilize facilities and equipment which ensure that the signal quality and functionality of PEG access channels is equivalent to that of the highest quality channel offered on the cable system, both now and throughout the term of renewal franchises.<sup>286</sup> Because PEG channels are somewhat comparable to local broadcast channels, staff has determined that PEG signal technical quality and functionality should be compared to the highest quality local broadcast channel(s) carried on Comcast's cable system in the same format. To be clear, SD PEG channels/signals must have technical characteristics (*e.g.*, in terms of picture and audio quality) that are equivalent to or better than the highest quality SD local broadcast channel distributed over Comcast's system in the NSCC franchise area. HD PEG channels/signals must have technical characteristics (*e.g.*, in terms of picture and audio quality) that are equivalent to or better than the highest quality HD local broadcast channel distributed over Comcast's system in the NSCC franchise area. This standard should also apply to future transmission and distribution formats and technologies, such as 4K/Ultra HD.
- Comcast's cable system must include facilities and equipment that will enable NSAC staff to monitor the quality of all PEG signals as delivered to subscribers in the Member Cities. This particular finding is based the fact that a number of people participating in TBG's needs assessment indicated that they had concerns about PEG access channel signal quality and functionality.<sup>287</sup>
- The spectrum on Comcast's cable used to transmit and deliver PEG channels must have a technical quality equivalent to or better than the highest quality commercial channel carried on the cable system throughout the term of any renewal franchises.<sup>288</sup> Once again, staff believes the required comparison should be between spectrum made available to HD, SD (and future format) PEG channels and the highest quality SD, HD (and future format local broadcast channel(s)). Thus, the technical quality and characteristics of the spectrum used to transmit and deliver all forms PEG channels to subscribers must be equivalent to or better than the spectrum allocated to all forms local broadcast channels.
- There must be high-quality, well-maintained, and regularly monitored bidirectional fiber-optic links between the NSAC master control/playback facility, each of the PEG access remote origination sites (located in member city, education, and community locations), the company's transmission hubs, and the Roseville headend.<sup>289</sup> Staff believes this particular need can be satisfied through the use of the institutional network, provided

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<sup>285</sup> *Needs Assessment Report* at 56.

<sup>286</sup> *Needs Assessment Report* at 57

<sup>287</sup> *Needs Assessment Report* at 57.

<sup>288</sup> *Needs Assessment Report* at 57.

<sup>289</sup> *Needs Assessment Report* at 57.

Comcast proposes to allow institutional network capacity (including bandwidth on the subscriber network), facilities and equipment to be utilized for public/community access purposes, as well as for governmental and educational uses. Specific findings and needs concerning the institutional network are discussed in detail below. In the event Comcast does not make the institutional network (including capacity and high-speed data service on the subscriber network) available for public/community access uses, it will need to provide bidirectional links between PEG access signal origination sites, NSAC's master control facility and Comcast's hubs and headend, as discussed and described in the *Needs Assessment Report* and the *Technical Review Report*.

- Facilities and equipment are needed to enable live PEG programming to be transmitted from locations throughout the franchise area (e.g., for sporting event sites, parade routes, etc.).<sup>290</sup> This could entail use of an institutional network connected to live origination locations, as is currently the case, the provision of dedicated upstream feeds, as previously discussed, the use of capacity on the subscriber network (along with high-speed data service), or a combination of the foregoing PEG signal transport solutions. To provide the necessary remote PEG signal origination capabilities, staff has concluded that the existing end-to-end fiber-optic network should be maintained (and made available for public/community, educational and government use) and that the subscriber network should be utilized for remote PEG productions (both from fixed and nomadic locations.) The necessary facilities and equipment for this approach are discussed below, and in the *Needs Assessment Report* and the *Technical Review Report*.
- Bandwidth on the subscriber network and adequate space on cable system servers should be set aside for (i) 8 standard definition digital (SD) PEG access channels, (ii) the delivery of PEG access channels in the same formats that are employed by the highest quality commercial channel carried on the cable system, including high-definition (HD), and (iii) on-demand viewing of PEG programming (in both SD and HD formats). PEG channel capacity/bandwidth should permit the transmission of closed captions, stereo audio and SAP content for PEG access programs delivered with such features.<sup>291</sup> These matters are discussed in greater detail in the Section II.C. of this Report, which addresses support for PEG access.
- Comcast should provide the facilities (e.g., fiber-optic cables), equipment, spectrum and space at the headend, hub and node locations needed for an institutional network, as described elsewhere in this Staff Report and in the *Technical Review Report*.<sup>292</sup>
- The cable system must include the facilities, equipment and bandwidth needed to include full program listings for PEG access programs on the interactive electronic programming guide.

Based on the *Needs Assessment Report*, the *Telephone Survey Report*, the *Technical Review Report*, technological trends, cable industry best practices, the applicability of various laws,

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<sup>290</sup> *Needs Assessment Report* at 57.

<sup>291</sup> *Needs Assessment Report* at 58-59.

<sup>292</sup> *Needs Assessment Report* at 59-60.



regulations and codes, the Member Cities' police powers, and its own experience, staff concludes there is a need or interest in a system that includes the facilities and equipment required.<sup>293</sup>

- a. To be capable of responding to subscriber demands for channels delivered in various formats without substantial additional upgrades and should be designed so that it will be capable of responding to technological developments (e.g., 4K or UltraHD) promptly.<sup>294</sup>
- b. To provide useable bandwidth at least comparable to that of other modern cable systems (but no less than the channel capacity of the current system).
- c. To reduce amplifier cascades as much as necessary to provide acceptable signal quality and reliability, both upstream and downstream, so that advanced cable services may be provided over the franchise term.
- d. To have a minimal number of failure points between each signal source (e.g., headend) and each individual subscriber.
- e. To support two-way, advanced cable services. The system should be entirely two-way activated, and should be designed so that it can support services that require broadband transmissions upstream and downstream from subscriber locations. Further, the system should be designed so that as subscriber demand increases, the system can effectively increase the amount of upstream and downstream capacity available to subscribers quickly (by “splitting” nodes, for example), and without the need for substantial new construction.
- f. To comply with applicable safety and construction codes and satisfy all applicable technical standards for system performance over the term of any renewal franchises. This shall include, at a minimum, compliance with the most current version of:
  - The National Electrical Safety Code (National Bureau of Standards);
  - The National Electrical Code (National Bureau of Fire Underwriters);
  - The Bell System Code of Pole Line Construction;
  - Applicable Occupational Safety & Health Administration

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<sup>293</sup> This list is intended to be a summary of general system needs and interests – it is not necessarily intended to be exhaustive. Comcast must propose a system that meets all identified cable-related needs and interests, as set forth in this Staff Report, the *Needs Assessment Report*, the *Telephone Survey Report* and the *Technical Review Report*.

<sup>294</sup> It should be noted that this RFRP does not require the use of any particular transmission format or any particular transmission medium. See 47 U.S.C. § 544.

Regulations;

- Applicable FCC or other federal, state and local regulations, including (but not limited to) Minn. Stat. § 326B.35;
  - Applicable Society of Cable Telecommunications Engineers Standards; and
  - Good engineering practices.
- g. To permit Comcast to respond quickly and effectively to outages, requests for service, and customer complaints, and to enable Comcast (and the NSCC) to effectively monitor system performance, so that the cable system is able to deliver high-quality signals and services to its subscribers.
- h. To allow subscribers to receive signals in substantially the same form in which they were received by Comcast, *e.g.*, stereo signals should be received by subscribers in stereo, high-definition video signals should be received by subscribers in high-definition and secondary and multiple audio signals should be receivable. Closed captioning and video description signals should be receivable on television sets capable of decoding the closed captioning and/or video description signal.
- i. To allow parents to control viewing by children, with minimum interference with adult viewing options.
- j. So that the services (including, by way of example, customer service support) provided are reasonably accessible to the hearing-impaired and other persons with disabilities.
- k. So that the cable system is capable of being easily connected to: (i) other cable systems, multichannel video program distribution systems, and other networks adjacent to the Member Cities; (ii) other cable systems, multichannel video distribution systems and other networks in one or more Member Cities, once they are operational; (iii) the metropolitan fiber ring currently known as the “PRISMA network;” and (iv) all PEG facilities directly or indirectly served by the master headend, which is currently located at Fairview Avenue in Roseville, or by any other master, back-up or ancillary headend owned or operated by the Applicant in the 7-county Twin Cities metropolitan area, so that PEG data (including institutional network data and video) can be effectively exchanged by each system or network seamlessly, with sufficient bandwidth for multiple video and data paths. All interconnects/interconnection links shall be VLAN (IEEE 802.1q) aware, and shall allow the NSCC and/or its designee(s) to provide Stacked VLAN (IEEE 802.1ad) without the need for management intervention from the Applicant.

- l. To allow the “PRISMA” interconnection system to successfully transport all PEG access signals/data (including, but not limited to, HD PEG access signals/data) to and from the NSAC’s PEG access master control facility through the continuous dedication of at least 50 Mbps of transport capacity, and the availability of up to 250 Mbps of transport capacity on demand.
- m. To allow customers to use the cable system for two-way communications from the home, and to use PEG access resources interactively.
- n. To allow members of the public, educators and government representatives to produce programming and transmit that programming, at no charge from Comcast, from suitable remote locations throughout the Member Cities to central PEG programming control sites established by the entities managing public, community, educational and governmental access functions, and from there, through the headend to subscribers, without the assistance of Comcast once such connectivity is established (except to the extent Comcast is providing server capacity, furnishing signal transmission services and/or equipment, or providing space in its facilities, in which case it should provide necessary and appropriate assistance).
- o. To permit PEG users to take advantage of the capabilities of an advanced system, as such capabilities are activated for commercial purposes, and to ensure that changes in the cable system do not hamper the use of the system for PEG purposes.

***Institutional Network.***

One of the most significant and substantial needs and interests identified during the ascertainment process is the need and interest in an advanced, flexible, scalable, bidirectional institutional network that connects designated sites.<sup>295</sup>

Enhanced communication among institutions – such as schools, libraries, government offices, and other public buildings – offers numerous ways to benefit residents of the Member Cities through improved delivery of services, greater access to governmental processes, and efficient, low-cost video, voice and data operations. Thus, in addition to other sorts of PEG capacity, facilities and equipment, a franchising authority may require as part of a cable operator’s renewal proposal that channel capacity on institutional networks, or “I-Nets,” be designated for educational or governmental use.<sup>296</sup> Such I-Nets connect institutions serving the public. They may carry voice, video and data transmissions.<sup>297</sup>

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<sup>295</sup> See, generally, Section C of the *Needs Assessment Report* and Section II of the *Technical Review Report*.

<sup>296</sup> 47 U.S.C. § 531(b).

<sup>297</sup> An I-Net is defined as a communication network which is constructed or operated by the cable operator and which is generally available only to subscribers who are not residential subscribers. See 47 U.S.C. §§ 531(f), 541(b)(3)(D).

The Member Cities benefit their taxpaying residents generally by obtaining I-Net facilities and equipment as part of the reasonable compensation the Member Cities receive from Comcast for the company's use of public rights-of-way. I-Net capabilities reduce the Member Cities' communications costs, which would otherwise fall on the Member Cities' taxpayers. Thus, in-kind compensation in the form of an I-Net provides significant benefits to residents of the Member Cities and to government, educational (and, if proposed, public/community) users themselves.

Currently, the NSCC franchise area is served by an "integrated" institutional network that consists of both end-to-end fiber connections and hybrid fiber-coaxial ("HFC") connections. CBGCI describes the I-Net as "two, primarily separate yet related, networks."<sup>298</sup> The end-to-end fiber-optic portion of the I-Net (which consists of 6 single mode fibers per connection) serves 21 locations/institutions in the Member Cities, and also includes a 6-strand fiber connection between the Fairview headend and the Shoreview hub.<sup>299</sup> The NSCC, the NSAC and the institutions connected to the fiber portion of the I-Net provide all of the end-user equipment necessary to "light up" or activate the fibers. Thus, Comcast has provided the NSCC, the NSAC, the Member Cities, and other fiber I-Net users (e.g., ISD Nos. 623, 621 and 282) with what is commonly referred to as a "dark" fiber network. Under this type of arrangement, Comcast is responsible for the maintenance and repair of all the fibers comprising the end-to-end fiber-optic institutional network.<sup>300</sup>

The fiber I-Net is interconnected with other fiber-optic facilities owned or leased by the Member Cities, other governmental institutions and educational facilities. This interconnectivity and the fiber I-Net itself is used for data, video and telephony services. According to CBGCI, "the fiber I-Net that is in place today is serving a significant data transportation need for its users. It was made clear that the services and applications enabled by this fiber-optic I-Net need to remain in place going forward, with the ability to expand and enhance these services as needs dictate."<sup>301</sup> Examples of applications running on the end-to-end fiber I-Net include shared applications, such as Microsoft Office, financial systems, GIS programs, Laserfiche document management, electronic messaging (shared e-mail servers), computer security and management, switch management and video streaming/surveillance.<sup>302</sup> The ability to share these applications saves the Member Cities (and their taxpayers) money and, for the smaller cities, gives them access to applications they might otherwise not be able to afford.

The HFC I-Net utilizes fiber-optic infrastructure to send and receive signals to/from nodes located at the ten Member Cities' city halls (these nodes are connected to the end-to-end fiber-optic I-Net). From the nodes, downstream signals are converted from light to radio frequency (RF) signals that travel over coaxial cable for transmission and distribution to the sites served by a particular node.<sup>303</sup> Upstream (RF) signals from sites connected via coaxial cable travel to the fiber nodes, where they are converted to light for transmission over the fiber-optic I-Net to the NSAC master control facility presently located at 2670 Arthur Street in Roseville. The HFC I-

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<sup>298</sup> *Technical Review Report* at 22.

<sup>299</sup> *Technical Review Report* at 22.

<sup>300</sup> *Technical Review Report* at 26.

<sup>301</sup> *Technical Review Report* at 25.

<sup>302</sup> See, e.g., the *Technical Review Report* at 25 and 27.

<sup>303</sup> *Technical Review Report* at 23.

Net now serves approximately 19 institutions and remote locations.<sup>304</sup> Examples of upstream and downstream signals carried over the HFC I-Net infrastructure to and from these sites include data and video origination.<sup>305</sup> HFC I-Net connections satisfy significant needs for sites that have lower bandwidth needs than institutions connected with fiber.<sup>306</sup> It is CBGCI's opinion that the HFC I-Net provides connected institutions, the NSAC and other PEG access managers with the flexibility to add or change sites as needs change for both data connectivity and video origination.<sup>307</sup> This functionality (or equivalent capabilities) should be maintained at those fixed sites delineated in the *Technical Review Report* over the life of renewal franchises.

The existing HFC I-Net was last upgraded more than 12 years ago, and the amplifiers have been in consistent use since the 1980s. It is likely that replacement components are no longer available for these amplifiers, should they fail, during the term of a renewal franchise (which is very possible given their age).<sup>308</sup> Many of the power supplies serving the I-Net are over 10 years old. Consequently, they will have reached the end of their useful life prior to the end of any renewal franchises.<sup>309</sup> Moreover, the "current LanCity cable modem system was state-of-the art in the mid to late 1990s. It has not been manufactured or supported by the manufacturer for approximately 10 years. Furthermore, the maximum throughput or bandwidth of this equipment is, and will continue to be, less than what end users will require going forward."<sup>310</sup>

The various findings and conclusions supporting the need for an institutional network are contained in the *Needs Assessment Report and the Technical Review Report*, and will not be discussed in detail here. However, it is worth emphasizing the following:

- The vital need for the existing fiber and HFC I-Net existed as far back as 1998, when the current cable franchise/ordinances and agreements became effective. The need for an institutional network has only grown since that time, as technology has become more advanced and more tightly integrated into the day-to-day operations of I-Net users. Both Comcast's predecessor in interest, the Member Cities and the NSCC all recognized that the costs (over \$600,000) associated with constructing the integrated fiber/HFC I-Net would be passed through to subscribers, and included in cable service rates. Those costs have now been fully recouped.
- The NSCC will need to upgrade the equipment used to activate the fiber I-Net over the course of any renewal franchise as bandwidth needs increase, and as existing equipment reaches the end of its useful life.<sup>311</sup>
- The HFC I-Net, or its functional equivalent, should be maintained throughout the Member Cities in order to enable live video productions from remote locations and data

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<sup>304</sup> *Technical Review Report* at 28.

<sup>305</sup> *Technical Review Report* at 23.

<sup>306</sup> *Technical Review Report* at 28.

<sup>307</sup> *Technical Review Report* at 23-24.

<sup>308</sup> *Technical Review Report* at 32-33.

<sup>309</sup> *Technical Review Report* at 32-33.

<sup>310</sup> *Technical Review Report* at 33.

<sup>311</sup> *Technical Review Report* at 28 and 30.

connectivity, as discussed in the *Technical Review Report*.<sup>312</sup> Staff has decided that the functionality of the HFC I-Net should be retained by utilizing bandwidth on the subscriber network, along with high-speed data service using DOCSIS 3.0 business-class cable modems. Specifically, Comcast should provide HSD service over the subscriber network to the fixed locations previously served by the HFC I-Net, at a reduced rate, and 5 free nomadic DOCSIS 3.0 business-class cable modems for use at any point along the subscriber network.<sup>313</sup> This approach will provide PEG programmers with the same flexibility to perform remote video programming productions as the HFC I-Net, but at a much lower cost to Comcast than re-building or upgrading the existing HFC I-Net to address the reliability and maintenance issues noted by CBGCI, or replacing the HFC I-Net with fiber.<sup>314</sup> Moreover, the solution staff is proposing will also produce revenue for Comcast through the discounted rates paid for the specified HSD service on the subscriber network.

- To ensure that PEG video signals carried over the subscriber network can be delivered without contention or interference from other business-class cable modem users, Comcast must ensure that all cable modems or other devices furnished to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public and government institutions and other I-Net users are assigned to a service tier that provides a minimum of 50 Mbps downstream and a minimum of 20 Mbps upstream connectivity to the Internet at all times to enable return video and ancillary data connections for purposes of live video programming productions.
- The existing end-to-end fiber-optic institutional network connections should be maintained at all the sites specified in the *Technical Review Report*, and expanded as new fiber networking needs arise.<sup>315</sup> It must be emphasized that the fiber I-Net, in its present form, is heavily used and relied upon by many government institutions located in the Member Cities for data transmission and other uses (*e.g.*, video transport). When the fiber-optic portion of the I-Net was completed, it immediately became and still is an integral part of the users' voice, video and data communications infrastructure. As such, the fiber I-Net is an extremely valuable community asset that would be very expensive to replace. At this point in time, the cost of the fiber-optic I-Net has been fully recouped from subscribers, as noted above. Any alternative whereby Comcast imposes new charges on the NSCC, the NSAC, the Member Cities and other I-Net users for these use of existing I-Net fiber would unfairly enrich Comcast. Thus, keeping the current fiber I-Net connections in place, free of charge, will not require any new capital expenditures on Comcast's part. Under these circumstances, there is no doubt that requiring Comcast to continue providing the end-to-end fiber-optic I-Net makes sense both operationally (since it is in place and meeting the critical needs of users) and financially (because it is an economical approach to meeting the communities' networking needs).

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<sup>312</sup> See, *e.g.*, the *Technical Review Report* at 29.

