

INTERGOVERNMENTAL AGREEMENT

Contract Number [Enter Contract Number]

This INTERGOVERNMENTAL AGREEMENT (“Agreement”) is between MULTNOMAH COUNTY, a political subdivision of the state of Oregon, acting through its Department of County Assets (collectively, “Lead Agency”), and the CITY OF WOOD VILLAGE a political subdivision of the state of Oregon (“Member Agency”). The effective date of the Agreement will be the date on which the second party signed the Agreement (“Effective Date”).

Recitals

WHEREAS, Lead Agency and Member Agency, together with the other entities listed in **Schedule A** (each of whom is a “Party” and collectively they are the “Parties”), recognize that access to high-speed Internet is increasingly essential for delivery of services and information to the public, maintenance and growth of economic activity and businesses vitality, and as a tool for residents to promote education, health, safety, resource conservation and economic success.

WHEREAS, the Parties wish to collaborate on commissioning a third-party (“Consultant”) to study and make recommendations concerning the feasibility of different models for a regional high-speed Internet network(s) to serve public needs.

NOW, THEREFORE, the Parties agree as follows:

Agreement

1. **PURPOSE.** The purpose of this Agreement is to set forth the Parties understandings and responsibilities in collaborating on hiring a Consultant to study and make recommendations concerning the feasibility of a regional high-speed Internet network, as more particularly set forth in **Exhibit 1** (the “Project”).
2. **TERM.** The initial term of this Agreement shall begin on the Effective Date and end shall end three (3) years from the Effective Date. Thereafter, on the anniversary of the Effective Date, the Agreement shall renew for additional one year terms until the Project is completed. The initial term and each renewal term shall be a “Term.”
3. **CONSIDERATION.** Each Member Agency agrees to pay by a date mutually agreed by the Parties, to Lead Agency the amount set forth on **Schedule A**, which Lead Agency shall use for the Project.
4. **RESPONSIBILITIES OF LEAD AGENCY.** Lead Agency shall be the Member Agency responsible for administering the obligations and performances set forth herein and for managing the Project on behalf of the Member Agencies. Its responsibilities include:
 - a. **Development of Statement of Work.** Lead Agency shall gather information provided by other Member Agencies, such as at scheduled Advisory Committee meetings, regarding the Project’s scope and deliverables and develop an initial proposed statement of work (SOW) that reflects, as much as practicable, the needs and priorities established by the Advisory Committee. The Parties acknowledge and agree that the SOW shall be based on the scope and deliverables for the Project as described in **Exhibit 1**. The SOW and any approved amendments thereto shall be used in the contract with the Consultant for the Project Report, as defined in **Exhibit 1**.
 - i. **Development of Member Agency Specific Requests for Work.** Lead Agency shall gather information provided by an individual Member Agency requiring greater specificity or other additional work, and develop additional Work Orders under the Consultant’s SOW. The cost of the additional work shall be the sole responsibility of the Member Agency(ies) requesting the work and shall be in addition to the consideration described in Schedule A.
 - b. **Selection and Procurement.** Lead Agency shall be responsible for representing all Member Agencies in the selection of a Consultant, including all procurement, contracting, budgeting, and payment activities required to retain the Consultant to deliver the Project Report. Any contract with Consultant shall be with Lead Agency as the contracting party for the Member Agencies.

- c. **Monitoring and Reporting.** Lead Agency shall work closely with the Consultant to ensure the Project is completed on time and on budget, and that the Project Report is consistent with the SOW. Periodically during the Term, but not more than quarterly, Lead Agency shall prepare a report for the other Member Agencies that shares information regarding the status of the Project, as compared against the performances required under the contract with Consultant.
 - d. **Advisory Committee Chair.** Lead Agency's Representative shall convene all Advisory Committee meetings as the committee's chairperson and shall ensure that minutes of each meeting are recorded and made available to the other Member Agencies within a reasonable time after each meeting.
5. **RESPONSIBILITIES OF MEMBER AGENCIES.** Each Member Agency is responsible for the following:
- a. **Authorizations and Approvals.** Each Member Agency agrees it will seek and receive all approvals, political and administrative, required to authorize the Member Agency to participate in the performances required under the Agreement and to otherwise support the Project.
 - b. **Payment of Contributions.** Each Member Agency agrees it will ensure its public body has timely paid to Lead Agency the payment set forth in **Section 3**, above.
 - c. **Advisory Committee Representation, Attendance.** Each Member Agency agrees it will appoint an individual from its organization to serve as its representative on the Advisory Committee (each, a "Representative"). Representatives are required to attend, either in person or electronically, all Advisory Committee meetings and to provide to Lead Agency any input or feedback that Member Agency wishes to share to influence the Project or SOW. Should it become necessary for a Member Agencies to replace it's Representative, Member Agency shall notify Lead Agency's Representative as soon as reasonably possible, but in all cases, within thirty (30) days, and provide the name and contact information of the new Representative.
 - d. **Assistance to Consultant.** Each Member Agency agrees it will actively assist the Consultant with requested tasks, such as participating in workshops, site surveys and local outreach to residents and businesses, and acting as a liaison for the Consultant in communications to residents within Member Agency's jurisdiction.
6. **ADVISORY COMMITTEE.** An advisory committee comprised of Member Agencies (the "Advisory Committee") is established to define and review the status of the Project and make policy recommendations. Nothing in this Agreement shall deprive any Party's elected or appointed officials of any power they may have under the laws of the State or otherwise.
- a. **Membership.** Each Member Agency shall appoint one Representative to serve on the Advisory Committee. Each Member Agency's initial Representative to the Advisory Committee is set forth in the Municipal Broadband Regional Partner Advisory Committee Charter, attached hereto as **Attachment 1**, along with contact information for communicating with that individual.
 - b. **Meetings.** Lead Agency may periodically schedule meetings of the Advisory Committee, which may be held in-person at an identified location or by electronic means. Lead Agency shall cause written notice of each meeting to be provided to each Representative, whenever possible, not less than ten (10) calendar days before the date of the meeting.
 - c. **Statement of Work.** The Advisory Committee shall assist Lead Agency with developing the SOW to be used to hire the Consultant and define the requirements of the Project Report. Specifically, Representatives shall review the scope and deliverables proposed for the Project and provide Lead Agency with any input on required or key characteristics of a regional high-speed Internet network or obstacles to investment in same for one or more Member Agencies.
 - d. **No Conflicts of Interest.** No Advisory Committee member, nor any Representative, may be an employee, officer, director, or agent of any entity that receives funding from the Advisory Committee for the Project, such as the Consultant.
 - e. **Emergency Needs.** If any Member Agency identifies any emergent, unanticipated, and unfunded need for Project-related services, the Advisory Committee shall be responsible for evaluating the need and voting on a majority basis on how the Parties, jointly, should respond to such need. Nothing in the Agreement shall preclude any Member

Agency, independent of the other Parties and the Advisory Committee, from responding to an emergent need in a manner that that government deems appropriate.

7. **TERMINATION.** This Agreement may be terminated: (a) by written agreement of ALL of the Parties at any time; or (b) by a Member Agency that is not then in breach of the Agreement after providing not less than thirty (30) days written notice to Lead Agency. In addition, the Lead Agency may terminate the agreement with a Member Agency that is in breach of the Agreement and that failed to timely cure such breach.
8. **EFFECT OF TERMINATION.** In the event of termination of the Agreement by ALL Parties, Lead Agency shall refund to the Member Agencies, Payments made by each Member Agency to Lead Agency, on a pro-rata basis based upon the amount of Payments made, all moneys that have not been previously irrevocably committed to or paid to the Consultant. If a single Member Agency terminates the Agreement, whether due to breach or for convenience, no refund shall be made.
9. **CONTRIBUTION.** If any third-party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 (a "Third-Party Claim") against a Party (the "Notified Party") with respect to which one or more other of the Parties (the "Other Parties") may have liability, the Notified Party shall promptly notify the Other Parties in writing of the Third-Party Claim and deliver to the Other Parties, along with the written notice, a copy of the claim, process and all legal pleadings with respect to the Third-Party Claim that have been received by the Notified Party. Each Party is entitled to participate in the defense of a Third-Party Claim, and to defend a Third-Party Claim with counsel of its own choosing. Receipt by the Other Parties of the notice and copies required in this section and a meaningful opportunity for the Other Parties to participate in the investigation, defense and settlement of the Third-Party Claim with counsel of its own choosing, are conditions precedent to the Other Parties' contribution obligation under this **Section 8** with respect to the Third-Party Claim.

