Request for Negotiation

FOR

STRATEGIC ALLIANCE   PARTNERSHIP FOR
NEXT GENERATION BROADBAND SERVICES

August 7, 2017

Contents

I. Introduction

West Next Generation Network ("WestNGN") Broadband is a regional consortium focused on accelerating deployment of Next Generation Broadband networks and services in the urban areas of Buncombe, Haywood and Henderson Counties in western North Carolina.

WestNGN seeks to form a Strategic Alliance Partnership with a Broadband Service Provider ("BSP") or coalition of providers or individual partners with a demonstrated interest in expansion of Next Generation Broadband infrastructure and provision of reliable and affordable high-capacity services in the WestNGN area. WestNGN anticipates the delivery of reliable, ultra-fast bandwidth at affordable prices will ensure our region remains competitive and at the forefront of developing the Next Generation applications essential to all sectors of the economy.

WestNGN is led by six municipalities in a partnership with area educational, research and healthcare institutions, chambers of commerce, and "community champions." It receives administrative support from the Land of Sky Regional Council. The initiative began when a public forum of 83 local leaders decided that high speed broadband was a regional priority.

The participating groups are:

WestNGN Municipal Members

- City of Asheville
- City of Hendersonville
- Town of Biltmore Forest
- Town of Fletcher
- Town of Laurel Park
- Town of Waynesville

Collaborative Partners

- UNC-Asheville
- Education and Research Consortium of the Western Carolinas, Inc. (ERC)
- NC State University
- Asheville Chamber of Commerce
- Lenoir-Rhyne University
- Land of Sky Regional Council

Community profiles including demographic information and maps of high priority targets for the six Municipal Members of WestNGN are attached to this Request for Negotiation as Appendix A.

WestNGN's Municipal Members serve as the official WestNGN Steering Committee and will review responses to this Request for Negotiation and make the final decision on how to proceed. Land of Sky Regional Council provides support for WestNGN and serves as an ex officio member of the Steering Committee. Collaborative Partners inform the Steering Committee with research and advice and champion the initiative in the region.

II.   Background

WestNGN understands that broadband networks and bandwidth are the technological equivalents of historical transportation networks including railroads, waterways, and highways. Communities with advanced broadband networks are connected in near real time to the world's largest trading centers and have virtually unlimited opportunities to participate in the digital economy. These communities have the required network infrastructure to support technological advances in education, healthcare and security, and attract cutting-edge knowledge-based businesses.

In recent years, many communities have offered gigabit internet service at affordable prices. These "Gigabit Communities" have benefited greatly. A recent study of the economic impact of gigabit service in Chattanooga found a $785 million benefit due to gigabit internet capacity (Dr. Bento Lobo, U. of Tennessee, 2015).

Affordable and reliable high-capacity access to the Internet has become an essential gateway to equal opportunity. Lack of access threatens our region's ability to remain competitive and maintain its reputation as home to multiple hubs of technological innovation and creativity. An associated project, Regional Vision for Broadband, has supplied a description of the types of future-oriented services sought by area residents and institutions (see Appendix B: "Accelerating our Future")

WestNGN is hopeful that as a result of this process, the six Municipal Members will be able to build the future as envisioned in the "Accelerating our Future" document.

III.   Strategic Objectives

While WestNGN's goal is ultimately gigabit service and fiber-to-the-home infrastructure, we recognize there are challenging market conditions to make this a reality in our region. In order to take a realistic and incremental approach toward this goal, WestNGN has evaluated a wide range of deployment, governance, and operational models for Next Generation Networks. Given current state law limiting municipalities' ability to provide direct services and the vitality of the private sector, the WestNGN Steering Committee is

proposing a public/private partnership.

Accordingly, WestNGN's Municipal Members are taking action to make investment by service providers more attractive by (a) reducing the cost of providing services, (b) streamlining bureaucratic requirements, (c) offering access to public resources where possible, and (d) offering help in promoting broadband adoption. The partnership can lead to the purchase of new broadband services and applications by the municipalities such as Smart Cities services.

We intend to find a partner or partners with whom the six communities can attain their identified priorities, build capability for future growth, maximize the strength and creativity of the private sector and be cost efficient with public funds.

The private sector partner(s) will bear all the costs for expanded internet services, including but not limited to design, engineering, construction, equipment and insurance. The respondents should demonstrate a clear network upgrade path to meet future consumer demand and service developments to at least 2022 and preferably beyond.

WestNGN Municipal Members will not charge the chosen partner(s) for access to their assets and infrastructure except as set forth herein and consistent with state and local law. While WestNGN members are not committed to provide funds for the construction, maintenance and operation of the network, grants may be available from other sources to assist some communities.

The final details will be determined during the negotiation phase of the selection process.

IV. Request for Negotiation for a Strategic Alliance Partnership

The six Municipal Members of WestNGN ("WestNGN Members") seek a Broadband Service Provider, coalition of providers, or individual partners with a demonstrated interest in expansion of Next Generation Broadband infrastructure and provision of reliable and affordable high-capacity services in the WestNGN area.

1. Preparation

The WestNGN Members have engaged with key stakeholders in their communities to assess their broadband needs.   Each municipality has established their priorities for improved service. (See Appendix A: Community Profiles). The priorities are the result of extensive review and discussion by each municipality and outlined in different tiers.

In addition, Land of Sky Regional Council conducted a needs assessment by conducting a survey of area residents and businesses.

WestNGN Members have identified government services that need improved voice, video, and data communications for government departments, public safety, emergency response communications, traffic management, energy management, and a host of other Smart Cities applications.

WestNGN Members ultimately wish to accelerate Next Generation Broadband service provisioning to the greater community, and especially to underserved communities, low-income housing, and community support organizations for low income and disabled populations.

WestNGN members are evaluating new models for public Wi-Fi, including wayfaring information for visitors and a platform for local government engagement with citizens, public safety, and Smart City applications, which will require broadly deployed high-speed connectivity.

WestNGN members want to encourage the deployment of advanced 4G wireless networks and the coming 5G networks through the availability of required deep fiber infrastructure that enables the deployment of far more small cell sites.

WestNGN Members, collaborative partners, key stakeholders, area residents and businesses speak with one voice in advocating for highly reliable and affordable Next Generation Broadband infrastructure that will support their current and future bandwidth needs.

2. Minimum Service Level

WestNGN seeks a provider or coalition of providers than can offer the following minimum service levels. These levels are not expected to be reached immediately. We envision a phased approach over the next three years as shown in Table 1. This target is based on the growth in bandwidth demand over the previous five years and a feasibility assessment of what is achievable.

Table 1: Minimum Service Level

| | Minimum Service Level at Peak Usage Period (Mbit/s) | | | |
| | 18 Months | | 3 Years | |
Customer Type	Down	Up	Down	Up
Residential	200	40	400	80
SME	500	125	1000	250
Enterprise	2500	2500	10000	10000

Note: Lower bandwidth service tiers may also be offered, in addition to Minimum Service Level.

Minimum Service Level at Peak Usage Period means that the network oversubscription ratio is less than 50:1 for residential and Small to Medium Enterprises ("SMEs'). This service level is generally available to businesses today. Recognizing that the WestNGN area is home to an increasing number of home-based businesses and workers, we believe this future target is reasonable. For enterprise-class customers, such as hospitals, universities, major employers and other large organizations with intensive bandwidth requirements and a critical need for reliability, the minimum service level is for dedicated symmetrical gigabit service.

WestNGN wants to expand the amount of dark fiber available to all providers for aggregation and middle mile connectivity, including for telephone, cable, and cellular. Respondents should include their plans on expanding their fiber footprint and/or willingness to make dark fiber and/or wavelengths available for municipal, education and health facilities. Certain members of the consortium already have dark fiber available, other members of the consortium would like to avail themselves of these services.

While the WestNGN Members would like to take a seat at the Gigabit Cities Fiber-to-the Premises table, it is understood that private sector investment follows demonstrated demand and rates of returns expected within the industry. Enterprise customers in the WestNGN service area who need gigabit services today pay for extension of fiber-optic cable to the premises and dedicated service capacity at a higher speed than generally available elsewhere, and carriers are happy to serve them if they have facilities in the area. Therefore, WestNGN believes that requiring gigabit symmetrical service to enterprises that need it within 18 months will be in high demand.

Several of the region's employers perform data-driven work (including basic and applied sciences, advanced manufacturing, biotech/pharma and software/ technology) that demands high levels of broadband access. Many of these enterprises are interested in improving their connectivity. Several employers have suggested telecommuting options to increase productivity, and save on transportation and office space costs if its employees could use a Gig.U-style network from home. In addition, many startups are clustered in leased office and incubator space to which landlords could provide a single point of negotiation and access for Gig.U networking service

WestNGN is aware that residential and Small and Medium Sized Enterprise (SMEs) service levels currently exceed 50 Mbit/s download and 10 Mbit/s upload speeds in portions of the service area, although in some areas the service is heavily oversubscribed, leading to delays at peak usage time.

The increase in coverage levels at 1.5 and 3 years reflects increasing demand as streaming video proliferates. Furthermore, multi-party applications, particularly gaming, and especially applications for 4K Ultra and Virtual Reality, will require higher bandwidth downstream and upstream.

3. Symmetrical Service

Symmetrical service speeds are commonly available today for areas served by municipal broadband networks. WestNGN recognizes the challenges facing cable and telephone service providers to achieve this level of service, however this is the desired goal.

4. Affordability

WestNGN understands that Next Generation services must be affordable to allow for widespread adoption to enhance learning and access to healthcare, as well as to increase opportunities for jobs and small businesses.

Strategic Alliance Partner(s) should plan to offer competitive rates comparable to rates for similar services in metropolitan areas of the southeastern U.S. such as Washington DC and Atlanta GA.