<sup>313</sup> See, *e.g.*, the *Technical Review Report* at 40.

<sup>314</sup> See, *e.g.*, the *Technical Review Report* at 39-40.

<sup>315</sup> See, *e.g.*, the *Technical Review Report* at 25 and 29-30.

- Because the fiber-optic I-Net is a dark fiber network, there is a need for equipment to activate the fibers. Such equipment includes edge switches that reside at end users' facilities and core switches that act as aggregation points. There is a related need for optical devices that create the lightwaves used for transporting data from one location to another. According to the *Technical Review Report*, 16 edge switches, plus 3 core switches are needed to serve the 17 fiber I-Net locations, the Shoreview hub and the Fairview headend.<sup>316</sup> Comcast should provide capital grants for this equipment, as specified in the *Technical Review Report*.
- Police and fire departments in the Member Cities need to continue using the fiber I-Net and the HFC I-Net for VoIP communications and centralized storage of video evidence (e.g., police in-car video), among other things. Thus, the integrated I-Net is supporting mission-critical public safety and homeland security functions.
- The Harmonic ION encoders and associated ancillary equipment located at the NSAC's master control facility need to be upgraded to support HD transport.<sup>317</sup>
- The equipment in the two remote production trucks and the mini-mobile unit needs to be upgraded consistent with the *Technical Review Report* to enable HD signal transportation.
- Encoders and decoders at each end of the fiber-optic I-Net connections must be upgraded consistent with the *Technical Review Report* to enable HD signal transportation.
- The fiber-optic portion of the I-Net must be governed by the reliability, availability and optical loss standards and response time set forth in the *Technical Review Report*.<sup>318</sup>

With respect to institutional network, staff concludes there is a need or interest in a system that includes the capacity, facilities and equipment required:<sup>319</sup>

- a. To continue providing the physical plant (e.g., end-to-end fiber connections), spectrum and any necessary equipment and space at the master headend, hub and node locations dedicated as an institutional network, as described herein, and in the *Staff Report*, the *Needs Assessment Report* and the *Technical Review Report*.
- b. To provide a reliable institutional network, including capacity on the Applicant's subscriber network, capable of furnishing advanced services to government agencies and departments, schools, and other institutions. The institutional network, including capacity on the subscriber network,

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<sup>316</sup> *Technical Review Report* at 30.

<sup>317</sup> *Technical Review Report* at 35.

<sup>318</sup> *Technical Review Report* at 31-32.

<sup>319</sup> This list is intended to be a summary of general system needs and interests – it is not necessarily intended to be exhaustive. Comcast must propose a system that meets all identified cable-related needs and interests, as set forth in this Staff Report, the *Needs Assessment Report*, the *Telephone Survey Report* and the *Technical Review Report*.

should satisfy the technical and performance standards specified in the *Technical Review Report*, and include the facilities and equipment to provide secure and reliable communications from one user to another.

- c. To maintain and enhance the existing functionality of the institutional network at the locations specified in the *Technical Review Report*.
- d. To continue providing the existing end-to-end fiber-optic institutional network connectivity and capacity, and to expand that connectivity and capacity, as described in the *Technical Review Report*.
- e. To provide sufficient capacity/bandwidth on the subscriber network for reliable, bi-directional institutional communications to and from the sites and locations specified herein and in the *Needs Assessment Report*, and the *Technical Review Report*.
- f. To upgrade the equipment utilized to activate and operate the end-to-end fiber-optic portions of the existing I-Net as bandwidth needs increase, and current equipment reaches the end of its useful life, as discussed herein and in the *Technical Review Report* and the *Needs Assessment Report*.
- g. To upgrade the encoders and related equipment at the PEG access master control facility to support HD PEG access signal/data transport, as discussed in the *Technical Review Report* and the *Needs Assessment Report*.
- h. To link the NSCC's, the NSAC's, the Member Cities', and Ramsey County's facilities located in the NSCC franchise area, educational facilities located in the NSCC franchise area and other public and government buildings (libraries, public safety facilities and others) identified in the *Staff Report*, and the documents attached thereto, via reliable capacity on the institutional network (including capacity on the subscriber network) for a variety of two-way video, voice, and high-speed data communications with each other. We will use the term "institutional network" to refer to that portion of the cable system primarily designed to meet the needs and interests of non-residential customers, and the term "subscriber network" to refer to the network equipment and facilities primarily designed to serve residential customers. We do not mean to suggest, however, that an institutional network is for the benefit of institutions or that a portion of the subscriber network cannot be utilized to meet the communities' institutional network needs. It is, in fact, the intent of the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, and other public or government institutions to use the I-Net, which may include capacity on the subscriber network, in a way that will improve educational services in the community and that will allow government to provide and receive information and



serve the community more effectively. The institutional network should also permit the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, and other public or government institutions to increase the types and amounts of services provided and/or received, without increasing expenses. The subscriber “network” and the institutional “network” are both designed to deliver cable service and can be within the same fiber-optic and coaxial cable bundles.

- i. The facilities, equipment and capacity on the institutional network, including capacity on the subscriber network, that are devoted to educational and government use (and public/community use, to the extent Applicant proposes to allow the institutional network to be utilized for public/community access purposes), and the associated interface devices at each PEG location on the institutional network, including capacity on the subscriber network, should have the following characteristics:
  - i. Except has otherwise expressly provided in this Report and the RFRP, the capacity, facilities and non-end user equipment should be provided and be available at no charge to users, the NSCC, the Member Cities, the Ramsey County, educational institutions and the NSAC (to the extent public/community access capacity is made available on the I-Net), including (but not limited to), any and all paths required to transmit PEG signals originating throughout the Member Cities to and from the headend and to and from PEG access centers and control sites.
  - ii. Institutional network facilities and equipment should, at a minimum, provide the NSCC, the Member Cities, Ramsey County, educational institutions and institutional network users with the functionality and capabilities described in the *Needs Assessment Report*, the *Technical Review Report* and this Report (e.g., to permit video, voice and data to be originated and received at designated I-Net sites on a point-to-point, point-to-multipoint, and multipoint-to-multipoint basis).
  - iii. Institutional network facilities and equipment should, at a minimum, meet or exceed the network reliability and availability standards, and response and repair benchmarks specified in the *Technical Review Report*, as these standards and benchmarks may be modified based upon changes in technology and I-Net usage.
  - iv. Institutional network facilities and equipment should be available to government and educational locations (and public/community access location(s), if proposed) throughout the Member Cities, and should be able to meet the needs and interests in governmental and

educational use (and public/community use, if proposed) of the institutional network throughout the Member Cities.

- v. There should be sufficient capacity available to support user requirements over the proposed franchise term. This requires that capacity be as scaleable and expandable as needed, and that the system be designed so that it can be extended to new locations without deterioration in system capabilities. This also requires Comcast to furnish and install the devices necessary to provide activated useable capacity supporting the functionality required in the *Technical Review Report* attached to this Report.
- vi. The network needs to support integrated services that will include applications for voice, data, and video (one- and two-way) transmissions, and must be designed in a way to minimize the cost of I-Net end user equipment and interfaces.
- vii. The institutional network should be designed and constructed to be VLAN (IEEE 802.1q) aware and shall allow the NSCC and/or its designee(s) to provide Stacked VLAN (IEEE 802.1ad) without the need for management intervention from Comcast.
- viii. Locations requiring an institutional network connection solely for telemetry and monitoring purposes may be served by capacity, devices and facilities on the subscriber network sufficient to support the low- and moderate-speed connections required for those purposes, as long as the subscriber network devices, facilities and capacity are securely segmented (such as through encryption and VPNs) from the rest of the subscriber network.
- ix. There must be sufficient capacity available for educational and government (and, if proposed, public/community) use of an institutional network, including any I-Net capacity on the subscriber network, and all required network switches and other equipment so that there is sufficient throughput to allow all institutional network locations (including locations and sites connected via the subscriber network) simultaneously to use the system without meaningful interference with their applications. In addition, capacity must be provided in such a way so that users operating at different transmission speeds, or using different media, can cost-effectively use the institutional network and capacity on the subscriber network.
- x. There is a need for Comcast to provide 24/7 maintenance of the institutional network facilities and equipment it furnishes, including capacity on the subscriber network, including responding

promptly to demand maintenance at all hours and planned maintenance at regular intervals designed to keep the network in top operating condition without inhibiting ongoing applications and uses.

- xi. There is a need to be able to connect new or additional government and educational facilities (and public/community access facilities and origination sites, if proposed by Comcast) designated by the NSCC to the fiber-optic portion of the existing institutional network, via fiber-optic connections, at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities and other public or local government institutions.
- xii. There is a need and interest in equipment to enable I-Net users (including, but not limited to, PEG users and PEG managers) to transmit and receive secure signals to and from any point along the subscriber network, including to and from other I-Net users, and to and from any PEG access master control facility so that PEG signal/data may be routed onto the appropriate channel(s) on the subscriber network.

### ***Interconnection.***

Cable systems are no longer isolated enclaves. Rather, they enable subscribers and other users to gain immediate access to information from both within and outside a franchise territory. Satellite feeds and national networks already link cable systems to the world at large. Cable modems and high-speed Internet service allow a cable system to serve as a high-speed conduit for data and video delivered over the Internet. Cable system servers contain a variety of national, regional and local data that subscribers may retrieve at their convenience. In addition, fiber-optics connect cable systems around the country and enable cable operators to deliver national, regional and local advertising information, and regional and local programming.

Interconnection requirements represent a particular application of this connectivity. The NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities and PEG programmers must be able to utilize and take advantage of these capabilities and characteristics in order to ensure that unique information and programming (generated both inside and outside the Member Cities and on different networks within one or more Member Cities) can be accessed by and made available to the NSCC, the NSAC, Ramsey County, educational institutions in the Member Cities (*e.g.*, ISD Nos. 623, 621 and 282), other public and government institutions (*e.g.*, state agencies) and subscribers. Indeed, a number of focus group participants participating in the needs ascertainment indicated that more network connectivity is necessary.<sup>320</sup>

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<sup>320</sup> *Needs Assessment Report* at 26.

At the present time, the NSAC and a number of other local franchising authorities and PEG access facilities in the Twin Cities metropolitan area share video programming (both send and receive) across networks using the regional PRISMA fiber ring, which is accessed by fiber-optic I-Net connections between the NSAC's master control facility and the master headend and Shoreview hub.<sup>321</sup> The PRISMA ring is also utilized to route NASA programming on to Channel 98.<sup>322</sup> All these interconnection capabilities must be maintained in any renewal franchises.<sup>323</sup> Moreover, capacity on the PRISMA ring must be increased to a minimum of 50 Mbps, and maximum of 250 Mbps, as needed, on the NSAC's segment of the ring.<sup>324</sup> This upgrade will allow the exchange of significant amounts of HD PEG programming between networks over the life of renewal franchises. All fiber-optic I-Net sites used for PEG signal/data transmissions must be connected to the NSAC master control facility so that PEG access video programming can be further distributed on PEG access channels.

Thus, the NSCC and the Member Cities need to be able to require Comcast to interconnect with other networks (both inside and contiguous to the Member Cities), free of charge, during the term of any renewal franchises, for the bidirectional transport of both video programming and data. For example:

- On September 11, 2001, public safety agencies responding to the terrorist attacks on the Pentagon experienced difficulties in communicating via their diverse communications systems. Similar difficulties were experienced at the World Trade Center. These experiences underscored the need for immediate, highly reliable, high-capacity communications systems for purposes of homeland security. The institutional networks operated and managed by the NSCC, Roseville and other local jurisdictions form such a system. If they are effectively connected together, they can provide independent communications routes that are *independent of the public networks* and thus may be less affected by the "traffic jams" likely to occur in times of crisis on public networks. Such networks contribute to the overall redundancy and survivability of emergency communications systems in the Twin Cities metropolitan area.
- In addition to the institutional communications needs indicated above, the Member Cities also have an interest in extending emergency alert messages to reach workers and students that live outside their borders and in providing alerts to neighboring jurisdictions regarding emergency conditions inside one or more Member Cities that may affect those communities (such as conditions affecting air quality or traffic).

Both the needs ascertainment and past operational experience indicate that the I-Net shall be interconnected with (A) Points-of-Presence ("POPs") of other networks and systems utilized by the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, all other I-Net Users and their allied organizations, (B) other cable systems (including, but not limited to) other commonly

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<sup>321</sup> See, e.g., the *Technical Review Report* at 34 and 41.

<sup>322</sup> See, e.g., the *Needs Assessment Report* at 32 and the *Technical Review Report* at 34-35.

<sup>323</sup> This need is supported by, among other things, the consensus during focus group brainstorming sessions that there is insufficient ability to deliver content across city borders that needs to be met. See, e.g., the *Needs Assessment Report* at 22. The PRISMA ring can satisfy this need, at least in part.

<sup>324</sup> *Technical Review Report* at 42.

owned cable systems in the 7-county Twin Cities metropolitan area (e.g., via the PRISMA ring) and other cable systems located in and serving the Member Cities, and (C) Metro Cable Network Channel 6 to permit transmission and reception of video programming and other programming services. Comcast must allow for an open transport connection between the I-Net and the Points-of-Presence (“POPs”) of other networks and systems, and other autonomous public networks utilized by the NSCC, the NSAC, the Member Cities, Ramsey County, public educational institutions located in the Member Cities, other public or local government institutions, all other I-Net Users and their allied organizations. Additionally, Comcast must allow connections between the I-Net and telecommunication service providers for the provisioning of services required by the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, all other I-Net Users and their allied organizations. Every interconnection link established pursuant this Report and the RFRP shall, at a minimum: (A) be bidirectionally activated; (B) use fiber-optics or the functional equivalent; (C) allow for the seamless transmission of all required signals and data on both systems; and (D) be provided for the exclusive use of the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, and all other I-Net Users, free of charge. There is a related need for all interconnects/interconnection links to be VLAN (IEEE 802.1q) aware, and to allow the NSCC and/or its designee(s) to provide Stacked VLAN (IEEE 802.1ad) without the need for management intervention from Comcast.

Staff recommends that RFRP requirements be adopted for facilities and equipment consistent with the above. Moreover, in addition to meeting the requirements listed in the attached Request for Renewal Proposal, Comcast must provide facilities, equipment and capacity meeting the needs and interests outlined above.

## **B. OTHER DESIGN AND CAPABILITY ISSUES.**

Based on its ascertainment and developments in technology, and its own experience over the term of the current franchises, NSCC staff concludes that the Member Cities’ and their respective communities’ future cable-related needs and interests include the following:

- a. Necessary facilities and equipment must be placed at the master headend and cable system hubs in the Member Cities, as necessary, to ensure that signals flowing upstream and downstream can be routed to the proper locations.
- b. There is a need and interest in having cable system facilities available to as many residences and businesses as possible throughout the Member Cities. This is a particularly important need, given the benefits of an advanced system that are discussed elsewhere in this Report. These benefits would extend to businesses, residents and the Member Cities themselves, in terms of economic development, entertainment, the exchange of information, and efficient internal and external communications.

- c. A proposal for a cable system should include provisions that ensure that the cable system will stay abreast of developments in the industry over the franchises' term, so that the NSCC, the NSAC, the Member Cities and their communities of interest can take advantage of changes in technology and so that community cable-related needs and interests will continue to be met. Among other things, an appropriate provision should permit the NSCC, on behalf of the Member Cities, to require further upgrades of the technical capabilities of the cable system (including construction of additional two-way links between public buildings and the creation of additional system capacity); to require upgrades and improvements to I-Net facilities and equipment (including capacity on the subscriber network); and to require additions and improvements to the facilities, equipment and other support required for PEG access use.
- d. The system should be designed so that institutional network users can (physically or virtually) "co-locate" facilities or equipment at the cable system's headend, control centers and major backbone facilities such as hub sites and optical transfer nodes (and access that equipment as necessary for maintenance and repairs).
- e. The system should be capable of providing and supporting advanced services, including digital services and state-of-the-art PEG applications.
- f. The system should be capable of narrowcasting government access signals originated, produced and transmitted by a Member City, the NSCC and/or the NSAC on a single PEG access channel (currently denominated as "Channel 16") on Comcast's subscriber network so that those signals may be viewed by subscribers located solely within the boundaries of the Member City. This capability should be available to all the Member Cities, free of charge.
- g. Comcast's cable system facilities and equipment must be maintained and operated in a safe manner that comports with applicable technical and safety standards, industry "best practices" and equipment manufacturer specifications. In this regard, there is a need and interest for Comcast to institute or maintain a routine and preventative maintenance program that is designed to regularly inspect all cable system infrastructure from the headend and all hubs up to and including subscribers' residences and business locations. Comcast should regularly provide the NSCC with documentation describing or specifying: (i) all problems found; (ii) the date(s) particular problems are identified; (iii) all steps taken to resolve identified problems; and (iv) the date(s) identified problems are ultimately resolved.
- h. The NSCC, or its designee(s), should have the authority to inspect and test Comcast's cable system in order to determine if it is being operated and

maintained in accordance with applicable rules, codes, standards and specifications.

- i. There is a need and interest in advanced services, including interactive services, digital programming and services and high-definition programming and services. This need and interest applies for both PEG and non-PEG applications.

## **C. SUPPORT FOR PUBLIC, EDUCATIONAL AND GOVERNMENT USE.**

### *1. Federal Law.*

As Congress noted when it first passed cable legislation:

One of the greatest challenges over the years in establishing communications policy has been assuring access to the electronic media by people other than the licensees or owners of those media. The development of cable television, with its abundance of channels, can provide . . . the meaningful access that . . . has been difficult to obtain.

Almost all recent franchise agreements provide for access by local governments, schools, and non-profit and community groups over so-called “PEG” (public, educational, and governmental) channels. Public access channels are often the video equivalent of the speaker’s soap box or the electronic parallel to the printed leaflet . . . PEG channels also contribute to an informed citizenry by bringing local schools into the home and by showing the public local government at work.<sup>325</sup>

Given the important policy considerations underlying Public, Educational and Governmental (“PEG”) access, Congress empowered local franchising authorities to establish PEG access requirements as part of the franchising process. Under the Cable Act, PEG requirements may take several forms.<sup>326</sup> Franchising authorities can require operators to designate channels for public, educational and governmental use in an RFRP. Franchising authorities can also establish requirements for equipment and facilities – for example, requirements for studios, lights, cabling, editing computers and cameras. In addition, franchising authorities can establish rules for the management and use of the facilities and channels devoted to PEG use. Furthermore, franchising authorities can enforce promises for broad categories of programming or other services made by a cable operator. In any event, before issuing a franchise, a franchising authority can insist that a cable operator “provide adequate public, educational, and governmental access channel capacity, facilities or financial support.”<sup>327</sup> This section will focus on what the NSCC’s needs assessment shows with respect to specific requirements for channel capacity, facilities and equipment, and

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<sup>325</sup> 1984 House Report at 30, 1984 U.S.C.C.A.N. at 4667.

<sup>326</sup> 1984 House Report at 68, 1984 U.S.C.C.A.N. at 4705 (franchising authorities may require, among other things, “satellite earth stations, uplinks, studios and productions facilities, vans and cameras for PEG use”).

<sup>327</sup> 47 U.S.C. § 541(a)(4)(B).

capital and operating support for PEG use, in addition to those network requirements, needs and interests described above.