With respect to a Third-Party Claim for which a Party is jointly liable with one or more other Parties (or would be if joined in the Third-Party Claim), each liable Party shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the first Party in such proportion as is appropriate to reflect the relative fault of the first Party on the one hand and of each other liable Parties on the other hand in connection with the events that resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the first Party on the one hand and of the other liable Parties on the other hand shall be determined by reference to, among other things, the Parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. Each liable Party's contribution obligation under this section is subject to the limits of the Oregon Tort Claims Act and the Oregon Constitution.

10. **DISPUTE RESOLUTION.** The Parties should attempt in good faith to resolve any dispute arising out of this Agreement. This may be done at any management level, including at a level higher than persons directly responsible for administration of the Agreement. In addition to other processes to resolve disputes arising under the Agreement, any Party may notify the others that it wishes to engage in a more guided dispute resolution process. Upon such notification, the Parties shall engage in non-binding arbitration to resolve the dispute. If the Parties do not reach agreement as a result of the non-binding discussion, the Parties may agree to consider further appropriate dispute resolution processes.
11. **REMEDIES.** In the event a Party has materially failed to perform under the Agreement, any other Party that is then not in default shall be entitled to seek all rights and remedies available to it under the Agreement or by law. Provided, however, all remedies, whether under the Agreement or at law or equity, shall be subject to the limits of the Oregon Tort Claims Act and the Oregon Constitution. No remedy provided for is exclusive of any other available remedy. All remedies are cumulative and in addition to every other remedy available under the Agreement, at law, in equity, or by statute.
12. **LIMITATION OF LIABILITY.** NO PARTY WILL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR OTHER INDIRECT LOSSES ARISING OUT OF OR RELATED TO THIS AGREEMENT, REGARDLESS OF WHETHER THE LIABILITY CLAIM IS BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, PRODUCT LIABILITY OR OTHERWISE. NO PARTY WILL BE LIABLE FOR ANY LOSSES OF ANY SORT ARISING SOLELY FROM THE TERMINATION OF THIS AGREEMENT IN ACCORDANCE WITH ITS TERMS.
13. **NOTICES.** The contact information provided on **Schedule A** will be used for any notice or other communication required or permitted in the Agreement, except as otherwise provided. All notices must be directed to a Party's Representative,

in writing, by any means effective, and deemed received three (3) days after the date sent based on verified date-stamp.

14. **INSURANCE.** Each Party shall each be responsible for providing worker's compensation insurance as required by law. No Party shall be required to provide or show proof of any other insurance coverage.
15. **ADHERENCE TO LAW.** Each Party shall comply with all federal, state and local laws and ordinances applicable to this Agreement.
16. **NON-DISCRIMINATION.** Each Party shall comply with all requirements of federal and state civil rights and rehabilitation statutes and local non-discrimination ordinances.
17. **SUBCONTRACTS AND ASSIGNMENT.** No Party will subcontract or assign any part of this Agreement without the written consent of the other Parties.
18. **ORS 190-COOPERATION OF GOVERNMENT UNITS.** This Agreement is an intergovernmental agreement subject to Chapter 190 of the Oregon Revised Statutes. The Agreement does not constitute an authorization by a public body under ORS 190.010 for a Party to perform one or more inherent governmental responsibilities for another Party.
19. **USE OF COOPERATIVE AGREEMENT.** Pursuant to ORS Chapter 279, and General Services Administration Directive ADM 4800.2G, Member Agencies may make use of the Services Contract between Lead Agency and the Consultant (Multnomah County Contract # 44000003956) to obtain services directly from Consultant, for services required outside the scope of this Agreement. The SOW(s) for such services shall be contracted for by Member Agency and Consultant, at Member Agency's sole cost.
20. **FEDERAL FUNDS SUBRECIPIENT.** The Parties acknowledge and represent that the funds provided to Lead Agency under **Section 3** are not from federal funds.
21. **REQUESTS FOR RECORDS.**
 - a. **Definitions.**
 - ii. "**Loss**" and "**Losses**" means any claim, damage, loss, liability or expense including, without limitation, attorney fees and legal costs suffered directly or by reason of any act, omission, claim, suit or judgment.
 - iii. "**Proceeding**" means any actual, threatened, pending or completed dispute, investigation, or inquiry, whether civil, criminal, administrative or investigative, implicating a matter arising under or related to the Agreement and brought by a third-party.
 - iv. "**Public Records Law**" means the Oregon Public Records Law, including ORS 192.311 to 192.475, the provisions for the Custody and Maintenance of Public Records, ORS 192.005 to 192.170, and laws incorporated by reference.
 - v. "**Records**" means information prepared, owned, used, or retained by a Party, and pertaining to their respective operations and business related to the Agreement, which is inscribed on a tangible medium, commonly a document, or that is stored in an electronic or other medium and is retrievable in perceivable form.
 - b. **Access to Records.** Each Party shall have access to the books, documents and other records of the other Parties which are related to this Agreement for the purpose of examination, copying and audit, unless otherwise limited by law. The Parties will retain, maintain, and keep accessible all Records for a minimum of seven (7) years following Agreement termination, unless a longer period of time is required under law. The Parties will maintain financial Records in accordance with generally accepted accounting principles.
 - c. **Public Records Law.** As custodians of Records under ORS 192.311(2), and public bodies responsible under ORS 192.318(2) and ORS 192.411(2) with responding to public records requests, the Parties acknowledge they must respond to public records requests concerning Records. Any Record request made that pertains to the Project and this Agreement may be subject to application of the Public Records Law.

- d. **Responses to Records, Data Requests.** If a Party receives (the “Recipient”) a subpoena, warrant, or other legal order, demand or request (collectively, a “Legal Demand”) seeking Records for which another Party is the original custodian (the “Custodian”), the Recipient will promptly provide a copy of the Legal Demand to the Custodian along with copies of Records in their possession that the Recipient believes responds to the Legal Demand. In the event of a Legal Demand the Parties agree to consult, cooperate, and collaborate with each other in their responses.
- e. **Records, Data Subject to a Public Records Law Exemption.** If a Party asserts that any Records, including some or all of the Agreement, disclosed hereunder meets the statutory requirements under the Public Records Law for one or more exemptions and wishes that an exemption be asserted to prevent public disclosure of any Record, it will: (i) notify each Party of its assertion; (ii) identify with adequate specificity the Records to which it asserts an exemption applies and the basis for such assertion; and (iii) as commercially practical, mark such Records with the words “DISCLOSURE EXEMPT.”

In the event a Recipient receives a Legal Demand for Records that the Custodian asserts is exempt from disclosure under the Public Records Law, the Recipient will notify the Custodian of such request as provided in this **Section 18** and the Custodian must immediately: (i) assume control of responding to the Legal Demand, and (ii) notify the requester in writing, with a copy to the other Parties, that the Custodian is the custodian of record.

- f. **Public Records Law Proceedings.** In the event of a Proceeding that occurs at the Custodian’s request or seeks disclosure of Records which the Custodian asserts is exempt, the Custodian will have complete control over the Parties’ defense in the Proceeding and will bear all Losses associated with such defense, including any Losses borne by any other Party arising from such Proceeding.