5. Flexibility

WestNGN appreciates the uniqueness of living in a diverse mountainous area with a relatively small, but growing, densely populated urban base. We desire a visionary plan to serve the entire six-community area by meeting the minimal standards. However, we are open to learn of alternative strategies such as enhanced Wi-Fi, advanced 4G or 5G cellular, satellite service, and smaller provider options that fit into our priority plans.

V. Requirements for Responses

Respondent(s) must have the experience and qualifications required to construct, manage, maintain and evolve the desired Minimum Service Level, including cost-effective interconnection to Internet Interexchange Points on the global internet backbone to lower the WestNGN members' costs of Internet access and to increase economic development opportunities.

Respondents are encouraged to review the following material prior to submitting their responses to this Request for Negotiation.

Appendix:
- A   WestNGN Members Community Profiles and Priority Area Maps
- B   Regional Vision for Broadband: Accelerating our Future
- C   Broadband Friendly Policies

Responses to this Request for Negotiation must provide the following information:

1. Experience in high speed network design and operation: Respondent(s) should provide a statement of experience highlighting similar network systems that it has designed, constructed and operated, including project name, location, size, technologies used, and name and phone number for reference contacts. Also indicate whether each system is owned by the respondent or another entity;

2. Whether the applicant is a single Broadband Service Provider or consortium;

3. If Consortium, list of members of Consortium and the lead partner (i.e. prime contractor);

4. Qualifications and experience of Consortium members;

5. Experience with similar public-private projects (if any);

6. Strategies and plans describing how they can meet the highest priorities of WestNGN;

7. Plans for improved broadband services, including services for the municipalities, deployment timelines, governance and operational models;

8. Statement of what the respondent will "bring to the table" showing enthusiasm and willingness to create a vibrant public/private partnership that is not reliant on public funding; and

9. Statement of what the provider requires or expects from the WestNGN municipalities.

VI.   Business & Technical Plan

Each potential Strategic Alliance Partner will submit a business and technical plan describing its approach to the project described in this Request for Negotiation. The business plan may describe the respondent's approach to design, construction, operation and management of the new infrastructure network or its relevant parts, and the services to be provided, in sufficient detail to allow the WestNGN Members to effectively consider the respondent's proposal.   The respondent will also include a description of the day-to-day operations and the management of all responsibilities related to the project and explain how the respondent will fulfill the scope of work. This may include the following:

1. **Technology**:   A description of the network technologies underlying the proposed network solution(s) included in the response. Each description should include the following information:

    - Technologies proposed and the limitations of each technology;
    - If a variety of technologies are contemplated, a discussion of the factors likely to influence the choice of technologies;
    - As much detail as possible regarding the network design, including, but not limited to: network design criteria, network elements, architecture, protocols, system reliability, availability, and operations and maintenance; and
    - Network performance characteristics, including the range of offerings, capacity and other factors relevant for each proposed solution.

2. **Service offerings**: A description of proposed wholesale or retail service offerings that the respondent anticipates offering to institutional, business and residential customers.

3. **Broadband service offerings**:

    - Type of broadband service;
    - Speed tiers;
    - Differences between business and residential offerings; and
    - Ancillary service offerings that may be provided by the respondent.

4. **Pricing strategy:** Explanation of respondent's willingness to work with the WestNGN Members to develop unique pricing or packages for key community stakeholders and populations (e.g., government, university facilities, K-12 facilities, economically distressed areas).

5. **Rollout strategy**: A discussion of the anticipated deployment strategy, scope   and timing of the proposed rollout. The discussion should identify the levels of committed demand necessary to trigger rollout obligations and any factors likely to influence the scope or timing, and explain how those factors impact the strategy.

6. **Roles and Responsibilities**: A description of the roles and responsibilities envisioned for the respondent, its team members (if any), WestNGN Members, and third parties (if applicable) for each of the following:

   - Network design;
   - Network construction;
   - Network operations and management; and
   - Community outreach and customer acquisition.

7. **Financial Projections**:

   Respondents with less than seven years of continuous operation as a Broadband Service Provider should include a pro forma financial statement including Balance Sheet, Income Statement and Statement of Cash Flows for at least ten years of construction and operation. The plan should identify and quantify all key assumptions underlying the calculations.

VII. WestNGN Commitments to the Strategic Alliance Partnership

The WestNGN Members have agreed to provide the following support and incentives for the Strategic Alliance Partnership, as permitted by state and federal law.

1. Commitment of municipal leaders to work creatively with the selected Strategic Alliance Partner;

2. Appointment of a single contact person in each municipality to facilitate cooperation;

3. Implementation of "Broadband Friendly" Policies, such as a Dig Once Policy, to accelerate deployment time and lower costs (Appendix C);

4. Streamlined permitting and inspection procedures;

5. List of city services where broadband is needed, contact information, and opportunities to provide services during service replacement;

6. Assistance in accessing GIS information and other available municipal resources such as fiber, conduits, facility space, power and a Single Point of Contact for each municipality;

7. Providing a "Next Generation Network" designation indicating endorsement by the six communities which can be used as public outreach and communications to support business development and marketing by the Strategic Alliance Partner;

8. Coordination of grants and other funding as available for joint-build construction of fiber-optic network routes to connect local government sites and lower local government connectivity costs.

9. Coordinate or partner in grant solicitation and development to provide funding support for deployment to low-income, remote areas of communities where private-sector investment is infeasible;

10. Provide coordination with ERC Broadband (ERC), a local non-profit middle-mile network and internet services provider for regional non-profit and public institutions. The ERC may be helpful in advising the awardee about regional connectivity options. Additionally, the ERC may offer regional middle mile dark fiber or lit capacity, and may be able to construct cable into or transport the awardee to unserved or underserved areas of the communities; and

11. Be open to ideas and suggestions by providers intended to accelerate the implementation process.

The specifics of each of these "commitments" will be determined through negotiations with the selected Strategic Alliance Partner.

VIII. Decision Making Process

1. Review of Responses

The Steering Committee will select those respondents to the Request for Negotiation that best demonstrate a shared commitment and capability to advance Next Generation Broadband Network and Services objectives.

Request for Negotiation Responses will be opened and reviewed internally at the convenience of the WestNGN Members. WestNGN will review the qualifications of respondents to this Request for Negotiation and their proposed solutions for meeting the strategic objectives as identified. All Responses will be evaluated and, at WestNGN's discretion, potential Strategic Alliance Partners will be selected for in-depth evaluation.

Potential partners must demonstrate the ability to meet the overall goals of the project with emphasis on the ability to fulfill the scope of work in the most timely and efficient manner. Partners for specific sub-projects such as focusing on the business and government markets will be considered.

2. Respondent Interviews

The WestNGN Members project team may request one of more meetings with promising partners for in-depth discussions regarding this Request for Negotiation.

3. Clarification of Responses

As the process moves forward, additional information may be required, such as:

A. **Financial Stability**: Respondents may be asked to submit Annual and Quarterly Reports to Shareholders, if a publicly traded company, or the two most recent audited financial statements if a privately owned or nonprofit corporation.   If audited statements are unavailable due to confidentiality reasons, respondent may submit recent D&B reports.

If respondent is part of a Consortium, shareholder reports or audited statements for each team member should be submitted. If the respondent's proposal includes vendor financing or committed bank or other financing, the two most recent annual financial statements of such equipment vendors and financial institutions should be submitted.

B. **Staff Technical and Managerial Experience**: Respondents should submit statements of experience and resumes of the project team, including the project manager and other key personnel who will be assigned to this project.   Be prepared to provide a list of any known or anticipated subcontractors along with their roles and responsibilities.

C. **Evidence of Legal Capacity**:   Copies of respondent's most recent federal and North Carolina annual reports and current licenses and franchise agreements as applicable to provide tele/communications and/or cable services, together with a certification that all North Carolina business and regulatory registrations/filings/taxes are current, and all internal corporate documents are kept and up to date (e.g. meeting minutes, bylaws, etc.).

D. **Evidence of a social commitment** to work with communities of need and to provide equity within the infrastructure platform necessary for new models for Public Wi-Fi and citizen engagement and expertise in economic development strategies.

4.   Negotiations with Selected Respondents

WestNGN will contact selected respondents to engage in further discussions and negotiations to arrive at the most mutually beneficial arrangement for all the parties and the greater community. The parties should dedicate resources and work together in good faith to tailor solutions to support the parties' mutual interests and shared goals. Discussion points include, but are not limited to, the following items:

A.   Explore opportunities for joint ownership of network assets owned or planned

by the respective parties, through long-term indefeasible right-of-use agreements in strands of fiber-optic cable and/or duct, to create a Local Government network and provide opportunities for the Strategic Alliance Partner to increase network coverage and expand services along the route;

B. Evaluate the costs and benefits of construction, management, operation and maintenance of a Local Government network by the Strategic Alliance Partner and discuss the terms of a managed service agreement;

C. Identify cost savings and increased reliability for the Local Governments through access to multi-homed, shared Internet ports, to be provided by the Strategic Alliance Partner by leveraging interconnections to Tier 1 Internet Exchange points;

D. Identify specific ways the Local Governments can streamline access and reduce costs associated with permitting and Rights-of-Way to further accelerate the Strategic Alliance Partner's deployment of a Next Generation Network and services for the greater community;

E. Identify specific ways the Local Governments and the Strategic Alliance Partner can support marketing and demand aggregation to drive sufficient demand for expansion into the greater community, leveraging the Local Government Network;

F. Development and dissemination of programs by the Local Government to increase adoption and use of the Next Generation services;

G. Review WestNGN Members' priority areas for provision of Next Generation Broadband infrastructure and services (available at this link: http://www.landofsky.org/westngnbroadband.html), including low-income and disabled vulnerable populations, economic development or other strategic objectives, and develop the timeline for service provisioning and pricing;

H. Identify capital projects or other projects for economic development such as road and sewer upgrades planned by the WestNGN members, which may provide future opportunities for deployment of network infrastructure at low cost;

I. Identify other needed resources or forms of support for the Strategic Alliance

Partner to accelerate Next Generation Network deployment and service provisioning;

J.   Discuss risk factors or exceptions identified by the Strategic Alliance Partner that would affect WestNGN's stated goals for bandwidth, deployment timeline, pricing, and coverage;

K.   Provide an opportunity for the Strategic Alliance Partner to suggest alternative methods to accomplish WestNGN's stated objectives; and

L.   Explore opportunities for Smart Cities Applications that could provide new demand for WestNGN.

5.   Selection of Strategic Alliance Partner(s)

After review of proposals submitted and negotiations with selected respondents, WestNGN expects to select the Strategic Alliance Partner or partners offering the highest value to WestNGN, the Collaborative Partners and the greater community. The announcement of the selected partner or partners will be announced in Fall 2017.