## 2. *National trends.*

While there are certainly many communities that have no PEG channels, communities that have concluded that PEG requirements serve important community needs and interests often require three or more channels. That is because the programming interests of the public, educational and governmental entities that use the channels are diverse. Public/community access is generally regarded as a modern electronic “soapbox” that permits citizens to speak to their community on virtually any subject. Educational access typically enables schools to communicate with parents and students. Some school systems utilize their access channel(s) to provide courses to homebound students, while other others cablecast sporting events and provide information on lunch menus, school policies and school closings. Government access usually functions as a mechanism by which government officials and employees communicate with their constituents, and the public is afforded an opportunity to see government at work (*e.g.*, through cablecast city council meetings). Separating the PEG channels by use allows different user groups to schedule and develop programming of a particular genre and ensures that viewers have a general idea as to the type of programming that will be available on each channel. This is important to building a channel identity and a programming schedule that can attract viewers on a regular basis. In addition, providing for adequate access from the outset avoids potential subscriber disruption that could occur if a community begins with too few channels and must displace channels in order to obtain adequate capacity. If it turns out that there is not enough programming, a cable operator can use the PEG channel capacity for its own purposes, as provided in the Cable Act.<sup>328</sup>

There are many communities where operators have devoted substantial system capacity to PEG use.<sup>329</sup> They are located across the country. In Portland, Oregon, for example, a municipality with a population of 593,820, Comcast, the local cable operator, dedicated at least eight (8) SD channels for PEG access use, and agreed to a process and formula by which the city could obtain HD PEG channel capacity. Another Comcast franchise in Cambridge, Massachusetts, a city of approximately 106,038, requires at least six access channels, with two additional channels available after 6 months notice from the city if programming minimums are met. In the Bronx, New York, the Borough initially received 9 PEG channels, with an option to add more channels.

As cable systems transition to digital signal delivery, communities that have significantly invested in their PEG operations now have shown needs for high-definition (“HD”) PEG channels, PEG video-on-demand (“VOD”) and the listing of local PEG programming on an interactive on-screen electronic programming guide (“EPG”) available to subscribers. Some of the cities that have franchise commitments for HD PEG channels, PEG VOD and placement on a cable operator’s EPG are: the Bronx, New York; Cambridge, MA; Chicago, Illinois; East Multnomah, Oregon; Fairfax County, Virginia; and Portland, Oregon. The experience of these and other communities suggests that substantial channel capacity, and additional cable system resources, such as server space and equipment for PEG VOD, and facilities, equipment and

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<sup>328</sup> See 47 U.S.C. § 531(d)(1).

<sup>329</sup> See, *e.g.*, <[www.buskegroup.com](http://www.buskegroup.com)> (visited July 16, 2013).



software for the insertion of PEG programming descriptions on a cable operator's EPG, should be devoted to PEG use.

It is also generally recognized, however, that channels, bandwidth and digital services alone are not enough. Resources must also be available to enable potential users to produce programming that is of value. The channels need to be publicized; potential users need to be trained; equipment and facilities need to be available to produce high-quality programming (audio and video must be satisfactory); equipment and facilities need to be available to edit programming; and necessary facilities and equipment need to be in place in order to send signals to the headend from origination points and then to subscribers via the system headend and hubs. It is difficult for PEG access to succeed without these resources. Many franchise agreements contain substantial commitments by cable operators to provide support for PEG access in addition to providing a 5% franchise fee to the community.<sup>330</sup> In Portland, Oregon, for example, the operator provides 3% of its gross revenues for capital support, and provides substantial studio space for an independent, non-profit access corporation. In Cambridge, Massachusetts, Comcast agreed to pay \$1.19 million for prior franchise noncompliance, plus an additional \$500,000 and ongoing support of \$141,333 per year. In the Twin Cities, many metro area cable commissions and local franchising authorities receive PEG support from their cable operator, over and above a 5 percent franchise fee, that is approximately \$1.00 to \$2.00 per subscriber per month (and in some cases over \$4.00 per subscriber per month). In the City of Minneapolis, Minnesota, Comcast agreed to pay \$3.5 million upfront (as part of a settlement of non-compliance issues) and a per subscriber PEG fee that is expected to generate an additional \$13-\$16 million over the course of the city's franchise with Comcast.

PEG use is changing as cable technology changes. Access centers originally were concerned with the provision of video programming, just as cable operators focused on the provision of video programming. A number of access centers are now evolving into community media centers, which provide people in the community opportunities to take advantage of the Internet, and cable's new technical capabilities to provide diverse, multimedia information to the home (and to provide everyone in the community the opportunity to participate in the Information Age).<sup>331</sup>

Because Comcast has moved to a fully digital system in the Member Cities, PEG channel signal quality has become an important issue. Unlike analog channels, digital channels are very sensitive to interference and are either "on" or "off," as opposed to degrading before they can no longer be viewed. This particular characteristic is highlighted by the problems several PEG access operations in the Twin Cities area had with their PEG channels after Comcast moved them to an area of the frequency spectrum that suffered from radio signal interference. In particular, PEG channels "froze" with pixilation or could not be viewed at all. Recognizing the need for high-quality PEG signals, one of the many conditions the FCC imposed on Comcast as part of the Comcast/NBC Universal merger was a requirement that Comcast commence a pilot

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<sup>330</sup> *Id.*

<sup>331</sup> The Saint Paul Neighborhood Network, the Grand Rapids Community Media Center and Grand Rapids Television provide interesting examples of this development.

program to enhance existing PEG channel carriage.<sup>332</sup> This condition required Comcast to refrain from implementing any change in the method it utilizes to deliver PEG channels that would result in a material degradation of signal quality or impair the reception of PEG channels.<sup>333</sup> Moreover, Comcast must continue to meet FCC signal quality standards when offering PEG channels on its cable systems and must continue to comply with closed captioning pass-through requirements.<sup>334</sup> Thus, there is clearly a national effort to ensure that PEG channels are treated no differently than commercial channels carried on cable systems.

In sum, the developments in communities across the country that have determined PEG access can serve important community needs and interests suggest that (i) multiple channels should be devoted to PEG use (both SD and HD); (ii) operators should provide substantial support for PEG access, in addition to the franchise fee (e.g., PEG VOD); and (iii) PEG access requirements should be structured to enable the community to take full advantage of advances in cable technology, including advances in interactivity and in digital capacity. Most importantly, PEG operations vary across the country primarily based on local needs and interests. In the NSCC franchise area, the community needs and interests are so substantial that they support the need for multiple PEG channels, modern studio facilities and equipment, and remote video origination sites. In almost every case, nationwide, these types of PEG resources and channels are available for use at no charge from the cable operator. That should continue to be the case in the Member Cities.

### 3. *The results of the needs ascertainment in the Member Cities.*

The NSCC and its Member Cities have long considered PEG access an important community need and interest. This fact is reflected by the numerous PEG and PEG-related provisions contained in the current cable franchise ordinances. For instance, in its existing franchises for the Member Cities, Comcast (through its predecessor in interest) agreed to dedicate 12 channel(s) for PEG access and community programming (of which 8 are currently in use).<sup>335</sup> The Member Cities and Comcast also provided for all of the Member Cities' residents to receive the PEG channels.<sup>336</sup> In a separate agreement, Comcast and the NSCC agreed that the PEG channels would be universally accessible by all residents in the Member Cities. The franchises also give the NSCC the right to rename, reprogram, or otherwise change the use of the PEG channels in its sole discretion and provide the Member Cities with the ability to add PEG channels pursuant to Minn. Stat. § 238.084.<sup>337</sup> In addition, the franchises protect PEG channel numbers and contain PEG channel relocation restrictions.<sup>338</sup> Perhaps most importantly, Comcast and the Member Cities agreed in the current cable franchises, the 1994 Memorandum of Understanding and the 1990 "Resolution Transferring Community Television Programming

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<sup>332</sup> See *In re: Applications of Comcast Corporations, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licenses*, FCC 11-4, at § XIV (Rel. Jan. 20, 2011) <http://corporate.comcast.com/images/FCC-Order-on-NBCU.pdf>

<sup>333</sup> *Id.*

<sup>334</sup> *Id.*

<sup>335</sup> See Cable Franchise, § 6(1)(b); Access Transfer Agreement, ¶¶ 5-6 (May 9, 1990).

<sup>336</sup> See Cable Franchise, § 6(1)(b) ("All residential Subscribers who receive all or any part of the total services offered on the System shall be eligible to receive such channels at no additional charge.")

<sup>337</sup> See Cable Franchise, § 6(1)(b).

<sup>338</sup> See Cable Franchise, at § 6(1)(c).

Responsibilities” to provide adequate funding, facilities and equipment for PEG access.<sup>339</sup> All of this support is provided over and above the 5% franchise fee paid to the Member Cities. That should continue to be the case in any renewal franchises.

Staff has now re-examined the community’s cable-related needs and interests for PEG access. The results of the ascertainment in the Member Cities show that there is still every reason to continue making PEG use of the cable system a high priority.

(i) *Background on PEG Access in the Member Cities.*

In 1990, the NSCC’s Member Cities agreed to transfer PEG access management responsibility from the cable operator to the North Suburbs Access Corporation/CTV North Suburbs (the “NSAC” or “CTV”), a nonprofit organization established by the NSCC under Minnesota law for this purpose. CTV is governed by a board of directors representing each of the ten Member Cities. CTV delivers the communities’ PEG access signals to Comcast’s headend, manages the public/community access studio facility located 2670 Arthur Street Roseville, produces video programming that is carried on the PEG channels, and encourages and promotes public use of the cable system.<sup>340</sup> The stated goals and purposes for the NSAC are as follows:

- to deliver high quality, timely programs via cable communications;
- to anticipate, plan for and adapt to changes in communications technology;
- to increase awareness and encourage the use of cable communications as a means of sharing information in and among the Member Cities;
- to promote awareness of and use by individuals and institutions, such as schools, government and civic groups; and
- to train and educate producers, users and others who request help.<sup>341</sup>

CTV delivers eight channels to the Comcast’s cable system headend for distribution to subscribers in the Member Cities: local government, sports and community programming on channels 14, 15, and 16; local educational programming from Independent School Districts 623, 282 and 621 on channels 18, 19 and 20, respectively; non-local programming on channel 21; and satellite programming (e.g., NASA TV) on channel 98.<sup>342</sup> The NSAC and its producers have received over 40 programming awards in national competitions: 33 from the Alliance for Community Media’s annual “Hometown Video Festival;” and nine from NATOA’s annual “Government Programming Awards.”<sup>343</sup> CTV currently has 15 full-time staff (plus four part-time receptionists and several interns and as-needed truck technicians) to handle a variety of management, outreach, training, production, programming, and promotional activities.<sup>344</sup>

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<sup>339</sup> See Cable Franchise, at § 6(4)-(5); Memorandum of Understanding, ¶¶ 6 and 8 (Nov. 3, 1994); Access Transfer Resolution/Agreement, ¶¶ 7-11 (May 9, 1990).

<sup>340</sup> See <http://www.ctv15.org/index.php/nsacnsc/nsc/about.html> (last visited July 15, 2013).

<sup>341</sup> *Id.*

<sup>342</sup> See the *Needs Assessment Report*, Exhibit B, at 32.

<sup>343</sup> *Id.*

<sup>344</sup> *Id.*

Although CTV was established to manage public access services, including programming the public access channels, the organization has evolved into a community media center providing a variety of services to the Member Cities and to the educational community, both K-12 and higher education, as well as to the public, both individuals and organizations. CTV equipment and facilities are available for use by government and educational access producers, and CTV staff furnishes a range of services to public, educational and government producers, including training and production assistance. For example, CTV provides production facilities and assistance to a program called “Disability Viewpoints,” produced by and for those with disabilities. CTV’s mobile production trucks, along with a truck technician, are used to cover sports events and concerts at the schools and universities in the Member Cities and for parades and festivals in the Member Cities. Although most of the Member Cities have hired their own staff to cover their city council meetings, they call on CTV staff for the production of informational programs and documentaries about city events and services.

CTV places special emphasis on engineering, with several of its full-time staff members involved in engineering matters, including a “Senior Technician,” “Senior Technician/Facilities Coordinator,” “IT Coordinator,” and “Technical Services Manager.”<sup>345</sup> As a result, CTV can provide technical services to its Member Cities and can extend the life of its equipment by performing repairs and maintenance in-house. One other result of this emphasis is CTV’s leadership in the PEG access field with respect to the ability to transmit live, multiple-camera remote field productions and actually do this on a regular basis.<sup>346</sup> During 2008-2010, CTV reported that a total of 638 remote field productions were created by crews of CTV volunteers and engineered by a CTV technician (this figure greatly exceeds the number of multiple-camera remote field productions that TBG has reported occurring in the scores of communities where it has provided consulting services).<sup>347</sup> Many of these productions earned several of the national awards mentioned above.<sup>348</sup>

#### Channel 14

Because the city council and other city meetings on each Member City’s “narrowcasted” Channel 16 are seen only within the boundaries of the individual city, the NSCC saw a need to aggregate those meetings on a channel that could be seen throughout all ten cities. So, Monday through Wednesdays, Channel 14 is reserved for government programming, including the Ramsey County Board meetings. On Thursdays through Sundays, Channel 14 is reserved for local sports programming, which was moved from Channel 15 when the amount of programming increased to the point that time for scheduling was unavailable. Sports programming on Channel 14 is produced mainly by community producers and CTV staff, with additional support furnished by volunteers.

All of the video programming carried on Channel 14 is managed and scheduled by CTV. The Member Cities own the equipment in their council chambers used to produce programming carried on Channel 14. CTV is responsible for getting video programming on to Channel 14

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<sup>345</sup> *Id.*

<sup>346</sup> *Id.*

<sup>347</sup> *Id.*

<sup>348</sup> *Id.*

from a technical perspective (*e.g.*, CTV staff is responsible for transporting it to the PEG access master control facility from the origination point and to Comcast's hub/headend for distribution on the subscriber network, etc.). Exhibit H contains a sample weekly program listing for Channel 14.

#### Channel 15

Community producers, volunteers and CTV staff produce the programming carried on Channel 15 (*e.g.*, they operate the equipment, perform editing, etc.). CTV (limited by its policies, *i.e.*, technical qualifiers concerning distorted audio and/or video) has editorial control over the scheduling on Channel 15 and has managerial control over the channel.

Some volunteers incorporate their equipment into the production of programming (home editing software, external hard drives, and cameras), but CTV owns the equipment used to produce most of the programming carried on Channel 15. CTV is responsible for getting video programming on to Channel 15 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control from the origination point and to Comcast's hub/headend for distribution on the subscriber network, etc.). Exhibit H contains a sample weekly program listing for Channel 15.

#### Channel 16

Member City and CTV staff produce the programming carried on Channel 16. The Member Cities, however, have managerial and editorial control over what programming is produced and cablecast on Channel 16 (*e.g.*, who decides what programming is produced). The Member Cities and CTV are the primary owners of the equipment used to produce programming carried on Channel 16.

With the exception of Arden Hills and New Brighton, CTV is responsible for getting video programming on to Channel 16 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control from the origination point and to Comcast's hub/headend for distribution on the subscriber network, etc.).

#### Channel 18

ISD No. 623 staff manages, produces and has editorial control over the programming carried on Channel 18 (*e.g.*, they operate the equipment, performs editing, etc.). The school district also employs the people who produce programming on Channel 18. ISD No. 623 is responsible for getting video programming on to Channel 18 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control from the origination point, where CTV is responsible for transporting programming carried on Channel 18 to Comcast's hub/headend for distribution on the subscriber network, etc.). However, approximately 90% of the equipment used to produce programming carried on Channel 18 is owned by CTV with the remainder owned by ISD No. 623.

#### Channel 19

ISD No. 282 staff produces the programming carried on Channel 19 (*e.g.*, they operate the equipment, perform editing, etc.). The St. Anthony-New Brighton School District employs the people who produce programming on Channel 19 and owns the equipment used to produce the programming on Channel 19. ISD No. 282 staff manages and has editorial control over what programming is produced and cablecasted on Channel 19 (*e.g.*, who decides what programming is produced).

CTV, however, is responsible for getting video programming on to Channel 19 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control from the origination point and for transmitting programming carried on Channel 19 to Comcast's hub/headend for distribution on the subscriber network, etc.).

#### Channel 20

ISD No. 621 staff manages, produces and has editorial control over the programming carried on Channel 20 (*e.g.*, they operate the equipment, perform editing, etc.). CTV assists with additional production. The school district and CTV employ the people who produce programming on Channel 20. ISD No 621 owns the equipment used to produce programming carried on Channel 20. CTV is responsible for getting video programming on to Channel 20 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control facility from the origination point and for delivering programming carried on Channel 20 to Comcast's hub/headend for distribution on the subscriber network, etc.).

#### Channel 21

Non-local producers, *i.e.*, those who live outside the Member Cities, produce the programming on Channel 21 (*e.g.*, they operate the equipment, perform editing, etc.). CTV manages and has editorial control over what programming is cablecast on Channel 21. CTV is also responsible for getting video programming on to Channel 21 from a technical perspective (*e.g.*, it is responsible for transporting it to the CTV master control from the origination point and for transporting programming carried on Channel 21 to Comcast's hub/headend for distribution on the subscriber network, etc.). Exhibit H contains a sample of a weekly program listing for Channel 21.

#### Channel 98

NASA primarily produces the programming carried on Channel 98, with some additional programming by CTV staff. For the programming produced by CTV, the NSAC employs the producers and owns the equipment. CTV has managerial and editorial control over what programming is produced (by CTV) and cablecast on Channel 98. CTV has no editorial control over NASA programming, but can control when it chooses to cablecast NASA programming on Channel 98. CTV is responsible for getting video programming on to Channel 98 from a technical perspective. This particular channel is desired by subscribers because it provides national governmental programming of local interest.

(ii) *Public and Community Access, Educational Access and Governmental Access.*

Based upon the findings and conclusions in the *Needs Assessment Report*, the *Telephone Survey Report*, and the *Technical Review Report*, national trends, best practices, and staff's own experience, NSCC staff has identified the cable-related needs and interests discussed below.

**PEG Channels Provide Local Programming Desired by Residents of the Member Cities.**

As TBG concluded based upon its surveys and focus group meetings,

[i]f PEG Access is to continue and be able to meet the needs and interests identified by the public during the needs assessment process in the NSCC franchise area, the current levels of capital and operations funding and in-kind support must be maintained and enhanced during the term of the next Franchise Agreement. The quantity and quality of PEG Access services in the future will be dictated to a large degree by the level of funding available from the NSCC and Comcast. CTV will also need to expand their efforts to obtain funding and in-kind support from a variety of other sources.<sup>349</sup>

This conclusion makes sense and is entirely reasonable based upon the findings in the *Needs Assessment Report* which show a very high level of support for significant PEG access bandwidth/capacity and resources and an appreciation of the importance of PEG access services in the Member Cities.<sup>350</sup> In this regard, extremely high percentages of the respondents to the focus group questionnaire, on-line survey, and telephone survey said it is "Important" or "Very Important" to have local cable TV channels that feature programs about local residents, organizations, schools, government, events and issues.<sup>351</sup> These responses indicate there is a very positive attitude about and a significant need for PEG channels that deliver local programming and services.<sup>352</sup>

PEG access channels are unique in their ability to deliver regularly scheduled local programming to cable subscribers.<sup>353</sup> Local broadcast stations stopped providing a significant amount of local programming years ago and are now content to rely primarily on nonlocal network and syndicated programs.<sup>354</sup> While videos distributed on the Internet (via YouTube and other sites) offer another alternative to broadcast and satellite-delivered stations for local content, audience measurement companies report that the number of people who watch programs online are currently very small, in comparison to those who watch on cable television.<sup>355</sup> In addition, YouTube and the other online outlets do not provide the outreach, training, production assistance, and promotional services available at CTV and other PEG access centers throughout the United States that are necessary to enable community producers to create video programs with good production values that do not detract from the effort to get their messages out to the

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<sup>349</sup> See the *Needs Assessment Report*, Exhibit B, at 71.