Notwithstanding the foregoing, if the Custodian does not assume its obligation to defend the other Parties in a Proceeding related to a Legal Demand for Records that the Custodian has demanded be withheld from public review or disclosure, then such Custodian shall defend, indemnify, and hold harmless the other Parties, including their officials, affiliates, officers, directors, agents, employees, and representatives, from and against all Proceedings and Losses related to the Proceeding described in this section, above. In such event, the other Parties shall have the option of: (i) resisting disclosure of Records identified by the Custodian as exempt from disclosure under the Public Records Law; or (ii) disclosing such Records.

- 22. **PARTIES’ RELATIONSHIP; NON-EXCLUSIVITY.** The Parties acknowledge and agree that their relationship is that of independent contracting entities. This Agreement does not create any form of legal association that would impose liability upon one Party for any act or omission of the other, nor does it preclude a Party from conducting similar business with other parties.
- 23. **INTENDED BENEFICIARIES.** Lead Agency, Member Agency, and the entities listed on **Schedule A**, are the only parties to this Agreement and are the only parties entitled to enforce its terms. Nothing in this Agreement provides, is intended to provide, or may be construed to provide any direct or indirect benefit or right to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of this Agreement.
- 24. **GOVERNING LAW, VENUE, CONSENT TO JURISDICTION.** The Agreement will be interpreted and enforced according to the laws of the state of Oregon. Any proceeding arising under the Agreement must be brought in Multnomah County, Oregon. THE PARTIES, BY EXECUTION OF THIS AGREEMENT, HEREBY CONSENT TO THE IN PERSONAM JURISDICTION OF SAID COURT. Except as provided in this section, no Party waives any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. The Parties acknowledge that this is a binding and enforceable agreement and, to the extent permitted by law, expressly waive any defense alleging that a Party does not have the right to seek judicial enforcement of this Agreement.
- 25. **GENERAL.** The Agreement sets forth the entire agreement of the Parties, and supersedes all prior communications, oral or written. The invalidity of any term or provision will not affect the validity of any other provision. The doctrine of *contra proferentem* may not be applied to the Agreement. All provisions that by their nature should survive Agreement termination or expiration of the Term will so survive. No Party is responsible for any failure to perform or any delay in performance of any obligations under this Agreement caused by fire, civil unrest, labor unrest, natural causes, or war, which is beyond that Party’s reasonable control. The Agreement may only be amended or supplemented by a writing that is signed by a duly authorized representative of each Party, clearly recites the Parties’ understanding and intent to amend the Agreement, and clearly and with specificity describes the terms to be amended or supplemented. This

Agreement may be executed in several counterparts, all of which when taken together shall constitute one agreement. Each copy of the Agreement so executed constitutes an original.

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

CITY OF WOOD VILLAGE

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

CITY OF TROUTDALE

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

CITY OF GRESHAM

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

CITY OF PORTLAND

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

CITY OF FAIRVIEW

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

MULTNOMAH COUNTY INTERGOVERNMENTAL AGREEMENT
Contract Number: [insert contract number]

LOCAL GOVERNMENT SIGNATURE PAGE (Replace name here)

I have read this Contract including any attached Exhibits and Attachments. I understand the Contract and agree to be bound by its terms.

Signature: _____ Title: _____

Name (print): _____ Date: _____

MULTNOMAH COUNTY SIGNATURE

This Contract is not binding on the County until signed by the Chair or the Chair's designee.

County Chair or Designee: _____ Date: _____

Department Director Review (optional):

Director or Designee: _____ Date: _____

County Attorney Review:

Reviewed: JENNY M. MADKOUR, COUNTY ATTORNEY FOR MULTNOMAH COUNTY, OREGON

By Assistant County Attorney: _____ Date: _____

Schedule A

The State of Oregon political subdivisions that are Parties to this Agreement are:

City of Fairview Contribution amount: _____	City of Gresham Contribution amount: _____
City of Portland via Grant to Municipal Broadband Coalition of America Contribution amount: \$25,000	City of Troutdale Contribution amount: _____
City of Wood Village Contribution amount: _____	Multnomah County Contribution amount: \$150,000.00
City of Portland Contribution amount: \$25,000	Agency Name Contribution amount: _____
See Attachment #1 for a list of Advisory Committee Representatives.	

Other interested parties to this Agreement are:

Municipal Broadband Coalition of America Representative: Michael O. Hanna, Campaign Manager	Entity Name Representative:
Entity Name Representative:	Entity Name Representative:
Entity Name Representative:	Entity Name Representative:

For purposes of this Agreement, "Other interested parties" have no rights or obligations in this Agreement and shall participate in the activities contemplated herein at Lead Agency's sole discretion.

INTERGOVERNMENTAL AGREEMENT

Contract Number [Enter Contract Number]

Exhibit 1

The Project's deliverable is a comprehensive, investment-grade feasibility analysis and plan for the deployment of a high-speed fiber-to-the-premises (FTTP) network in the geographic area described herein ("Geographic Area"), including business modeling that evaluates both public sector operations and public-private partnerships. The deliverable will be contained in a report that sets forth Consultant's analysis and plan for the enhanced FTTP network (the "Project Report"), and contains as an attachment the SOW describing Consultant's recommended Project scope and deliverables.

The Project Report should include, but need not necessarily be limited to, the following:

1. *Assess and evaluate each Party's current network capabilities and the Parties' combined infrastructure landscape.* This task begins with an engineering assessment of existing fiber and other broadband-enabling infrastructure (owned and leased) and should result in an inventory of each Party's existing, relevant assets and facilities (e.g., towers, wireless facilities, fiber, conduit) and coverage.
2. *Assess the broadband service options in the Parties' market(s).* This task is a survey and analysis of the existing and emerging high-speed Internet service offerings in the Geographic Area. The result should be a profile that details the types of services, pricing, availability, and limitations of the existing network for the collective telecommunications environment of the Parties across the Geographic Area, as well as individual profiles broken out per Party, where applicable.
3. *Assess the Parties' current and foreseeable FTTP network needs, including "middle mile" and "last mile" service.* This task includes an analysis of how and whether the Parties' existing Internet service offerings meet community needs and a projection, based on input from the Parties, regarding how existing need may change based on a change in demand, services, and (network) technology. This assessment will target: (a) the collective needs of the Parties across the Geographic Area, (b) each Party's internal needs (i.e., its various departments and agencies), (c) the needs of other public agencies in the Geographic Area, (d) the needs of business partners in the Geographic Area, (e) and the needs of commercial users in the Geographic Area. This task should include recommendations for long-term provision to maintain high-speed FTTP network access and quality in the Geographic Area.
4. *Conduct stakeholder outreach.* This task is a series of workshops and discussions with local (within Multnomah County) and regional stakeholders on issues surrounding high-speed Internet. These events should result in a list of stakeholder issues that inform policy and SOW development.
5. *Conduct customer market research.* This task involves compiling recent and relevant, or preparing and distributing new, residential and business surveys that solicit(ed) feedback on:
 - a. satisfaction with existing telecommunications, high-speed Internet service and providers;
 - b. proposed characteristics of a municipal enhanced FTTP network drawn from stakeholder input and policy direction received from the Parties;
 - c. anticipated current and future needs of customers and the community's desire for enhanced FTTP network and services;
 - d. community willingness to support and patronize FTTP network and services provided by municipal government agencies over commercial providers;
 - e. user willingness to pay for alternative service (as provided by municipal government agencies); and
 - f. overall interest in obtaining services from one or more new providers.
6. *Assess potential for regional coordination and cooperation.* This task involves meeting with other potential regional partners and service providers and assessing their interest in working with the Parties on an enhanced FTTP network.
7. *Engage with potential providers.* Identify and engage potential network provider-partners to:
 - a. identify entities that can be service providers to end-users;
 - b. engage providers early to understand network infrastructure and operations; and

- c. determine what financial resources and investment providers can bring to the Project.
8. *Provide assessment of benefits/risks, gap analysis, and project map.* This task involves developing cost estimates for the various proposed FTTP network options, evaluating their cost-based benefits and risks and then considering differences in service levels. Specifically, assessing community benefits and risks through improved and more efficient municipal enhanced FTTP network services (enhancing citizen opportunities for learning, health care, leisure, emergency services, law enforcement and community connections); evaluating the current environment against current and future needs of each of the Parties, including all identified stakeholders; identifying key issues limiting enhanced FTTP network expansion; and creating a comprehensive map that provides analysis of the Geographic Area's broadband environment.
9. *Recommendation for FTTP network strategies, business models.* This task involves describing enhanced FTTP network options and then identifying those models that are recommended approaches. Recommendations should be based on the Consultant's analysis and feedback from the Parties, stakeholders, and residents and include modeling the option and developing a conceptual network design. Business model strategies must be based on sound and reasonable business cases that can be demonstrated quantitatively through development of a comprehensive financial model that presents the potential benefits and risks of each model. At least one business case should consider options and alternatives for addressing the most underserved areas of the study first.

