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REPORT OF RIVER OAKS COMMUNICATIONS CORPORATION AND ITS TEAM - PRIVILEGED AND CONFIDENTIAL

June 4, 2019

Comcast and Frontier Cable Franchise Renewals - Phase I

As a follow-up to our Meetings in Redmond (the “City”), River Oaks Communications Corporation (“River Oaks”) is submitting this Report on behalf of our Team to the City. Additional background regarding our Team is contained in **Exhibit 1**. We have also included Recommendations based upon the information received and reviewed to date. We appreciate the participation of Jonny Chambers-Technology & Information Services Director in the Meetings and that of other City Staff who assembled and provided information for our Team.

We are aware of the major priorities and Policy Goals of the City. Several of the projects for consideration by the City described or referred to in this Report interrelate and intersect with those Policy Goals. Those include, for example, having on-going cable and other services provided by Comcast and Frontier, improving and potentially monetizing City infrastructure, providing safety for its residents including school children, encouraging a diverse and connected community and promoting a clean and green environment.

By way of background, there are two existing non-exclusive Cable Franchise Agreements in the City. Those are the Cable Television Franchise dated May 28, 2013 between the City and Comcast of Washington I, Inc. and Comcast Cable Holdings, LLC (all hereinafter collectively “Comcast”) and the Cable Television Franchise dated September 2, 2008 between the City and Verizon Northwest, Inc. which was assigned to Frontier Communications and its affiliates (“Frontier”). While the Comcast Franchise was a more traditional cable agreement, the Frontier Franchise is a FIOS Fiber to the Premises Agreement with many cable components given its Verizon origin. Thus, maintaining parity between Comcast and Frontier is challenging since the two Franchises read very differently; but this needs to continue so that, taken as a whole, neither company is treated in a more favorable or less burdensome manner in terms of its cable television obligations.

The level of interaction with Comcast and Frontier varies from Department to Department. While some have actual oversight and inspection of construction, others are more indirectly involved. Finance is involved with receiving reports with respect to Franchise Fees and Utility Taxes paid by the two cable providers. Additionally, for many years the Cable Access Fund which received PEG Fee contributions has been growing. Federal law governs the use of such

funds for capital projects in connection with video production and video distribution to Subscribers of the Comcast and Frontier Cable Systems.

PHASE I

The Scope of Work for Phase I contained the following:

River Oaks shall perform the Scope of Services in Phase I in order to provide information to the City so that the City can determine (1) whether it wishes to seek to modify and extend the existing Cable Television Franchise between the City and Comcast and the Cable Television Franchise between the City and Frontier; or (2) whether the City wishes to enter into a new Cable Television Franchise with Comcast and a new Cable Television Franchise with Frontier.

There is a third choice for the City which is to amend the current Franchises with Comcast and Frontier. Based upon the totality of information received and reviewed and meetings with City Staff, River Oaks is recommending that the City enter into detailed and extensive Amendments with Comcast and Frontier. To merely extend the current Franchises would be a lost opportunity for the City because much has changed in cable franchises over the last decade. Similarly, we anticipate significant pushback from Comcast and Frontier if the City were to indicate that it wants totally new agreements. By amending the Franchises, the City can modernize and update them given new technologies (for example, HD) and changes in the marketplace. Additionally, there are opportunities from a revenue and cost savings standpoint, in the context of the franchise renewal processes, to explore fiber-related arrangements with Comcast and Frontier, and to explore fiber-related arrangements with CenturyLink and other providers.

Document Review and Meetings to Date

During a 2 day period over May 6th and May 7th, meetings were held in the City with City Staff. Departments involved were: Technology & Information Services, Real Property, Planning, RCTV-Redmond City Television, Development Services, Traffic and Finance.

The Real Property Department manages the Vertical Assets of the City. There are a number of Agreements in place involving City facilities. With respect to construction, the City is most concerned as to which entity is doing the work and that the contracting entity has liability and responsibility for its Subcontractor. Chapter 12.14 and the Zoning Code provide for several requirements depending upon where facilities are to be located. Historically, there have been challenges for the City in dealing with Frontier although Frontier has been good to work with in other areas. In order to put Agreements in place with CenturyLink, it took enumerable emails. With respect to the Video Programming, the City has Channels 21 and 75 on Comcast and Channels 34 and 35 on Frontier. With respect to negotiations with Comcast, the City is willing to consider exchanging Channel 75 for other Franchise considerations. If the City were to go to HD, it will need additional HD cameras and robotics. The City may be interested in upgrading the Community Center and being able to have remote video training at various Fire Stations. With respect to the provision of free drops, the City is looking into the locations for the drops as

well as the locations of Local Origination Return Lines. Currently, it appears that Comcast has Fiber to the City and Frontier utilizes Coax or Fiber.

Comcast and Frontier currently pay both Franchise Fees and the Utility Tax. In this regard, reports are provided to the City. The current yearly total amount is approximately \$1,050,000. Thus, it is very important that the amended Franchises with Comcast and Frontier maintain both the 5% of Gross Revenues on Cable Services and 6% Utility Tax. The City should also consider maintaining its ability to charge a 35 cent per Subscriber per month PEG Fee with the possibility of increasing it by a CPI increase or to another amount given the needs and interests of the City.

Deliverables

Task 1 - Comcast

- A. Review of existing Comcast Franchise Agreement. **Reviewed in Detail**
- B. Review of any pertinent City Cable Communications Ordinance - Chapter 5.60 of the Redmond Municipal Code. **Reviewed in Detail**
- C. Address the Comcast Build-Out requirements.

In the Comcast Franchise, the most pertinent provision is found in Section 13.1. Where there are 25 residences or more per mile and where there is an aerial drop of 125 feet or less or an underground drop of 60 feet or less connecting to the exterior demarcation connection point where someone lives, Comcast is required to provide Cable Service within 7 days at a Standard Installation charge.

If the connection is not a Standard Installation, the person requesting Cable Service needs to pay additional funds to cover the added cost. A similar cost scenario applies for potential Frontier customers if they need a connection beyond a Standard Installation.

- D. Review of correspondence from and to the City and Comcast. **Provided by City Clerk and Finance Departments**
- E. Address Section 626 Letter from Comcast. **Provided by City Clerk and reviewed**
- F. Address numerous matters for possible inclusion in the renewed Franchise. This can include matters with respect to Fiber Connectivity between City Buildings, PEG Requirements and Channels, PEG Fees, Gross Revenues inclusions, FCC Orders, Definitional matters, Police Power issues, Term of Franchise, Free/Complimentary Service to City, Police, Fire, Libraries and Schools, Joint Trenching, Competitive Equity, Audits, Financial Records, Tax Liability, Indemnification, Insurance, Letter of Credit and Bond, Local Customer Service Office, Open Records, Customer Service Standards and issues, Government Video on Demand, SD Issues, High Definition, Signal Quality of PEG Channels, Location of PEG Channels, Return Connectivity, Changes in Technology,

Right-of-Way Standards, Construction, Excavation, Burying Drops, Undergrounding, Inspection of Construction, Timeframe for Service Extensions and Service Availability, Emergency Alert System, Default Standards, Transfer of Ownership, Venue, and Governing Laws. Addressed numerous matters for possible inclusion in the renewed Franchise

- G. Participate in Conference Calls/Phone Meetings and In-Person Meetings with the City and City Departments in order to assess whether the City could modify and extend the existing Franchise or enter into negotiations for a new Franchise with Comcast. Several conference calls and in-person meetings were held to gather information and make this assessment.
- H. Undertake a review of the Comcast Franchise to identify potential items for inclusion in a Compliance review of Comcast. This could identify subject matters which could be included in a future Compliance Letter in Phase II. Additionally, this can include addressing the incremental increases and charges in the context of Rate Regulation and Effective Competition limitations under Federal Law and Senior/Low Income Discounts. The Franchise was reviewed and potential items were noted for inclusion in a Compliance Review. Rate Regulation and Effective Competition limitations exist under Federal Law and Senior/Low Income Discounts can be addressed with Comcast.
- I. Review the 1984 and 1992 Cable Acts, Telecommunications Act of 1996, FCC Orders and FCC Regulations in connection with the above. Cable Acts, Telecommunications Act, FCC Orders and FCC Regulations have been taken into account in Phase I.
- J. Discuss with the City possible opportunities to expand Fiber Connectivity in the context of the Cable Renewal Process: Detailed conference calls were held with the Information & Technology Department.
- Fire Station 16 fiber hookup
 - RCC fiber hookup
 - 1GBit Metro Internet to City
 - Some lateral connection opportunities
 - Parks - free Wi-Fi
 - Lower income/isolated homes - free/low-cost Wi-Fi subscription services
 - Hi-Def TV support
 - Address from a Cable Franchise standpoint if Comcast wishes to migrate its services to include 4G and 5G Service from an infrastructure standpoint. Small Cell, Wireless, 4G and 5G Service and specific work related to Comcast, other Providers, Ordinances and Applications could be separate projects.

Redmond Institutional Network Needs and Interest Review

Introduction

An Institutional Network (I-Net) is a public benefit that can be negotiated as part of a Cable Franchise Agreement. It is defined as network infrastructure or services specifically for use by government or educational entities within the local franchise area. Before pursuing an I-Net during franchise renewal negotiations, it is important to look at a Local Franchising Authority's (LFA's) existing network and determine what type of infrastructure and/or services can be provided by the cable operator that would be the most benefit to the LFA, in this case the City. Once these are quantified, then needed infrastructure and/or services can be negotiated by the City as part of its franchise renewal processes with Comcast and Frontier.

CBG Communications, Inc. ("CBG"), in conjunction with River Oaks, began the I-Net needs review process by reviewing initial information presented by the City and engaging in conference calls with the City's Technology & Information Services Director and associated personnel. The purpose of the review and discussions was to determine the City's immediate network development goals (as part of its overall network development goals) and how those goals meld with potential I-Net infrastructure and/or services that can be negotiated. As part of this, the City provided information on specific sites that it believes are in need of network enhancement and could benefit from the negotiated provision of I-Net infrastructure and/or services. A fundamental part of the initial I-Net review is to also look at the potential payback period based on various I-Net implementation scenarios.