<sup>350</sup> See the *Needs Assessment Report*, Exhibit B, at 62.

<sup>351</sup> *Id.*

<sup>352</sup> *Id.*

<sup>353</sup> *Id.*

<sup>354</sup> *Id.*

<sup>355</sup> *Id.*

public.<sup>356</sup> The demand for high-quality local programming on PEG channels is underscored by the fact that over three-fourths of the respondents to the focus group/on-line survey and about half of the telephone survey respondents said they had watched a PEG channel. Strong majorities of the respondents also said that CTV provides a valuable public service as a source of local programming.<sup>357</sup>

The need for local programming for the Member Cities' growing and increasingly diverse population is also an important community need and interest.<sup>358</sup> The *Needs Assessment Report* found that the Member Cities' populations are becoming more ethnically and culturally diverse and are aging.<sup>359</sup> This diversity affects all of the public institutions in the Member Cities.

### **PEG Channels and PEG Programming Descriptions/Information on Comcast's Electronic Programming Guide and Promotion for PEG Access.**

About 45% of all cable subscribers responding to Group W's telephone survey said they most often use Comcast's on-screen electronic guide to find programming information, far more than any other method.<sup>360</sup> When representatives of interest groups, institutions and organizations were asked if there were services not currently provided by NSCC/CTV that they would like to receive, placing PEG channels on the Comcast's electronic programming guide was identified.<sup>361</sup> Indeed, focus group participants identified the inability to find CTV's program schedule, a general lack of awareness of CTV's services and the absence of the PEG channels and programming descriptions on the cable system's interactive programming guide as problems that should be addressed in any renewal franchise.<sup>362</sup>

Accordingly, staff finds there is a need and interest in requiring full program listings and descriptions for PEG access programming on Comcast's on-screen interactive electronic programming guide, free of charge.<sup>363</sup>

### **PEG Video on Demand ("VOD").**

As Comcast expands the capabilities of its system for commercial purposes, it must similarly expand the capabilities of the portion of the system that is dedicated for PEG use. For example, now that Comcast is delivering video-on-demand for commercial purposes, it must also provide the facilities and equipment required to permit the provision of PEG programming on demand. Because the RFRP does not require Comcast to provide particular services or to use specific transmission technologies, the communities' requirements for PEG capacity must be understood to extend to forms of system capacity that may not yet exist, so that the NSCC's, the NSAC's, the school districts' and the Member Cities' PEG access arrangements are not made obsolete by system improvements Comcast may decide to implement in the NSCC franchise area.

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<sup>356</sup> *Id.*

<sup>357</sup> *Id.*

<sup>358</sup> See the *Needs Assessment Report*, Exhibit B, at 44.

<sup>359</sup> *Id.*

<sup>360</sup> *Id.* at 3 and 8.

<sup>361</sup> *Id.* at 44 and 55.

<sup>362</sup> See the *Needs Assessment Report*, Exhibit B, at 23 and 51.

<sup>363</sup> See, e.g., the *Needs Assessment Report*, Exhibit B, at 60.



Accordingly, there is a need and interest in having Comcast provide facilities and equipment to make on demand capacity available to PEG users.

This particular need is supported by the *Needs Assessment Report*<sup>364</sup> and the national franchising trends discussed above.

### **PEG Access Channel Relocation.**

NSCC is aware that, from time to time, PEG channels are moved from one channel location to another, thus making it more difficult for viewers to find and use those channels (and preventing the channels from developing a clear identity). Significant resources have been expended by PEG access channel operators to develop and market distinct channel identities. Changes in channel position could confuse subscribers and decrease viewership and the availability and consumption of important information. Moreover, some channel locations are not as good as others and are subject to interference. Placing an access channel so that a good quality signal cannot be delivered to subscribers is akin to not providing the channel at all. Further, it is important that the availability of public/community access resources be publicized. Accordingly:

- a. There is a need and interest in ensuring that PEG access channels are provided and publicized in a way so that they are easily identifiable and viewable.
- b. There is a need and interest in ensuring that current PEG access channel positions, numbers and locations (including location in the frequency spectrum on Comcast's cable system) are not changed without the prior approval of the NSCC or its designee(s), such as the NSAC. Comcast should reimburse the NSCC (or appropriate PEG access channel operator) for all costs incurred by the access channel operator in moving a channel, if permission is granted, as described in the RFRP.
- c. There is a need and interest that all PEG access channels/PEG capacity dedicated by Comcast resides in a portion of spectrum that is not susceptible to significant degradation, and that will permit PEG access producers and users to generate a high-quality signal that can be received by subscribers. The cable system should not prevent PEG access picture and audio quality from meeting or exceeding the picture and audio quality of the best local broadcast channel (ABC, CBS, NBC and Fox) carried in the cable system in the same form (e.g., SD or HD).

### **PEG Access Channel Placement on the Cable System.**

With regard to PEG channel placement, the *Needs Assessment Report* recommended:

[a]s long as there are SD channels in the lowest cost tier of service, PEG Access SD channels should be grouped together within that tier. In addition, PEG Access HD channels should be grouped together within the lowest cost HD tier. The inclusion of PEG

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<sup>364</sup> See the *Needs Assessment Report*, Exhibit B, at 44, 55 and 67.

Access channels in the lowest cost tier of service and the grouping of similar types of channels are standard practices in the cable industry, in keeping with the spirit of the Cable Act's expressed support for PEG Access and for the convenience of subscribers.<sup>365</sup>

Staff agrees with TBG's recommendations.

Based on the foregoing, there is a need and interest in keeping all SD PEG channels in the same neighborhoods as the major local broadcast networks' primary SD channels (ABC, CBS, Fox and NBC) during the term of a renewal franchise. HD PEG channels must be maintained in the same neighborhoods as the major local broadcast networks' primary HD channels (ABC, CBS, Fox and NBC) during the term of a renewal franchise. PEG channels, should always be placed on the lowest cost tier of service available for any given transmission or channel format (e.g., the lowest cost HD service tier).

***PEG Access, PEG Access Transport, and I-Net Equipment and Funding.***

TBG concluded in the *Needs Assessment Report* that many items in the CTV equipment inventory are over 10 years old and need to be replaced/updated soon, including several camcorders and other field production items; video editing system components; studio production cameras, lights, tripods, switchers and recorders; equipment in CTV's production trucks; and master control components. In addition, much of the production equipment in the Council Chambers of the 10 Member Cities needs to be replaced/updated.<sup>366</sup> TBG further concluded that CTV's field production, editing, studio, and master control equipment, and the member cities' Council Chambers equipment should be upgraded to enable the recording and transmission of programs in both standard definition ("SD") and high definition ("HD") formats.<sup>367</sup> Similarly, CBGCI found that PEG access transport equipment needs to be upgraded to accommodate and support HD-SDI PEG signal/data transmissions.<sup>368</sup> Certain I-Net equipment also needs to be replaced.<sup>369</sup>

The *Needs Assessment Report* suggests that the communities support or want these types of enhancements. For instance, focus group participants indicated they are generally willing to pay more for PEG channels than other channels carried on the cable system.<sup>370</sup> Moreover, in small group meetings conducted by TBG, several respondents indicated that CTV's equipment needed improvements.<sup>371</sup> Examples of desired improvements include (i) the acquisition of high-definition equipment, (ii) the availability of laptop computers for video editing that can be checked out of the CTV facility and (iii) "portable, multiple-camera systems (that can be checked out of the CTV facility)."<sup>372</sup> When asked, "[w]hat resources/services do you currently receive as a result of the Comcast franchise agreement that you feel should be retained under a

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<sup>365</sup> See the *Needs Assessment Report*, Exhibit B, at 66.

<sup>366</sup> See the *Needs Assessment Report*, Exhibit B, at 53.

<sup>367</sup> *Id.*

<sup>368</sup> See, generally, Section III of the *Technical Review Report*, Exhibit A to this Report.

<sup>369</sup> See, generally, Section II of the *Technical Review Report*, Exhibit A to this Report.

<sup>370</sup> See the *Needs Assessment Report*, Exhibit B, at 10-11.

<sup>371</sup> See the *Needs Assessment Report*, Exhibit B, at 14.

<sup>372</sup> See, e.g., the *Needs Assessment Report*, Exhibit B, at 14, 25, and 27.

renewed franchise . . .,” needs assessment meeting attendees answered, “funding for media/video production . . .”<sup>373</sup> Likewise, during the brainstorming portion of the focus group sessions held by TBG, equipment upgrades and more funding for PEG equipment maintenance and replacement were cited as top needs for PEG access in the Member Cities.<sup>374</sup>

Thus, in addition to the specific facilities and equipment that are outlined in other parts of this Report and otherwise required to meet identified needs and interests, there is a need and interest in capital funds for facilities and equipment to be used in conjunction with the PEG channels/capacity and the institutional network, as specified in the *Needs Assessment Report* and the *Technical Review Report*. These funds are required to purchase and replace equipment over time; to upgrade, expand and modify facilities to satisfy changing needs; to obtain and replace office equipment and related support structures (e.g., computer systems and software, tables, desks, etc.); and to lease the current community media facility. Without adequate capital support, PEG and institutional network users will not be able to make effective use of PEG and I-Net channels/capacity, equipment and facilities.

In order to meet identified cable related needs and interests for PEG access equipment, TBG concluded current levels of capital and in-kind support must be maintained and enhanced over the life of any renewal franchises.<sup>375</sup> CBGCI has determined that additional capital funding is necessary for I-Net and PEG signal transport equipment.<sup>376</sup>

Based on the *Needs Assessment Report* and the *Technical Review Report*, NSCC staff has identified equipment and other capital funding needs for PEG access and the I-Net totaling approximately \$14 million over a franchise term of 10 years.<sup>377</sup> The *Needs Assessment Report* found PEG equipment needs of approximately \$12 million, with an immediate need of about \$8 million in year one of a renewal franchise.<sup>378</sup> The *Technical Review Report* identifies and supports I-Net equipment and other capital needs that total a little over \$1 million.<sup>379</sup> Staff has ascertained an additional capital need of \$1.1 million over a ten-year term in the form of capital lease payments for the NSCC/NSAC community media center. After careful deliberation, staff has concluded that its capital needs should be met and capital grants should be paid through a phase-in approach during the course of a 10-year franchise, rather than seeking the bulk of funding in an up-front grant, as recommended by the *Needs Assessment Report*.<sup>380</sup> In order to phase in the necessary capital grants, NSCC staff recommends that annual capital grants be provided in accordance with the schedule set forth in the RFRP and Exhibit G.

Staff has also calculated and documented its need for operational funding to be approximately \$1.3 million per year, with a modest annual cost adjustment of up to two percent, as described in

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<sup>373</sup> See the *Needs Assessment Report*, Exhibit B, at 44.

<sup>374</sup> See the *Needs Assessment Report*, Exhibit B, at 51.

<sup>375</sup> *Id.* at 64, 69, and 71-72.

<sup>376</sup> See, generally, Sections II and III of the *Technical Review Report*.

<sup>377</sup> During informal franchise renewal discussions, Comcast indicated that it was interested in a 10-year franchise. Staff believes a franchise term of 10 years is reasonable in light of the communities’ needs for capital and operating support.

<sup>378</sup> See the *Needs Assessment Report*, Exhibit B, at Appendix 5.

<sup>379</sup> See, generally, Sections II and III of the *Technical Review Report*, Exhibit A.

<sup>380</sup> *Id.*

more detail in Exhibit G.<sup>381</sup> The \$1.3 million base amount reflects the current level of operating support. Staff believes a small escalator of up to 2% is reasonable to ensure that a consistent amount of operating support is received during any renewal franchise term. Moreover, the inclusion of a discretionary escalator allows the NSCC/NSAC to address its operating needs each year before requesting any increase in support that may be passed through to subscribers. This approach is rooted in almost 25 years of history and a longstanding and productive partnership between the Member Cities, the NSCC and the franchised cable operator in the NSCC franchise area.

As part of a 1990 “Resolution Transferring Community Television Programming Responsibilities from Group W Cable of the North Suburbs, Inc., d/b/a Cable TV North Central”(the “Access Transfer Resolution”), the responsibility for day-to-day management and operations of public/community programming activities in the Member Cities was transferred to the NSCC. The NSCC, in turn, set up the North Suburbs Access Corporation to promote, oversee and operate a community media center to meet the communities’ public/community access needs. Under the Access Transfer Resolution, Cable TV North Central voluntarily agreed to make certain cash payments to the NSCC in order to support public/community access. One of those commitments is the annual payment of operating support for the NSAC. Both the Access Transfer Resolution and the November 3, 1994, Memorandum of Understanding extended the annual operating support requirement through the term of the current cable franchises (and any future franchises). The NSCC and the Member Cities have relied on the annual operating support grant as the primary source of funding for the NSAC’s continued operations. Elimination of the voluntary operating support grant, at this point in time, would effectively force the closing of the NSAC’s community media center and eliminate public/community access in the Member Cities, despite the fact that there is a well-documented and extremely important need for such access capabilities. It has been suggested that the Member Cities should fund the operating needs of the NSAC by transferring their franchise fees to the NSAC. If that were to occur, essentially all of the Member Cities’ franchise fees would be given to the NSAC, leaving the Member Cities with little or no “rent” for Comcast’s use of public rights-of-way for private profit. When considering how the annual operating grant impacts Comcast financially, it is important to recognize that these support payments are simply a pass-through to subscribers and not a cost that impacts Comcast’s profit margin. It is also important to understand that subscribers have been paying for the annual operating support grant in their rates for over two decades. During that time, Comcast has not lost a significant number of subscribers, and its net profit has continued to increase. Furthermore, eliminating or decreasing the PEG fee pass through would likely not result in a long-term decrease in cable rates, but would instead simply mean more funding would return to Comcast’s corporate headquarters in Philadelphia. Accordingly, Comcast should continue to pay the operating support grant during the term of any renewal franchises if the PEG access needs and interests of the Member Cities are to be met.

Staff is well aware of communities across the country where the operating support payments for PEG access were received from a local city or town, but eliminated in the face of deficits and fiscal pressures plaguing local governments. With the elimination of operating support, many

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<sup>381</sup> See the NSCC/NSAC Summary of Capital and Operating Support attached hereto and incorporated herein as Exhibit G.

community media centers were forced to close or drastically reduce their services. Such an outcome must be avoided in the Member Cities in light of the strong support and critical need for PEG access documented in the *Needs Assessment Report*. Staff, therefore, strongly recommends that Comcast continue to provide the current level of voluntary operating support, with a maximum two percent (2%) annual escalator, over the term of any renewal franchises. The annual capital and operating grants identified in the RFRP and Exhibit G should be paid in quarterly installments, at the same time Comcast makes its quarterly franchise fee payments to the Member Cities.

### **PEG Channel Capacity and Number of SD and HD PEG Channels.**

Given the NSAC's history of providing robust PEG programming in the Member Cities, it is not surprising that nearly three-fourths (72.5%) of all cable subscribers think it is either very important or important to have cable channels that feature local programs.<sup>382</sup> Eighty-seven (87) percent of individuals who answered a TBG a questionnaire indicated it was important or very important to have local cable television channels that feature programs about local residents, organizations, schools, government, events and issues.<sup>383</sup> In addition, high percentages of individuals interviewed by TBG said they agreed or strongly agreed that PEG channels provide: programming that deals with local issues (84.8%); a valuable public service (80.8%); programming that publicizes local services (79.8%); and programming with diverse points of view (60.2%).<sup>384</sup> Younger respondents appear more likely to think local community programming is important.<sup>385</sup> As discussed elsewhere in this Report, there are significant numbers of younger residents in most of the Member Cities.

When needs assessment participants were asked how interested they would be in watching each of 10 different categories of programming (detailed elsewhere in this Report), they indicated that they are most interested in *local news & information programs*, followed by *live concert programs* and *programs about local history, arts and artists*.<sup>386</sup> These are the very types of programming carried on the PEG channels in the Member Cities. About half of all cable subscribers have actually watched a program on a PEG channel.<sup>387</sup> Of these viewers:

- 46% said they watched programs on Channels 14, 15 or 16 at least once during the last month. About one-fourth said they watched programs on Channels 18, 19 or 20 at least once during the last month. About 7% said they watched non-local programs on Channel 21 at least once during the last month. About 12% said they watched NASA TV on Channel 98 at least once during the last month.<sup>388</sup>

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<sup>382</sup> *Id.* Telephone Survey Report, Exhibit C, at 4, and 17.

<sup>383</sup> See the *Needs Assessment Report*, Exhibit B, at 16.

<sup>384</sup> See the *Needs Assessment Report*, Exhibit B, at 48.

<sup>385</sup> See the *Telephone Survey Report*, Exhibit C, at 23.

<sup>386</sup> See § II.A.3.(i) *supra*.

<sup>387</sup> See the *Telephone Survey Report*, Exhibit C at 4; and *Needs Assessment Report*, Exhibit B, at 12 and 48 (75.5% of all respondents indicated that they had watched programming on at least one of the channels programmed by CTV/NSAC).

<sup>388</sup> See the *Telephone Survey Report*, Exhibit C, at 4; and *Needs Assessment Report*, Exhibit B, at 12-13 (63.2% of respondents watched programming at least once per month on channels 14, 15, and 16).

- A majority of those surveyed (47.5%) believed that PEG channels were not equal in technical quality to the best broadcast channel carried on the system and only about 37% reported the picture and sound quality on these local channels as equal to the picture and sound quality of the other channels on the cable system.<sup>389</sup>
- About 87% have watched *City Council Meetings*, about 57% have watched *Local Sports*, and about 38% have watched *School Board Meetings*.<sup>390</sup>

Respondents who said they had watched a program on a PEG channel were then asked if they had ever watched each of 9 different programs shown on these channels and, if so, how regularly they watch. “*City Council Meetings*” is the program category watched by more of these viewers than any other, as 86.9% of them recall watching such meetings, with 31.3% of them saying they watch at least monthly.<sup>391</sup>

“*Local sports*” were watched by well over half (57.1%) of respondents who said they had watched a program on a PEG channel, and 37.9% of them had watched “*School Board Meetings*,” with 22.7% and 5.1%, respectively, watching programs in these categories at least monthly. Just over one-fourth (26.8%) of respondents had watched both “*Ramsey County Board Meetings*” and “*North Suburban Beat*,” with 1.5% and 9.1%, respectively, watching at least monthly. “*Education Conversations*,” a program produced by the Minnesota Department of Education at the CTV studio, was watched by 21.7% of respondents, with 8.1% watching at least monthly.<sup>392</sup>

TBG also found from meetings with representatives of interest groups, institutions and organizations that the following resources/services should be retained in a renewed franchise with Comcast: dedicated PEG channels and bandwidth; funding for media/video production; video production/engineering/technical services, and the I-Net.<sup>393</sup>

In general, telephone survey respondents appear to have a high regard for the NSAC and its video programming and services. When those who had watched a PEG channel were asked to grade statements made about the services provided by CTV, two of the four statements tested -- *provides programming that deals with local issues* and *provides a valuable community service* -- received a grade of “A” or “B” from almost 60% of them.<sup>394</sup> Overall, the *Needs Assessment Report* concluded the Member Cities have a cable-related need and interest in retaining local cable channels featuring programs about local residents, organizations, schools, government, events and issues.<sup>395</sup>

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<sup>389</sup> See the *Telephone Survey Report*, Exhibit C, at 4. and 14; and *Needs Assessment Report*, Exhibit B, at 14 (over 60% of subscribers responded a little lower quality or much lower quality).