Business models must also identify at a minimum but not limited to the following:

- a. ownership of network, such as:
 - i. a network built and operated by the Parties;
 - ii. a network built and operated by the Parties but with related services provided by another party;
 - iii. a network built and services offered by another party or in partnership with another party.
- b. management and operation of network;
- c. capital investment required (i.e., amount, timeframe, responsible party);
- d. assets required (alignment with inventory of assets and inventory); and
- e. potential services and partners.

Business model strategies to be considered should include at a minimum:

- f. municipal retail – residential and commercial;
- g. municipal retail – commercial only;
- h. open access provider;
- i. municipal broadband partnership;
- j. infrastructure;
- k. public services; and
- l. public policy only.

This should include consultant's recommended approach to implementation of preferred business model strategies.

10. *Evaluate financing and funding availability.* This task includes evaluating the potential or confirmed availability of Project financing, including:
- a. from contributions by potential additional partners, and/or stakeholders;
 - b. via one or more public-private partnerships;
 - c. from grants funds; and
 - d. from capital, revenue bond and municipal self-funding sources (e.g., advertising).
11. *Address lifecycle issues for infrastructure and technologies.* This task requires an evaluation of the likely operational life of network assets and technologies; costs associated with replacement, decommissioning, and disposal; and models for building into network architecture flexibility to accommodate technology advances to improve network performance and reduce costs.

MULTNOMAH COUNTY SERVICES CONTRACTContract Number 44000003956**DRAFT
EXHIBIT 1
Statement of Work #2****BACKGROUND:**

Multnomah County has entered into an Inter-Governmental Agreement with the Cities of; Fairview, Gresham, Portland, Troutdale, and Wood Village (each individually a “Member Agency” and collectively “Partner Agencies”), to assess the feasibility of a high-speed fiber-to-the-premises (FTTP) network (“Municipal Broadband”) for residential and business use, in the geographic area encompassing Multnomah County, Oregon (“Geographic Area”).

SUMMARY:

County desires to engage Contractor for additional Work under the Agreement. Contractor will provide Consultation Services to County in conducting a feasibility assessment for a Municipal Broadband network (“Project”). The Project’s deliverable is a comprehensive, investment-grade feasibility analysis and plan for the deployment of Municipal Broadband in the Geographic Area described herein, including business modeling that evaluates both public sector operations and public-private partnerships. The deliverable will be contained in a report that sets forth Contractor’s analysis and plan for the Municipal Broadband network (the “Project Report”), and contains as an attachment the SOW describing Contractor’s recommended Project scope and deliverables for said deployment.

PROJECT SCOPE:

The Project Report should include, but need not necessarily be limited to, the following:

1. *Assess and evaluate each Member Agency’s current network capabilities and the Partner Agencies’ combined infrastructure landscape.*

This task begins with an engineering assessment of existing fiber and other broadband-enabling infrastructure (owned and leased) and should result in an inventory of each Member Agency’s existing, relevant assets and facilities (e.g., towers, wireless facilities, fiber, conduit) and coverage.

Infrastructure Analysis

To the extent feasible given publicly available information and details provided by the Partner Agencies, we will assess the Partner Agencies’ existing broadband infrastructure assets (owned and leased).

We will conduct this assessment through a combination of desk and field surveys. We will also facilitate technical discussions with Partner Agencies’ engineers about related issues, such as:

- Poles (number per mile, suitability for additional attachment, etc.)
- Underground passageways (availability of conduit, suitability for additional fiber, etc.)
- Existing fiber optics, including any existing connectivity (building entry, etc.)

We will review relevant maps, studies, documents, or data that the Partner Agencies can share with us. A CTC outside plant engineer will then conduct an extensive desk survey using GIS maps, Google Earth imagery, and other relevant sources.

To supplement the desk survey, a highly experienced CTC engineer will conduct field verification and site surveys of the terrain and topology of representative portions of the Geographic Area. This will include evaluation of areas that we believe may be particularly challenging to serve with fiber technologies, based on our previous experience in similar projects.

CTC's engineer will survey pole lines to determine their ability to support additional fiber attachments, the need for make ready and pole replacement, and the estimated cost. CTC's engineer will note any potential barriers to construction, as well as what permits would be needed to construct fiber infrastructure. The field survey will enable us to identify specific details related to using the rights-of-way, as well as targets of opportunity for providing physical path redundancy to enhance communications survivability between sites.

Network Capabilities Analysis

In parallel with our infrastructure analysis, we will seek to evaluate the Partner Agencies' existing internal network infrastructure—both the parts the Agencies own and operate, and the part they lease. We will evaluate how to maximize the Partner Agencies' internal operations and capabilities over time for government communications, as well as for the provision of public-facing broadband service.

Drawing on maps, as-builts, budgets, financial statements, and other relevant inputs that the Partner Agencies provide, we will analyze the Partner Agencies' current technical capacities (including sites served, current and likely future capabilities, expansion plans, and so on) and the networks' financial implications (including not just costs incurred, but the expenses that the networks enable the Partner Agencies to avoid).

2. *Assess the broadband service options in the Partner Agencies' market(s).*

This task is a survey and analysis of the existing and emerging high-speed Internet service offerings in the Geographic Area. The result should be a profile that details the types of services, pricing, availability, and limitations of the existing network for the collective telecommunications environment of the Partner Agencies across the Geographic Area as well as individual profiles broken out per Member Agency where applicable.

We will analyze the current competitive environment for residential broadband services in the Geographic Area, with an emphasis on understanding service availability and identifying service gaps in the unincorporated areas.

In this task, we will seek to document what providers are active, what services are available, and what residents pay for varying levels of service. We propose here an innovative, multi-faceted, approach to assessing the competitive landscape based on publicly available information.

We propose to look at a wide range of datasets in part because so much of the existing broadband availability data, particularly that gathered by the federal government, is inaccurate and grossly overstates availability. As the U.S. Government Accountability Office has pointed out, the FCC's data overestimates broadband availability because it is insufficiently granular and is self-reported by carriers.