Findings

Overall I-Net Development Goals - From discussions with the City and a review of the information provided, CBG determined that there were a number of City network development goals that I-Net infrastructure and/or services could potentially fulfill. These factored into the analysis as CBG looked at specific sites that would benefit now by I-Net infrastructure and/or services and then meet broader objectives for the City's network in the future. Specifically, these are:

- **Expand the City's network infrastructure** - Information provided by the City indicates that it is working to help create uniform capabilities at many of the sites on its network, by implementing fiber optic-based connections that can be interconnected with the existing City leased or City-owned private fiber network to the degree such is configured now or in the future. As part of this, the City also wants to fill gaps in its network where a substantial difference in network capabilities exists based on the type of connection that currently exists versus what is needed. In the future, the City may also want to add sites to its network and do so at levels of connectivity consistent with those provided by its own private fiber network.

- **Expand capacity** - Implementing fiber-based connections and/or services will help the City expand the capacity at locations that need upgraded network speed and bandwidth.
- **Achieve cost savings and/or cost avoidance versus existing connections** - While it is always a trade-off between more cost and higher bandwidth, depending upon the fiber-based connections that would be available for designated sites, there may be the ability to expand the existing network utilizing I-Net connections or services while saving costs now or avoiding future costs based on choosing one or more of the various types of I-Net implementations.
- **Overall, any Institutional Network infrastructure or services negotiated should help position Redmond for the future** by increasing the City's ability to adapt to ever-changing connectivity, service and support needs.

Review of the available current types of I-Nets indicate that there are a variety of ways to negotiate with cable operators to gain access to fiber optic infrastructure and/or the services provided over such infrastructure. For the City, this could include the following:

- **Dark fiber infrastructure** - This could be provisioned in two ways: either leveraging existing capacity that is available in the current Comcast or Frontier backbone or through the implementation of new dark fiber infrastructure. Currently, the primary way that cable operators prefer to provide such infrastructure is through dark fiber leases. The lease would be at a negotiated rate, for unlimited capacity use and an Indefeasible Right of Use ("IRU") for a specified length of time. Rates for access to such infrastructure can vary widely, based on whether existing, unused strands are available, or whether new strands need to be built. Often the construction cost is amortized over the length of the IRU and is rolled into the monthly recurring charge. Dark fiber lease rates agreed to by cable providers as part of the "total package" negotiated during franchise renewal can often be significantly below the market rates for such capacity from other providers.

Where I-Net fiber has been implemented previously for a jurisdiction (an existing dark fiber I-Net) or, again, through a "package deal" where the cable operator is benefitting from other negotiated provisions, a cable operator may agree to provide dark fiber infrastructure for a maintenance fee only. The maintenance fee can be as low as 1/5th of what a comparable dark fiber lease rate would be, and potentially as little as 1/10th of what a managed service option (described more fully below) would cost on a monthly basis.

The substantial benefit of obtaining dark fiber through a negotiated I-Net is that it would allow the City, over the life of the IRU, to provision as much bandwidth as the fiber strands could provide (currently, on average, 2.2 gigabits per second (“Gbps”) transfer rate per wavelength (color of light) per fiber strand).

- **Managed services** - This is the provision of end-to-end (end user edge switch, through the core and to another end user edge switch designated by the City) bandwidth scaled based on the cost charged (a certain cost for 10 megabits per second (“Mbps”), a higher charge for 100 Mbps, still higher for 1 Gbps, etc.). Additionally, the longer the term of the Managed Services Agreement, the lower the monthly recurring cost (the most per month for 1 year, less for 3 years, still less for 5 years, etc.).

The term of the Managed Services Agreement (or even the dark fiber infrastructure IRU) may exceed the length of a renewed Franchise Agreement (potentially beyond 7-10 years, the length of some current franchise renewals). Accordingly, the managed service rates negotiated for a particular transfer rate could be the lowest in the marketplace, which would be of benefit to the City depending on the payback (discussed further below). Signing such a Managed Services Agreement (or a dark fiber infrastructure lease) could be a lower cost alternative versus building the City’s own infrastructure where it would be able to utilize any bandwidth it desires, but would have to maintain the infrastructure, as well as provision and refresh the end user equipment.

- **Barter arrangements** - Since the City currently has its own private fiber network and conduit, it is conceivable that, if Comcast, Frontier or another entity wanted conduit access for their own infrastructure or wanted to lease some of the City’s fiber optic infrastructure, then the City could also, in exchange for granting access to City conduit or City fiber, gain access to Comcast’s, Frontier’s or another entity’s fiber or conduit. These kinds of barter arrangements are not common in Institutional Network Agreements, but are common in the telecommunications industry. Specifically, providers often choose not to fund the substantial costs of putting in their own conduit or fiber when available capacity is already there from another provider, and that provider does not have capacity in another location and is desirous of a barter or trade. It is certainly worth putting this concept into the I-Net discussion.
- **Other I-Net characteristics** - Another benefit of an I-Net Agreement covering infrastructure or services is that since it has a nexus to the Franchise, it often incorporates certain Franchise protections (such as right-of-way requirements, performance bonds, insurance and indemnification, transfer approval, etc.) which provides another layer of protection for the City.

Additionally, Service Level Agreements for either managed services or service responsiveness in dark fiber leases and fiber maintenance agreements can be customized to the City's needs, and don't necessarily have to follow the standard contracts of providers (again because the City would negotiate the I-Net SLA as part of the franchise renewal process).

Specific Sites for Review

After review of documentation provided by, and discussions with, City Staff, we believe that there are five specific sites that could benefit from I-Net infrastructure or services. The focus for I-Net negotiations would be to connect the following sites back into the City's fiber network at the closest location. These sites are:

- **Fire Station 16** - Fire Station 16 is currently connected through Frontier's Metro Ethernet Service at a rate of 10 Mbps (moving to 50 Mbps in the next 2-3 months). However, review indicates that higher capacity, which would be afforded by a fiber connection back into the City's private fiber network, would be far preferable and would provide capacity for additional communications such as video conferencing and training.
- **Fire Station 18/Novelty Hill Ops Center (Water)** - This is a similar situation to Fire Station 16 as far as current connectivity versus future connection needs. The City's private fiber is in a cabinet just east of Fire Station 18 on Redmond Ridge. Accordingly, a fiber connection, especially if existing fiber is available from either Comcast or Frontier, could potentially be cost effectively instituted.
- **RCC** - Connectivity at RCC is similar to the above in that it is currently a leased connection from Lake Washington Tech (LWIT). It would be beneficial instead to connect RCC to the City's fiber network.
- **Grass Lawn Pavilion** - This is a Parks facility which has very limited connectivity now and would, again, benefit by being connected to the City's private fiber network. An advantage here is that a Frontier Central Office is just next door to the Park.
- **Farrel-McWhirter Park** - This is another Parks facility that is in need of a higher capacity connection. Potentially, an interconnection could be made with aerial City fiber on Novelty Hill Road.

One of the benefits of higher capacity connections is that the City could then provide free public Wi-Fi at sites like the Parks and RCC.

Evaluation of Various I-Net Infrastructure and Service Scenarios

In moving forward with negotiating I-Net infrastructure and/or service for the above and other locations that may be similarly in need, it will be important to determine the “best-fit” scenario considering the payback period in moving from current connectivity to potential I-Net options. Essentially, the payback would be calculated for any I-Net infrastructure or service possibility based on evaluating these possibilities in consideration of the applications enabled by and cost of the existing connectivity, or applications that would be enabled by and cost to the City of constructing and managing its own fiber connections versus the I-Net rate negotiated and the type of I-Net infrastructure or service chosen over the period of time proposed.

This means that for each connection considered, we and the City would need to look at fiber construction costs, its equipment cost, and various dark fiber access and managed services costs over the period of time that each would be considered. For example, **as a hypothetical example based upon national averages**, if the City desires a 1 Gbps connection and is able to negotiate access to dark fiber (preferably for a maintenance fee cost only) for a period of 10 years, then payback scenarios could be calculated as shown below:

- a) Though this is not a likely scenario- Access to existing Comcast or Frontier fiber at no cost, plus a maintenance charge of \$75 (on average) per fiber pair, per mile annually, plus demand maintenance as needed, or \$1,200 per site per year (including demand maintenance costs) plus equipment costs (\$3,500 per end x 2 ends = \$7,000 x 2 implementations over 10 years including one refresh = \$14,000) equals a range of \$23,000 to \$26,000 over 10 years for a **1-mile fiber link**.
versus
- b) Access to existing Comcast or Frontier fiber with a dark fiber lease (includes maintenance costs) at approximately \$500 per month or \$6,000 per year, plus equipment costs = \$74,000 over 10 years for a **1-mile fiber link**.
versus
- c) Access to specifically constructed dark fiber by Comcast or Frontier plus a maintenance charge - add \$75,000 to the range in (a) above - \$98,000 to \$101,000 over 10 years for a **1-mile fiber link**.
versus
- d) Access to a lease of specifically constructed dark fiber by Comcast or Frontier - Add \$75,000 to the cost above in (b) - \$149,000 over 10 years for a **1-mile fiber link**.
versus
- e) The City constructing and maintaining its own **1 mile of fiber link** = \$75,000-\$100,000 or more (on a per mile basis this could cost up to \$200,000 or more depending upon supply and demand, above and below ground construction, soil conditions, etc.) for the construction cost plus \$12,000 maintenance (including demand maintenance) plus \$14,000 in equipment = approximately \$101,000 over 10 years.

Review indicates that I-Net scenarios a and b are more cost effective, and c could be more cost effective over 10 years for the City than building its own infrastructure, whereas the payback to the City would be less than 4 years versus I-Net scenario d. Much of this depends upon the number of years that the City uses the fiber.