If Request for Negotiation and further discussions have not resulted in plans that would satisfy the needs and objectives of the WestNGN members, Collaborative Partners and the greater community, WestNGN may determine that a Strategic Alliance Partnership is not a strategic alternative at this time.

6.   Implementation Plan

The selected Strategic Alliance Partner(s) will work with WestNGN members in drafting an implementation plan that clarifies the responsibilities and roles of all parties. The selected partner or partners and WestNGN will commence implementing the plan as soon as possible. Implementation of the plan will be overseen by the Steering Committee and the Land of Sky Regional Council.

7.   Reservation of Rights

Notwithstanding any other provision of this Request for Negotiation, WestNGN reserves the right to:

- Conduct discussions with any or all potential partners to clarify Responses to the Request for Negotiation;

- Waive, or decline to waive, any defect in any Response;

- Accept, reject, or negotiate any or all Responses on the terms or any parts thereof, for obtaining the highest value offer;

- Cancel or amend this Request for Negotiation;

- Select a Strategic Alliance Partner or Consortium based on its analysis and evaluation of Responses and further discussions and negotiations;

- Select no Strategic Alliance Partner at all; or

- Use any and all concepts presented in any Response to the Request for Negotiation to obtain the most beneficial and effective path to achieving its desired goals for the project.

8. Respondent Costs

Respondents are responsible for all expenses they incur in preparing and submitting a Response or in negotiations with WestNGN. Even if WestNGN elects to reject all Responses to the Request for Negotiations, WestNGN will not be liable for any costs or damages incurred by any respondent in preparing and submitting a Response.

9. Confidentiality of Responses

The WestNGN Members will not pay for any information requested herein, and all Responses to the Request for Negotiation submitted become the property of WestNGN. Responses will not be returned and may be subject to disclosure pursuant to the federal Freedom of Information Act and/or the North Carolina Public Records Act.

Pricing and other information that is an integral part of the Response to the Request for Negotiation cannot be considered confidential after an award has been made. The WestNGN Members may receive information that may be confidential as part of your response. If you believe that any portion of your Response to the Request for Negotiation includes proprietary or other confidential information, please clearly mark it as such and state the basis for your claim to confidential treatment.

Unless otherwise required by law, WestNGN Members will treat the information as confidential and will not disclose it to a third party without your permission. However, pricing and other information that is an integral part of the Response to the Request for Negotiation will likely not be considered confidential after an award has been made.

IX. Project Calendar

Anticipated dates pertinent to the WestNGN Broadband Project:

Milestone	Date 2017	Time (EDT)
Request for Negotiation Issued	August 7	
Last Date for Questions	August 18	5:00 pm
Reponses Due	September 21	4:00 pm
Evaluation of Responses Completed	October 19	
Interviews with Respondents Completed	November 9	
Selection of Potential Partners for Further Discussions	November 22	
Agreements Finalized	January 31, 2018	

X. Submission of Responses to Request for Negotiation

Responses to this Request for Negotiation are due by **Thursday, September 21st** at **4:00 pm EDT.**

The last date for questions is **Friday, August 18th** at **5:00 pm EDT**.

Responses received after the deadline will not be considered.

All general correspondence and any questions about this Request for Negotiation must be submitted electronically to:

<div align="center">

Land of Sky Regional Council
Erica Anderson, Director of Economic and Community Development
828-251-6622x123
erica@landofsky.org

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All questions will be considered public and released with an answer posted as expeditiously as possible to:

The identity of the person or company posing the question will not be disclosed.

Potential respondents should not contact any WestNGN Members directly. However, questions may be directed to specific cities or individuals involved in the process.

Any attempts to contact WestNGN Members staff regarding this Request for Negotiation other than via this email process may be grounds for the WestNGN Members to reject your submission.

Responses must be submitted electronically or via priority or certified mail. Two (2) printed copies and one (1) complete electronic version are required for any Response submitted in printed format. Faxed submittals will not be accepted.

Electronic responses must be submitted in editable format to facilitate evaluation and planning. Word, Excel, GIS and PDF formats are acceptable.

Electronic responses must be submitted by email to:

erica@landofsky.org

with an email copy to:

kyle@landofsky.org

The address for submission of printed Responses is:

Land of Sky Regional Council
Attention: Erica Anderson
339 New Leicester Hwy., Suite 140
Asheville, NC 28806
Phone: 828.251.6622

Office hours for receipt of mailed responses are Monday through Friday, 8:30 am - 4:00 pm EDT. Broadband Service providers assume the risk of the methods of dispatch or delivery chosen.

Appendices

A. WestNGN Community Profiles and Maps of High Priority Targets

    1.   City of Asheville
       01.   Community Profile
       02.   Priority Targets: Downtown
       03.   Priority Targets: Charlotte Drive
       04.   Priority Targets: Patton Avenue
       05.   Priority Targets: River Arts District
       06.   Priority Targets: Sardis Road
       07.   Priority Targets: South Slope
       08.   Priority Targets: VA Hospital

    2.   City of Hendersonville
       01.   Community Profile
       02.   Priority Targets: Four Seasons Blvd.
       03.   Priority Targets: Downtown
       04.   Priority Targets: Asheville Highway
       05.   Priority Targets: Recreational Corridor
       06.   Priority Targets: Spartanburg Highway / Upward Road

    3.   Town of Biltmore Forest
       01.   Community Profile
       02.   Priority Targets

    4.   Town of Fletcher
       01.   Community Profile
       02.   Priority Targets

    5.   Town of Laurel Park
       01.   Community Profile
       02.   Priority Targets

    6.   Town of Waynesville
       01.   Community Profile
       02.   Priority Targets: Downtown
       03.   Priority Targets: Southwest

B. Regional Vision for Broadband: Accelerating our Future

C. Broadband Friendly Policies

Asheville City Council's 2036 Vision
Asheville is a great place to live because we care about people, we invest in our city, and we celebrate our natural and cultural heritage. Our city is for everyone. Our urban environment and locally-based economy support workers, entrepreneurs, families, tourists, and people of all ages. Cultural diversity and social and economic equity are evident in all that we do. Our neighborhoods are strong, participation in civic life is widespread, and collaborative partnerships are the foundation of our success.

A DIVERSE COMMUNITY
Asheville is an inclusive, diverse community. We define diversity broadly, including but not limited to all races, ages, sexual orientations, gender identification, socio-economic backgrounds, and cultural beliefs. We have created a fair and balanced society where everyone can participate and has the opportunity to fulfill their potential because they have access to healthy, affordable food, transportation, quality education, and living wage jobs. Asheville promotes and supports minority business as a means of strengthening our local economy. We use a racial equity lens to review and achieve our city's strategic goals in health, education, housing, and economic mobility.

THRIVING LOCAL ECONOMY
Asheville is unique in its locally-focused economy. Our local businesses are vibrant and, no matter where you are in the city, you see a diversity of customers, employees, and business owners. Our historic buildings are home to funky, eclectic businesses that reflect the character of the city, and a creative economy of artists, makers, and innovators is thriving.

As an employer, the City values its workers by paying living wages and offering benefits that ensure both security and opportunity. Businesses of all types that share those values locate, start, and grow in Asheville, offering a wide range of career opportunities. Educational options, workforce development, access to capital, economic incentives, and a culture that values homegrown businesses make our economy strong.

Asheville has an AAA bond rating. We use our debt capacity and revenue wisely in order to maintain and improve the City's infrastructure and invest in our public employees. We strive to control our costs and still provide the highest possible level of service.

CONNECTED AND ENGAGED COMMUNITY
We pride ourselves on building and growing partnerships – with regional and state governments, nonprofits, the private sector, and neighborhood associations to name a few - to achieve our vision. If you live, work, or play here, we want you to participate in shaping our community.

Asheville by the Numbers
Population: 90,839[1]
Median Household Income: $43,334[2]
Total Housing Units: 42,100[3]
Number of Companies: 12,785[4]
Median Housing Value: $199,800[5]

Residential Neighborhoods and Multi-Unit Dwellings. Asheville is characterized by higher household densities than many other areas in the region. Asheville's 2010 Census population density was 3,019 people per square mile including 9,258 housing units at an average density of 1,424 per square mile. Asheville has an ever-growing number of home-based businesses as well as residents who would be better able to telecommute if they were able to access large data sets and/or graphic/video applications from home apartment complexes and condominium units. We anticipate that the demand for ultra high-speed access to these areas will be significant.

Asheville has prioritized the following sites for broadband deployment:
1. Innovation Districts:
   a. Downtown
   b. Charlotte Street
   c. Patton Avenue
   d. River Arts District
   e. Sardis Road
   f. South Slope
   g. VA Medical Center

Public and private investments in the downtown area have exceeded $1 billion in recent years and areas adjacent to downtown have seen a significant influx in business space, residential units, income and employment. No economic incentives are contemplated or offered by Asheville government at this time and would require further discussion if requested by any respondent.