For this reason, we are proposing to evaluate, test, and incorporate a wide range of different sources of data—understanding that each is likely to have different importance and usefulness for this project—and with the intent of building a comprehensive picture based on a larger set of sources. We will:

- **Develop a list of current broadband providers**, including their costs for services and the areas they serve, based on publicly available information.
- **Evaluate available FCC Form 477 data** about broadband services available in the Geographic Area. There is tendency for internet service providers (ISP) to overstate their service availability on these forms, given that an entire census block is reported as being served if even one location in the block meets the FCC's requirement. In the case of this analysis, that overstatement may be to our advantage; if we find census blocks within the Geographic Area that are shown as being unserved, then we can be certain that the residents there truly are unserved.
- **Evaluate Connect America Fund (CAF II) funding areas.** Evaluating the FCC's maps and data related to CAF II funding in the County will provide useful data on areas deemed unserved or underserved by that program. Given the 10-year buildout window for entities receiving CAF II funding, we note that unserved areas that are subject to an award may still be unserved for many years.
- **Evaluate the USDA Rural Utilities Service's map of served and unserved areas**, which is based on a range of different datasets. In our view the map is under-inclusive of the unserved portions of the country but provides another set of insights to add to our broader analysis.
- **Identify and analyze relevant Member Agency datasets.** In our experience local governments have access to datasets that can give them considerable insight into where communications infrastructure exists in their communities. However, using those data to understand the big picture requires innovative analysis. We specialize in understanding how otherwise underutilized datasets can provide insight about broadband availability. We will work with the Partner Agencies to identify and develop the most useful data—potentially including permitting, public works, and public safety communications datasets.
- **Identify and analyze relevant commercial datasets.** There exist a range of commercial datasets of different levels of usefulness that provide insight into broadband infrastructure and availability. For example, FiberLocator is a commercial service to which we subscribe that aggregates data about known backbone fiber routes in the United States. In addition, some companies, like Zayo, publish maps of their enterprise fiber in order to communicate where they can provide enterprise-level service. We will incorporate these important datasets into our full analysis.
- **Review existing cable franchise agreements throughout Multnomah County**, which will tell us where the cable companies are obligated to build and where lower population density has resulted in them not having an obligation. To complement this review, we will analyze the Partner Agencies' GIS-based population density data to identify areas where cable infrastructure is required. (Some of the areas where we expect to see underserved residents are the pockets of lower-density housing development in the County's incorporated areas.)
- **Conduct an extensive desk survey** using the Partner Agencies' GIS maps, Google Earth imagery, and other relevant sources. We will use the desk survey to spot check and verify the other datasets in order to develop the most accurate and comprehensive overview of service availability.

- **Conduct field verification of the datasets we have already analyzed, as well as representative portions of the Geographic Area selected for closer inspection.** A highly qualified CTC outside plant engineer will do up to three days of field work to evaluate density requirements in representative portions of the unincorporated areas of the County. We will focus on previously rural areas where recent construction might have elevated the population density to a point where franchise agreements would require buildouts.
- **Conduct outreach to local private providers** to gather input on their service areas, their perceptions of service gaps, and their plans for expansion.
- **Review other relevant maps, studies, documents, or data** that the Partner Agencies can share with us.
- **Review broadband speed data collected by Measurement Lab (M-Lab)**, a consortium led by academic and public interest entities that was founded by our close collaborators at New America’s Open Technology Institute. The M-Lab broadband speed dataset is considered the most comprehensive and authoritative in the country and has no commercial elements, thus ensuring the independence of the data. M-Lab was co-founded by our colleague and proposed collaborator on this project, Dr. Sascha Meinrath, the Palmer Chair in Telecommunications at Penn State University.
- **Estimate demand based on the results of our survey work in other communities, Pew research, and other reputable data sources.** We have performed broadband demand surveys for more than 20 years. We will assess these datasets to identify demographic patterns that may align with the Geographic Area.

Based on all these different inputs, we will build an estimate of where there is broadband and where there is not within the unincorporated parts of the County. Ideally, we will be able to use this multi-step analysis to develop a map that visually approximates what kind of services are available in each part of the County—to supplement and confirm the results of our other data gathering tasks.

3. *Assess the Partner Agencies’ current and foreseeable MUNICIPAL BROADBAND network needs, including “middle mile” and “last mile” service.*

This task includes an analysis of how and whether the Partner Agencies’ existing Internet service offerings meet community needs and a projection, based on input from the Partner Agencies, regarding how existing need may change based on a change in demand, services, and (network) technology. This assessment, will target the needs of; (a) the collective Partner Agencies across the Geographic Area, (b) each Member Agency’s internal needs (i.e., its various departments and agencies), (c) other public agencies in the Geographic Area, (d) business partners in the Geographic Area, (e) and commercial users in the Geographic Area. This task should include recommendations for long-term provision to maintain high-speed MUNICIPAL BROADBAND network access and quality in the Geographic Area.

The stakeholders for this engagement include the public sector (including the Partner Agencies and the individual Member Agencies, other regional government agencies, federal agencies, and educational institutions), business customers, institutional stakeholders (representing healthcare providers and other entities), and broadband service providers. Each of these stakeholder groups has different current broadband needs, and will have unique future demands.

In this task, which we will conduct in parallel to the stakeholder outreach efforts (see Task 4, below), we will conduct meetings and teleconferences with representatives of the range of key stakeholders. We will prepare an appropriate list of questions for each interview subject with a goal of understanding their fiber needs, as well as constraints and challenges. We will take detailed notes on the discussions, and will use the insights we develop to inform subsequent project tasks.

We will rely on the Partner Agencies and other agencies and partners to communicate their fiber needs to us. We will work with them to expand and develop it as necessary—but we trust, given the number of agencies and entities with which we will meet, that they will share with us their long-term needs.

4. Conduct stakeholder outreach.

This task is a series of workshops and discussions with local (within Multnomah County) and regional stakeholders on issues surrounding high-speed Internet. These events should result in a list of stakeholder issues that inform policy and SOW development.

We believe, through our experience conducting needs assessments for local governments nationwide, that group interviews and one-on-one discussions with stakeholders will produce important insights for the Partner Agencies' analysis of broadband needs. While this approach is qualitative rather than quantitative, it allows for follow-up questions, in-depth discussion, and an exploration of nuanced needs and concerns related to the broadband market.

We will conduct up to 20 on-site interview meetings and teleconferences with representatives of the Partner Agencies' range of key local and regional stakeholders. We will develop the list of stakeholders with the Partner Agencies' guidance.

We will prepare questions for each interview and outreach session with a goal of understanding the stakeholders' broadband needs, constraints, and challenges. We will use the insights we develop to understand the Partner Agencies' broadband priorities and opportunities, and to inform subsequent project tasks.

Our outreach to Partner Agencies' staff will have a specific focus: We will seek to identify their fiber broadband needs, and to develop an anecdotal inventory of opportunities and functions that fiber connectivity might support. This outreach will include, to the extent feasible, an attempt to identify the leased circuit costs that the Partner Agencies' could reduce or eliminate through expanded Partner Agency-owned fiber.

We anticipate conducting the in-person sessions over a period of several days in the County in conjunction with our project kick-off meeting. We suggest holding discussion groups in the afternoon and the evening. We will facilitate up to five discussion groups over three days in the County and several more by teleconference if necessary.

For all of these meetings, we request the assistance of the Partner Agencies in identifying the participants; determining who should be invited for a discussion group and who should be contacted for individual interviews; scheduling and confirming the meetings; and arranging a suitable location for the discussions.

5. *Conduct customer market research.*

This task involves compiling recent and relevant, or preparing and distributing new, residential and business surveys that solicit(ed) feedback on:

- a. satisfaction with existing telecommunications, high-speed Internet service and providers;
- b. proposed characteristics of a FTTP network drawn from stakeholder input and policy direction received from the Partner Agencies;
- c. anticipated current and future needs of customers and the community's desire for MUNICIPAL BROADBAND network and services;
- d. community willingness to support and patronize a MUNICIPAL BROADBAND network and services provided by municipal government agencies over commercial providers;
- e. user willingness to pay for alternative service (as provided by municipal government agencies); and
- f. overall interest in obtaining services from one or more new providers.

Using a variety of industry-accepted evaluation methods, we will seek to identify current broadband use and needs among residential and business customers. We propose below a market research approach that we believe, through our experience conducting needs assessments for local governments nationwide, will produce the insights and data that the Partner Agencies request.

In addition to the research we conduct in the County, we will also selectively apply reputable national survey data (e.g., Pew) as well as market research data that CTC has previously collected through statistically significant surveys conducted in other communities nationwide, to develop a demand estimate for the local market.