If, instead, managed services is the chosen option, and Comcast or Frontier roll in the construction costs, the question again, would be how long would it take for the City in constructing its own fiber, maintaining it and adding necessary equipment to reach a point where the managed services cost continues to escalate beyond a threshold where the City's own fiber cost remains flat?

Calculating payback for each link in this way will indicate which way would best serve the City's needs and how best to negotiate I-Net infrastructure and/or services.

Building upon the foregoing, the following are some additional alternatives with respect to possibilities to improve the Fiber Connectivity for the City:

- CenturyLink - Continue with CenturyLink; however, determine if CenturyLink will reduce the monthly recurring charges ("MRCs"), discuss with CenturyLink if it would convert Fiber use from MRCs to an IRU since the Fiber is already in City Conduit.
- Comcast - As discussed above regarding Comcast- whether it could provide cost saving alternatives as contrasted with CenturyLink; in the context of the Cable Franchise negotiations - explore with Comcast whether it might provide dark fiber or a Managed Network and use this in negotiations impacting the Cable Franchise as well as the dark fiber or Managed Network.
- Frontier - As discussed above regarding Frontier- whether it could provide cost saving alternatives as contrasted with CenturyLink; in the context of the Cable Franchise negotiations - explore with Frontier whether it might provide dark fiber or a Managed Network and use this in negotiations impacting the Cable Franchise as well as the dark fiber or Managed Network.
- The City could consider approaching other providers to see whether they might be able to provide cost saving alternatives with respect to the fiber connectivity - some examples would be Level 3 (now owned by CenturyLink), Zayo (which is being bought by Digital Bridge) or other fiber optic companies.

From the City's standpoint, there are operational as well as financial considerations to take into account. For the City to switch Fiber providers - whether they involve CenturyLink, Comcast (if any regarding Fiber) or Frontier - involves a host of logistical and coordination issues. Thus, our recommendation with respect to this fiber aspect of Phase I is that the City explore the

possibilities described above. That may be impactful from a negotiation and cost standpoint. However, before the City changes providers, there would need to be significant cost savings, quality of service, redundancy, reliability and other considerations before making such a change.

Amendments could be written into the Comcast and Frontier Franchises (subject to the approval of Comcast and Frontier) which permit use of some of the PEG Fees in the Cable Access Fund (currently about \$370,000 including the transfer of \$80,000 to the General Fund) to pay ongoing Monthly Recurring I-Net and related charges.

- K. Prepare a list of Franchise Topics which could be included in an Extension or new Franchise Agreement so the City can determine whether it wishes to modify and extend the existing Comcast Cable Franchise or negotiate a new Cable Franchise Agreement with Comcast.

The following is a list of items for consideration which can be supplemented or included in Amendments to the existing Comcast Franchise and Frontier Franchise:

1. Expanding the definition of Gross Revenues (*Very important*)
2. Including commissions, rep fees, etc., paid to Affiliates in connection with Advertising in Gross Revenues (*Important*)
3. Whether the Competitive Equity language could be expanded (*Not as important*)
4. Annual Franchise Fee Reports (*Not as important, quarterly reports suffice*)
5. Alternative Compensation language (*Very important*)
6. Cross Subsidization language (*Not as important*)
7. Performance Evaluations (*Important*)
8. Additional Self-Insurance language (*Important*)
9. A Letter of Credit in the event of an uncured breach of a material provision or if there is a pattern of repeated violations (*Important*)
10. Broadening Open Records and Confidentiality Sections (*Not as important*)
11. Providing Annual Operational and Construction Reports (*Important*)
12. Ascertainment of Programming and Customer Satisfaction surveys (*Not as important*)
13. We do not want the City to lose its Channels if there is not a certain amount of programming carried each week during a six month period (*Very important*)
14. The amount of the per Subscriber per month PEG Contribution (*Important*)
15. Additional language with respect to Multiple Dwelling Units (*Not as important*)
16. Requirement to carry local signals received in stereo or with secondary audio tracks (*Not as important*)
17. Whether both public and private schools need to receive free service (*Not as important*)
18. Locates - notification before digging (*Very important*)
19. Build-Out Density Requirements (*Very important*)

20. Set top boxes for City Buildings now existing or hereafter constructed, Fire Stations, Police Stations, Libraries and Schools (*Very important*)
21. Discounts for low income, senior/disabled persons (*Not as important, can encourage but cannot require*)
22. Additional requirements with respect to audio and visual quality of PEG Channels, picture resolution, functionality, etc. (*Important*)
23. Resolution quality of an HD Channel and more advanced formats (*Important*)
24. PEG Channels on Mobile Devices, Tablets and Smart Phones (*Not as important*)
25. Maintaining the City Channels on their current locations (*Important*)
26. Including PEG Access Program Listings in Electronic Subscriber Guides at the cable company's cost (*Not as important*)
27. Transporting and distributing SD and HD Access Programming (*Very important*)
28. Emergency Alert Capability to comply with City requirements and Homeland Security requirements (*Very important*)
29. Making facilities available to the City in the event of a public emergency, fire, flood, natural disaster or other type of emergency (*Not as important since cannot require*)
30. Access Channels on Basic Service or Lowest HD Service Tier with a corresponding Channel number (*Important*)
32. Providing a Scrambled Channel for internal City training purposes (*Not as important*)
33. Adding new substantive language contained in 2019 Cable Franchises and Cable Franchise Renewals (*Very important*)

Task 2 - Frontier

- A. Review of existing Frontier Franchise Agreement. *Reviewed in Detail*
- B. Review of any pertinent City Cable Communications Ordinance - Chapter 5.60 of the Redmond Municipal Code. *Reviewed in Detail*
- C. Potential Compliance Issue - with respect to the potential Build-Out - Reviewed Memorandum to the Mayor dated November 17, 2009 along with the Data Request and other materials with respect to the Transfer of Control from Verizon to Frontier.

In order to determine whether Frontier has failed to provide service to a specific location as required by the Verizon Franchise, we needed to address certain Franchise provisions. This necessitates a detailed Franchise analysis in relation to specific addresses.

Under Section 3.1.1, because three years have passed, Frontier is required to offer Cable Service to all residential areas in the Initial Service Area as shown on Exhibit "A". We need to discuss whether any of the exceptions in Section 3.1.1 (A) through (G) apply, or not.

Then, under Section 3.1.2, Frontier is required to make service available where the average density (number of residential dwellings per mile) is equal to or greater than 25 “... from the nearest technically feasible point on the active FTTP Network trunk or feeder line.” If this address is located in an area which was newly annexed after the adoption of the Verizon Franchise in 2008, then there are other considerations under Section 3.1.3.

In areas where Frontier is required to provide service, it needs to do so at a Standard Installation charge if the residential dwelling unit is within 125 feet or 150 feet (Exhibit “D” Section 1 (F)) of trunk or feeder lines not otherwise already served by Frontier’s FTTP Network.

Under Section 3 B of the Customer Service Standards in Exhibit “D”, the Standard Installation is to be done within 7 to 14 days depending upon whether there is an Optical Network Terminal already installed on the Customer’s premises. Under Section 5.60.360 F (5), a Cable Operator is required to provide Cable Television Service in accordance with density provisions in the Franchise.

- D. Review of correspondence from and to the City and Frontier. **Provided by City Clerk and Finance Departments**
- E. Address Section 626 Letter from Frontier. **Provided by City Clerk and reviewed**
- F. Address numerous matters for possible inclusion in the renewed Franchise. This can include matters with respect to Fiber Connectivity between City Buildings, PEG Requirements and Channels, PEG Fees, Gross Revenues inclusions, FCC Orders, Definitional matters, Police Power issues, Term of Franchise, Free/Complimentary Service to City, Police, Fire, Libraries and Schools, Joint Trenching, Competitive Equity, Audits, Financial Records, Tax Liability, Indemnification, Insurance, Letter of Credit and Bond, Local Customer Service Office, Open Records, Customer Service Standards and issues, Government Video on Demand, SD Issues, High Definition, Signal Quality of PEG Channels, Location of PEG Channels, Return Connectivity, Changes in Technology, Right-of-Way Standards, Construction, Excavation, Burying Drops, Undergrounding, Inspection of Construction, Timeframe for Service Extensions and Service Availability, Emergency Alert System, Default Standards, Transfer of Ownership, Venue and Governing Laws. **Addressed numerous matters for possible inclusion in the renewed Franchise**
- G. Participate in Conference Calls/Phone Meetings and In-Person Meetings with the City and City Departments in order to assess whether the City could modify and extend the existing Franchise or enter into negotiations for a new Franchise with Frontier. **Several conference calls and in-person meetings were held to gather information and make this assessment.**

- H. Undertake a review of the Frontier Franchise to identify potential items for inclusion in a Compliance review of Frontier. This could identify subject matters which could be included in a Compliance Letter in Phase II. Additionally, this can include addressing the incremental increases and charges in the context of Rate Regulation and Effective Competition limitations under Federal Law and Senior/Low Income Discounts. The Franchise was reviewed and potential items were noted for inclusion in a Compliance Review. Rate Regulation and Effective Competition limitations exist under Federal Law and Senior/Low Income Discounts can be addressed with Frontier.
- I. Review the 1984 and 1992 Cable Acts, Telecommunications Act of 1996, FCC Orders and FCC Regulations in connection with the above. Cable Acts, Telecommunications Act, FCC Orders and FCC Regulations taken into account in Phase I
- J. Discuss with the City possible opportunities to expand Fiber Connectivity in the context of the Cable Renewal Process. Detailed conference calls were held with the Information & Technology Department.
- Fire Station 16 fiber hookup
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 - Lower income/isolated homes - free/low-cost Wi-Fi subscription services
 - Hi-Def TV support
 - Address from a Cable Franchise standpoint if Frontier wishes to migrate its services to include 4G and 5G Service from an infrastructure standpoint
- K. Prepare a list of Franchise Topics which could be included in an Extension or new Franchise Agreement so the City can determine whether it wishes to modify and extend the existing Frontier Cable Franchise or negotiate a new Cable Franchise Agreement with Frontier. The list of Franchise Topics to be added to the Frontier Cable Franchise and their importance is provided above as part of this Report.