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[1] North Carolina Office of State Budget and Management 2015 Certified Estimate

[2] 2011-2015 ACS 5-Year Estimates

[3] 2011-2015 ACS 5-Year Estimates

[4] 2012 Survey of Business Owners

[5] 2011-2015 ACS 5-Year Estimates

Recent Downtown Development Projects

City of Asheville Apartment Inventory

Application Year	Project Name	Status	No. of Bldgs	No. of Units	Aff Hsg
2008	Glen Rock Apartments				yes
2008	Crowell Park (10 Coleys Circle)			80	Yes
2008				80	
2009					
2010	Westmore Apartments	CO Issued	7	72	Yes
2010	Weirbridge	CO Issued	10	280	
2010				352	
2011	Larchmont Apartments (24 Larchmont Rd.)	CO Issued	3	60	Yes
2011					
2012	Aventine	CO Issued	5	312	
2012	Residences at glen Rock hotel	CO Issued	1	22	yes
2012				334	
2013	Retreat at Hunt Hill	CO Issued	5	180	

Year	Project	Status	Buildings	Units	Notes
2013	Palisades	CO Issued	10	224	
2013	Eagle Market (Eagle St)	Under Construction	1	62	Yes
2013				466	
2014	Haywood Lofts (919 Haywood)	Under Construction	1	21	
2014	Avalon (off Sweeten Creek)	CO Issued	8	192	
2014	Evolve Mountainview (Davis Grey)	CO Issued	5	104	
2014	Givens Estate Phase 2	CO Issued	2	24	
2014	Doc Chey Properties	CO Issued	1	3	
2014				344	
2015	Carolina Lane (45 Broadway)	CO Issued	1	5	
2015	Gerber Givens Park	CO Issued	1	120	Senior (yes)
2015	Givens Estate Creekside	CO Issued	2	24	
2015	The Lofts at South Slope (150 Coxe)	Under Construction	1	49	
2015	Hawthorn at Southside (Turtle Creek Drive)	CO Issued	2	168	
2015	Broad Properties	Under Construction	1	3	
2015	The Garage (56 S. Lexington St)	Under Construction	1	32	
2015	Beaucatcher Flats (128 Florence St)	Under	1	97	

		Construction			
2015	The District (off Fairview Rd)	Under Construction	7	298	
2015	River Mill Lofts (off Thompson St)	Under Construction	3	131	
2015				927	
2016	Ascot Point Village Phs III	Under Construction	4	80	
2016	Gerber Givens Park Phs II	Under Construction	1	82	
2016	Greymont (off Sardis)	Under Construction	4	108	
2016	Patton Place (248 Patton Ave)	Under Construction	4	116	
2016	Kensington Place	Under Construction	1	8	
2016	88 Southside	Under Construction	1	9	
2016				403	
2013	Radlofts	Pending	1	235	
2015	Sand Hill Apt. Phs III	Pending	1	1	
2015	Hawthorn at Mills Gap	Pending	4	256	
2015	Collier Avenue Apartments	Pending	1	49	
2015	Biltmore Park Town Apts.	Pending	1	56	

2016	Atkins Street Development	Pending		45	
2016	55 S. Market Street Apartments	Pending	1	70	
2016	Simpson Street Apartments	Pending	7	70	Yes
2016	Lee Walker Heights	Pending	9	199	
2016	ABCCM Veteran's Housing Project (1401 Tunnel)	Pending	1	96	
2017	Skyland Exchange	Under Construction	6	286	
2017	White Oak Grove	Pending	10	113	
2017	Stoneyard Apartments	Pending	4	133	
				1374	
	Mountain View will have 149 units at 1903 Hendersonville Road. The project is under construction.				
	EXCLUDE THE FOLLOWING				
2017	Mills Creek Condos	condos		26	
2017	Arras Condos	Under Construction	1	41	
2016	45 Asheland Condos	Under Construction		38	

2016	Mayfair	Withdrawn	2	24	
2016	Hawthorn at Bear Creek (west)	Reroof			
2015	Ledford Site (185 Coxe)	Withdrawn		118	
2015	Springside Road Apt.	Withdrawn			
2014	Woods Edge (98 Woodstream)	Remodel			
2010	Altamont Apartments	Renovation of Existing units.	1		
2008	Evolve Mountain View (1903 Hendersonville Rd)	Site work only			
2007	Westmont Commons				
2007	58 Broadway			5	Yes
2005	Parkway Crossing (Lamanch Dr)	Remodel			
2000	Compton Place - Mountain Housing				yes

City of Asheville Priority Area Maps

Community Facilities
Asheville, NC
Downtown

Legend
Community Facilities

- H Medical
- Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- Fiber Line
- Innovation Districts
- Municipal Boundary

YMCA

Buncombe County Health Department

Buncombe County Courthouse

Asheville City Hall

Buncombe County Health and Human Services

Asheville Public Works

Buncombe County Tax Department

Water Maintenance Building

YWCA

Asheville Middle School

Minni

City of Asheville

July 2017
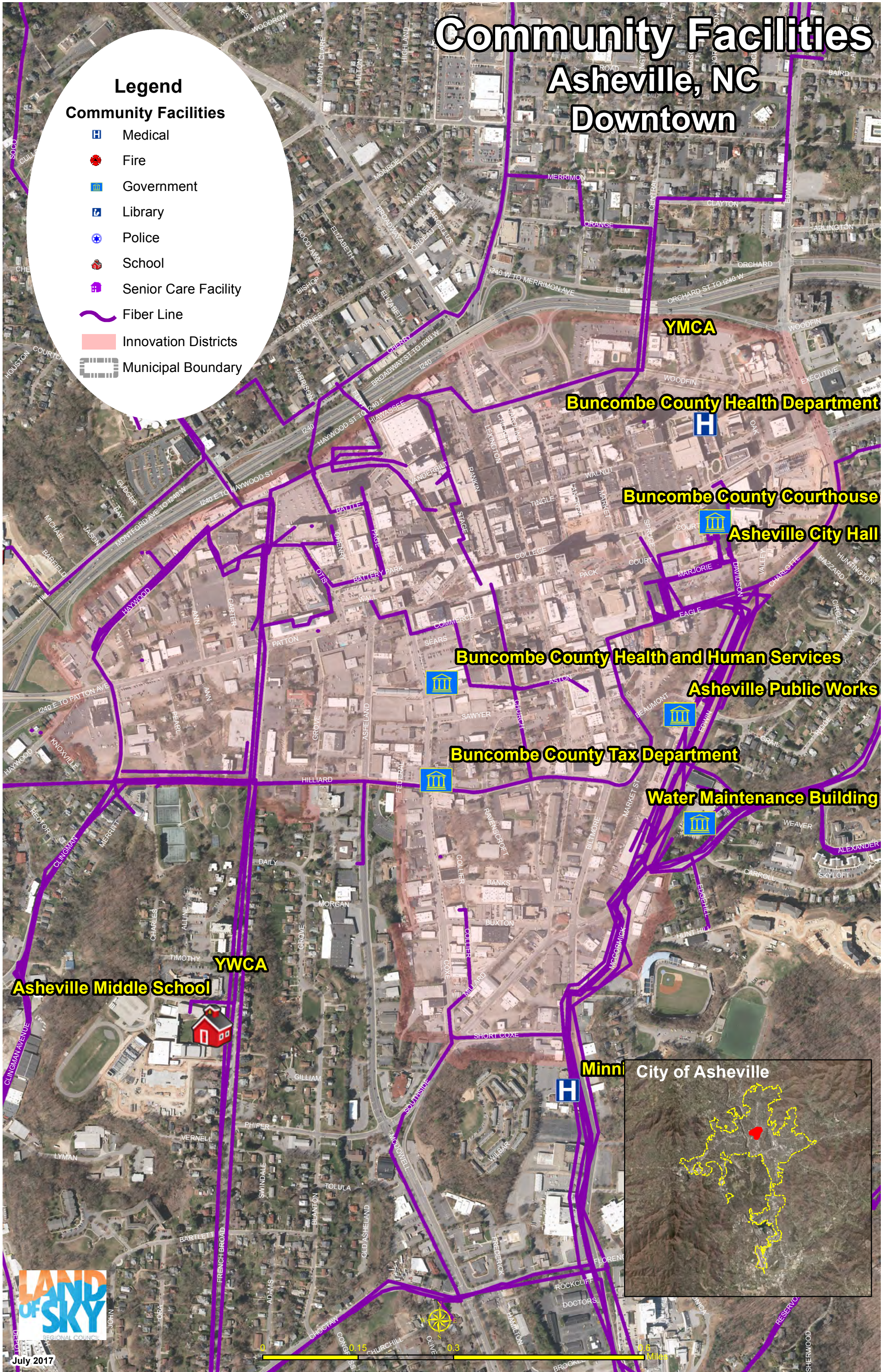
Community Facilities
Asheville, NC
Charlotte Street

Legend

Community Facilities

- ⊞ Medical
- 🔴 Fire
- 🏛 Government
- 📖 Library
- ✳ Police
- 🏫 School
- 🏥 Senior Care Facility
- 〰 Fiber Line
- ▨ Innovation Districts
- ⬚ Municipal Boundary

City of Asheville

YMCA

Buncombe County Health Department
H

July 2017

LAND of SKY REGIONAL COUNCIL

Community Facilities
Asheville, NC
Patton Avenue

Legend

Community Facilities

- Ⓗ Medical
- 🔴 Fire
- 🏛 Government
- 📖 Library
- ✴ Police
- 🏫 School
- 🏥 Senior Care Facility
- 〰 Fiber Line
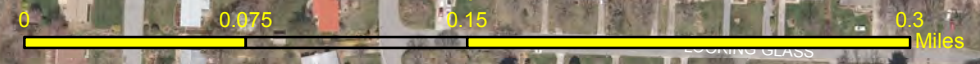- ▨ Priority Areas
- ⬚ Municipal Boundary