<sup>390</sup> See the *Telephone Survey Report*, Exhibit C, at 4; and *Needs Assessment Report*, Exhibit B, at 15.

<sup>391</sup> See the *Telephone Survey Report*, Exhibit C, at 4 and 15; and *Needs Assessment Report*, Exhibit B, at 52-53.

<sup>392</sup> *Id.*

<sup>393</sup> See the *Needs Assessment Report*, Exhibit B, at 55.

<sup>394</sup> *Id.*

<sup>395</sup> See the *Needs Assessment Report*, Exhibit B, at 65.

Many focus group participants also expressed an interest in having PEG access channels with HD and on-demand capability.<sup>396</sup> The need for HD PEG channels is further confirmed by the fact that subscribers in the Member Cities are rapidly subscribing to high definition channels. Nearly 40% of all cable subscribers in the Member Cities already pay extra to receive Comcast's high-definition channels.<sup>397</sup> When representatives of interest groups, institutions and organizations were asked if there were services not currently provided by NSCC/CTV that they would like to receive, getting PEG channels in high definition was identified.<sup>398</sup>

TBG has recommended the following based upon its ascertainment and best practices in the PEG access field:<sup>399</sup>

[i]nitially, there is a need and interest in ensuring that Comcast maintains the current allocation of bandwidth to deliver the eight (8) channels for PEG Access programming that are now provided to Comcast cable subscribers in the NSCC franchise area. As discussed previously in this report, we anticipate that the SD format will be gradually phased out in the near future, as the penetration of HD televisions in U.S. households continues its very rapid growth. During this transition period, as the PEG Access channels are converted to HD format (either gradually or all at once), they should be transmitted in both SD and HD formats – as is the case for local broadcast and satellite-delivered channels – for the convenience of all cable TV subscribers, including those who do not subscribe to the HD package of programming services. The simultaneous transmission of the PEG Access channels in SD and HD formats should continue as long as there are SD channels in the lowest cost tier of service.

The *Needs Assessment Report* also recommended that additional bandwidth/capacity should be available to enable on-demand and HD capabilities for PEG access programming and for future PEG access purposes. Moreover, PEG access HD channels should be grouped together within the HD channel lineup. All PEG access bandwidth/capacity should be provided free of charge.<sup>400</sup> In addition, the *Needs Assessment Report* concluded that PEG access channels should have the same functionality and capacity as the highest quality over-the-air broadcast television channels delivered by Comcast on its cable system.<sup>401</sup>

Over the next 10 years, some of the big challenges for the Member Cities will be: changing ethnic and cultural diversity; budget issues; and an aging population.<sup>402</sup> PEG channels can be utilized to help meet these challenges over the life of any renewal franchises.

Staff agrees with the findings and recommendations set forth in the *Needs Assessment Report* and in the *Telephone Survey Report*. In light of those findings, there is a need and interest in having a sufficient number of downstream channels provided for PEG use, receivable by all

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<sup>396</sup> See the *Needs Assessment Report*, Exhibit B, at 44.

<sup>397</sup> See the *Telephone Survey Report*, Exhibit C, at 3 (36.5% subscribe to HD service); and Exhibit B, at 8 (45% paid extra for HD service).

<sup>398</sup> *Id.* at 55.

<sup>399</sup> See the *Needs Assessment Report*, Exhibit B, at 65; and 61, 63-64.

<sup>400</sup> See the *Needs Assessment Report*, Exhibit B, at 55 and 65.

<sup>401</sup> See the *Needs Assessment Report*, Exhibit B, at 67.

<sup>402</sup> *Id.* at 55.

subscribers. At a minimum, staff believes that this requires that the existing eight (8) standard definition digital (“SD”) PEG channels be maintained, that four (4) additional channels be provided for high-definition (“HD”) PEG use, and that additional HD and/or SD PEG channels be added as provided in the *Needs Assessment Report* and pursuant to the formula set forth in state law, if the use of current channels/capacity grows or if there is a need and interest to provide programming in additional or new formats (e.g., 4K or 3D). The four HD PEG channels will be phased in over time in light of the fact that it will take time procure and deploy HD production, editing, transmission and transport equipment, and that the amounts of HD programming produced by NSAC staff and other PEG users will ramp up over the life of renewal franchises as HD formats become more common and ubiquitous.

All PEG channels/PEG capacity should be available in standard definition digital and high-definition digital formats, as further described herein and in the *Needs Assessment Report*. PEG programmers should be able to use the capacity provided for transmission of any information, not just video; furthermore, sufficient capacity should be available on the network to enable PEG users to take full advantage of advances in cable technology and system capabilities, including two-way capability that allows PEG program providers and users to use interactive television services as they become available on the cable system. Among other things, there is a need and interest in ensuring that there is sufficient PEG capacity: (i) to enable the transmission of closed captions, video descriptions, SAP content and multiple audio channels/streams; (ii) to deliver PEG access channels to subscribers in the same formats that are used by the highest quality local broadcast channel(s) (ABC, CBS, NBC and Fox) carried on the cable system, including (but not limited to) HD; (iii) to simulcast SD and HD PEG channels as long as SD channels are available on the lowest cost tier of service or any other SD service tiers that include PEG access channels; and (iv) to permit on-demand viewing of SD and HD PEG access programming and PEG data via Comcast’s on-demand platform.

### **Bidirectional Upstream Feeds**

It should be noted that setting aside channels for public, educational and governmental use does not guarantee that the community will be able to use those channels. As the 1992 amendments to the Cable Act suggest, there must also be adequate support for access operations, in the form of facilities and/or other financial support.<sup>403</sup> Accordingly, franchises in many communities require cable operators to provide facilities, equipment and services to support PEG use. Such facilities and equipment include upstream transmission paths for PEG signals from certain origination sites. In order for Comcast to carry PEG access programming on its network, it must provide a means of transporting audio and video signals from the locations where such programming is produced, played back or originated to its headend. This is accomplished by establishing an upstream transmission path from an origination point to Comcast’s headend facilities (as opposed to a “downstream” transmission path which supplies subscribers with video programming). The quality of an upstream transmission path is extremely important, because the signal reaching subscribers can be no better than the signal that reaches the headend. Thus, high-quality and reliable upstream transport is essential to providing high-quality access

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<sup>403</sup> See 47 U.S.C. § 541(a)(4) (“In awarding a franchise, the franchising authority . . . may require adequate assurance that the cable operator will provide adequate . . . access channel capacity, facilities, or financial support . . .”).



programming. Accordingly, as discussed elsewhere, the Member Cities and their communities of interest have a fundamental need and interest in high-quality, and reliable bidirectional transmission paths between all existing PEG origination sites and any additional origination sites identified through the ascertainment process, and other origination locations added at a later date, and Comcast's master headend facilities (regardless of where they are located). Comcast should provide all facilities and equipment needed to furnish such paths, and such equipment and facilities must permit an origination site to send signals to the headend on a number of upstream channels (or amount of channel capacity) that will facilitate the number of downstream channels or amount of downstream capacity that may be transmitted from the site. All upstream transmission paths (as well as necessary downstream transmission paths) must be provided at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities and PEG access users (except as otherwise noted herein or in the RFRP), and must be in addition to all SD and HD PEG channel capacity provided on Comcast's system. Necessary upstream feeds may be provided as part of the institutional network proposed by Comcast, as long as specified signal quality standards are met or exceeded.

Comcast must provide, install and maintain all equipment for amplification, conversion, receiving, encoding, decoding transmitting, switching and headend processing of signals to be used for PEG access purposes on the cable system to ensure that such signals can be received by subscribers as intended – that is, without deterioration, and with all signal components intact. In this regard, all bidirectional transmission paths (including those that may be incorporated into the institutional network) must ensure that the technical characteristics of PEG channels are the same as or better than those of the highest quality local broadcast channel(s) (ABC, CBS, NBC and Fox) carried on Comcast's system in the Member Cities in the same format (e.g., SD or HD).

**Summary of Specific Needs and Interests Related to Public/Community, Educational and Governmental Access in the Member Cities.**

Based on the findings and recommendations in the *Needs Assessment Report*, the *Telephone Survey Report*, the *Technical Review Report*, and staff's own experience and independent assessment of PEG access facilities, equipment and capacity, the Member Cities' PEG access-related needs and interests can be summarized as follows:

- a. There is a need and interest in local video programs that allow the expression of public, government, educational, community and neighborhood ideas and opinions (particularly ideas and opinions that are not available for viewing and consumption from other media sources, such as local broadcast networks).
- b. There is a need and interest in having a sufficient number of downstream channels provided for PEG use in both HD and SD channel formats, as described above.
- c. All PEG access channel capacity/bandwidth (including HD and SD PEG channels) should be provided free of charge to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, and PEG access users and producers.

- d. PEG channels should at all times be available on all tiers of service, including (but not limited to) the basic service tier, regardless of transmission format. If the basic service tier is no longer available, PEG channels should be available on the lowest cost tier of service Comcast offers, in addition to all other tiers of service. Once PEG access channels are transmitted in both HD and SD formats, those channels must be available on the least expensive standard definition tier of service and the least expensive high-definition tier of service available on the Comcast's cable system, in addition to all other HD and SD tiers of service.
- e. As long as there are SD channels in the lowest cost tier of service, PEG access SD channels should be grouped together with the local broadcast networks' primary channels (ABC, CBS, NBC and Fox) within that tier, and any other SD service tier(s), unless prohibited by applicable law. In addition, PEG access HD channels should be grouped together with the local broadcast networks' primary channels (ABC, CBS, NBC and Fox) within the lowest cost HD tier of service, and any other HD service tier(s), unless prohibited by applicable law.
- f. There is a need and interest in ensuring that SD and/or HD PEG access channel numbers, positions and locations, including (but not limited to) locations in the frequency spectrum on the cable system, may only be changed if Comcast must do so to comply with federal law or FCC requirements, and with the prior written approval of the NSCC or its designee(s). All costs related to channel relocations must be paid by Comcast, including but not limited to: (1) PEG access staff time; (2) equipment; (3) creation of electronic and print versions of station ID's and logos; (4) replacement of materials such as letterhead, business cards, etc.; and (5) any other items which include the channel number. In addition, Comcast should provide free print and electronic advertising and announcements to inform subscribers about the relocations.
- g. There is a need and interest that all PEG access channels/PEG capacity dedicated by Comcast resides in a portion of spectrum that is not susceptible to significant or material degradation or interference from over-the-air broadcast signals, such as two-way radio transmissions, and that will permit PEG access producers and users to generate, transmit and display a high-quality signal that can be received and viewed by subscribers. The cable system should not prevent PEG access picture and audio quality from meeting or exceeding the picture and audio quality on other channels carried on the cable system. At a minimum, the system must enable standard definition ("SD") and high-definition ("HD") PEG signals/PEG data to satisfy all applicable technical requirements and to meet or exceed the quality (in terms of picture and audio) of the highest quality SD and HD local broadcast channels offered on the cable system (e.g., the cable system must permit SD PEG signals/data to have video and audio qualities that meet or exceed the highest quality SD local broadcast channel carried on the cable system and HD PEG signals/data to have video and audio qualities that meet or exceed the highest quality HD local broadcast channel carried on the cable system).

- h. There is a need and interest in ensuring that PEG access channels/signals have the same functionality and capacity as the highest quality over-the-air broadcast television channels delivered by Comcast in the same format (*e.g.*, SD and/or HD) on its cable system. This would include, but not necessarily be limited to, the ability to transmit signals in any format used on the cable system, to transmit other video and programming services, to transmit video and audio signals only, or to transmit other information (including secondary and multiple audio channels/streams, text, digital information, HD signals, or other audio signals). Comcast should maintain the same technical standards for the transmission of the PEG access channels (in either SD or HD format) as it does for the highest quality SD and HD local broadcast and satellite-delivered channels on its cable system.
- i. There is a need and interest for Comcast to provide sufficient storage space on its servers, any necessary encoding/decoding, and other accommodations to enable free on-demand viewing of HD and SD PEG access programs and PEG data by subscribers, as selected by PEG access channel managers, such as the NSAC.
- j. There is a need and interest in having public/community access managed by an entity or entities committed to promoting the use and development of the public/community access channel capacity, and with adequate experience to ensure such use and development. The NSAC is such an entity.
- k. There is a need and interest in having improved public/community access equipment and support (both capital and operational) so that use of the system can continue and be expanded, so that potential users can be properly trained and assisted in production, so that production facilities are readily available for remote and studio productions (and post-production work), so that playback can occur smoothly, and so that the quality of PEG signals delivered to subscribers meets or exceeds the signal quality of the highest quality local broadcast channels carried on the cable system in the same format (*e.g.*, SD and/or HD).
- l. There is a need and interest in having a user-friendly, accessible community media facility that provides public/community access users with a place of sufficient size (and expandability) so that (i) there is adequate studio space, designed in such a way that it can meet user demands efficiently; (ii) there is adequate space for equipment to playback and control programming on public/community access channels; (iii) there is separate and adequate space and equipment available for editing programs and for storing sets; (iv) there is separate and adequate space available for training, planning meetings, and administrative functions (office space, storage space, and so on); and (v) public/community access facilities and equipment are made available so that people throughout the Member Cities have reasonable access to them, at convenient times and at a convenient location. The community media facility should be fully accessible to persons with disabilities.

- m. There is a need and interest in having modern, high-quality equipment, consistent with the equipment identified herein and in the *Needs Assessment Report* and *Technical Review Report*,<sup>404</sup> provided for public and community access use that could be utilized for producing programming in the field or in the studio; editing it; and for controlling and playing back programming that may be produced utilizing a variety of formats. Adequate capital support to replace and/or upgrade this equipment must be provided, as described herein and in the *Needs Assessment Report* and the *Technical Review Report*.
- n. There is a need and interest in having modern, high-quality equipment, consistent with the equipment identified herein and in the *Needs Assessment Report*, provided for government use, including (but not limited to) cameras and sound equipment for the Member Cities' Council chambers. Adequate capital support to replace and/or upgrade this equipment must be provided, as described herein and in the *Needs Assessment Report* and the *Technical Review Report*.
- o. There is a continuing need and interest in being able to utilize existing PEG facilities and equipment until the NSCC, the NSAC, and/or the Member Cities determine that those facilities and equipment are no longer needed.
- p. There is a need and interest in having the ability to easily transmit live video programming from locations throughout the Member Cities.
- q. There is a need and interest in having a free, dedicated high-quality and reliable bidirectional transmission paths (equivalent to an uncompressed digital optical connection for fiber connections) throughout the Member Cities available from access production facilities, remote locations and other origination sites for public, educational and government use (and future origination locations), with the ability to be activated in both directions to enable those entities managing the PEG access channels to (i) receive live and recorded signals intended for retransmission on the subscriber network from the institutional network (including the HSD service and associated capacity dedicated for PEG use on the subscriber network) with connectivity to/from permanent and temporary remote locations; and (ii) select signals for retransmission and to transmit and route those signals onto appropriate channels on the subscriber network or the institutional network without the assistance of Comcast. The connections should include all routers, encoders, decoders, optical transmitters and receivers, and other equipment required to provide this functionality, at no charge to the Member Cities, the NSCC, the NSAC, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, and/or PEG users (except as otherwise specified herein or in the RFRP). Each transmission path must permit an origination site to send signals to the NSCC/NSAC master control facility, regardless of its location, and on to Comcast's headend. All bidirectional transmission paths must ensure that the technical characteristics of

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<sup>404</sup> By high-quality, we do not necessarily mean to require high-end equipment of the sort that would be used in the most advanced broadcast television studio.

PEG channels are the same as or better than those of the highest quality broadcast channel(s) carried on Comcast's system in the Member Cities in the same format (e.g., SD and/or HD).

- r. There is a need and interest in having a free, dedicated high-quality and reliable bi-directional transmission path, equivalent to an uncompressed digital optical connection, available from the NSCC/NSAC master control facility (regardless of its location) to the Comcast's master headend for transport of PEG signals/data for insertion onto the appropriate PEG access channels on the subscriber network. The bi-directional connection should include all routers, encoders, decoders, optical transmitters and receivers, other equipment required to provide this functionality, at no charge to the Member Cities, the NSCC, the NSAC, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, and/or PEG users.
- s. There is a need and interest in providing PEG access managers with the ability to independently monitor all PEG channels, regardless of format, as transmitted and delivered to subscribers for appropriate and adequate video and audio signal quality and functionality.
- t. There is a need and interest in requiring Comcast to regularly test PEG channel signal quality, in all formats, and to automatically report the results to the NSCC or its designee(s), including (but not limited to), comparative test results for broadcast channels carried on the cable system in the same format.
- u. There is a need and interest in ensuring that PEG access transportation paths are properly maintained and that Comcast responds quickly and effectively to problems associated with the upstream and downstream delivery of all PEG signals.
- v. There is a need and interest in ensuring that all of the PEG access channels perform well, end-to-end, so that PEG signals do not deteriorate significantly or materially during transmission or transport. Comcast should provide, install and maintain all equipment for amplification, conversion, receiving, transmitting, encoding, decoding, switching and headend processing of signals/data to be used for PEG access purposes on the cable system to ensure that the technical characteristics of such signals/data are the same as or better than those of the highest quality SD or HD local broadcast channel, as appropriate, carried on Comcast's cable system in the Member Cities.
- w. There is a need and interest in ensuring that PEG producers and users can take advantage of current technologies and changes in technology that permit the provision of interactive, standard definition, high-definition and on-demand programming, and the transmission of video, data and voice signals, and ensuring that subscribers can receive and take full advantage of these PEG signals.