RECOMMENDED GOALS IN THE CABLE FRANCHISE RENEWAL PROCESSES

- Follow the direction of the City Council with respect to substantive issues in the negotiation process.
- Maintain a level playing field between Comcast and Frontier.
- Preserve and support the City Channel.
- Preserve the current 5% of Gross Revenues Franchise Fees and 6% Utility Tax.
- Incorporate State-of-the-Art PEG provisions in order to provide that the City Channels will be carried without signal degradation.

- Negotiate and draft Fiber and Connectivity Agreements with Comcast, Frontier or CenturyLink to benefit the City and reduce costs over time.
- Include Right-of-Way and Construction provisions that require accountability from the Cable Operators.
- Explore Shadow Conduit opportunities.
- Update definitions current with Federal Law.
- Density, Line Extension and Build-Out Requirements.
- Sections to address transition from SD to HD.
- Complimentary Service to City Buildings and Schools.
- Reservation of right to PEG Fees (\$0.35 per Subscriber per Month or more) to be triggered by City Council at a later date.
- Convenient Customer Service and Bill Payment locations and adherence to FCC Customer Service Standards.
- Performance reports and evaluations required.
- Letter of Credit required for a pattern of material breaches.
- Emergency Alert Systems (“EAS”) and Emergency Communications.
- Term of Cable Franchises between 5-10 years.
- Discounts for low income seniors or disabled customers.
- Density clause: Build-outs if density reaches a certain number of homes per mile.
- Interconnection between Cable Operators.
- Update, modernize the Cable Franchises.

Overall Recommendation: Amend and extend the Comcast and Frontier Cable Franchises, taking into account the improvements which are referenced in this Report.

PHASE II - Projected Costs for Potential Cable Renewal Tasks under the Informal Renewal Process:

	Comcast	Frontier
Past Performance Review [Do]	\$4,200	\$7,500
Citizen Participation and Stakeholder Town Hall Meetings and Workshops for (i) Residents, (ii) Small to Medium Businesses and (iii) Large Companies [Do]	\$8,500-\$10,500	\$8,500-\$10,500
Web Survey [Do]	\$3,500-\$4,500	\$3,500-\$4,500
(City to use and pay other costs for Survey Monkey or similar company for tabulation)		
Phone Survey [Don't do]	\$20,000-\$25,000	\$20,000-\$25,000
Technical Assessment [Don't do]	\$30,000-\$35,000	\$25,000-\$30,000
Franchise Fee Agreed Upon Procedures Review For One Year [Don't do]	\$17,500-\$22,500	\$17,500-\$22,500
Negotiate and Draft Franchise Amendments [Do]	\$39,500-\$49,500	\$39,500-\$49,500

Negotiate and Draft I-Net

Agreements [Do]

\$14,000-\$24,500

\$14,000-\$24,500

Negotiate and Draft Agreement -

CenturyLink

\$7,500-\$17,500

Expenses - In addition to the costs above, expenses would be approximately 15% to 20%

Frontier Franchise Transfer Process [Do] - \$8,500-\$14,500 plus expenses of \$2,450, for a total of \$10,950-\$16,950, depending upon the cooperation of Frontier and the Buyer - Timeframe - (120 days after receipt of completed FCC Form 394).

The City could request that the Team provide some or all of the above services. We have recommended the most salient ones to protect the interests of the City and its constituents while recommending that other tasks not be done in order to save time and expense for the City.

This Cable Renewal work would be completed within 6 to 9 months subject to the cooperation of Comcast and Frontier.

Estimated Payback Period for the City - Based upon the current \$1,050,000 which the City receives from the 5% of Gross Revenues and 6% Utility Tax (which should be increasing by over \$300,000 given the implementation of the higher Utility Tax rate to 6%) and the continuation of both of those to be negotiated by River Oaks in the Franchise Amendments for Comcast and Frontier, the City would recoup the money spent (\$191,190-\$265,590, including expenses, for the recommended tasks above listed as Do) in approximately 2-3 months. With respect to the Fiber and I-Net related work involving Comcast, Frontier and CenturyLink, the Estimated Payback Periods for the City would depend upon how the Fiber and I-Net Agreements are structured with the Providers and the potential cost savings when compared with other existing agreements and alternatives. The Estimated Payback Periods and other payback periods contained or referenced throughout this Report are approximations and subject to a host of factors and variables which could result in the Estimated Payback Periods and other payback periods being of shorter or longer durations.

PHASE III - Fiber Availability, Fees and Permits, and Becoming a Smart City - Phase III or components thereof could be done concurrently with Phase II

Opportunities

The City currently has approximately 25 Inspectors plus another 20 Inspectors who are specifically dedicated to the Microsoft Refresh Project. It would be helpful to Development Services if better Route Maps, As-Built and GIS Information were provided to the City. Since the City owns street lights at main arterials and other locations, there are opportunities for monetization of those assets.

Currently, the City recognizes that while the conduit is a very valuable asset, the City is not inclined to monetize those horizontal assets since they are currently occupied by the City,

CenturyLink and Lake Washington School District. It would take additional City Staff to handle additional Agreements regarding the conduit and to manage the maintenance and operation thereof. The City is experiencing extensive growth with the Microsoft Refresh Project, the Sears area revamping, the Overlake area, the Light Rail and the tearing down of homes to build more homes.

The City owns approximately 1,600 Light Poles. Many are contained in Urban Centers as well as the arterials. With the advent of more 4G and 5G, there will be an increased need for backhaul and fiber to support small cell locations. The City does not have the Staff to manage or respond to small cell outages and issues. However, the City could benefit from increased connectivity to Fire Stations and other locations. The City has approximately 106 traffic signals and cameras. It could be possible and more cost effective to replace a 44 strand count with a 144 strand fiber bundle in existing conduit. This would be much less expensive than new construction given the current fiber construction costs per mile.

The City may be interested in obtaining new pricing on all of its fiber contracts and then bringing some in house. Currently, the City works with the C-3 Consortium. There was a need expressed to have all street lights equipped with fiber and redundancy. Wi-Fi could be located in parks where people gather and where there is City Staff. The City Council is interested in having low income residents having access to Wi-Fi at free or reduced rates. Additionally, there is interest in utilizing fiber technology for security, SCADA and water systems as well as for the IoT and increased GIS mapping

Smart City

In 2018, more than half the world's population lives in cities. Every week nearly 1.5 million people become urban dwellers, and by 2050, urban population will account for more than two-thirds of the world's population.

It should be noted that most cities were not planned but grew in a dispersed and organic fashion, primarily based on local geography and access to water. In most cities today, urbanization has been strained to a significant degree, affecting both people and local infrastructure. This puts local governments under pressure because of exponential growth in the telecommunications sector.

Smart cities are based on the concept that technology can provide mechanisms to modernize infrastructure, improve efficiencies, improve citizen engagement, improve inclusion and increase the overall quality of life through a combination of technology, connectivity and data. Cities must further learn to utilize technology to more effectively deliver essential city services to its citizens.

Building a Smart City requires investment in infrastructure. Advanced Internet of Things (IoT) technologies can provide sensors that create data insights that can help city leadership make better decisions and take real-time actions to more effectively deliver services to citizens, businesses and visitors alike.

According to McKinsey Global Institute (MGI), Smart City applications are being used to improve some quality of life indicators by 10% to 30%.

- Smart cities driven by data are adding digital intelligence to existing urban systems. This is enabling city leadership to do more with less by making better decisions. Connected applications put real-time information into the hands of leaders to help them make better choices.
- In the MGI study, the three sample cities that were running Smart City applications were able to reduce fatalities by 8% to 10%, accelerate emergency response times by 20% to 35%, shave the average commute by 15% to 20%, lower the disease burden by 8% to 15%, reduce crime incidents by 30% to 40%, reduce the liters of water used by a citizen by 25-80 liters per day and cut greenhouse gas emissions by 10% to 15%.
- According to this research, success requires public-private partnerships. The public sector would be the owner of approximately 70% of the applications in this study, but 60% of the initial investment required to implement these applications could come from private sector.

Many North American cities are already deploying Smart City applications. These applications range from LED lighting projects to infrastructure investments that are unlocking the value of energy savings, water savings or increasing efficiency by providing data insights to key city leadership.

But what does a Smart City really do? A review of Smart City projects worldwide showed that initiatives generally fall into one of the following Smart City categories:

- Government Efficiency
- Sustainability
- Economic Development
- Health and Wellness
- Public Safety
- Mobility
- Quality of Life

Key issues to consider when developing a Smart City plan include at least the following categories:

Funding - There are several options that cities can use to finance Smart City initiatives:

- Performance-based contracting model in various assets such as LED lighting, wastewater treatment, and municipal building heating and cooling is well demonstrated that can naturally extend to other applications.

- Public-private partnership (P3) models can be financially, socially, and technically innovative. See, for example, opportunities created by a P3 in Westminster, Maryland (<https://www.westminstermd.gov/419/Westminster-Fiber-Network>).
- Asset privatization (buildings, water/waste treatment, streetlights, marinas, etc.) is a recognized methodology for cities to upgrade outdated or failing infrastructure with funding from private investment groups that develop long-term relationships.
- Opportunity Zones, established by the 2017 Tax Reform Act, were created to revitalize economically distressed communities using private investments rather than taxpayer dollars. Investors are incentivized to invest long-term in return for preferential tax treatment. A recent example of Opportunity Zone investment of Smart City initiatives can be found in [Cleveland, Ohio](#) with the intent to make those areas safer and more attractive for investment.