Emanual Lutheran School

City of Asheville
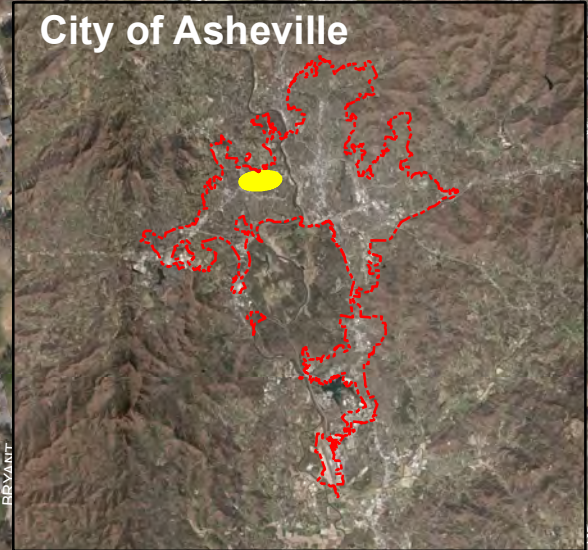
July 2017
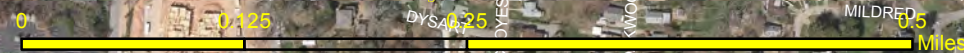
Community Facilities
Asheville, NC
River Arts District

Isaac Dickson Elementary

Buncombe County Health and Human Services

Buncombe County Tax Department

Asheville Middle School YWCA

Minnie Jones Health Center

Hall Fletcher Elementary

MAHEC

Asheville High School

Legend
Community Facilities

H	Medical
●	Fire
🏛	Government
📖	Library
✳	Police
🏫	School
🏢	Senior Care Facility
∿	Fiber Line
▮	Innovation Districts
⬚	Municipal Boundary

City of Asheville

LAND OF SKY
REGIONAL COUNCIL

July 2017

0   0.225   0.45   0.9
Miles

Community Facilities
Asheville, NC
Sardis Road
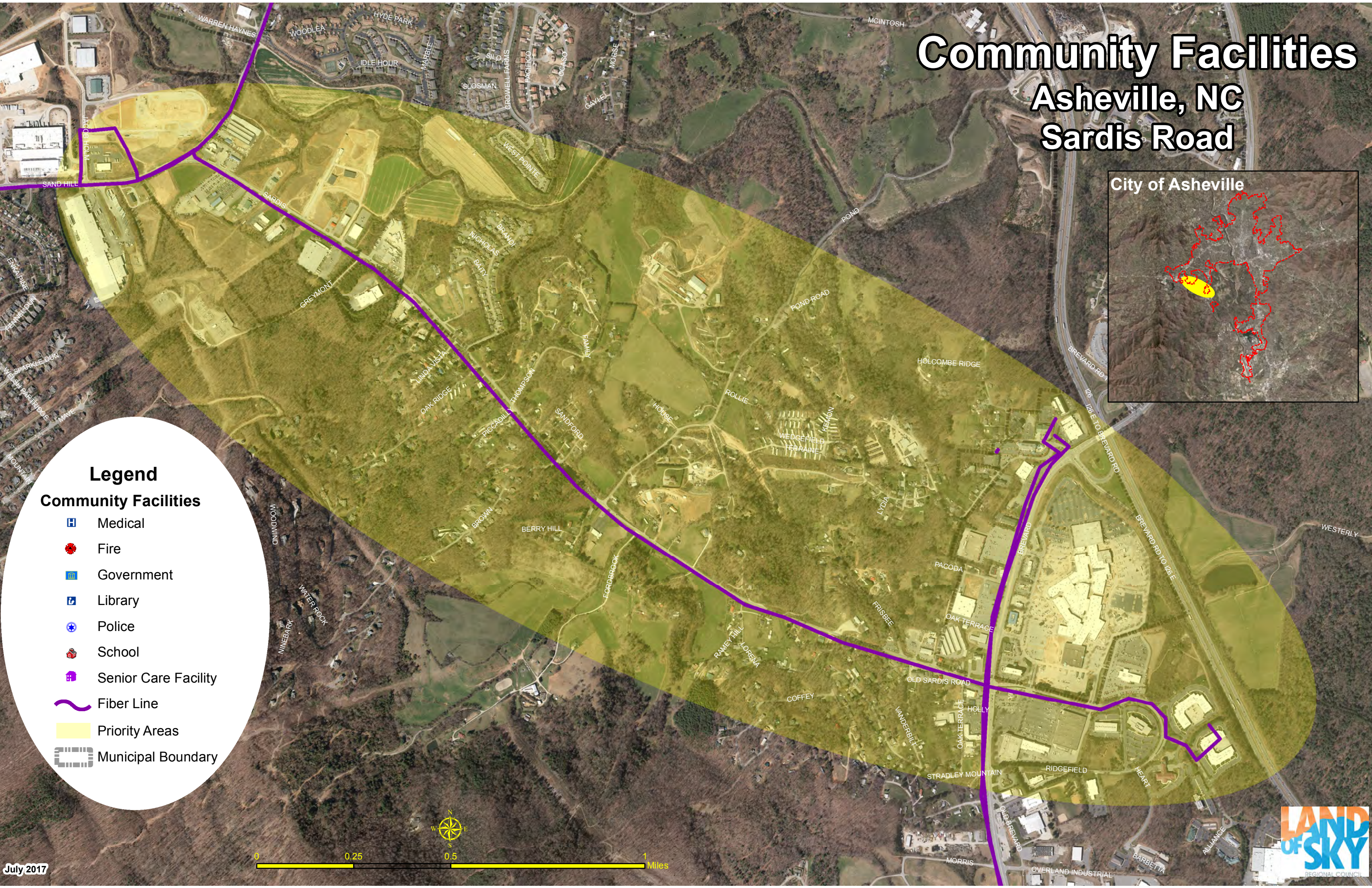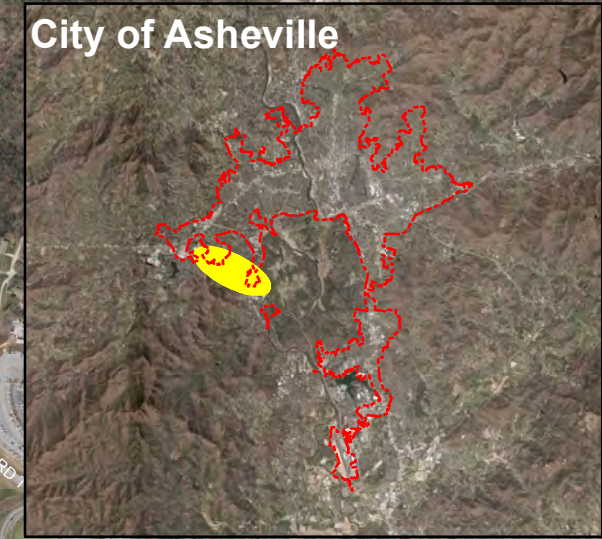
City of Asheville

Legend

Community Facilities

H	Medical
	Fire
	Government
	Library
	Police
	School
	Senior Care Facility
~~	Fiber Line
	Priority Areas
	Municipal Boundary

July 2017

LAND OF SKY
REGIONAL COUNCIL

0   0.25   0.5   1 Miles
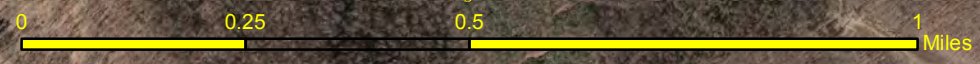
Community Facilities
Water Maintenance Building
Asheville, NC
South Slope

Buncombe County Tax Department

YWCA

Asheville Middle School

Minnie Jones Health Center

Legend

Community Facilities

H	Medical
⚜	Fire
🏛	Government
📖	Library
✴	Police
🎓	School
🏠	Senior Care Facility
⌇	Fiber Line
▮	Innovation Districts
⬚	Municipal Boundary

City of Asheville

0   0.1   0.2   0.3   0.4
Miles

July 2017

LAND OF SKY
REGIONAL COUNCIL

Community Facilities
Asheville, NC
VA Hospital Vicinity

Legend
Community Facilities
- **H** Medical
- 🔴 Fire
- 🏛 Government
- 📖 Library
- ✳ Police
- 🏫 School
- 🏢 Senior Care Facility
- 〰 Fiber Line
- ▨ Priority Areas
- ▢ Municipal Boundary