Conduct statistically valid residential market survey

We will prepare and distribute a residential market survey on the current and potential future use of broadband by residents in the community. Our market research will be designed to estimate demand for next-generation broadband services, and to gather insight on issues that will impact the Partner Agencies' future plans by:

- Providing statistically valid market data to assist in identifying the potential market for broadband—as well as the risk that the market is not sufficiently large
- Providing market data to encourage private sector involvement in the project
- Establishing residents' needs and concerns
- Understanding residents' views on the role of Partner Agency involvement in providing service
- Identifying residents' price sensitivities and willingness to pay for broadband
- identifying differences among residents based on income level, education level, and other factors
- Understanding customer satisfaction as well as perceptions of current prices and service attributes offered by the existing providers
- Understanding the overall market demand for communications services
- Quantifying the use of high-speed connectivity in the Partner Agencies' jurisdictions
- Determining the number of residents subscribing to a service where it is available

- Gauging demand for alternative broadband services

Recognizing the differences in broadband options between residents of rural areas and residents of urban/suburban areas—and that, statistically speaking, a survey of the County as a whole would be dominated by results from Portland—we will design the survey around three geographic areas:

1. Portland
2. Fairview, Gresham, Troutdale, and Wood Village
3. All other portions of the County (mostly unincorporated)

We will purchase a mailing list and mail a written survey to randomly selected samples of residents from each of the three geographic areas. Based on the sample sizes for each of the geographic areas, we would anticipate receiving approximately 400 responses from each area—which would provide results within a confidence interval of ± 5.0 percent for each of the three areas at the 95 percent probability level. That is, 19 times out of 20, the results from the respondents would be within those boundaries as compared to the responses from the entire population.

The survey will require an estimated 12 to 15 minutes to complete. To encourage participation, the survey will be printed as a booklet (which enhances readability) and mailed in a non-standard sized envelope (which increases the likelihood that it will be noticed and opened by the recipients). We will manage all aspects of survey distribution, return mailing, processing, and data analysis.

The residential survey will be designed to collect the following specific responses:

- Basic demographics of the respondent
- Respondent's income
- Number and ages of household residents
- Computer availability and usage rates
- Customer loyalty to existing services
- Satisfaction with current connectivity services and prices
- Interest in next-generation high-speed Internet
- Internet/email use, service, cost, and time since connected
- Use of telephone services
- Use of IP-based video and voice services
- Desired new services

- Motivation to switch communications service providers
- Perceived value of new voice, video, and data services
- Relationship of price vs. willingness to switch providers

In addition to traditional survey questions, we will include:

1. Questions on importance of service attributes versus satisfaction with services. Most surveys only ask for respondents' satisfaction level. Asking questions to determine the importance of aspects of their service allows for an evaluation of whether and where the private provider market is meeting or failing to meet consumers' needs.
2. Questions directed to what the respondents believe the Partner Agencies' role should be in promoting internet access. If a large majority of residents are skeptical of municipal involvement in this area, for example, that is an important piece of data for elected decision-makers.
3. Questions regarding respondents' willingness to switch services for a range of alternative pricing and service scenarios. We believe that the answers to these questions assist in predicting price points and market share.

The Partner Agencies will have an opportunity to review and edit the printed residential survey instrument prior to mailing.

Survey responses will be entered into a database format and analyzed. The raw data will be reviewed and processed following our standard data-cleaning protocol. This might include coding missing responses, establishing new response categories, verifying skip logic, and other steps necessary to ensure a clean and valid dataset.

The residential survey data will be weighted by the age of the respondent to minimize any age bias in the survey results. Because younger residents are much less likely to respond to surveys, "weighting" the survey responses based on the actual (Census) distribution of adult population by age cohort is necessary to minimize response bias. This is especially true for surveys regarding internet technologies and uses that may be more widely adopted by younger residents than by older residents.

Data analysis will include, at minimum, development of frequency tables for all responses and selected cross-tabulations and/or comparisons of mean ratings by geographic area and key demographics. Examples of key cross-tabulations that may be evaluated include:

- Internet connection type by age of respondent
- Internet connection type by geography (urban/suburban/rural or congressional district)
- Internet uses by business type (industry classification)

- Internet connection type by business size
- Satisfaction with vs. importance of internet service characteristics
- Use of telecommuting or distance learning by home internet connection type

Additionally, we will seek to identify key target segments by examining demographic, income, or other relevant drivers. The level of analysis completed will depend on the number of responses and the characteristics of the data collected.

For example, cluster analysis and/or classification trees can be used to segment and profile residents according to their needs or perceptions, and a gap analysis can help us evaluate whether and where the broadband Internet marketplace is meeting or failing to meet expectations for attributes that are important to respondents. That is, including questions about the level of importance respondents assign to various aspects of their service, along with the level of satisfaction with those service aspects, enables us to identify in what areas providers are meeting or failing to meet customers’ expectations. An example of this analysis is shown in the following table.

Sample Gap Analysis

	Mean Importance	Mean Satisfaction	GAP < -- >	Significance?
Price (n=345)	7.9	7.2	-0.7	Expectations not met
Local office (n=322)	5.0	6.4	1.4	Expectations exceeded
Connection speed (n=343)	8.3	7.6	-0.7	Expectations not met
Connection reliability (n=308)	9.0	8.6	-0.4	Not significant

Prepare Spanish-language survey instrument (optional task, priced separately)

To encourage participation from the Spanish-speaking community, we will produce a two-sided questionnaire booklet in place of the English-only booklet envisioned in the task above. The booklet will have one side in English and the other side in Spanish (with alternate-language instructions on both sides to flip over for the other language). This approach will allow all survey recipients to choose between English and Spanish and maintain confidentiality.

Because the Spanish-language surveys will have the same question numbering and numerical response options, there will be no need for reverse translation; respondents will be able to mail the survey back to CTC (as with English-language survey responses) for analysis.

Support non-English-language survey distribution (optional task, priced separately)

For surveys in non-English languages that are not spoken as extensively as Spanish, we recommend that the Partner Agencies select a limited number of languages that are most widely spoken by potential survey recipients or are otherwise deemed most important to this project. We will print a version of the following notice in up to three languages on the cover of the English or English/Spanish survey instrument: “If you would like to receive this survey in [language], please call [telephone number].” Survey recipients who call will then be able to request a copy of the survey in the language of their choice.

For cost-effectiveness, and to capitalize on the Partner Agencies’ local resources, we will ask the Partner Agencies to identify a staff member(s) to field these phone calls, provide the phone number, prepare the survey translations, and mail the survey instruments as requested.

Because the translated surveys will have the same question numbering and numerical response options, there will be no need for reverse translation; respondents will be able to mail the survey back to CTC (as with English-language survey responses) for analysis.

We would anticipate few requests for non-English-language surveys, in which case those respondents would not represent a statistically significant sample. While this methodology may incur additional costs for the Partner Agencies as compared to offering translated surveys online, we recommend offering a written survey instrument—as with the primary survey methodology—because limiting non-English-language surveys to an online platform may exclude some residents who do not have access to broadband service.

Survey and analyze data about the general business community (online survey)

Across the market research industry, reports indicate that response rates for surveys of businesses have fallen in recent years. As business owners and individuals are bombarded with requests for feedback, there is a sense that being over-surveyed has reduced recipients’ willingness to respond even to “important” surveys. Accordingly, we do not believe that the expense of a written business survey will deliver a return on the Partner Agencies’ investment.

To seek to develop insight into business’ broadband needs and issues—while limiting the Partner Agencies’ costs—we will 1) analyze data about businesses in the same three geographic areas identified for the residential survey, and 2) invite businesses to participate in an online survey.

We will purchase a dataset on all local business entities reporting email addresses¹ in Multnomah County from our supplier, InfoUSA. Key data points will likely include the number of employees, the size and location of the facility, annual sales, annual telecommunications expenditures, annual technology spending, and email contact information (for some portion of the businesses in the dataset).