Data Policy - Smart cities collect and analyze immense amounts of data from a vast array of sensors and devices. Policies must be aligned to identify what will be made available, citizens privacy protections and public and private use, storage and access of data. Knowing that technology, data and policies will dynamically change, it is critical to stay current. Ongoing education must be provided to all stakeholders.

Infrastructure Modernization - Cities must create dependable, modern and efficient infrastructure. Infrastructure modernization is normally associated with the essentials such as streets, water, sewer, gas and electric services, and a common omission when determining critical infrastructure upgrades is connectivity. Fiber and wireless networks are critical for data flow from/to Smart City sensors and devices. A city can rely on the local telephone company, cable company or wireless carrier for sensitive data connectivity, or they can deploy the necessary networks to more fully control their critical data access.

Smart City Champion - It is important for a city to designate a Smart City champion with appropriate authority on the City's leadership team. This person can serve as the director and driver of results, provide direction and governance to the program and deliver a cross-departmental perspective to future Smart City decisions. Ideally, this person would also serve on a regional, multidisciplinary committee Board.

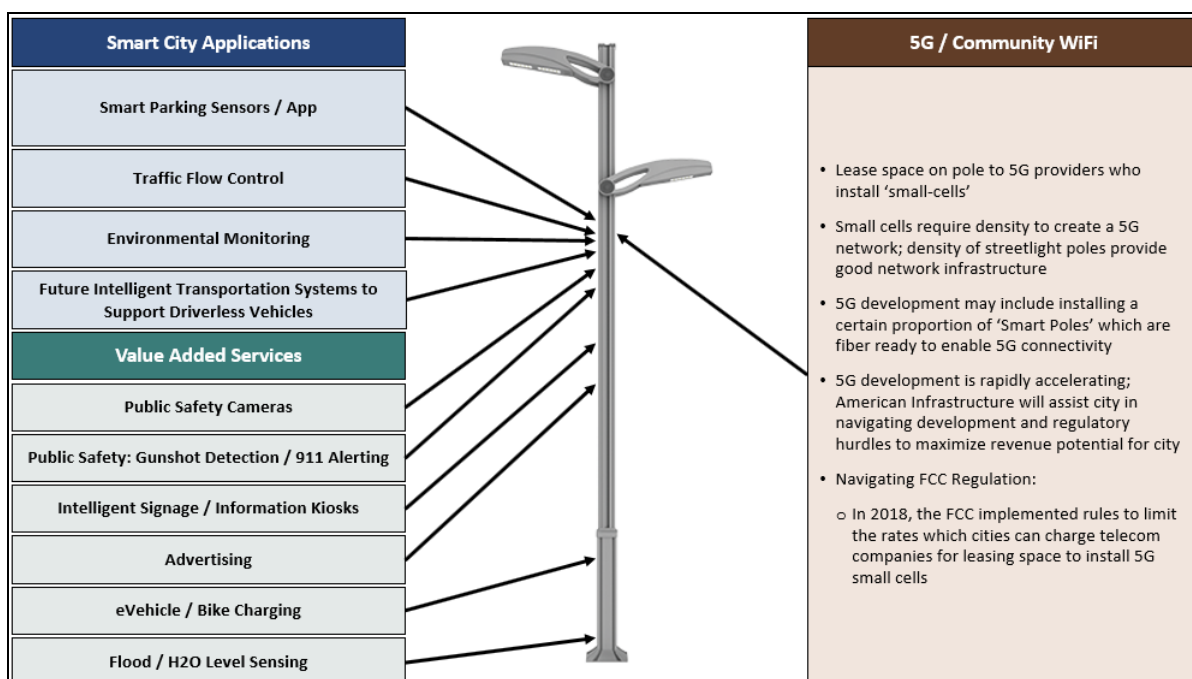
Develop Metrics - To quantify results a city should (i) identify metrics to evaluate all Smart City related programs for financial, social and environmental impact; (ii) create dashboards that reveal key performance indicators (KPIs) for every Smart City opportunity; and (iii) then ensure monitoring and feedback that encourage growth and success and hold vendors and/or partners responsible.

Citizen Engagement - One of the primary goals of Smart City proponents is to create an interactive social fabric with citizens, so it is vital to adopt a proactive approach in engaging with citizens and their neighborhoods to gain long-term support for their Smart City initiatives.

Phased-Based Approach - Initiating any component of a Smart City plan should be a phased-based approach. A city should identify projects that provide quick, measurable wins while longer-term projects should seek incremental and multi-stakeholder support.

Smart City activities that can quickly provide high impact results could include:

Upgrade Streetlights to LED Streetlights with Smart Network Controllers - Cities can realize significant and immediate cost savings by retrofitting streetlights with LED lighting systems and controls. Energy costs are typically reduced 50% and dimming features can add an additional 20-30% savings. Controller networks can facilitate 5G deployments, public Wi-Fi, smart parking, automated utility meter reading, atmospheric sensors, public safety devices, Smart utility grids and much more.



Deploy Digital Kiosks - Digital kiosks can create revenue streams while enhancing citizen engagement. Kiosk vendors will typically deploy at no charge to the City, plus provide a negotiated revenue share to the City. Additionally, these vendors will work with cities to highlight current events, train/bus schedules, and other important citizen notices. Digital kiosks are recognized Smart City improvements and can be used for wayfinding, brand identity, digital divide access, emergency communications, job searches, local business advertisements and more. Kiosks are designed with multiple cameras that can be fed to public safety, and some units utilize LiDAR technology. Digital policies need to accompany any agreement with these providers.

Smart City Applications

We anticipate increased permit applications from the providers, driven by the latest IoT technology, Smart City applications and/or overall customer demand for enhanced broadband

services from more than just one device. Users now have cell phones, tablets, laptops and wearable devices each desiring high-speed wireless access. As part of this work, it is important to consider Best Practices utilized by other jurisdictions. Recommendations can be drafted for Best Practices, taking into account Federally Mandated Requirements and State Requirements. This could include Small Cells, Macro Cell Towers, Conduit and Fiber Optics, Sensors, Digital Kiosks and other Applications from a P3 - Public-Private Partnership Paradigm. See **Exhibit 2** for further detail. It should be noted that implementation of Smart City Applications requires staff and resources - thus goals in this regard need to keep in mind City capacity to undertake and manage Smart City initiatives.

The following are some previously addressed and potential Smart City Applications:

- Carbon monitoring
- Public safety - gunshot triangulation
- Parking information regarding available spaces
- Autonomous vehicles
- Revenue generating opportunities for the City
- Additional current and Smart City applications
- Emergency evacuation routes
- Including sensors in trees to monitor watering

Like other communities across the country, the City is seeking a clear path to becoming a Smart City through broadband expansion. This requires identifying existing vertical City assets that providers can utilize for current and future technology initiatives, doing an inventory of those assets, creating a data base, streamlining regulations to facilitate providers' "speed to market" and implementing a strategy for future technology growth and revenue generation.

If the City would like to facilitate broadband investment in City assets, it will need to address the digital divide and generate new revenue streams to further fund the deployment of Smart City initiatives. There will be challenges to efficiently address the connectivity infrastructure demands of a growing City population.

Fortunately, there are opportunities to leverage experience, strategic partners and mapping platforms to categorize City assets, streamline the wireless siting application process, implement the deployment of fiber, manage and lease City assets, deploy Smart City infrastructure and benefit public safety, education, healthcare, public services and transportation -- all of which can drive a smart economy. Projected costs: (\$35,500-\$49,500 plus expenses for the initial work). Estimated Payback Period for the City - 12 to 24 months after this initial work is completed depending upon the level of interest shown by the Providers.

Fees and Permits

It is not uncommon for a city's fees and permit structures to become outdated. Technology has evolved much faster than the fees and processes which are applicable to them. Now is a good

time for the City to reexamine its fees and permits in view of the significant growth in mobile devices. We would recommend consideration of the following:

Right-of-Way Management Fees - Review the existing fee structures and identify all fees currently not established where the City is incurring costs or could incur costs related to work performed in the Rights-of-Way that are recoverable through service fees (if the City were to allow certain techniques related to boring and trenching, this would include boring plan review application and inspections, etc.). Projected costs: Currently being reviewed by CBG-depends upon whether a Fee Study was recently done and what methodology and policies currently exist. Estimated Payback Period for the City - 12 to 18 months after this initial work is completed.

Telecommunications Policies and Procedures - Dig Once, Shadow Conduit, Common/Shared Conduit, IRUs, Right-of-Way Utility Work and Street Degradation could also be taken into consideration. This includes modernization for future broadband application permitting approvals, including (but not limited to) redistricting plans and zoning changes for high-density and underserved areas, small cell and macro cell applications, ROW encroachment permits, small cell and macro cell attachment fee agreements (master license agreements and site license agreements) and fiber franchise agreements and renewals. Projected costs: Currently being reviewed by CBG-depends upon whether a Fee Study was recently done and what methodology and policies currently exist. Estimated Payback Period for the City - 12 to 18 months after this initial work is completed depending upon the cooperation of the Providers.

Street Degradation Fee and/or Proposed Policy Changes to Reduce Street Restoration Costs Incurred by the City - The Team can develop Street Degradation Fees associated with the City's current costs to construct, reconstruct, and resurface City streets. These costs related to newly constructed, reconstructed and resurfaced streets by the City as part of its Street improvement and infrastructure program should be recaptured or recovered from those entities performing work on streets. The Team can develop a schedule of fees related to the remaining street life of a City street, as well as develop policies and procedures for the City Council to consider in order to reduce the current street improvement costs. Projected costs: Currently being reviewed by CBG-depends upon whether a Fee Study was recently done and what methodology and policies currently exist. Estimated Payback Period for the City - 9 to 18 months after this initial work is completed depending upon the level of activity in the City.