VA Hospital

City of Asheville

July 2017

LAND of SKY
REGIONAL COUNCIL

0   0.075   0.15   0.3
Miles
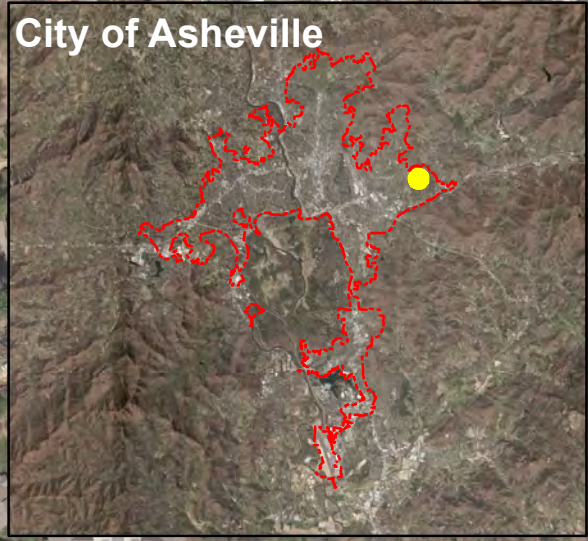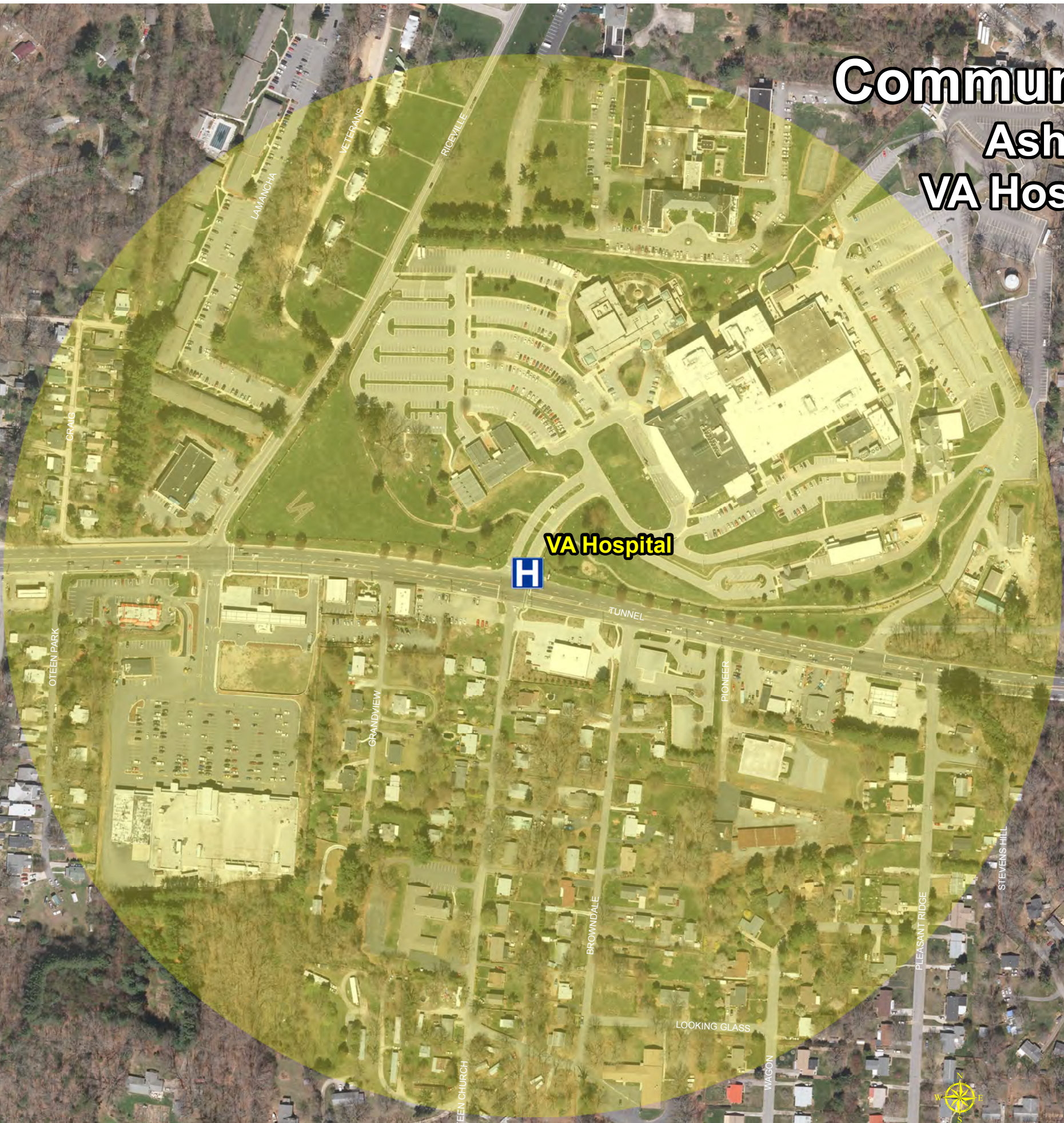
Appendix A.2
City of Hendersonville

City Overview

Hendersonville is a vibrant mountain city where the government and citizens work together for a high quality of life. It is the commercial and civic hub of Henderson County and home to Pardee Regional Hospital, Wingate University - Hendersonville Campus and Henderson County government.

Dating to shortly after the founding of Henderson County in 1838, Hendersonville is traditionally known as "The City of Four Seasons". The town has a well-preserved Main Street and adjoining downtown areas with many restaurants, antique shops and boutiques in buildings that housed key local business until the mid-1980s. Its architecture reflects the late 19th and early 20th centuries. Many buildings have outhouses because there were no indoor toilets in the past. This is now a celebrated part of Hendersonville culture. Much downtown revitalization has occurred since the early 1990s. Larger stores are almost entirely along the commercial strips extending outward from the downtown along U.S. Hwy. 64 east and U.S. Hwy. 176 and U.S. Hwy. 25. There are historic neighborhoods outside the Main Street corridor including the 5th Avenue neighborhood on the city's west side and the Hyman Heights and Druid Hills neighborhoods north of downtown. Areas of transition are found along the city's east side, but redevelopment efforts are underway in the historic commercial district along 7th Avenue East.

Downtown Hendersonville is a vibrant mixed use district with a retail, office, restaurant governmental and residential uses. The architectural cornerstones of the downtown area include the Historic Henderson County Courthouse, completed in 1905 and completely renovated in 2008, Hendersonville City Hall erected 1924 and restored in 2005 and the modern Henderson County Courthouse constructed in 1995.

Hendersonville is home to the North Carolina Apple Festival, which is the largest street festival in Western North Carolina. It is held annually over Labor Day weekend and draws up to 300,000 spectators,culminating in the Apple Parade on Labor Day. Main Street is home to other festivals and special activities throughout the year.

High schools in the city include West Henderson High School, Hendersonville High School, North Henderson High School, and East Henderson High School.

Hendersonville by the Numbers

Population: 13,814[1]
Median Household Income: $33,937[2]
Total Housing Units: 7,342[3]
Number of Companies: 1,946[4]
Median Housing Value: $165,600[5]
Priority Areas

1. Economic Development
    a. Four Seasons Boulevard (Commercial Development)
    b. Downtown (Main Street)
    c. 6th Ave Corridor (Pardee Hospital Area)
    d. Asheville Highway
    e. Spartanburg Highway
    f. Upward Road
2. Residential
    a. Downtown mixed-use development
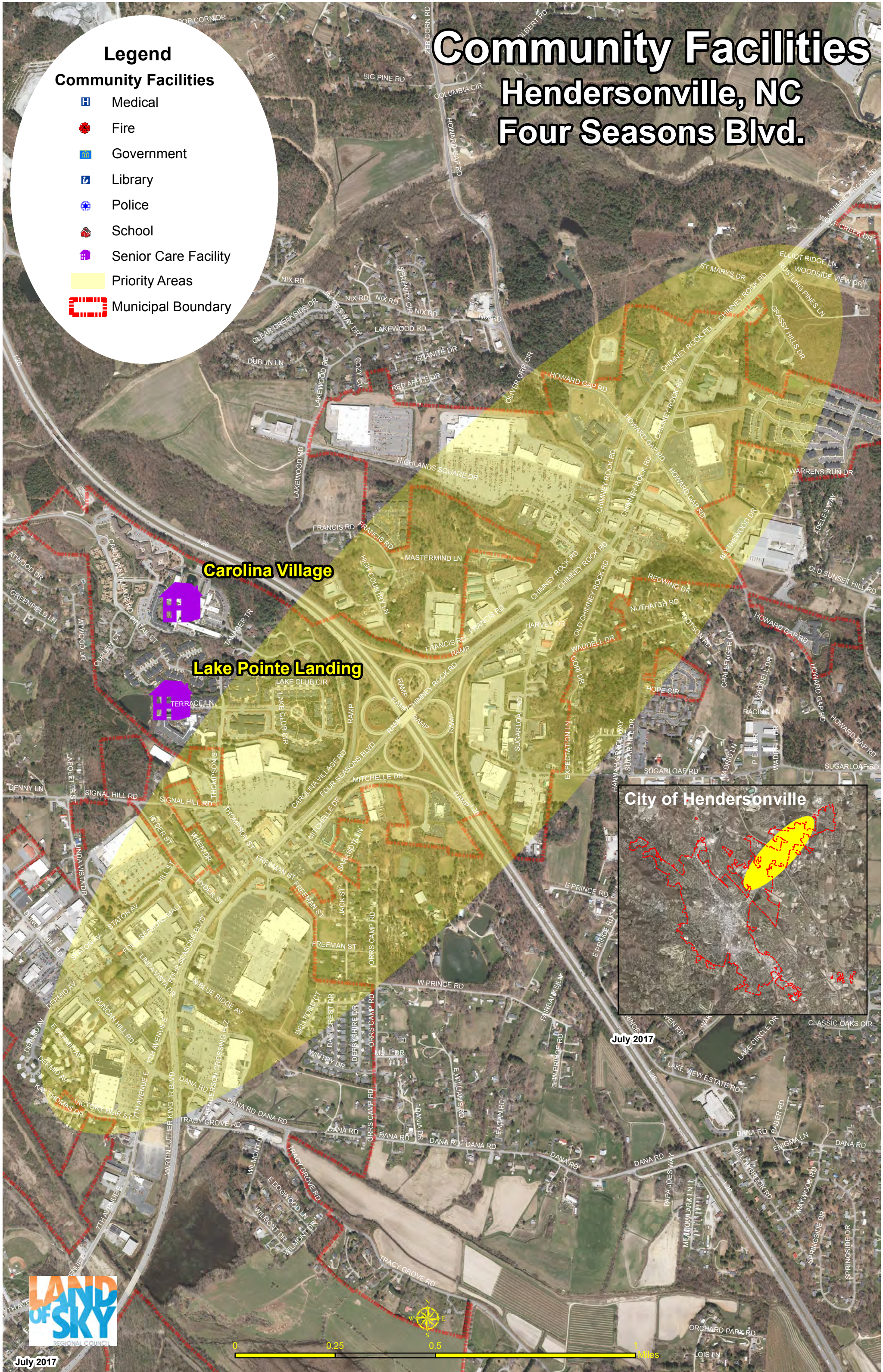   b. Neighborhoods connected and surrounding downtown area