- x. There is a need and interest in PEG channel capacity, facilities, equipment and other support being available at no charge to the user, any access manager(s) (including, but not limited to, the NSAC), educational institutions and other public/local government institutions, the NSCC and the Member Cities.
- y. There is a need and interest in providing PEG access users and managers with the funds necessary to replace PEG-related facilities and equipment as described herein and in the *Needs Assessment Report* and the *Technical Review Report*.
- z. There is a need and interest in delivering all SD and HD PEG access channels and signals to subscribers via channels and/or bandwidth whose quality, functionality and placement is equivalent to that of the highest quality HD or SD local broadcast channel, as appropriate. PEG access channels, irrespective of format (e.g., SD, HD, 3D, 4K, video-on-demand, etc.), shall not be placed in portions of the cable system's spectrum that are more prone to undesired effects from signal ingress onto the system or other degradation.
- aa. There is a need and interest in ensuring that if any changes are made to the cable system that directly and materially affect the signal quality or transmission of PEG services, signals or programming, Comcast will at its own expense take all necessary technical steps to ensure that the capabilities and availability of PEG access services, programming and signals are not materially diminished or adversely affected by such change, by taking all necessary technical steps, including (but not limited to) providing all necessary equipment and facilities.
- bb. There is a need and interest in ensuring full program listings and descriptions for PEG access programming on Comcast's on-screen interactive electronic and print program guides, free of charge.
- cc. There is a need and interest in requiring Comcast to provide normal spares and back-up facilities and equipment, whenever it provides facilities and equipment for PEG use, to ensure that all PEG access channels can operate seven days a week, 24 hours a day, with minimum downtime if equipment-related problems arise.
- dd. There is a need and interest in ensuring that cable services (including, but not limited to, SD, HD and VOD formats of PEG services) are available to all educational institutions located in the Member Cities, all Ramsey County and Member City libraries and all Ramsey County and Member City government buildings, particularly so that these entities can receive the important educational and governmental information carried over the cable system. Free drops, outlets and services should be provided that will make cable service available throughout schools, libraries and government buildings. The equipment required to receive cable services at these locations should be furnished free of charge.

- ee. Current levels of capital and operations funding, and in-kind support, must be maintained and enhanced as described herein and in the *Needs Assessment Report* and the *Technical Review Report*.
- ff. There is a need and interest for the free insertion of promotional spots for PEG access channels and programs on cable services (*e.g.*, satellite and terrestrial channels and networks) that make times available for local advertising insertions.
- gg. There is a need and interest in obtaining sufficient bandwidth/capacity on the Comcast's cable system for PEG access use, including the conversion of PEG access signals/video programming produced and/or delivered by the NSAC (or another public/community access manager designated by the NSCC) to HD and other signal or data formats used on the cable system for the transport, transmission and/or delivery of cable service.
- hh. There is an initial need and interest in providing and activating at least 7 SD channels on the subscriber network solely for public/community and educational access use. In addition, there is a related need and interest in ensuring that the cable system has adequate bandwidth/capacity available for future public/community and educational access purposes and uses (*e.g.*, 3D and 4K television).
- ii. There is a need and interest in providing and activating at least 1 SD channel, unique in each of the Member Cities, on the subscriber network for government access use (*e.g.*, for Channel 16), which will be discretely narrowcast in each Member City. In addition, there is a related need and interest in ensuring that the cable system has adequate bandwidth/capacity available for future government access purposes and uses (*e.g.*, 3D and 4K television).
- jj. There is a need and interest in Comcast furnishing four (4) channels for HD PEG use, and that these HD PEG channels be phased in over the life of any renewal franchise (and simulcast in SD format, as specified elsewhere in this Staff Report). Any and all HD and/or SD PEG channels should be dedicated and activated as described herein (which includes the *Needs Assessment Report*), the Request for Renewal Proposals, or pursuant to the formula set forth in state law, if the use of current channels/capacity grows. There is a related need and interest in ensuring that the cable system has adequate bandwidth/capacity available for PEG access purposes and uses (*e.g.*, 3D and 4K television).
- kk. There is a need and interest in obtaining all equipment facilities necessary to transition PEG access channels and services from an exclusively SD format today to both an SD and HD format (and any future programming/channel formats carried on the cable system in the Member Cities) over the life of a renewed franchise.

- ll. There is a need and interest in simulcasting all PEG channels in HD and SD format, until such time as Comcast no longer delivers any channels or networks on its cable system to subscribers in SD format.
- mm. There is a need and interest in having the remote equipment and facilities needed to produce live public/community access programming from locations throughout the Member Cities.
- nn. There is a need and interest in upgrading the field production, editing, studio and master control equipment to enable the recording, production, editing, storage and transmission of video programming and other programming services in both SD and HD formats, as described herein.
- oo. PEG access equipment should be able to record and transmit programs/signals in stereo, and in SD and/or HD formats. Comcast must provide and maintain the equipment and facilities necessary to deliver PEG programming in these formats to subscribers.
- pp. There is a need and interest in the ability to transfer video and data from one area in the public/community access studio facility to another and from the studio facility to the appropriate public/community access channel and the Internet.
- qq. There is a need and interest in having a comprehensive video/audio routing system throughout the public access facility.
- rr. There is a need and interest in upgrading to high-definition serial digital interface (HD-SDI) connections at all PEG access facilities in order to improve picture quality.
- ss. There is a need and interest in upgrading the Harmonic ION encoders, and associated or ancillary equipment, located at the NSAC's master control facility to support and enable HD-SDI or uncompressed HD transport of all PEG access signals/data.
- tt. There is a need and interest in upgrading the encoders and decoders located at all PEG access signal/data origination sites connected to the NSAC's PEG access master control facility via fiber-optic lines (*e.g.*, City Halls and the three (3) school district PEG signal/data origination facilities) so that those sites/locations can successfully and reliably transmit and receive SD and HD PEG access signals/data.
- uu. There is a need and interest in upgrading and/or configuring all PEG access optical transport equipment/switches to enable the bi-directional transport of SD and HD PEG access signals/data.



- vv. There is a need and interest in upgrading the encoders and associated equipment in the two remote production trucks and in the “mini-mobile” unit to enable the upstream transmission and transport of SD and HD PEG signals/data from remote PEG signal/data origination sites to the NSAC’s master control facility.
- ww. There is a need and interest in obtaining the “nomadic” equipment necessary to enable the upstream transmission and transport of SD and HD PEG signals/data over the subscriber network to the NSAC’s master control facility from temporary PEG access signal/data origination sites.
- xx. There is a need and interest in obtaining capacity and high-speed data service (“HSD”) on the Comcast’s subscriber network to enable the upstream transmission and transport of SD and HD PEG signals/data from locations and sites specified herein and in the *Needs Assessment Report* and *Technical Review Report* to the NSAC’s master control facility.
- yy. There is a need and interest in increasing the amount of capacity on the Comcast’s Converged Regional Area Network (CRAN or C-RAN) to support and fully enable the HD bi-directional transport of all PEG access signals/data.
- zz. There is a need and interest in continuously ensuring that any and all PEG access signals/data (including, but not limited to, SD and HD signals) transmitted and transported upstream over the subscriber network are successfully delivered to the appropriate PEG access master control facility without contention or interference.
- aaa. There is a need and interest in upgrading the NSAC’s field equipment available for checkout, as described herein and in the *Needs Assessment Report*.
- bbb. There is a need and interest in upgrading the equipment in the Member Cities’ Council Chambers and control rooms to enable the recording, storage and transmission of video programming in both SD and HD formats, as described herein and in the *Needs Assessment Report*.
- ccc. There is a need and interest in playback equipment and all other facilities and equipment required to continuously provide PEG access video programming and other programming services 24 hours a day, seven days a week for all PEG access channels.
- ddd. There is a need and interest in obtaining the facilities and equipment needed to establish remote origination capabilities, as described herein and in the *Needs Assessment Report* and the *Technical Review Report*.
- eee. There is a need and interest in retaining existing remote origination sites and capabilities for the transmission of video programming and other programming services.

- fff. There is a need and interest in having the equipment and facilities required to originate video programming from the Member Cities' government buildings (leased and owned) and remote locations.
- ggg. There is a need and interest in Comcast providing capacity on the institutional network (and on the subscriber network portion of the I-Net) and associated SD and HD digital transport equipment for video origination from institutional network sites, at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities and other public or local government, other PEG access managers, institutional network users and video producers (except as otherwise specified in the RFRP).
- hhh. There is a need and interest in the provision, free of charge, of a functional bidirectional upstream and downstream feed to Comcast's headend facilities from the public/community access master control facility (wherever it is located), along with all facilities and equipment (including, but not limited to internal wiring) needed to operate the feed and to transmit high-quality SD and HD signals (equivalent to an uncompressed digital optical connection).
- iii. There is a need and interest in ensuring that all school district sites and educational institutions located in the Member Cities have access to NSAC (or any successor entity's) video facilities and equipment.
- jjj. There is a need and interest in using open systems to allow the sharing of information within and between all PEG access facilities.

*(iii) General and Miscellaneous PEG Needs and Interests.*

In view of the PEG ascertainment, it is worth emphasizing the following:

- a. The telephone survey, on-line survey, questionnaires, face-to-face meetings and focus groups performed in connection with this ascertainment showed high support for public and community channels, educational channels and government channels.
- b. There is a very important and immediate need for HD PEG capacity on the cable system.
- c. The NSCC's PEG access ascertainment indicates that, with the proper support, PEG can continue to be a great success in the community. However, to meet the needs and interests of the Member Cities, there must be facilities, equipment, capital funding and operational support, as noted herein and in the *Needs Assessment Report* and *Technical Review Report*.

- d. There is every reason to conclude that PEG channels will continue to be used significantly in the Member Cities and that such use can increase, at least if adequate support is provided.
- e. The current resources available for PEG access in the Member Cities are not adequate to provide PEG access capabilities needed now and in the future in the Member Cities.
- f. Among other things, there is a need and interest in assuring that Comcast's subscriber network and high-speed data service can be used to transmit and receive PEG programming in a manner that satisfies the quality of service requirements set forth in this Report and the RFRP.
- g. PEG programmers should be able to use the capacity provided for transmission of any information, not just video; furthermore, sufficient capacity should be available on the network to enable PEG users to take full advantage of advances in cable technology and system capabilities, including two-way capability that allows PEG program providers and users to utilize interactive television services as they become available on the cable system.<sup>405</sup>

In addition to the PEG/system design needs and interests already identified in this Report, the PEG needs and interests in this community include the following:<sup>406</sup>

- a. The NSCC or its designee(s), including (but not limited to the NSAC) may adopt reasonable rules regarding the use of public, educational, and governmental access channels pursuant to Section 611(d) of the Cable Act, 47 U.S.C. § 531(d). The NSCC may, in its sole discretion, delegate the authority to promulgate such rules to an entity managing a particular PEG access channel. The NSCC shall have the sole authority to resolve any disputes regarding allocation of PEG access channels.
- b. There is a need and interest in ensuring that Comcast does not exercise editorial control over PEG channels, and any other spectrum allocated for PEG purposes, except as provided by applicable law or as otherwise specified by the NSCC or the Member Cities.<sup>407</sup>
- c. There is a need and interest in having public access managed by an entity or entities committed to promoting the use and development of the public/community access channel capacity and with adequate experience to ensure such use and development. The NSAC is such an entity, and should continue to manage, promote and develop public/community access in the

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<sup>405</sup> Such applications are already being offered in the Member Cities, including video-on-demand, subscription video-on-demand and the interactive on-screen program guide.

<sup>406</sup> This list is not necessarily meant to be exhaustive. Comcast should be certain to meet all of the needs and interests identified in the *Needs Assessment Report*, the *Telephone Survey Report* and the *Technical Review Report*.

<sup>407</sup> See 47 U.S.C. § 531(e).

Member Cities during the term of any renewal franchises awarded to Comcast, unless the NSCC selects a different entity.

- d. There is a need and interest in having a user-friendly, accessible community media facility that provides public access users and NSAC staff/producers with a place of sufficient size (and expandability) so that (i) there is adequate studio space, designed in such a way that it can meet user demands efficiently; (ii) there is adequate space for equipment to playback and control programming on public/community access channels; (iii) there is separate and adequate space available for editing programs and for storing sets; (iv) there is separate and adequate space available for training, planning meetings, and administrative functions (office space, storage space, and so on); and (v) public/community access facilities and equipment are made available so that people throughout the Member Cities have reasonable access to them, at convenient times and at a convenient location. The community media facility should be fully accessible to persons with disabilities. The community media facility currently operated by the NSCC/NSAC at 2670 Arthur Street in Roseville meets the foregoing needs and interests as of the effective date of any renewal franchises and should continue to be available, equipped, staffed and operated consistent with the needs and interests specified in this Report, the *Needs Assessment Report*, the *Technical Review Report* and the *Telephone Survey Report* during the entire term of any renewed franchises.
- e. There is a need and interest in adequate operating support for PEG access (over and above franchise fees and all other financial and in-kind commitments to be paid or furnished to the Member Cities, the NSAC, the public schools and all other PEG access managers in response to this Report, the *Needs Assessment Report*, the *Technical Review Report*, the *Telephone Survey Report* and the RFRP). Such support must be sufficient to enable the effective management and operation of the community media facility, the production, editing and playback of high-quality programming and other programming services (by both the public and NSAC staff) over the life of any renewal franchises. Likewise, sufficient operating support is needed so that the system can continue and be expanded, so that potential users can be properly trained and assisted in production, so that production facilities and equipment are readily available for remote and studio productions (and post-production work), so that playback can occur smoothly, and so that the quality of PEG signals delivered to subscribers meets or exceeds the signal quality of the highest quality local broadcast channel(s) carried on the cable system in the same format (e.g., SD or HD).
- f. There is a need and interest in having high-quality equipment, consistent with the equipment identified in the *Needs Assessment Report* and the *Technical Review Report*,<sup>408</sup> provided for PEG use that could be used for producing programming in

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<sup>408</sup> By high-quality, we do not necessarily mean to require high-end equipment of the sort that would be used in the most advanced broadcast television operation. TBG has prepared an equipment list for PEG use, and advises us that

the field or in the studio; editing it; and for playing back and transmitting programming that may be produced utilizing a variety of formats and technologies (e.g., HD and SD). Adequate capital support must be provided for this equipment, as described in the *Needs Assessment Report* and the *Technical Review Report*. All equipment for PEG use should be replaced and upgraded over the term of the franchises as specified in the *Needs Assessment Report* and the *Technical Review Report*.

- g. There is a continuing need and interest in being able to utilize existing PEG facilities and equipment until the NSCC determines that those facilities and equipment are no longer needed. Any proposal should contain a provision that ensures that such facilities and equipment will remain available until replaced.
- h. There is a need and interest in having activated, high-quality, reliable upstream capacity available throughout the Member Cities to enable PEG producers and users to originate and cablecast programming live from remote locations and from other origination sites.
- i. There is a need and interest in ensuring that PEG access signal transmission paths are properly maintained and that Comcast responds quickly and effectively to problems associated with the upstream and downstream delivery of all PEG signals.
- j. There is a need and interest in ensuring that PEG producers and users can take advantage of the latest technologies that permit the provision of interactive, high-definition, and on demand programming, and the transmission of video, data and voice signals, and in guaranteeing that subscribers can receive and take full advantage of these PEG signals.
- k. Consistent with federal law, PEG access channel capacity, facilities, equipment and should be available from Comcast at no charge to a producer, user, any public access manager, ISD Nos. 623, 621 and 282, the NSCC, the NSAC, Ramsey County and the Member Cities.
- l. There is a need and interest in ensuring that if Comcast makes changes to its cable system that necessitate modifications to PEG facilities and equipment (including but not limited to the bidirectional links/upstream feeds), Comcast shall, at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, any PEG user or any PEG access manager, provide any additional facilities or equipment necessary to implement such modifications within 30 days of the date that the system changes are made, so that PEG facilities and equipment may be used and operated as intended, including, among other things, so that live and recorded/stored programming can be produced and transmitted efficiently to

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this equipment is sturdy enough for heavy, repeated use indoors and outdoors, and produces a signal significantly better than that produced by typical home video products.

subscribers. By way of example, because the cable system delivers signals in a digital format to subscribers, Comcast must, at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, any PEG user and any PEG access manager, provide or continue to provide the facilities and equipment necessary so that PEG signals can be delivered to subscribers in a digital format. If the standard format for video programming/television signals is “high-definition,” “4K,” or a different technology or format, Comcast shall, at no cost to the NSCC, the NSAC, the Member Cities, Ramsey County, educational institutions located in the Member Cities, other public or local government institutions, all PEG users and all PEG access managers, provide or continue to provide such additional equipment and facilities as may be necessary to carry all PEG signals in a high-definition format, 4K format or other technology or format Comcast adopts as its standard for video programming/television signals.

- m. In the event Comcast makes any change in cable system delivery technology that directly and materially affects the signal quality or transmission of PEG access services, programming or signals, Comcast shall at its own expense immediately take all necessary technical steps, including (but not limited to) the provision of all necessary equipment, needed to ensure that the capabilities of PEG access services, programming and signals are not materially diminished or adversely affected by such change.
- n. Comcast must ensure that digital PEG communications are receivable and useable by any subscriber to any digital service, except as otherwise specified by the NSCC or its designee(s). This includes, but is not limited to, the obligation to ensure that a subscriber using Comcast’s cable modem service can access public, educational and government information and can take full advantage of that information. By way of example, and not limitation, Comcast’s system should not prevent a user from effectively accessing a streaming video from the NSCC, NSAC, the Member Cities, Ramsey County, educational institutions, public and governmental institutions and/or any other PEG access managers and PEG producers, or prevent real-time interaction (because of latency problems created by the manner in which NSCC, NSAC, Member City, Ramsey County, educational institution, public or government institution and/or PEG access manager facilities connect to the network).
- o. Comcast may utilize any unused PEG channel/capacity, or portion thereof, which is allocated pursuant to the RFRP, upon written approval by the NSCC. The NSCC shall act expeditiously on any such request and shall not unreasonably withhold approval. Upon a determination of need, the NSCC shall request return of such channel or capacity or portion thereof, by delivering written notice to Comcast and in such case Comcast shall cease use of the channel or capacity within two (2) months after receipt by Comcast of such written notice, and take all steps necessary to enable the NSCC’s designated user to program and otherwise utilize the channel or capacity.

- p. The NSCC (or its designee) may reallocate users of the designated PEG access channels among the designated PEG channels at the NSCC's sole discretion. Likewise, the NSCC (or its designee) may, in its sole discretion, reallocate the use of PEG channels.
- q. Comcast shall provide, at its sole expense, all facilities, equipment, hardware and software necessary to permit the NSCC or its designee to independently monitor the quality of all PEG access channels delivered to and received by subscribers over the system at its master control facility.

In addition to the foregoing, there are a few miscellaneous PEG needs and interests that the NSCC believes should be emphasized here (as already indicated, the *Needs Assessment Report*, the *Telephone Survey Report* and the *Technical Review Report* contain a more detailed description of PEG needs and interests).

First, the experience of the Member Cities, the NSAC and other PEG users over the current term of the franchises has shown that the facilities and equipment needed to make effective use of PEG access channels require continuing maintenance and repair to remain usable and in good condition. Accordingly, there is a need and interest in having Comcast replace PEG-related facilities and equipment as necessary, or provide PEG access users with the funds needed to do so.

Second, the facilities, equipment and support identified herein and in the ascertainment documents are in addition to the franchise fee (and other financial and in-kind commitments) required by a renewal franchise agreement and applicable law.

Last, but not least, there is a need and interest in requiring Comcast to provide normal spares and back-up facilities and equipment, whenever it provides facilities and equipment for PEG use, to ensure that all PEG access channels can operate seven days a week, 24 hours a day.

Staff recommends that RFRP requirements be adopted for facilities, equipment and/or financial support consistent with the above. Thus, in addition to meeting the requirements listed in the attached Request for Renewal Proposal, Comcast must provide facilities, equipment and support meeting the needs and interests outlined above. The model in the RFRP shows how that might be done.