Program Management - (Monetization of Horizontal and Vertical Assets) - includes Walk-Outs with Carriers on a pre-construction basis and Walk-Outs with Carriers on a post-construction basis). This can be achieved through monetization of public assets and modernization of municipal policies, processes and fee schedules. This can be done by facilitating public-private partnerships with broadband and Smart City providers that rapidly accelerate broadband expansion for businesses, residents and visitors. The collaboration helps maximize the value of City assets. The City could coordinate design walks, reviews and approvals of design requirements for City-owned assets with departmental staff and providers as needed for application processing:

- Track, coordinate and verify with City Staff and providers all site walks and pre-construction scheduling necessary to commence construction;
- Track, coordinate and verify insurance, licensing and building permit processing with providers for departmental notices to proceed; and
- Track, coordinate and verify all construction inspections, consistency with permits granted and “as built drawings” and issuance of Certificates of Occupancy.

As mentioned, now is an opportune time for the City to examine its current fee structures. Application, permit, inspection, engineering, street degradation, small wireless facility and other fees should all be examined. All too often, fees do not adequately reimburse cities for their actual costs. The result is that cities inadvertently subsidize private Industry. Projected costs: (\$325/hour plus expenses). Estimated Payback Period depends on the amount of work done by City Staff and by the Team to manage the Assets (identify and contact Providers, conference calls, meetings, draft and negotiate Agreements, present same to City Council, etc.).

Cost Study

The current inclination of the Federal Communications Commission, particularly in the area of Small Wireless Facilities, is to require cities to model their fees on a cost-based analysis. Specifically, this will require communities who want to charge more than the FCC minimums to justify higher fees based on cost studies. In order to satisfy those requirements, we would suggest that the City consider the following steps:

Perform a Market Analysis - Carriers, speeds and currently existing providers can be analyzed. This analysis is important in order to evaluate existing offerings and relative speeds so that the City can gauge whether it is receiving State of the Art Broadband coverage. In most cases, there are either unserved or underserved areas which, in turn, create a digital divide.

Develop a Cost Study - The Team can review the costs currently being incurred, as well as those anticipated to be incurred, related to the planning review, design and installation of proposed small wireless facilities in the rights-of-way. The Team would need to determine the affected Departments, the amount of time devoted by staff, the annual salaries and benefits of involved City employees and allocate those and other factors to determine the actual amount of time and resources needed to handle, oversee and monitor Small Wireless Facilities that will be placed in the City’s rights-of-way. To successfully build new wireless networks, providers want to partner with cities that have a streamlined permit intake and attachment process with access to a wider range of city assets like fiber, conduits, poles and property for Small Cell Deployment.

Based upon information received, we could recommend that the City consider doing a Cost Study. Often times Local Governments do not fully recoup their costs from providers with respect to small cell build-outs. The suggested \$270/year/pole usage fee for small cells by the FCC is undervalued. Given the growth of the City, we anticipate that several providers may want to install Small Cell and 5G Networks. In order to serve those sites, backhaul will be necessary. In this regard, we further anticipate that streets will need to be repaired and costs recouped in

order to make the City whole. See **Exhibit 3** for further detail. Projected costs: Currently being reviewed by CBG-depends upon whether a Fee Study was recently done and what methodology and policies currently exist. Estimated Payback Period for the City - 12 to 24 months after this initial work is completed depending upon the level of Provider activity and number of small wireless facilities in the ROW.

Conclusion

We appreciate the opportunity to present this Report and our recommendations regarding the Cable Television Franchise Renewal, Fiber Opportunities, becoming a Smart City, Fees and Permits, and a Cost Study. Besides amending the Cable Franchises with Comcast and Frontier, it will be the City's decision as to what other steps it desires to take in Phase II and Phase III of this Project.

EXHIBIT 1 - BRIEF BIOGRAPHIES

River Oaks Communications Corporation

Formed in 1987, River Oaks Communications Corporation (“River Oaks”) has had a wide variety of broadband, cable television, wireless and telecommunications work with local government clients and has a proven track record of providing consulting and project management services which produce effective results. Our clientele has included large metropolitan, midsize and rural communities.

We have worked with Redmond on a variety of Projects since 2003 including the Cable Television Franchise with Comcast in 2004, the Cable Television Franchise with Verizon in 2008, the Transfer of the Cable Television Franchise from Verizon to Frontier in 2009, the Cable Television Franchise with Comcast in 2013, Chapter 12.14 several years ago and RCTV Video Production related matters.

For over 30 years, the company has worked on cable television, telecommunications, wireless or other projects in 39 States throughout the country and on behalf of the Commonwealth of Puerto Rico. Our work has included cable television, small cells, Broadband Needs Assessments, focus groups, workshops, surveys and community outreach. We have been brought in to meet with key stakeholders (Industry, businesses, residents, schools, libraries, hospitals, etc.), explore public-private partnerships, negotiate and draft Agreements, conduct strategic due diligence and work as a team member on broadband feasibility studies.

For example, our company worked on a Broadband Feasibility Study as part of a Team for Garfield and Mesa Counties in Colorado. Many communities continue to be underserved or unserved by the providers. Community outreach meetings were held over a period of three weeks throughout those Counties to acquire stakeholder input on their Internet needs and interests. Attendees included Industry, businesses, residents, a former Mayor, a City Manager and Town Manager, IT staff, library personnel, school representatives, retirees, a Chamber of Commerce, Economic Development staff and other interested parties. Information gathered from the community outreach meetings was assimilated and a Report was generated.

The principals of River Oaks have had their work published, and they are speakers at local, regional and national conferences. We authored broadband articles for the New Mexico Municipal League and Wyoming Association of Municipalities. River Oaks was also a contributing author to the Best Practices Siting Guide for Wireless Services of the National Association of Telecommunications Officers and Advisors. This Guide was prepared by a group of experts throughout the United States and facilitates discussion between Local Governments and Wireless Carriers.

Thomas (Tom) Duchen, President of River Oaks, has broadband, cable television, IPTV, wireless and telecommunications experience. Mr. Duchen is a graduate of the University of Virginia School of Law and holds a B.A. from Tulane University, where he was Phi Beta Kappa. Since the formation of River Oaks in 1987, he has worked on a variety of issues throughout the United States, including projects in Colorado, Nebraska, Missouri, North Dakota, Nevada, Illinois, Washington

and New York. Mr. Duchen has significant experience in team management and negotiating agreements and is a speaker at seminars and conferences.

Robert (Bob) Duchen, Vice President of River Oaks, has broadband, cable television, IPTV, wireless, telecommunications, intellectual property and mergers and acquisitions experience. Mr. Duchen is a graduate of the University of Virginia School of Law and holds a B.A. from Tulane University, where he was Phi Beta Kappa. He has worked in States throughout the country, such as Colorado, Nebraska, Wyoming, Iowa, Minnesota, New Mexico, Washington, Oregon, Idaho, Ohio, Illinois, Wisconsin, Maryland and South Carolina. Mr. Duchen also has significant experience in team management and negotiating agreements and is a speaker at seminars and conferences.

Additional information regarding River Oaks can be found at www.rivoaks.com.

CBG Communications, Inc.

CBG Communications, Inc. since 2001 has established a national reputation in broadband and telecommunications, right-of-way management, cost studies, needs assessment, institutional network, technology, cable television and PEG Access matters. CBG has a proven track record of providing consulting services for public sector entities which produce effective results.

During their professional careers, CBG's principals have been involved with numerous broadband and telecommunications matters and cable television franchise renewals throughout the United States. They are professionals with decades of experience performing activities related to broadband needs and interests ascertainment; subscriber/non-subscriber attitudes, interests, needs and opinion research; ROW management cost studies; asset valuation; technical audits; system review; past performance reviews; designing, developing and evaluating communications networks for proper functionality, capacity and reliability; and evaluating PEG access facilities. They have a clear understanding of the interplay between community broadband needs, telecommunications networks, law, policy, regulation and technology, and are able to determine realistic, demonstrated needs, policies, procedures, costs and revenue possibilities in an objective way that can advance the goals of the City.

Specific CBG expertise includes:

Broadband and Telecommunications

Broadband Infrastructure Planning and Development

Assistance with a wide range of network planning and development activities, including wireless and wireline broadband network feasibility and community needs assessment studies; video, voice, and data communications application review and implementation; development of public sector telecommunications infrastructure (including review and analysis of physical transport, architectures, aerial and underground construction methods and locations, etc.); development of public sector-owned and common conduit policies and leasing plans; analysis of co-location and co-build requirements and strategies; inventories of broadband, telecommunications and other utility infrastructure; review of

construction techniques (open street cuts, directional boring, saw-cuts, etc.); wireless communications site planning and evaluation, etc.

Right-of-Way Management

Services include development of provisions regarding the permitting process, licensing, ROW management procedures, construction and inspection requirements, ROW usage fee structures (including the provision of in-kind services), asset valuation, insurance, indemnification and bonding, service definitions and other critical issues.

Telecommunications Planning and Policy Development

Services include development of mechanisms to enhance universal access to basic and advanced telecommunications and internet services; expansion of telecommunications service opportunities within the jurisdiction and surrounding region; facilitation of greater electronic access by the public to government and educational information and services; expansion and enhancement of g-commerce, e-commerce, and other Internet-based initiatives; review of privacy and security needs related to such information; review of the jurisdiction as both a user and provider of telecommunications services; development of right-of-way management policies, procedures and requirements; development of compensation methods for telecommunications service provider use of the ROW, etc.

Telecommunications Regulatory Projects

Development of franchise, license, revocable permit and other forms of operating agreements for the provision of broadband, cable, telephone, competitive access provider, competitive local exchange carrier and open video system services; review and analysis of both state and federal legislation and legislative initiatives, including assistance with legislator education and advocacy efforts on behalf of public sector interests.