City of Hendersonville
Priority Area Maps

Community Facilities
Hendersonville, NC
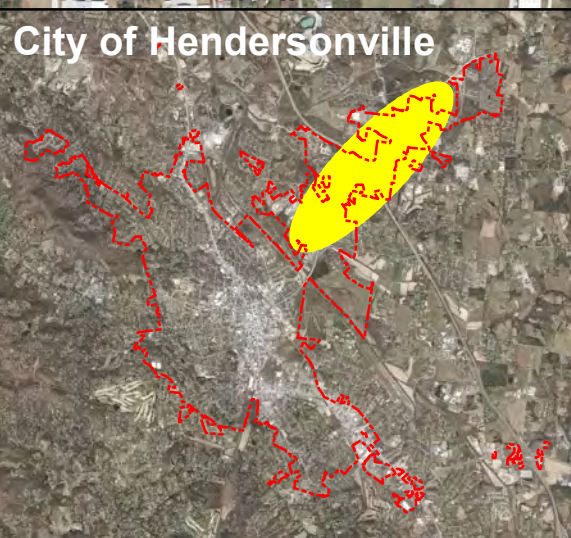## Four Seasons Blvd.

Legend
Community Facilities

- Medical
- Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- Priority Areas
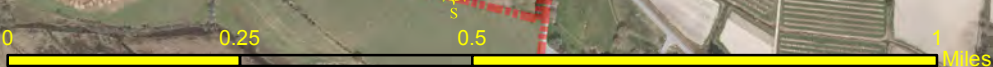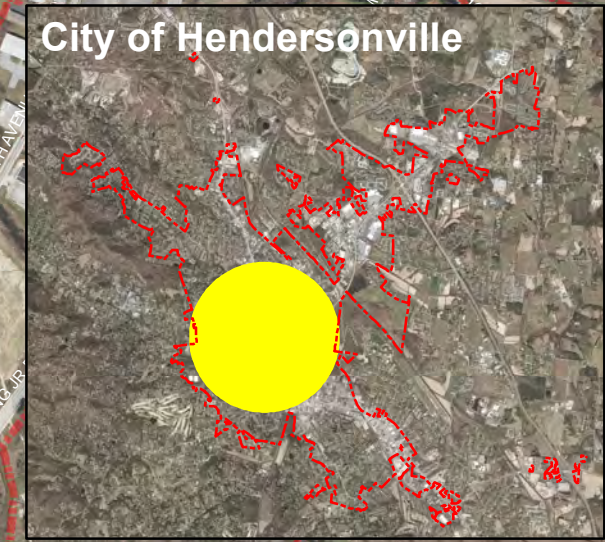- Municipal Boundary

Carolina Village

Lake Pointe Landing

City of Hendersonville

July 2017

LAND OF SKY
REGIONAL COUNCIL

July 2017

Community Facilities
Hendersonville, NC
Downtown

City of Hendersonville

Hendersonville Elementary School

Hendersonville Middle School

Pardee Hospital

Hendersonville City Hall

Jackson Park

Laurel Park Town Office
Laurel Park Police Department

Sunnybrook Assisted Living

July 2017

Legend
Community Facilities

H	Medical
	Fire
	Government
	Library
	Police
	School
	Senior Care Facility
	Priority Areas
	Municipal Boundary

LAND OF SKY REGIONAL COUNCIL

July 2017

0   0.25   0.5   1
Miles

Community Facilities
Hendersonville, NC
Asheville Highway

City of Hendersonville

Legend
Community Facilities

- Ⓗ Medical
- ● Fire
- ▥ Government
- Ⓛ Library
- ✹ Police
- ⬠ School
- ⬛ Senior Care Facility
- ▨ Priority Areas
- ▣ Municipal Boundary

July 2017

Patton Park

July 2017

LAND OF SKY
REGIONAL COUNCIL

0   0.2   0.4   0.8
Miles

Community Facilities
Hendersonville, NC
Recreational Corridor

Jackson Park

Legend
Community Facilities

Ⓗ	Medical
🔴	Fire
🏛	Government
📖	Library
✳	Police
🎒	School
🏠	Senior Care Facility
🟨	Priority Areas
⬜	Municipal Boundary

City of Hendersonville

July 2017

0   0.1   0.2   0.4 Miles

LAND OF SKY
REGIONAL COUNCIL
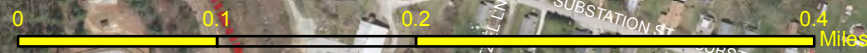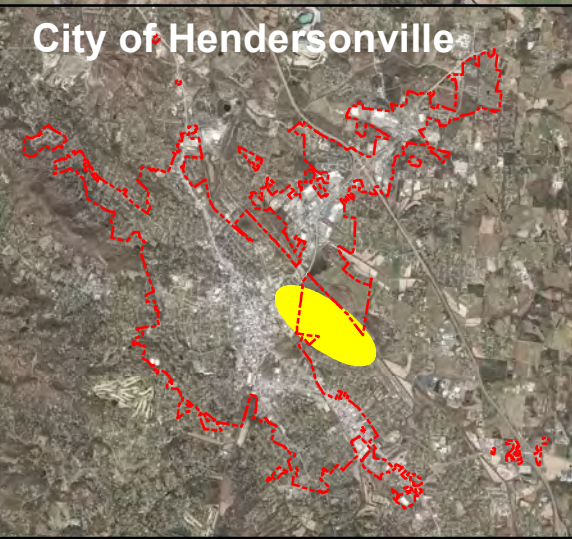
Community Facilities
Hendersonville, NC
Spartanburg Hwy. / Upward Road

Hendersonville City Hall   Jackson Park

Sunnybrook Assisted Living

Blue Ridge CC

East Henderson High School
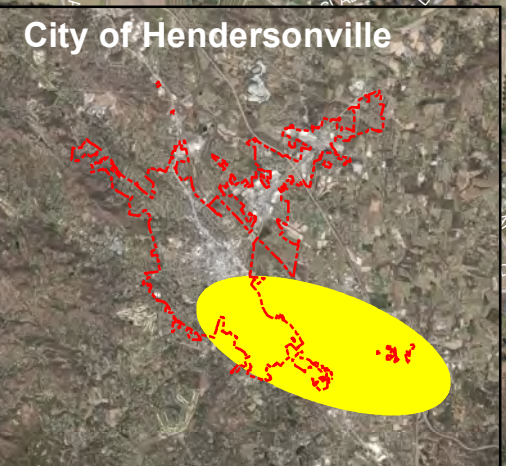
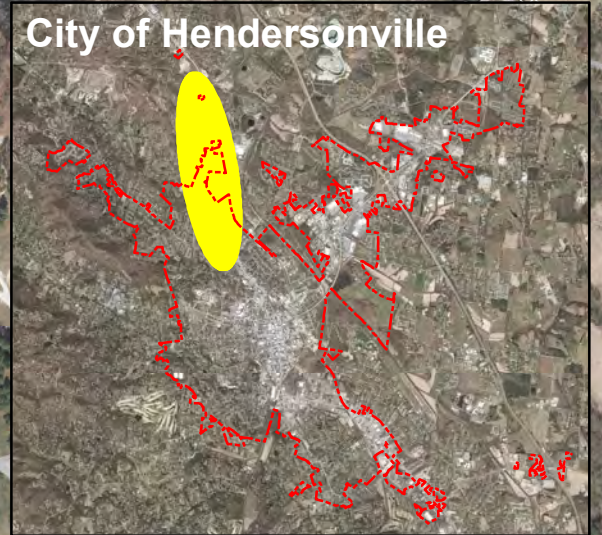City of Hendersonville

Legend
Community Facilities

- Ⓗ Medical
- 🔴 Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- Priority Areas
- Municipal Boundary

July 2017

0   0.4   0.8   1.6 Miles

LAND OF SKY REGIONAL COUNCIL

Schedule A.3
Town of Biltmore Forest

Town Overview
The Town of Biltmore Forest was incorporated in 1923 in the Blue Ridge Mountains of western North Carolina. The Town is located between the Biltmore Estate, the Blue Ridge Parkway and the City of Asheville. In 1990 the Biltmore Forest Historic District was determined eligible for the National Register of Historic Places. Eligibility included the pioneering method of suburban real estate development; the association with William Waldo Dodge Jr, a silversmith and architect, known for Colonial revival, craftsman, rustic and Tudor revival styles that permeate the area; and because of the coordination of plan, landscaping and architecture to create identity and character.

The attention to detail and environment that were so prominent during the development of the Town have been preserved by virtue of residential zoning designations and conscientious zoning restrictions. Conservation of the naturalistic landscaping, designed with the same influences as the Biltmore Estate, has been possible through adoption of a tree protection ordinance and community forestry programs**.**

Biltmore Forest by the Numbers
Population: 1,441[1]
Median Household Income: $150,438[2]
Total Housing Units: 685[3]
Number of Companies: n/a[4]
Median Housing Value: $839,100[5]

Priority Areas
The Town of Biltmore Forest is relatively small in size and provides high levels of service to its citizens. To that end, the Town has prioritized the entire community for enhanced broadband service to better serve all residents. The Town is adjacent to the heavily commercialized Hendersonville Road, a growing commercial corridor that is the gateway to downtown Asheville. Professional offices, including medical and financial facilities are located along Hendersonville Road and are within the Town.