Using the three-part geographic framework established for the residential survey, we will analyze these data based on differentiating factors (e.g., type of business, number of employees, annual telecommunications spending) to determine potential demand patterns. We can make initial estimates of what types of

¹ Approximately 16,200 records (approximately 15,000 in Portland and 1,200 other regions of the County.)

communications services the businesses might be interested in purchasing based on these factors, our experience conducting similar analyses around the country, and insights gained in the previous task.

Next, using email addresses from the dataset we purchase from InfoUSA (which, we note, will be neither complete nor entirely accurate—as is the nature of email lists) and business email lists that are provided to us by the Partner Agencies, we will email an invitation to local businesses to participate in an online survey.

The business survey will include questions such as:

- What types of broadband services do the businesses currently use?
- What limitations do these businesses see with the available services?
- What are the businesses' expectations for current and future broadband needs, and how well do current providers meet these needs?
- How aware are businesses of their available broadband options?
- How likely would the businesses be to purchase services from a new provider?

We will administer the survey through an online portal, track survey responses, and remove any duplicates. The raw data will be reviewed and processed following our standard data-cleaning protocol. Survey responses will be entered into a database format and analyzed. Data analysis will include, at minimum, development of frequency tables for responses.

As a caveat for the online business survey results, we note that the level of analysis completed will depend on the number of responses and the characteristics of the data collected. The response rate for the online business survey will typically be much lower than a mail survey response rate—both because of the lack of a comprehensive email list, and because online survey response rates for businesses are typically low.

6. *Assess potential for regional coordination and cooperation.*

This task involves meeting with other potential regional partners and service providers and assessing their interest in working with the Partner Agencies on a MUNICIPAL BROADBAND network.

Building on our analysis in previous tasks and our knowledge of regional broadband issues, we will assess the Partner Agencies' opportunities for pursuing regional coordination and cooperation to deploy a municipal broadband network. We will begin by evaluating the current regional elements of the Partner Agencies' fiber networks, including, to the extent such features exist, fiber connections to other local governments, co-location/peering sites, and interconnection with regional networks. With that baseline, we will consider opportunities (technical, operational, and otherwise) for achieving the Partner Agencies' goals in concert with regional cooperation, investment, and planning. We will seek the Partner Agencies' input and help in identifying and conducting outreach to other potential regional partners and service providers and assessing their interest in working with the Partner Agencies.

7. *Engage with potential providers.*

Identify and engage potential network provider-partners to:

- a. identify entities that can be service providers to end-users;
- b. engage providers early to understand network infrastructure and operations; and
- c. determine what financial resources and investment providers can bring to the Project.

Discussions with broadband service providers are an opportunity not only to assess total community demand, but also to explore potential partnerships and joint opportunities—and the shared benefit that might result from creative planning. While service providers are typically reluctant to discuss competitive details about their business (e.g., customer demand, take rates, future buildout plans), in our experience many providers are interested in partnering with the public sector under a variety of models.

With that approach as our framework, we will seek to have constructive conversations (in person or via telephone) with local middle-mile and last-mile service providers, including incumbent and competitive service providers in the enterprise markets. Our request to discuss broadband planning with local providers will reflect the Partner Agencies' openness to collaborating with these entities to mutual benefit. We will seek to determine what financial resources and investments the service providers might bring to a municipal broadband project. We anticipate engagement with approximately a dozen companies.

8. *Provide assessment of benefits/risks, gap analysis, and project map.*

This task involves developing cost estimates for the various proposed MUNICIPAL BROADBAND network options, evaluating their cost-based benefits and risks and then considering differences in service levels. Specifically, assessing community benefits and risks through improved and more efficient MUNICIPAL BROADBAND network services (enhancing citizen opportunities for learning, health care, leisure, emergency services, law enforcement and community connections); evaluating the current environment against current and future needs of each Member Agency and collectively of the Partner Agencies, including all identified stakeholders; identifying key issues limiting enhanced MUNICIPAL BROADBAND network expansion; and creating a comprehensive map that provides analysis of the Geographic Area's broadband environment, including clear identification of the areas with the most underserved population.

CTC's engineers will prepare a system-level design and cost estimate for a fiber network to meet the Partner Agencies' stated goals and identified needs. Our design will enable either Partner Agencies' or third-party operations, and multi-phase buildout.

To be clear, we will not be providing a blueprint-level network design or cost estimate. Rather, we will be providing an analysis of existing infrastructure, a conceptual design, high-level maps, and a system-level overview of the potential infrastructure—which in turn will become a roadmap for financial analysis and business modeling, and for future decisions (potentially including detailed engineering and contracting with private sector service providers).

Network Design

As an initial step, we will review Partner Agencies-provided GIS data and any other relevant maps, studies, documents, or data that the Partner Agencies can share with us. With access to relevant data provided by the Partner Agencies, we will evaluate potential opportunities for the Partner Agencies to expand its infrastructure in conjunction with planned construction such as public works projects, traffic signal upgrades, and projects for which permits have been issued for underground construction.

A CTC outside plant engineer will then conduct a desk survey using the Partner Agencies' GIS maps, Google Earth imagery, and other relevant sources. We will leverage data obtained during the field survey in the previous tasks.

We will include in our engineering analysis any existing infrastructure (including utility poles, fiber and conduit, but also rights-of-way access and locations for network hubs and other necessary infrastructure) that we believe the Partner Agencies can use to support deployment.

Cost Estimate

CTC will prepare cost estimates and supporting documentation for fiber deployment, inclusive of anticipated construction labor, materials, engineering, permitting, pole attachment licensing, quality control, and testing.

Supporting documentation will include summary tables of key project metrics generated for cost estimation purposes, including estimated fiber plant mileage; number of homes and businesses; and anticipated percentages of aerial versus underground construction. Additionally, CTC will provide a narrative to explain key construction characteristics that impact the cost estimates.

Our intent is that the cost estimates will allow the Partner Agencies to inform future cost estimates for detailed engineering of specific phases, as well as to properly scope construction phases according to particular budgetary constraints.

As is typical in this phase of a fiber construction project, the cost estimates will not be based on a detailed design, environmental assessment, or geotechnical analysis of soil composition. As a result, actual costs may vary due to unknown factors, including: 1) costs of private easements, 2) utility pole replacement and make ready costs, and 3) subsurface hard rock. We will, of course, incorporate suitable assumptions to address these items based on our experience.

9. Report findings and analysis to Partner Agencies to seek input and guidance on next steps

Following our extensive data collection tasks, we will facilitate an on-site, interactive workshop to report to the Partner Agencies' steering committee and key stakeholders on our findings and analysis. We will cover topics including project status, broadband challenges, service gaps, and other issues identified, researched, and analyzed to this point in the engagement.

Beyond the important aspects of providing a mid-point status update, our primary goal will be to have an interactive discussion of potential solutions given what we will know at this point in the project about the County's challenges. We anticipate emerging from this session with a clear vision for subsequent phases of the project, particularly in regard to aligning potential solutions with identified problems.

To that end, the workshop will be an opportunity for the steering committee to provide direction on what types of solutions to explore, and to work with CTC to calibrate the next steps of the project.

10. Recommendation for MUNICIPAL BROADBAND network strategies, business models.

This task involves describing enhanced MUNICIPAL BROADBAND network options and then identifying those models that are recommended approaches. Recommendations should be based on the Contractor's analysis and

feedback from the Partner Agencies, stakeholders, and residents and include modeling the option and developing a conceptual network design. Business model strategies must be based on sound and reasonable business cases that can be demonstrated quantitatively through development of a comprehensive financial model that presents the potential benefits and risks of each model. At least one business case should consider options and alternatives for addressing the most underserved areas of the study first.

Business models must also identify at a minimum but not limited to the following:

- a. ownership of network, such as:
 - i. a network built and operated by the Partner Agencies;
 - ii. a network built and operated by the Partner Agencies but with related services provided by another party;
 - iii. a network built and services offered by another party or in partnership with another party.
- b. management and operation of network;
- c. capital investment required (i.e., amount, timeframe, responsible party);
- d. assets required (alignment with inventory of assets and inventory); and
- e. potential services and partners.