CBG Communications, Inc. Key Personnel

CBG personnel have worked on behalf of local governments and other public sector organizations all across the country. Successful results have been achieved in numerous settings from large metropolitan areas such as Philadelphia, Denver, Baltimore, Minneapolis, St. Paul, Seattle, Portland and many others, to rural counties and medium and small-sized towns. Collectively, CBG's principals have decades of telecommunications and cable experience, which provides them with a knowledgeable, seasoned and expert background. Its representatives have had their work published, and they have spoken at local and national conferences and received recognition in national publications.

CBG has three office locations: one in New Jersey, outside of New York City; one in Paoli, Pennsylvania, outside of Philadelphia; and the other in St. Paul, Minnesota. Additional information regarding CBG can be found at www.cbgcommunications.com.

Fortitude Ventures, Inc.

Over the past several years, Terry Holmes worked with cities such as Columbus, Ohio and Nashville, Tennessee to assess and monetize their municipal assets. Terry has deployed advanced wired and wireless telecommunications networks nationally in urban and suburban environments. Terry has led wireless technology trials with Microsoft, AT&T, WorldCom, Newbridge, Pioneer and others to converge voice, video and data in the pioneering days of digital compression.

At the Federal Communications Commission (FCC), Terry co-authored rule changes for the licensed 2.5 GHz spectrum band to realize greater spectral efficiencies, presented a white paper on broadband mapping methodologies and currently participates, as a municipal advocate, in the Broadband Deployment and Advisory Committee (BDAC) regulatory initiatives to streamline deployment of 5G technologies. Terry is active in NATOA, the NLC and U.S. Conference of Mayors and regularly presents on Smart City transitional issues. He is a strong advocate for helping cities integrate the technologies necessary for densification with forward-thinking municipal applications.

EXHIBIT 2 - INVENTORY AND SMART CITY

If the City so desires, the Team can develop Smart City strategies and comprehensive broadband master plans that generate new revenue streams while closing the digital divide. This can be achieved through monetization of public assets and modernization of municipal policies, processes and fee schedules. The Team does this by facilitating public-private partnerships with broadband and Smart City providers that rapidly accelerate broadband expansion for businesses, residents and visitors. We consider ourselves to be a partner with the City, with your priorities and community interests as the drivers of our success. We would look forward to working with your local stakeholders to develop Smart City strategies for the future of Redmond.

Our experienced Team is committed to providing a comprehensive and holistic approach. We are focused on the challenges and unique solutions to identify and assess what can become a pivotal infrastructure component that collects and transports data to drive Smart City efficiencies and services.

Use Innovative Strategies to Leverage Telecommunications Investments for Public Purpose

When the City makes its assets available for broadband use, the goal is to reduce costs, streamline deployment and encourage investment. Our Team has created a comprehensive strategy that can accomplish this and much more:

- Establish an inventory of public assets that providers may use to offset deployment costs and enhance time to market, which may include conduit, fiber, vertical assets like poles and street lights, public structures, real estate, or other assets.
- Evaluate existing telecommunications and cable franchise agreements in the right-of-way and negotiate market rents commensurate with national averages.
- Create a strong set of investment-friendly policies to monetize assets in a fair and equitable manner.
- Encourage service providers to make essential asset choices on City assets, based upon entitlement clarity, available assets and business-friendly policies.
- Provide a single point of contact for City asset marketing, application intake and pre-screening services for streamlining departmental approval with all broadband siting applications on City assets (without tying up valuable resources).
- Utilize the City's mapping platform for available City-owned assets to identify gaps in carrier coverage and capacity. The platform can also be utilized for fiber development and IoT initiatives.
- Provide overall policy guidance consistent with federal, state and local industry standards.
- Provide a success-based program that includes value added oversight on all preconstruction and post-construction site walks to verify consistency with approved, permitted drawings.

Many cities, like Redmond, now recognize the need to organize and design their existing vertical assets and fiber inventories into a comprehensive “Smart City” infrastructure plan. As a technology and broadband asset aggregator, the Team can utilize the City’s mapping technology to survey, inventory, and market the currently available broadband-valued department assets: light/traffic/electric poles, water tanks, City-owned telecommunication towers, buildings and land, existing fiber and conduit. Additionally, asset owner data, technical specifications, location details, installation dates, and other pertinent metadata, could be collected and uploaded as part of a centralized database to market and facilitate Smart City initiatives throughout the engagement. Marketing these data points may become increasingly critical towards development and sustainability of an asset “marketplace” where providers contract with the City to offer the latest Smart City sensors and IoT technology.

Identify and Inventory City Assets

- Conduct preliminary meetings with City Staff to provide a checklist of necessary information needed for review and outline a comprehensive scope of work.
- Gather necessary documentation - GIS data collection for existing City assets in acceptable digital format (identification and delineation of fiber, conduit, traffic signals, dynamic signs, closed circuit camera towers and traffic management centers within City-wide asset data set).
- Collaborate with Staff to verify assessment of collected ROW assets and cross-reference types of City infrastructure assets needed to accommodate industry needs.

Asset Valuation and Strategic Planning

To establish the value of the City’s infrastructure, both for a potential City-owned network and for the potential for private use to expand broadband, we can develop a financial pro forma that illustrates the net present value (NPV) of the potential revenues that the assets might generate and the City’s avoided costs, less the City’s long-term operating and maintenance expenses.

Our analysis can focus on developing a market lease value for fiber and conduit, and other municipal assets as defined. We can also consider the value of mounting assets that could support small cell wireless deployment. This latter category can include rooftops, building facades, light poles, street furniture and other outdoor City assets.

As with any financial projections, we can make a series of reasonable assumptions about a range of cost and revenue factors, including:

- Operating expenses
- Staffing levels

- Maintenance contracts
- Ongoing equipment replacement
- Services offered
- Market rates (current and future)
- Projected revenue for core services currently offered
- Projected revenue for potential future services

EXHIBIT 3 - COST STUDY

COST RECOVERY AND MARKET VALUATION

The Team could utilize a variety of data gathering methods to review and evaluate the City's current and projected Right-of-Way, Public Property, Wireless Communication Facilities (WCF)¹ and Small Cells² regulation and management practices and the associated cost categories being utilized to develop their current fee structures. This can include analysis of application, permitting, inspection, maintenance and overall management and enforcement activities, and processes, procedures and policies in relation to the current fees charged, in order to identify the potential for any unrecovered cost, unrecovered market value and allowable fees.

Cost Ascertainment Process

The Team could provide time and cost templates, data analysis, process review, cost analysis and fee recommendations through the following means:

For the greatest efficiency and effectiveness, the Team could request early and integral participation of pertinent City departments. The Team could first develop a number of templates for information gathering, have initial conference calls/meetings with pertinent City departments and then have the departments gather and/or assemble a variety of initial data. The City could send the pertinent initial data to the Team, whereupon it could be analyzed, follow-up tasks could be developed and additional interviews scheduled. Then, the Team could further gather ROW management, Public Property and Small Cell WCF-related cost data through meetings (including on-site), records research, personnel interviews, activity monitoring, workflow analysis, and other data gathering methods. Once all the revised data has been gathered and analyzed, a data set could be used to determine initial and revised fee structures along with any necessary financial changes to pertinent Ordinances and policies.

Overall, Tom Robinson, President, Dick Nielsen, Senior Engineer, and Krystene Rivers, Senior Research Associate, all with CBG Communications, Inc., Tom Duchen, President, and Bob Duchen, Vice President of River Oaks Communications Corporation and Terry Holmes of Fortitude Ventures, Inc. can work with the City to review the current ROW, Public Property and Small Cell management and oversight program, fee structures and their basis. As part of this, the Team can review the existing policies and procedures, including ordinances, regulations, rules, policies, forms and other documentation related to permitting, inspections, property and asset

¹ "Wireless Communication Facilities" or "WCF" means equipment for the transmission or reception of radio frequency (RF) signals or other wireless communications or other signals for commercial communications purposes, typically consisting of one or more antennas or group of antennas, a tower or attachment support structure, transmission cables and other transmission equipment, and an equipment enclosure or cabinets, and including small cell technologies.

² "Small cells" mean compact wireless equipment that contain their own transceiver equipment and function like cells in a wireless network but provide a smaller coverage area than traditional macro cells. The size requirements are found in the FCC's Declaratory Ruling and Third Report and Order released September 27, 2018.

leasing and related processes. This could be done in conjunction with the other documentation review performed by the Team for the overall cost study.

The Team can review current and projected ROW, Public Property and Small Cell infrastructure construction, installation, permitting, inspection and maintenance procedures, including information flow management and construction and installation oversight. Ultimately, this can allow determination of how the ROW and Small Cell management tasks and corresponding reimbursement should be best apportioned and allocated. It can also enable the baseline costs of Public Property to be determined, such that these costs are recovered, as part of market valuation.

We could then review the current and projected directly reimbursable administrative, permitting, and inspection costs, maintenance costs, planning and zoning costs, and capital costs as well as supporting and related costs. This can allow the modification and further development of application and permit fees, ongoing management/inspection fees, lease fees and/or other applicable fees.

After review and discussion, new and/or additional ROW and Small Cell management fees and property and asset lease fees could then be folded into an amendment to the current fee structures and/or proposed regulatory and leasing provisions to be developed or revised. We could revise and fine tune the proposed fee structures as necessary, based upon input during the City's review process, including as determined by the City, any pertinent industry review, comparative analysis, etc., after initial development.

Reimbursable Costs

More specifically, based on the data gathered, the Team could determine the following ROW and Small Cell management cost elements:

- **Directly reimbursable costs** - The Team could use both an analysis of current operations as well as a comparative and historical analysis to determine the administrative, permitting, inspection, and ongoing management (including costs incurred based on improper restoration, relocation and other post-installation activities) that could be directly attributable to the use of the public right-of-way by a variety of underground and overhead utilities, WCF/Small Cell and other communications service providers.
- **Indirect costs** - The Team could review the amount of indirect costs attributable to construction, installation and ongoing use of the public right-of-way including a variety of administrative and support costs (executive branch, legislative branch, public safety, etc.) that aren't always traditionally factored into the overhead and indirect costs associated with direct cost centers such as Public Works and other pertinent departments. This includes a variety of costs such as central services, facility support services, clerical and other administrative support, and other similar costs that don't directly factor into pertinent cost formulas.