#### **D. SYSTEM CONSTRUCTION AND EXTENSION ISSUES.**

##### *1. Time for Completion.*

Under federal law, the NSCC and the Member Cities must allow Comcast a reasonable time to make any improvements required to upgrade the system (including the institutional network), consistent with the needs and interests identified in this Report (including the *Needs Assessment*

*Report* and the *Technical Review Report*)<sup>409</sup> and the facilities and equipment requirements set forth in the RFRP. As elsewhere in this Report, the NSCC and the Member Cities have an interest in ensuring that any construction and system modifications dictated by the communities' cable-related needs and interests are completed expeditiously, so as to minimize any necessary service interruptions, as well as disruption of economic activity and of the rights-of-way. To adequately protect the Member Cities' economic and property interests, the NSCC must be able to enforce timing and construction requirements. Given the fact that the RFRP is not requiring any immediate upgrades to the subscriber network and is looking to retain the existing end-to-end fiber-optic I-Net and to utilize the subscriber network for data connectivity and PEG signal origination, as described herein and in the *Technical Review Report*, staff believes Comcast could reasonably be expected to complete any necessary construction and equipment upgrades in the Member Cities within 18 months of the effective date of any renewal franchises.

## 2. *System Extension.*

Even though construction of the current cable system in the Member Cities has been completed, the system may need to be extended to new developments or subdivisions and multiple dwelling units on a periodic basis. There may also be areas within the boundaries of the existing franchise areas that are not now reachable by the cable system without extending the network plant to a point where a home or business can be served by a drop. The existing franchise ordinances'/agreements' existing service area requirements emphasize the importance of ensuring that residents of the Member Cities have access to Comcast's system and the advanced cable services offered over that system.<sup>410</sup> Specifically, the existing franchise documents require Comcast to extend service to areas of the Member Cities where there is minimum of 50 homes per cable mile for underground plant and 35 homes per cable mile for overhead plant. This line extension formula appears to have worked reasonably well over the current franchise term, as staff has not received numerous complaints from homes and businesses that are unable to receive cable service. Accordingly, there is an important need and interest in having Comcast continue to make service available where it does so now, and to extend service to anyone who satisfies the density requirements set forth above, and who is willing to pay the applicable monthly service fee. Where density standards are met, there should not be a charge for extending the network to the point from which service can be installed into a location, whether that location is a business, residence, multiple dwelling unit or non-profit organization. In those areas of the Member Cities, if any, where the requisite density requirements are not satisfied, staff believes a cost sharing arrangement is reasonable, so as to minimize the financial burden placed on potential subscribers, so far as possible, taking cost into consideration. It is staff's opinion that the cost sharing arrangement set forth in the RFRP is a reasonable compromise that balances the public's need to obtain access to important infrastructure, upon request, with expense of extending network facilities to areas with lower housing/building densities.

There is a special need and interest in ensuring that cable services (including PEG services) are available to all schools, libraries and government buildings, particularly so that these entities can

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<sup>409</sup> See 47 U.S.C. § 541 (a)(4) (“[i]n awarding a franchise, the franchising authority...shall allow the applicant’s cable system a reasonable period of time to become capable of providing cable service...”).

<sup>410</sup> See, e.g., Section 2.8 of the Member Cities’ current franchise ordinance/agreements.



receive the important educational and governmental information carried over the cable system.<sup>411</sup> This important need and interest is reflected, in part, through the current franchise requirement for public drops, which specifies that Comcast must provide, free of charge, installation of one (1) subscriber network drop, one (1) cable outlet, one (1) converter, if necessary, and monthly basic cable service, without charge, to numerous institutions listed in Exhibit B of the franchise ordinances/agreements, and additional public or educational institutions designated by the NSCC which are located 500 feet or less from the subscriber network (unless the institution is willing to reimburse Comcast for its actual costs in excess of the first 500 feet of installation).<sup>412</sup> Additional subscriber network drops and/or outlets at the locations listed on Exhibit B will be installed by Comcast at the cost of Comcast's time and material.<sup>413</sup> These commitments were clarified in the July 25, 2002, Memorandum of Understanding between the NSCC and AT&T Broadband, Comcast's predecessor in interest.

Based on the foregoing, the NSCC staff concludes there is a continued need and interest in free drops and outlets and free services here that will make cable service available throughout schools, libraries and government buildings. The equipment required to receive cable services at these locations should be furnished free of charge.

### 3. *Supervision of Construction and System Maintenance.*

Cable system construction can involve significant disruption in a community. This includes (but is not necessarily limited to) any construction needed (i) to extend the system to newly annexed or developed areas of a Member City or (ii) to upgrade the system (including the I-Net), in order to ensure that it remains state-of-the-art (e.g., as a result of a mid-term technical review). CBGCI's experience in other communities indicates that system construction and improvements should proceed according to a plan that ensures the public is informed, that construction proceeds rationally, and that it is completed on time. A construction plan can also ensure that the NSCC and the Member Cities understand what they can expect to be required to do in order to help Comcast move efficiently through the permitting process. It also allows the Member Cities and others to coordinate and take advantage of street openings. In addition, of course, the NSCC and the Member Cities have an interest in ensuring that the system will comply with applicable franchise requirements. By requiring adequate quality control, and by requiring Comcast to describe in detail what it is doing, Comcast, the NSCC and the Member Cities will be in a position to address problems so that they can be resolved expeditiously. A plan will also help the NSCC and the Member Cities ensure that there is an acceptable procedure for notifying property owners along the affected rights-of-way as to when the rights-of-way will be trenched or bored, and the expected duration of the trenching and/or boring. Further, because there have been disputes about the NSCC's ability to obtain information regarding the cable system in the past, the duty should be unequivocal.

Without good maintenance practices, frequent outages and signal quality problems can occur. Proper maintenance is particularly important given digital signals' sensitivity to degradation.

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<sup>411</sup> In almost every cable franchise in the country, operators are required to provide free drops and free service to these types of locations.

<sup>412</sup> See Section 2.10 of the Member Cities' franchise ordinances/agreements.

<sup>413</sup> *Id.*

Good maintenance practices are also necessary to correct system safety issues that inevitably arise over time, such as: (i) electrical code (NEC and/or NESC) violations; (ii) failure to comply with bonding and grounding requirements; (iii) improper separation of cables; (iv) broken lashing wires; (v) unsecured pedestals; and (vi) failure to restore property in accordance with applicable standards and requirements. Many of these very problems were discovered during the course of CBGCI's 2011-2012 technical audit and review of Comcast's system.<sup>414</sup>

To protect public safety and public property, to protect against problems with the cable system, and to assist with franchise compliance, it is appropriate to establish requirements for ongoing inspection, maintenance and testing (as well as compliance with all local codes). It also follows that, because construction, maintenance and repair work on a cable system, and other tasks, are often performed by contractors or subcontractors, there is a need and interest in ensuring that the contractors and subcontractors are properly trained, subject to the same rules that apply to Comcast, and that Comcast bears unqualified responsibility for their work.

#### 4. *Coordination of Construction.*

Staff believes it is important to ensure that Comcast (and any other cable operators that may enter the market in the Member Cities) are required to coordinate and cooperate with the Member Cities in trenching. There is an overall effort in the Member Cities to improve transportation corridors and to preserve and improve the communities' infrastructure and rights-of-way. Therefore, the Member Cities must be in a position to require Comcast and other cable operators to underground facilities consistent with their goals and objectives. Street cuts can limit the life of a roadway. They are expensive for both the Member Cities and Comcast. It is, therefore, important to minimize cuts and trenching by coordinating street use, and by requiring companies to cooperate so that facilities can be placed when trenches are open.

In summary, based on the our ascertainment and experience and the Member Cities' authority, we have identified the following construction-related needs and interests:<sup>415</sup>

- a. There is a need and interest in having cable service available to as many residents in the Member Cities (including to businesses and non-profit organizations, and to single family and multi-unit residences, as well as schools and government agencies) as possible, taking cost into consideration. To that end, Comcast shall make cable service available to all residences, businesses and other structures in the Member Cities, including multiple dwelling unit buildings, whose owners or occupants request cable service, except for multiple dwelling unit buildings to which Comcast cannot legally obtain access, subject to reasonable density requirements. Accordingly, Comcast must extend its system, upon request, to any potential subscriber in the Member Cities that meets or exceeds specified standards set forth in this RFRP, without charging more

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<sup>414</sup> See generally the *Technical Review Report*. As noted elsewhere in this Report, many of the problems CBGCI uncovered may have been permanently corrected.

<sup>415</sup> These are in addition to the needs and interests served by the right-of-way provisions that are included in the Member Cities' municipal codes and the Model Franchise Ordinance/Agreement.

than the standard installation charges, unless the Applicant demonstrates to the NSCC's satisfaction that extraordinary circumstances justify a waiver of this requirement.

- b. There is a need and interest in assuring that any upgrades or system improvements performed are undertaken pursuant to a construction plan that is reviewed by the NSCC and/or the Member Cities for compliance with the requirements of the franchise ordinances/agreements, the Member Cities' municipal codes, federal and state laws, and applicable policies, rules, standards and codes. And, because information requested by the NSCC has not been timely provided in the past (*e.g.*, in connection with franchise fee reviews), there is a need and interest in ensuring that Comcast is required to provide information regarding the system promptly and completely. There is also a need and interest in having the plans for any upgrade or improvement of the system (including the I-Net) ensure that the rebuild or system improvement is completed with minimum disruption of the rights-of-way or service.
- c. There is a need and interest in Comcast completing any and all necessary construction (including I-Net construction) in the Member Cities within 18 months of the effective date of the renewal franchises. Any construction required as a result of a mid-term technical review shall be completed within the timeframe established by the NSCC, in its sole discretion.
- d. There is a need and interest in ensuring that Comcast has plans in place that are designed to ensure that it complies with local standards and requirements for construction, maintenance and repair, and that ensure that construction errors are promptly corrected.
- e. There is a need and interest in providing for testing of the system on an ongoing basis to determine whether any rebuild or system improvement has been successfully completed, and to identify problems with system performance on an ongoing basis throughout the term of the franchises. There is a related need and interest in NSCC authority to perform system performance tests and audits periodically throughout the term of the franchises.
- f. There is a need and interest in ensuring that Comcast adopts a maintenance plan, that it follows that plan (subject to regulations and applicable law), and periodically reviews and updates the plan. The plan should ensure that all parts of the system are properly maintained in a way that is designed to prevent failures, to guarantee public safety, and to ensure compliance with applicable laws, regulations, standards, codes and industry practices. There is a need and interest in ensuring Comcast has procedures in place for complying with local requirements (including permitting requirements) for use of the rights-of-way. In particular, there

is a need and interest in ensuring that Comcast cooperates and coordinates with joint trenching and undergrounding.

- g. There is a need and interest in ensuring that Comcast's employees, contractors and subcontractors are competent and well-trained, and will abide by the requirements of the franchises and applicable laws, ordinances, regulations, and standards, as if the work were being directly performed by Applicant.

### **III. FRANCHISE CONDITIONS AND OTHER REGULATORY ISSUES**

In addition to the matters already discussed, a renewal franchise ordinance/agreement must contain a number of provisions in order to ensure that franchise requirements are properly implemented and enforceable. In addition, the franchise ordinances/agreements must contain provisions to protect the Member Cities and their citizens, including cable subscribers, and to enable the Member Cities to manage their public rights-of-way fairly and effectively. NSCC staff believes the Member Cities have the authority to establish these conditions unilaterally. However, it is also the case that these conditions serve paramount public needs and interests.

The following brief discussion of certain key provisions is intended to elaborate on some of the reasons underlying those provisions. This discussion is not intended to be comprehensive.

#### **A. Term**

The length of the franchises is primarily a function of allowing Comcast a sufficient opportunity to earn a reasonable return, while ensuring that (i) Comcast's performance will be evaluated within a reasonable period of time, so that it has incentives to maintain its performance at a high level, to ensure that its franchises can be renewed; and (ii) to allow the Member Cities and their respective communities to reevaluate franchise requirements, in light of changes in technology. For example, the existing franchises at this point contain technical provisions that are no longer state-of-the-art (*e.g.*, the 750 MHz upper frequency limit of Comcast's cable system). Several recent franchises have been granted for 10 years,<sup>416</sup> and we are not aware of any that exceed 15 years. Under Minnesota law, renewal cable franchises cannot exceed 15 years.<sup>417</sup> Given the cable-related needs and interests identified in this Report and in the various ascertainment documents, and given the renewal provisions of the Cable Act, which ensure any application for renewal will be fairly considered, staff believes up to a 10-year franchise is appropriate for each Member City if all the needs and interests identified in this Report and the ascertainment documents are adequately met.<sup>418</sup> To the extent these needs and interests are not sufficiently satisfied, the term of the franchises would need to be shorter.

#### **B. Franchise Fees**

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<sup>416</sup> See, *e.g.*, the following cable franchises: Cambridge, Massachusetts/Comcast (2011); Pittsburgh, PA/Comcast (2010); Portland, OR/Comcast (2012); and Minnetonka, MN/Comcast (2012).

<sup>417</sup> Minn. Stat. § 238.084, subd. 1(c).

<sup>418</sup> Comcast expressed an interest in a 10-year renewal term during informal franchise renewal discussions.

Franchise fees are charged to help compensate the Member Cities for Comcast's use of their public rights-of-way -- property that was acquired and is maintained by the communities as a whole.<sup>419</sup> However, franchise fees are subject to a form of federal "rent control" that prevents local franchising authorities from simply charging fair value of the property that cable companies, such as Comcast, occupy and use. Charging less than the maximum permitted amount effectively means that everyone subsidizes Comcast's use of the public rights-of-way. While NSCC staff recognizes that cable subscribers would prefer not to have a franchise fee -- because Comcast passes through and itemizes the fee on bills -- staff also notes the following. First, it is fair to those who DO NOT subscribe to cable service to ensure that Comcast pays for the public property it uses. Second, the Member Cities' City Councils may choose to designate a portion of any increase in franchise fees -- to the extent that the amount collected increases due to, for example, the deployment of advanced cable services and/or an increase in subscribership -- to fund additional PEG access activities (above and beyond current needs and interests) that will provide substantial benefits to subscribers and to the entire 10-city franchise area. Third, charging less than the maximum amount may mean that the franchise fee itemization on the bill is lower, but it may not actually result in lower rates. Reducing the franchise fee may simply result in subscriber dollars leaving the Member Cities. Thus, NSCC staff believes the best approach to the franchise fee issue is to continue to charge the maximum permitted fee, which for now is 5% of gross revenues derived from the operation of Comcast's cable system to provide cable service.<sup>420</sup>

The NSCC's own experience over the last franchise term, which included disputes with Comcast about franchise fee payments, suggests that the definition of "gross revenues" should be clear and broad, and consistent with the federal cap. To address this problem, Comcast and the NSCC have already agreed on the definition of "gross revenues" upon which franchise fees will be calculated in a renewal franchise as part of a March 1, 2012, settlement agreement. Prior franchise fee reviews have also shown that NSCC staff, and their consultants and attorneys, should have the clear and unequivocal ability to review and obtain copies of the company's financial data within a specified period of time and to review/audit franchise fee payments remitted by Comcast on a regular basis. This need has also been satisfied in the March 1, 2012, settlement agreement with Comcast.

### **C. Scope of Grant**

Federal law draws a distinction between cable systems and telecommunications systems, and suggests that to the extent telecommunications systems can be franchised and/or regulated by local governments, this ought to be done separately from a cable franchise.<sup>421</sup> In particular, changes in the Cable Act made by the Telecommunications Act of 1996 indicate that the federal Cable Act does not apply to the provision of telecommunication services by a cable operator; that a cable operator is not required to obtain a franchise *under the federal Cable Act* for the provision of telecommunications services; and that a franchising authority may not impose any requirement *under the federal Cable Act* that has the purpose or effect of prohibiting, limiting, restricting, or conditioning the provision of a telecommunications service by a cable operator or

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<sup>419</sup> See, e.g., *City of Dallas v. F.C.C.*, 118 F.3d 393 (5<sup>th</sup> Cir. 1997).

<sup>420</sup> See 47 U.S.C. § 542(a). See also Section 8.3 of the Member Cities' franchise ordinances/agreements.

<sup>421</sup> See, e.g., 47 U.S.C. §§ 153(43)-(46), 522(6)-(7).

its affiliate.<sup>422</sup> By restricting these prohibitions to franchises issued under the federal Cable Act, however, Congress indicated its intent to permit state and local governments to require appropriate compensation and to manage their public rights-of-way through instruments other than franchises under the federal Cable Act, to the extent permitted by applicable law.<sup>423</sup> Thus, it appears to be the intent of Congress that the two be treated separately. Moreover, the FCC has clarified that local franchising authorities' jurisdiction over cable systems under the Cable Act applies only to the provision of cable services.<sup>424</sup> For this reason, among others, any renewal franchises for Comcast governed by the federal Cable Act will only authorize the company to use the Member Cities' public rights-of-way for the provision of cable service and to provide such other services as are required to meet its PEG access and institutional network obligations. Any renewal cable franchises will also make clear that the Member Cities reserve all of their rights under applicable law with respect to information services governed by Title I of the Communications Act of 1934, as amended.

#### **D. Transfers**

The Member Cities' decisions to grant renewal franchises to Comcast is based on the expectation that the entity to whom the franchises are granted (*i.e.*, Comcast of Minnesota, Inc.) will be the entity that will perform all franchise requirements. In effect, the decision to grant a renewal franchise is a decision to ensure a Member City's needs and interests are met for the duration of the franchise. Any transfer may affect these and other conditions, and the Member Cities may have chosen to deny the award of franchises to the transferee had it applied. Thus, the NSCC, on behalf of its Member Cities, must have the opportunity to review a transfer, sale and/or fundamental corporate change, to determine the likely impact on the performance of franchise requirements and on the communities and subscribers, and to approve, approve with conditions or deny the transfer, sale or fundamental corporate change based on the reasonably predicted impact.<sup>425</sup> For similar reasons, the term "transfer" should be broadly construed to include transactions that may result in the transfer of all or a portion of Comcast's interests in the cable system or the franchises, a change in the control of the franchises themselves, or similar results, however achieved. The terms "fundamental corporate change" and "controlling interest" should be defined or interpreted in accordance with Minn. Stat. § 238.083, subd. 1 and subd. 6.

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<sup>422</sup> See 47 U.S.C. § 541(b)(3)(A)-(B).

<sup>423</sup> Cf. 47 U.S.C. § 253(c) (recognizing state and local government's right to manage the public right-of-way and to require fair and reasonable compensation). Minn. Stat. §§ 237.162 and 237.163 do not permit local government units to "franchise" telecommunications right-of-way users or to charge a fee that exceeds the actual costs incurred in managing public rights-of-way. That said, Minnesota law does authorize local governments to manage telecommunications right-of-way users' use of public rights-of-way and to recover the costs of such right-of-way management. *Id.*

<sup>424</sup> See *In the Matter of Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, FCC 06-180, Report and Order and Further Notice of Proposed Rulemaking at ¶¶ 121 and 122 (Rel. March 5, 2007).

<sup>425</sup> Minn. Stat. § 238.083, subd. 4 provides that approval of a sale or transfer request must not be unreasonably withheld.