Business model strategies to be considered should include at a minimum:

- f. municipal retail – residential only;
- g. municipal retail – residential and commercial;
- h. municipal retail – commercial only;
- i. open access provider;
- j. municipal broadband partnership;
- k. infrastructure;
- l. public services; and
- m. public policy only.

This should include Contractor's recommended approach to implementation of preferred business model strategies.

We will bring to this engagement our experience in identifying the challenges of municipal network expansion—and our realistic approach to assessing project risks. We will be very frank about the trade-offs among risk, benefits, and network control in various partnership approaches.

We will assess and provide guidance on the full range of business models described above and will discuss them in a way that evaluates how they can support the Partner Agencies' next steps and inform an implementation roadmap. We will consider the strategies we believe are relevant to the Partner Agencies' desired role and their risk tolerance.

We will evaluate options including:

Partner Agencies-owned and facilitated solutions

As we have done for such communities as Seattle and San Francisco, we will consider the prospects of a Partner Agencies-owned and operated infrastructure to serve unserved and underserved residents. This model frequently entails considerable cost and risk but is important to consider as part of a full evaluation of feasible solutions.

Developing one or more public-private partnership strategies

As a means of developing lower-risk models to meet broadband goals, CTC has designed most of the significant broadband public-private partnerships in the United States and literally wrote the book on broadband public-private partnerships—"The Emerging World of Broadband Public-Private Partnerships: A Business Strategy and Legal Guide," published by the Benton Foundation.

We will look at a range of collaboration strategies, many of which would involve extensive involvement by the Partner Agencies. Specifically, we will evaluate:

- **Public facilitation of private investment (“public policy” model).** This model focuses not on a public sector investment, but on modest measures the public sector can take to enable or encourage greater private sector investment. We specialize in understanding ISP needs and developing strategies to make underserved areas more attractive to ISPs seeking to expand their networks.
- **Public funding and private execution (municipal “concessionaire” model).** This model, which involves a substantial amount of public investment, offers private execution in return for public support and risk. The model enables an arrangement in which a private “concessionaire” undertakes turnkey financing, construction, and operations of a publicly-supported or publicly-guaranteed broadband project.
- **Shared investment and risk.** In this model, localities and private partners find creative ways to share the costs and risks of building and operating a broadband network. These shared-risk models include fiber-based shared-risk strategies throughout the country and such rural public-private partnerships as that in the Appalachia portion of Maryland, where we developed a collaboration between Garrett County, Maryland, and Declaration Networks Group—a network that has been recognized and applauded by Microsoft’s Airband rural broadband project.

11. Evaluate financing and funding availability.

This task includes evaluating the potential or confirmed availability of Project financing, including:

- a. from contributions by potential additional partners, and/or stakeholders;
- b. via one or more public-private partnerships;
- c. from grants funds; and
- d. from capital, revenue bond and municipal self-funding sources (e.g., advertising).

Develop Financial Model

We will analyze business models and develop a business case and financial analysis for a municipal broadband network deployment. As we have done for public sector broadband networks nationwide, we will develop a financial model (pro forma data) for the Partner Agencies’ broadband network operations based on the recommended system-level design and related cost estimates.

These financial projections will also include a risk assessment. We will identify buildout requirements (financial, staffing, business and technical expertise needed) and evaluate factors that would be affected by the selected model.

Based on our consideration of potential partnership approaches, we will next develop a business case and financial analysis model for the deployment. The high-level financial model for the Partner Agencies’ proposed fiber construction will consider a range of likely costs, including:

- Capital investment and additional assets required
- Financing
- Operations, maintenance, and repair

We will outline operational attributes and processes including policies, staffing levels, maintenance agreements, and other considerations. Particular attention will be paid to financing and funding sources and approaches, as well as operating requirements and working capital projections. We will discuss a strategy for fiber maintenance and management based on best practices.

The model will include an overall analysis of viable potential services and will provide:

- Sensitivities of key assumptions including, but not limited to:
 - Customer segmentation
 - Market penetration
 - Pricing
 - Operating costs
 - System construction
 - Staffing levels
- Base, best, and worst-case analysis

The pro forma will follow accounting standards and will provide schedules that detail:

- Operating income and cash flow
- Net present value analysis
- Subscriber revenue by service/customer class
- Debt service analysis and reserve fund requirements
- Uses and sources of funds
- Operating expenses and savings
- Depreciation summary
- Projected construction costs for network, hardware, buildings, and other equipment
- Return on investment (ROI)

Our assumptions and price sensitivities will be clearly stated and justified. This financial model will provide the Partner Agencies with an order-of-magnitude estimate of the overall project cost, and will support a phased implementation roadmap by providing inputs for potential business models, financing options, and partnering opportunities.

As our references can attest, our financial analyses are based on reasonable, conservative assumptions regarding potential costs (capital and operating) and revenue, and are extremely detailed in terms of taking into consideration the financial implications of staffing, maintenance contracts, and so on.

In addition to our narrative report, we will provide the Partner Agencies with a detailed Excel workbook that includes underlying data and assumptions, and can be manipulated to illustrate the impact of changing costs or revenue on the network's potential income statement.

Evaluate Financing and Funding Options

Public sector broadband network deployments reflect both an ambitious vision and, often, a public commitment to financing broadband access for all citizens. Many local governments have pursued grants or loans, taken out bonds, or otherwise sought funding for construction of publicly owned fiber networks.

We will help the Partner Agencies develop realistic options for funding (e.g., federal or state grants) and financing (e.g., general obligation bonds, revenue bonds).

We will draw on our hands-on knowledge of broadband funding opportunities and our research capabilities in this area to conduct a high-level evaluation of existing state and federal grant programs that the Partner Agencies might consider. Our goal in this task is to help the Partner Agencies determine whether they have a path toward at least partial funding for broadband deployment.

12. Address lifecycle issues for infrastructure and technologies.

This task requires an evaluation of the likely operational life of network assets and technologies; costs associated with replacement, decommissioning, and disposal; and models for building into network architecture flexibility to accommodate technology advances to improve network performance and reduce costs.

Our financial analysis (Task 10) will include long-term cost projections related to operations, equipment replacement (including decommissioning and disposal), and equipment upgrades for improved performance and reduced costs.

SCHEDULE:

We anticipate completing the project within nine months of notice to proceed. We will initiate the project immediately upon receiving notice to proceed—beginning with preliminary research and preparation of the market surveys. We will plan to release the surveys in the first week of September because summer is typically a low-response period for market research.

ANTICIPATED PARTNER AGENCY STAFF INVOLVEMENT:

For planning purposes, we note that we anticipate requiring the most extensive Partner Agency staff involvement during the first month of the engagement (during project kick-off and while we are collecting data). We will also seek input from the Partner Agencies during the interactive workshop planned as a midpoint check-in. In addition, we will forward to working closely with the Partner Agencies' project manager throughout the engagement.

COSTS:

We will perform the scope of work described above, excluding the optional survey tasks, for a not-to-exceed cost of \$300,000, including expenses. If the County chooses one or both of the non-English survey tasks, we will add the following fee(s):

1. English/Spanish survey option: \$15,000
2. Multiple-language notices on survey cover: \$2,000 per language

DELIVERABLES AND ACCEPTANCE CRITERIA:

Our final deliverable will be a comprehensive feasibility study (the “Project Report”) that recommends for the Partner Agencies’ consideration a strategic approach for the potential deployment of a Municipal Broadband network. The report will include the data, insights, and recommendations developed in the engagement—including an investment-grade financial analysis and business modeling for both public sector operations and a public-private partnership.

We will provide the Partner Agencies with an electronic draft of our report, which will include a concise narrative supported by tables, graphics, and maps as appropriate. We will incorporate feedback from reviewers and deliver an electronic version of the final report.