- **Embedded versus incremental costs** - As part of our review, the Team can delineate the incremental costs (change in costs) incurred by the City related to the City's WCF management program and the newly implemented FCC regulations regarding Small Cells. While the industry typically maintains that incremental costs are the only reasonable cost to be reimbursed to municipalities, the Team does not agree and therefore can gather, review and analyze fully allocated, embedded costs and compare the two types in our report.
- **Street Life Recovery Costs** - The Team could review both the historical and current impact on street life in the City due to periodic opening of the right-of-way and the effect of sub-surface disturbance on surface viability, compare this with the results of street life studies in other jurisdictions and project cost indicators to determine the impact on street life based on the amount of ROW construction, installation and maintenance activity. This could then be analyzed versus the City's street surfacing and reconstruction expenditures to determine the associated cost impact. (Please note that this does not include a specific street degradation study for the City which can be performed, but it is a time-consuming and costly process involving cataloging all street cuts, ages of the streets, rideability and other factors to determine the relative Pavement Condition Index [PCI] of streets without cuts versus streets with cuts).

Once costs are fully determined, they then need to be allocated to the ROW, WCF and Small Cell user community based on a defensible methodology. These costs can be allocated based on the impact of each user's facilities and its usage of the right-of-way, and thus a direct comparison to the FCC's fees can be conducted in the case of WCF/Small Cell-related cost recovery. Overall apportionment of cost is typically directly related to the impact that the provider has on the right-of-way (for example, those with greater placements in the right-of-way typically cause the largest ongoing management costs, while those that have the most significant installation during any given period can have the greatest costs associated with permitting, inspection and zoning).

Market Valuation

Regarding market valuation for public property, the Team could look both at physical vertical and horizontal assets as well as public land. Specifically, the Team could:

- a. Assess the current market value of tower, conduit, building and fiber leases both nationally and regionally.

The Team proposes to provide valuation services that can glean potential asset values based on existing attachment and use fees charged in the region. These attachments can include towers and structures as well as other telecommunications-related vertical assets. Use can include access to conduits and fiber. We can employ best practices and comparative analysis to determine the highest reasonable and feasible valuation of the City's assets for access by wireless communications provider infrastructure and communications providers generally. This could include valuation for access by both those providers currently accessing the City's assets, as well

as those that are anticipated to seek access in the future, for existing poles, buildings and towers and other vertical assets as well as conduit and fiber. This valuation analysis can account for the following factors:

- demand for access;
- available capacity;
- current and anticipated future market value;
- location;
- number and nature of potential occupants, structures and attachments;
- potential for colocation on or in a single structure or multiple structures and sharing property, including subleases;
- height needed for access;
- desired length of agreement term;
- coverage;
- potential in-kind services; and
- other relevant factors.

The Team's comparative analysis can focus on similar lease agreements and circumstances, as listed above, both in the Redmond Washington market (See **Exhibit 4**) as well as in Washington generally. Pertinent national data can be analyzed as well. A spreadsheet of these findings can be created showing the compensation attributes of agreements in other jurisdictions that are relevant to valuing the City's assets.

b. Assess the current market value of land leasing for communications structures, both nationally and regionally.

Similar to the processes defined in (a) above, the Team proposes to provide valuation services that can determine potential land lease values based on existing property leases for placement of telecommunications related assets including towers, antennas and buildings that house the necessary equipment. We can employ best practices and comparative analysis to determine the highest reasonable and feasible valuation of the City's land assets that are or can be used for wireless or other communications providers' infrastructure. This could include valuation for access by both those providers currently accessing City property, as well as those that are anticipated to seek access in the future to City-owned property. This valuation analysis can be similar to the above valuation of access to physical structures and can account for the same factors.

c. The Team can review the City's current lease fee structure, assess the pricing structure and make recommendations as to what elements should be considered in a pricing model (amount of land or rack space, amount of space/load on the tower, revenue sharing if space is sublet, differential for high-value locations, etc.). The Team can include an evaluation of the current method for escalating rates over the life of the lease period.

The Team can work with the City to review current leases and agreements with service providers using its assets today as well as comparable agreements with other entities incorporating current

lease arrangements and fees. These agreements can be compared to the above findings to determine how the City's current agreements measure up to rates found elsewhere in the region and those projected for the future. This process can develop a baseline that can be adjusted depending on any current or desired in-kind agreements with the occupants. These valuations can be further adjusted based on the specifics of each lease, such as the amount of space needed on a tower or in a City facility or on City-owned land. Powering needs, if provided as part of the lease with the City, as well as additional security or environmental needs of the lease, can also be incorporated in the analysis.

Additionally, the Team can review the City's methods and processes for evaluating lease terms and rates over time. This can include evaluation and recommendations concerning pricing structures based on longer-term as well as shorter-term leases and how potential adjustments to current processes may impact the City.

The Team can perform many of the above tasks remotely but can evaluate site-specific circumstances as needed.

Recommendations and Reporting

Compensation Methodology/Fee Structures

From all the information gathered, the Team could ultimately recommend an appropriate compensation methodology and level of compensation, resulting in changes to the current fee structures depending upon findings during the information-gathering phase.

Recommendation for Implementation/Further Action

The Team could provide recommendations for appropriate ROW management, Public Property lease and Small Cell fees and a plan for implementation, as well as recommendations for any changes to City processes, policies and procedures.

Written Report

The Team can provide its recommendations in a thorough but concise written report for the City.

Approval and Implementation of Changes to the Fee Structures

The final step is to assist the City in the approval and implementation of changes to the Fee Structures and related documents. The Team can draft a Cost Study report for the elected officials.

The Cost Study incorporates a significant amount of work that can be done by E-mail, telephone, and Federal Express. When personnel are needed on-site at your locations for a variety of cost analyses, review and assessment tasks, planning sessions, document drafting, public meetings, etc., our Team will be there.

EXHIBIT 4
REDMOND, WASHINGTON
SUMMARY OF LEASES

Name	Clearwire	Clearwire	Clearwire	Eastside Public Safety Communications Agency	NORCOM (North East King County)	King County
Original Date	2006	2006	2006	2008	2011	2017
Location	7031 148th Ave. NE	22515 NE Market Place	18609 NE 65th Street	17100 - 104th Street NE	17100 NE 104th Street	10365 72nd Ave. NE
Term	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 1 additional 5 year term	5 years plus 5 year renewals	25 years plus three 5-year renewal terms
Rent	\$14,232/year or \$14,801/year depending on signing date, plus the greater of 4% or CPI/year	\$14,232/year or \$14,801/year depending on signing date, plus the greater of 4% or CPI/year	\$14,232/year or \$14,801/year depending on signing date, plus the greater of 4% or CPI/year	None (to enhance public safety radio communications)	\$1,000/year plus the greater of 3% or CPI/year	\$27,000/year
Security	\$20,000 cash or L/C or Bond	\$20,000 cash or LC or Bond	\$20,000 cash or LC or Bond	\$20,000 cash or LC or Bond	N/A	N/A

Name	New Cingular	New Cingular	US West	GTE Wireless	Sprint	Sprint
Original Date	2009	2005	1998	1998	1997	2009
Location	17100 - 104th Street NE	22515 NE Marketplace	5021 264th Ave. NE	5021 264th Ave. NE	18609 NE 65th Street	17100 - 104th Street NE
Term	5 years plus 5 year renewals	5 years plus 5 year renewals	1 year plus 5 year renewals	5 years plus 1 additional 5 year term	1 year with auto renewal plus 5 year renewals	5 years plus 5 year renewals
Rent	\$16,380/year or \$17,035/year depending on signing date, plus the greater of 4% or CPI/year	\$20,528/year or \$21,348/year depending on signing date, plus the greater of 4% or CPI/year	\$10,000/year plus the greater of 4% or CPI/year	\$10,000/year plus the greater of 4% or CPI/year	\$10,000/year plus the greater of 4% or CPI/year	\$15,001.71/year or \$16,602/year depending on signing date, plus the greater of 4% or CPI/year
Security	\$20,000 cash or L/C or Bond	\$20,000 cash or L/C or Bond	\$10,000 cash or LC	\$10,000 cash or LC	\$10,000 cash	\$20,000 cash or LC or Bond

Name	T-Mobile	T-Mobile	T-Mobile	T-Mobile	T-Mobile	Verizon
Original Date	2007	2007	2009	2006	2006	2018
Location	5021 264th Ave. NE	7031 148th Ave. NE	22515 NE Market Place Drive	18609 NE 65th Street	SW corner of NE 104th Street & 172nd Ave. NE	18609 NE 65th Street
Term	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 5 year renewals	5 years plus 1 additional 5 year term
Rent	\$7,117/year or \$7,402/year depending on signing date, plus the greater of 4% or CPI/year	\$15,393/year or \$16,009/year depending on signing date, plus the greater of 4% or CPI/year	\$16,016/year or \$16,657/year depending on signing date, plus the greater of 4% or CPI/year	\$14,232/year or \$14,801/year depending on signing date, plus the greater of 4% or CPI/year	\$13,159/year or \$13,685/year depending on signing date, plus the greater of 4% or CPI/year	\$22,308/year or \$23,000/year depending on signing date, plus the greater of 4% or CPI/year
Security	\$20,000 cash or L/C or Bond	\$20,000 cash or LC or Bond	\$20,000 cash or LC or Bond	\$20,000 cash or LC or Bond	\$10,000 cash or LC or Bond	\$20,000 cash or LC or Bond

Name	Verizon		
Original Date	2016		
Location	17100 - 104th Street		
Term	5 years plus 1 additional 5 year term		
Rent	\$19,700/year or \$20,488/year depending on signing date, plus the greater of 4% or CPI/year		
Security	\$20,000 cash or L/C or Bond		