#### **E. The Member Cities' Exercise of Police Powers and Modification of Applicable Rules and Ordinances**

The Member Cities have the legal authority to utilize their police and other powers to secure and promote the public health, safety, and general welfare of their residents, and to adopt appropriate regulations for businesses over which they have jurisdiction. In particular, because of the technical, economic and regulatory volatility of the cable industry, the Member Cities must have regulatory flexibility if they are to meet their duty to the public while still granting renewal franchises. Accordingly, any renewal franchises must preserve the Member Cities' police powers and regulatory flexibility to the maximum extent possible.

#### **F. Compliance with Applicable Laws**

Many matters governing Comcast's operation and business practices of are addressed by federal, state and local laws and regulations. The Member Cities' grant of any renewal franchises is based on the assumption that Comcast would comply with such laws and regulations at all times.

#### **G. Severability**

As a cable television franchisee, Comcast will enjoy special rights to use the Member Cities' unique, limited and valuable public rights-of-way. To ensure that a franchisee does not essentially convert what is valuable public property to private purposes, the Member Cities impose conditions on Comcast's use of the rights-of-way. This ensures, among other things, that the communities at large share in the benefits which flow from the grant of cable franchises by the Member Cities. The grants would not be made if those benefits were not received. Therefore, any franchise ordinances/agreements must include a provision that makes it clear that, if material provisions of the ordinances/agreements are unenforceable, the Member Cities can void, reconstitute and/or shorten the franchises. Comcast should not be able to retain the benefits of the franchise ordinances/agreements without providing the corresponding benefits to the communities, including (but not limited to) the Member Cities and CTV (or its successor).

#### **H. Insurance Requirements; Indemnifications; Bonds; Letters of Credit; No Recourse**

Franchises typically include provisions that are designed to: (i) ensure that a local franchising authority, and the local franchising authority's citizens, bear no risk as a result of a franchisee's use of public rights-of-way; and (ii) ensure that the franchisee complies with applicable requirements, and if it does not, that the local franchising authority, or its designee, can complete the required work and obtain compensation for the damages caused. As to the first point, the franchisee can cause damage to public and private property when it is in the streets. It can also create hazards that may lead to lawsuits. It should be clear that the Member Cities and the NSCC should bear no risk associated with such suits, and what is more, the Member Cities and the NSCC have an interest in assuring that Comcast has adequate insurance and other protections in place so that it can be held responsible for the damage that it causes.

In addition, the Member Cities need to enter and use their streets constantly. The use by a cable company, such as Comcast, is an important use, but that use is subordinate to other uses. If, by reason of allowing Comcast to use the streets, the Member Cities were exposed to liability if they caused damage to Comcast's property, the Member Cities' potential liability would be enormous and their ability to use their own property limited. In commercial leases, landlords usually require tenants to assume all risks that flow from the occupancy of a building: a landlord does not, for example, agree typically to compensate the tenant for business losses if a roof leaks. The Member Cities cannot afford to assume any risks associated with Comcast's use of the public rights-of-way.

Performance guarantees, in the form of letters of credit and bonds, ensure that work and obligations that Comcast promises to perform are performed. If the Member Cities' or the NSCC's only remedy is a lawsuit, the benefits that are promised will inevitably be delayed, and may, in many cases, be deferred forever. By ensuring that there are sufficient funds available via a letter of credit and/or a bond, the Member Cities ensure that the benefits promised are delivered. Indeed, during the term of the current franchises, the NSCC found it necessary, on occasion, to draw on (or begin the process of drawing upon) Comcast's letter of credit for the Member Cities in order to be compensated for franchise commitments that were not being honored.

#### **I. Termination**

The Member Cities must also have available more serious remedies – such as revocation of Comcast's franchises – in the event of a serious breach of performance. Any business relationship depends upon a satisfactory working relationship between the parties; no working relationship can be established and maintained if Comcast lies or attempts to deceive, refuses to comply with key provisions of law or its agreed upon obligations, or repeatedly violates applicable laws, regulations and codes.

#### **J. Relationship of Remedies**

The remedies available under a renewal franchise ordinance/agreement should not be exclusive. The public's compensation for harm suffered should be as complete as possible; therefore, remedies should be available singly or in combination.

#### **K. Abandonment**

Any renewal franchise would be granted in return for Comcast's promise to provide service throughout its franchise area in accordance with its franchise ordinances/agreements. Thus, a renewal franchise must ensure that, if for any reason, Comcast stops providing service in accordance with its franchises over all or part of its system, the NSCC, on its members' behalf, is able to take action to ensure that service continues. In addition, if property is abandoned, the NSCC and the Member Cities must be able to ensure that it is either removed or that the NSCC can operate the system, designate another entity to operate the system or compel Comcast to continue operating the system. There is enormous potential risk to the Member Cities if unused property remains in the public rights-of-way, it is no longer subject to a franchise or other



regulatory authority, and the Member Cities do not have the right to dispose of that property as they see fit (during construction or excavation projects for example).

#### **L. Conditions on Use of Public Rights-of-Way**

One purpose of the franchising process is to protect public property used by private entities from harm and to ensure that the property can be used by others. For example, a franchisee may need to cut open a road or bore under it to install or repair a line. Improper restoration can leave a permanent bump or depression in the road, or even cause it to collapse. Public safety is at stake. Thus, cable franchises in the Member Cities must be subject to conditions regarding the use of the public rights-of-way. It is essential that any renewal franchises continue to protect municipal property and make it safe and available for multiple users, including utilities. Moreover, usage standards, policies and requirements change over time, as do the Member Cities' planning goals. The placements of these private facilities in the public rights-of-way must not be allowed to interfere with the implementation of these new standards, policies and requirements, or permit Comcast to avoid rules or fees that are imposed in connection with various activities in the rights-of-way. Finally, the use of the rights-of-way cannot be allowed to interfere with any public projects. Accordingly, Comcast should be required to meet certain minimum standards for use of the rights-of-way to satisfy these goals, and the Member Cities must have the flexibility to establish new standards, policies and procedures over time.

#### **M. Customer Service Provisions**

The failure of cable operators to provide good customer service received national recognition in the 1992 amendments to the Cable Act (the Cable Television Consumer Protection and Competition Act of 1992) and the minimum customer service standards adopted by the FCC.<sup>426</sup> Those federal standards, however, recognize that additional or more stringent standards may need to be adopted by particular localities, based on specific conditions and on the behavior of particular cable companies.<sup>427</sup> This authority was affirmed by the FCC in its Section 621 orders.<sup>428</sup> Moreover, because customer service practices and community needs change over time, the Member Cities must be able to modify and apply these altered standards to each cable franchisee, including Comcast, to protect the public. This, too, is contemplated by the Cable Act, which permits the establishment of customer service standards by ordinance.

Given the customer service issues identified in the *Needs Assessment Report*, and staff's own experience with customer service issues over the life of the current franchises, the NSCC believes the Member Cities and their communities need assurances that the cable system will be in a position to monitor, evaluate and correct its own performance on an ongoing basis. For example, it is possible to install equipment that measures the length of time it takes for an operator to answer the phone, number of calls abandoned, and so on. This equipment costs

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<sup>426</sup> See, e.g., 106 Stat. 1460 §§ 2(b)(4)-(5) (1992); 47 U.S.C. § 552; and 47 C.F.R. §§ 76.309 and 76.1601-1604.

<sup>427</sup> 47 C.F.R. § 76.309(b). Poor customer service is a continuing problem, as highlighted by the results of the *Needs Assessment Report*. See, e.g., *Needs Assessment Report* at 28 and 61.

<sup>428</sup> See, e.g., *In the Matter of Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, FCC 07-190, Second Report and Order at ¶¶ 26-27, 31 (Rel. Nov. 6, 2007).

money, of course, and if an operator is providing good quality service to its subscribers, and has devised less costly means for determining compliance with applicable customer service standards, then there may be a basis for granting relief from a requirement that monitoring equipment be installed.

Comcast, however, appears to be experiencing problems with customer service. Comparing the first six (6) months of 2012 to the first six (6) months of 2013, NSCC staff has received 1.5 times as many complaint calls in 2013 than it did in 2012 for the same time periods, and most complainants reported significant problems with calls to customer service, including extremely long wait times and language issues with off-shore call centers. This is a substantial increase and points to the decline in the quality of customer service from that reported in the *Telephone Survey Report*. Poor customer service can have a profound impact on the Member Cities. If, for example, customer service issues cause subscribers to drop cable service, franchise fees could decline, but Comcast will still be occupying the same amount of valuable public rights-of-way.

To address documented customer service concerns, staff has incorporated several enhanced customer service requirements into the model franchise ordinance/agreement to ensure that subscribers are given explicit rate change notifications, reasonable call holding times, access to local customer service locations, etc. that will enhance the customer service experience in the Member Cities.

#### **N. Rate Regulation**

In 1992, Congress determined that it was necessary to protect subscribers from unreasonable rates for cable service and equipment. That said, the current Cable Act, and the FCC's implementing regulations, place significant limitations on local governments' authority to regulate service rates. Specifically, the NSCC can only regulate rates for basic service and associated equipment and installations. While cable service rate regulation is limited, some charges levied by cable operators – commingled HD DVR service fees, and digital transport adapter (DTA) additional outlet service fees, for example – should be subject to the control of the NSCC because they include regulated equipment. In light of prior problems with Comcast's regulated rates (there are, in fact, two rate appeals currently pending before the FCC), it is important that the NSCC retain the right to pre-approve rates and rate changes, except where the law prohibits it from doing so.<sup>429</sup> Comcast, however, has filed a petition for effective competition with the FCC covering seven of the NSCC's ten Member Cities. If the petition is granted, the NSCC will lose its ability to regulate basic service and associated equipment and installation rates in the affected Member Cities. In addition, Comcast may be freed from the Cable Act's uniform rate provision and buy-through prohibition.

#### **O. Reports and Records**

Comcast is currently subject to provisions regarding books, records, inspections, reports, and similar requirements. However, these provisions have not proven adequate to satisfy the NSCC's

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<sup>429</sup> The need for continued rate regulation is underscored by the fact that the *Telephone Survey Report* shows that subscribers are generally unhappy with Comcast's rates. See, e.g., Exhibit B at 28. See also Appendix D to the *Comcast Financial Report*, which depicts average rate increases from 2010 to 2012.

interest, and their meaning is subject to dispute in some cases. In a new franchise term, the ability of the NSCC and the Member Cities to obtain records, documents and reports should not be in doubt and is critical to the effective enforcement of any renewal franchises going forward. The March 1, 2012, settlement agreement addresses the production of data and documents in the context of franchise fee reviews.

#### **P. Non-Discrimination**

The need for provisions prohibiting discrimination among subscribers or persons requesting service is expressly recognized by federal law.<sup>430</sup> Federal law also establishes general EEO requirements for cable operators like Comcast. These provisions not only establish federal standards, but also permit establishment of additional local requirements. Companies using public property and obtaining the sorts of benefits from the public that are being provided through the franchises should be subject to the Member Cities' and the state's general laws and rules regarding non-discrimination to ensure that the public property is not effectively converted to private use. Likewise, exclusive contracts to provide cable service must be prohibited. Cable subscribers in single-family homes and multiple dwelling units (such as apartments) must have a choice in multichannel video programming distributors.

#### **Q. Other Matters**

As previously noted, the discussion above is not exhaustive. Comcast's proposal must include any provisions necessary to ensure that its renewal proposal meets the Member Cities', and their respective communities', cable-related needs and interests, whether or not such provisions are specifically addressed in this Report or the attached Request for Renewal Proposal, and Model Franchise Ordinance/Agreement.

### **IV. PAST PERFORMANCE**

As part of the proceeding conducted pursuant to § 626(a) of the Cable Act, 47 U.S.C. § 546(a), the NSCC reviewed Comcast's past performance under its franchises and applicable laws. This review included CBGCI's technical audit of Comcast's cable system in the Member Cities, which revealed a number of code violations that are discussed in the *Technical Review Report*. Comcast proceeded to cure many of the identified violations, and any remaining issues likely have not had a major impact on Comcast's overall performance. However, where necessary, the above description of the Member Cities' (and the communities') needs and interests takes into account such previous difficulties in determining what terms and conditions would be required in any renewal proposal in response to the RFRP. As discussed below, however, there are potential compliance problems that may negatively impact Comcast's legal qualifications to obtain renewal franchises in the Member Cities.

The Cable Act permits a local franchising authority to deny renewal if a cable operator has not "substantially complied with the material terms of the existing franchise and with applicable law . . ."<sup>431</sup> Comcast, however, must be given adequate notice and an opportunity cure.<sup>432</sup>

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<sup>430</sup> See 47 U.S.C. §§ 541(a)(3), 543(e).

<sup>431</sup> See 47 U.S.C. § 546(c)(1)(A).

Accordingly, Comcast's past performance could serve as a basis for denying renewal, if one or more notices of violation are sustained by the NSCC, after providing Comcast with an opportunity to remedy specific violations of the Member Cities' franchises and applicable law. Assuming any violation notices that are issued are ultimately upheld, Comcast's renewal proposal must show, in detail, how and when Comcast will cure all outstanding violations of the franchises and/or applicable laws and prevent similar violations from occurring over the term of any renewal franchises. If Comcast refuses to cure the violations at issue, it should explain why it is legally qualified to hold a franchise.

**A. Compliance with the NSCC's March 7, 2013, and May 2, 2013, Rate Orders**

On March 7, 2013, and May 2, 2013, the NSCC issued rate orders addressing Comcast's equipment and installation rates. Among other things, the rate orders required Comcast: (i) to implement the rate orders within sixty (60) days of the date they were adopted; (ii) to submit a "compliance plan" within thirty (30) days of the date of issuance; and (iii) to file a compliance certification with the NSCC no later than 90 days after the orders were issued. Comcast submitted a compliance plan for each order to the NSCC. These plans, however, did not comply fully with the clear and unambiguous terms of the rate orders. Comcast was informed of this fact, in writing, and was asked to bring itself into compliance. To date, Comcast has not satisfied all of the requirements of the rate orders, notwithstanding its purported July 15, 2013, Compliance Plan Certification.

NSCC staff recommends that the NSCC take appropriate action to enforce its rate orders. This could entail issuing notices of violation to Comcast (and giving it an opportunity to cure) and/or seeking relief from the FCC.

**B. Negative Option Billing for Digital Transport Adapters**

As part of the national digital television transition, Comcast began offering free Digital Transport Adapters (DTAs) to subscribers. Many subscribers obtained free DTAs so they could continue to view digital programming on their analog devices. Beginning in 2013, Comcast informed non-basic-only subscribers that it would start charging \$1.99 for each DTA in their home or office. Staff is very concerned that this bait and switch tactic could be a violation of the Cable Act's negative option prohibition. Staff recommends that the NSCC authorize an investigation of this issue, which may constitute a material breach of the Member Cities franchises and/or applicable law, and issue a notice of non-compliance or take other remedial action, if warranted.

**C. Comcast's Elimination of 6 MHz PEG Channels**

Exhibit A, Section E-1 of the Member Cities' franchises states that:

Meredith Cable agrees to maintain the **number of access channels (12) as currently exist[s]** and accept[s] the concept of having the current channel loan agreements extended

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<sup>432</sup> See 47 U.S.C. § 546(d).

for the fifteen (15) year renewal term and that the Commission will retain control over the **entire 6 MHz spectrum that equals one channel**. (Emphasis added).

In March 2013, Comcast unilaterally eliminated all analog channels, including analog PEG channels, on the cable system in the Member Cities as part of its “all digital” transition. As a result, the NSCC’s eight (8) PEG channels were converted to a digital format that uses less than a full 6 MHz of spectrum per channel. Thus, Comcast has, without permission, effectively confiscated bandwidth the NSCC is entitled to control and use in accordance with the language of Exhibit A, Section E-1. Staff believes that this matter should be investigated, and that a notice of violation should be issued to Comcast, if warranted.

#### **D. The Allocation of Bundled Service Package Revenues**

NSCC staff has already begun a review of whether Comcast is following the bundled package revenue allocation methodology specified in the March 1, 2012, Settlement Agreement. As part of that settlement, Comcast is required to maintain all package revenue allocation data (e.g., subscriber counts, bundled service package revenue allocation data and “package cards”), on at least a quarterly basis, in order to allow the NSCC to analyze and recompute any incorrect package revenue allocations. This review is ongoing, and at this point it is not possible to determine if Comcast has violated the terms of the March 1, 2012, Settlement Agreement. However, if the review is completed, and a violation is found, the NSCC must decide whether to issue a written notice of noncompliance to Comcast.

#### **E. Pasadena Non-Subscriber Franchise Fee Pass-Through**

NSCC Staff has already initiated a review of the calculations used, and true-up methodology employed by, Comcast with respect to the pass-through of non-subscriber franchise fees to subscribers. Based upon an initial analysis of data provided by Comcast, it appears that the company may not be following the true-up methodology previously agreed upon, as Comcast’s calculations only appear to address a 9-month period instead of a full twelve months. If it is ultimately found that Comcast has improperly overcollected and retained non-subscriber franchise fees, the NSCC may wish to require Comcast to return the excess funds and to issue a notice of violation, if appropriate.

#### **F. Amount of Late Fee**

Section 5.7 of the Member Cities’ franchises governs the assessment of late fees on subscriber bills and accounts. That provision states:

[f]ees for the late payment of bills shall not be assessed until after the service has been fully provided and, as of the due date of the bill notifying Subscriber of an unpaid balance, the bill remains unpaid. Late Fees may not exceed the **actual costs to Grantee of late payment of bills and the servicing and collecting of such accounts**. (Emphasis added).

The late fee applicable to subscribers in the Member Cities is currently \$8.00. It appears on its face, and based on cost justification data supplied to other cable commissions, that this fee is not based on actual local costs but, instead, on costs applicable to a Comcast cable system on the east coast. Staff believes this important issue requires further investigation, and recommends that the NSCC authorize a review of the \$8.00 late fee and the issuance of a notice of violation, if appropriate.

Nothing in this Staff Report shall be construed to waive (explicitly or tacitly) any known or unknown substantial breaches of material provisions of the Member Cities' franchises and applicable laws that exist on or after the date the NSCC, or its designee, closes the § 546(a) past performance review. Both the NSCC and the Member Cities reserve their rights: (i) to identify existing and additional material violations of the franchises and applicable laws; (ii) to take appropriate enforcement actions, including (but not limited to) issuing notices of violation and affording Comcast an opportunity to cure; and (iii) to avail themselves of all available remedies (*e.g.*, drawing on Comcast's line of credit) and defenses. The material violations identified in this Report shall not limit the past performance issues that may be considered in any administrative proceeding conducted pursuant to 47 U.S.C. § 546(c)(1) or that may serve as a basis for denying renewal of the franchises pursuant to 47 U.S.C. §§ 546(c)(1)(A), § 546(c)(3) and § 546(d).

**EXHIBIT A**  
**Technical Review Report**

**EXHIBIT B**  
**Needs Assessment Report**



**EXHIBIT C**  
**Telephone Survey Report**

**EXHIBIT D**  
**Comcast Financial Report**

**EXHIBIT E**  
**Resolution No. 2011-02**

**EXHIBIT F**  
**Resolution No. 2013-04**

**EXHIBIT G**  
**NSCC/NSAC Summary of Capital Grants and Operating Support Grants**

**EXHIBIT H**  
**Examples of Programming on PEG Channels 14, 15 and 21**

**EXHIBIT I**  
**Request for Renewal Proposal for Cable Television Franchise**