---

[1] Vintage 2015 Population Estimate

[2] 2011-2015 ACS 5-Year Estimates

[3] 2011-2015 ACS 5-Year Estimates

[4] 2012 Survey of Business Owners

[5] 2011-2015 ACS 5-Year Estimates

Town of Biltmore Forest
Priority Area Maps

Community Facilities
Biltmore Forest, NC

MAHEC Education Center

Legend
Community Facilities
- H   Medical
- Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- ～ Fiber Line
- Municipal Boundary

Biltmore Estate

Biltmore Forest Town Hall

Carolina Day School

July 2017

0   0.375   0.75   1.5 Miles

LAND OF SKY REGIONAL COUNCIL

Schedule A.4
Town of Fletcher

Town Overview
Fletcher is located in the Blue Ridge Mountains of Western North Carolina. It lies between Asheville and Hendersonville in the northern portion of Henderson County. The Town of Fletcher was incorporated in June of 1989. Fletcher's approach to economic development is as follows:

Hospitality, entrepreneurship, and manufacturing are integral parts of our history.

Fletcher developed as a stopping point for travelers and the railroad between Hendersonville and Asheville. Dr. George Fletcher located his house at the crossroads of Old Plank Road (now US 25) and Howard Gap Road in 1856. His house not only accommodated his growing family, but also served as an inn for many travelers. By 1860, Dr. Fletcher had built a blacksmith's shop, a store and tannery, and other families had settled in the area starting businesses of their own. Today, the Town of Fletcher has an established tradition of hospitality, business development, and neighbors caring and working together for the community. The Town is committed to working with local business and industries to create a vibrant local economy and a high quality of life.

Location, location, location.

The Town's proximity to Asheville Regional Airport, Interstate 26, and the major tourism destinations of Henderson and Buncombe counties, make our area a desirable place to conduct business and to live. Fletcher is located midway between Hendersonville and Asheville, and is surrounded by rolling hills and views of the mountains on all sides. It is not surprising that the Fletcher area is home to some of the premier manufacturing and industrial facilities of the southeast. This includes Cane Creek Industrial Park, Broadpointe Industrial, and Fletcher Commerce Park.

We are a leader in recreation.

The Town of Fletcher's Parks and Recreation Department is working to make Fletcher the leader in recreation facilities and services in Western North Carolina and to be an active partner in health and wellness programs. The Town is implementing a Greenways Master Plan to link businesses and industries with residential and commercial districts, as well as the Town's recreational facilities. Through an infrastructure of trails, parks, and sidewalks, the Town of Fletcher provides increased opportunities for recreational activities and alternative transportation for both residents and employees. The Town has been awarded many awards for Fletcher Community Park, as the best park in WNC!

Fletcher is a fertile environment for growing your business.

The Town of Fletcher works closely with FABA – Fletcher Area Business Association to reach out to local businesses to determine what business leaders would like to see.   As a result of this teamwork, the Town:

Is developing a mixed-use, downtown business district which will feature small businesses, professional and commercial space, retail, and restaurants. The "Town Center District" will be a development district that connects to our greenway system and parks.

Is working with local banks and business leaders to provide information to entrepreneurs and prospective business owners on available resources, local requirements, and considerations for a successful business.

FABA sponsors "After Five" events, Membership Events, and Training Events with local business sponsors and partners to bring business leaders together to network, learn about the Fletcher area, and have fun.

Fletcher is future thinking, but action oriented.

Through the Town's strategic approach to planning, our community is striving to accomplish today what will position us well for the future. Examples of this include the greenways master plan, the "Town Center" development district, zoning and subdivision ordinances, and town efforts to expand and improve water and sewer infrastructure and service. The Town is also exploring high-speed Internet access, creative storm water management strategies, and open space provisions. Town staff is always looking for new opportunities and resources to provide the best and most advanced service in local government while keeping our tax rate as low as possible.

For Fletcher, "Pride in our past, and faith in our future" is more than just a phrase placed across the Town insignia. It is how we conduct ourselves today in order to be a leader in the future.

Fletcher by the Numbers

Population: 7,698[1]
Median Household Income: $52,888[2]
Total Housing Units: 3,491[3]
Number of Companies: 785[4]
Median Housing Value: $178,200[5]

Priority Areas

1. Economic Development
   a. Hendersonville Road/US 25
   b. Cane Creek Industrial Park
   c. Broadpointe Industrial Park
   d. Fletcher Commerce Park
   e. Fletcher Town Center District
   f. Old Airport Road Corridor
2. Residential
   a. Cane Creek Vistas Development
   b. Multi-family along Hendersonville Road Corridor
   c. Mixed use residential in Town Center District

---

[1] 2015 Certified Population Estimate
[2] 2011-2015 ACS 5-Year Estimates
[3] 2011-2015 ACS 5-Year Estimates
[4] 2012 Survey of Business Owners
[5] 2011-2015 ACS 5-Year Estimates

Town of Fletcher Priority Area Maps

Community Facilities
Fletcher, NC

Pardee Fletcher Medical Associates

Veritas Christian Academy

Town of Fletcher Library

Fletcher Fire & Rescue

Fletcher City Hall **Fletcher Police**

Fletcher Elementary School

Legend
Community Facilities

H	Medical
	Fire
	Government
	Library
	Police
	School
	Senior Care Facility
	Fiber Line
	Priority Areas
	Municipal Boundary

Town of Fletcher

0   0.475   0.95   1.9
Miles

July 2017

LAND OF SKY
REGIONAL COUNCIL
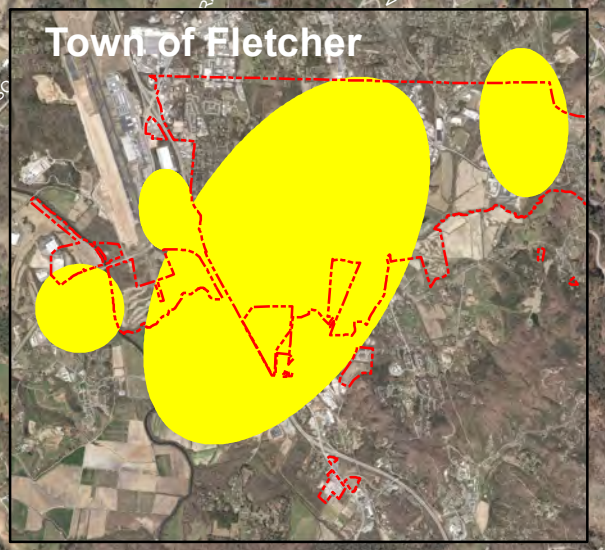
Appendix A.5
Town of Laurel Park

Town Overview

Situated at the southern edge of the Blue Ridge Mountains, just west of the City of Hendersonville, lies the Town of Laurel Park. The town, incorporated in 1925, boasts of its magnificent views from Jump Off Rock that overlook the Mills River Valley. This "Town on the Mountain" is a close-knit residential community with parks, the Hendersonville Country Club, opportunities for civic engagement, and a collection of long standing community businesses. Laurel Park also contains a small and concentrated commercial center and a variety of medical-related facilities. These assets and others combine to make Laurel Park an attractive place to live, work, and play.

Laurel Park is centrally located:
- 1.5 miles from the center of Hendersonville
- 20 miles from the Town of Brevard and 26 miles from Asheville, the region's hub city.
- Access to I-26 is 4 miles away and the Asheville Regional Airport is 14 miles.

One of the Town's most distinguishing features is the 954 foot rise in elevation from 2,170 feet at Wash Creek to 3,124 feet near the Fleetwood Development.

Laurel Park by the Numbers

Population: 2,314[1]
Median Household Income: $57,083[2]
Total Housing Units: 1,441[3]
Number of Companies: n/a[4]
Median Housing Value: $253,700[5]
- Laurel Park's population grew by 10% between 2000 and 2010.
- It is the 5th most populous of Henderson County's six towns

Some of the growth promoters that are relevant to Laurel Park include:
- Potential for very large developments in the Etowah area, such as the Seven Falls rebirth.
- Wingate University Development Project.
- The US 64 widening project and Balfour Parkway (a proposed new route that would connect US 64 and NC 191, see existing plan review).
- The Ecusta Trail.
- Laurel Park has quick access to Hendersonville, Asheville, Brevard, and upstate South Carolina and offers the "small town feel" that some prefer.
- Regional efforts to improve broadband access.

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[1] Vintage 2015 Population Estimate
[2] 2011-2015 ACS 5-Year Estimates
[3] 2011-2015 ACS 5-Year Estimates
[4] 2012 Survey of Business Owners
[5] 2011-2015 ACS 5-Year Estimates

Town Goals for the WestNGN Network

<u>Immediate</u>
1. **Access to Broadband to businesses and residences**
   a. Business district: Along US-64/Brevard Road from Blythe Street to White Pine Drive, including Pisgah Drive to Brian Center
   b. Within the residential area outlined by White Pine Dr, Daniel Dr, Davis Mountain Road, Hebron Road, and to the first intersection of Hebron Road with Laurel Park Hwy

2. **Access to Broadband to Town Facilities& Public Safety Facilities**
   a. Town Hall – 441 White Pine Dr, Laurel Park, NC
   b. Public Works – 500 Toms Dr, Laurel Park NC
   c. Valley Hill Fire & Rescue Station #1, 1675 Willow Rd, Hendersonville, NC
   d. Valley Hill Fire & Rescue Station #4, 1914 Brevard Rd

3. **Competitive pricing and reliable service for all customer types**

<u>Near- Medium Term</u>
4. An actionable plan for expanding access to additional residences within Laurel Park

5. When the Ecusta Trail (a rails-to-trails project) is developed, the trail construction includes broadband infrastructure if needed, or at a minimum, wireless internet

Laurel Park
Priority Area Maps

Community Facilities
Laurel Park, NC

Town of Laurel Park

Legend
Community Facilities

- H Medical
- Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- Priority Areas
- Municipal Boundary
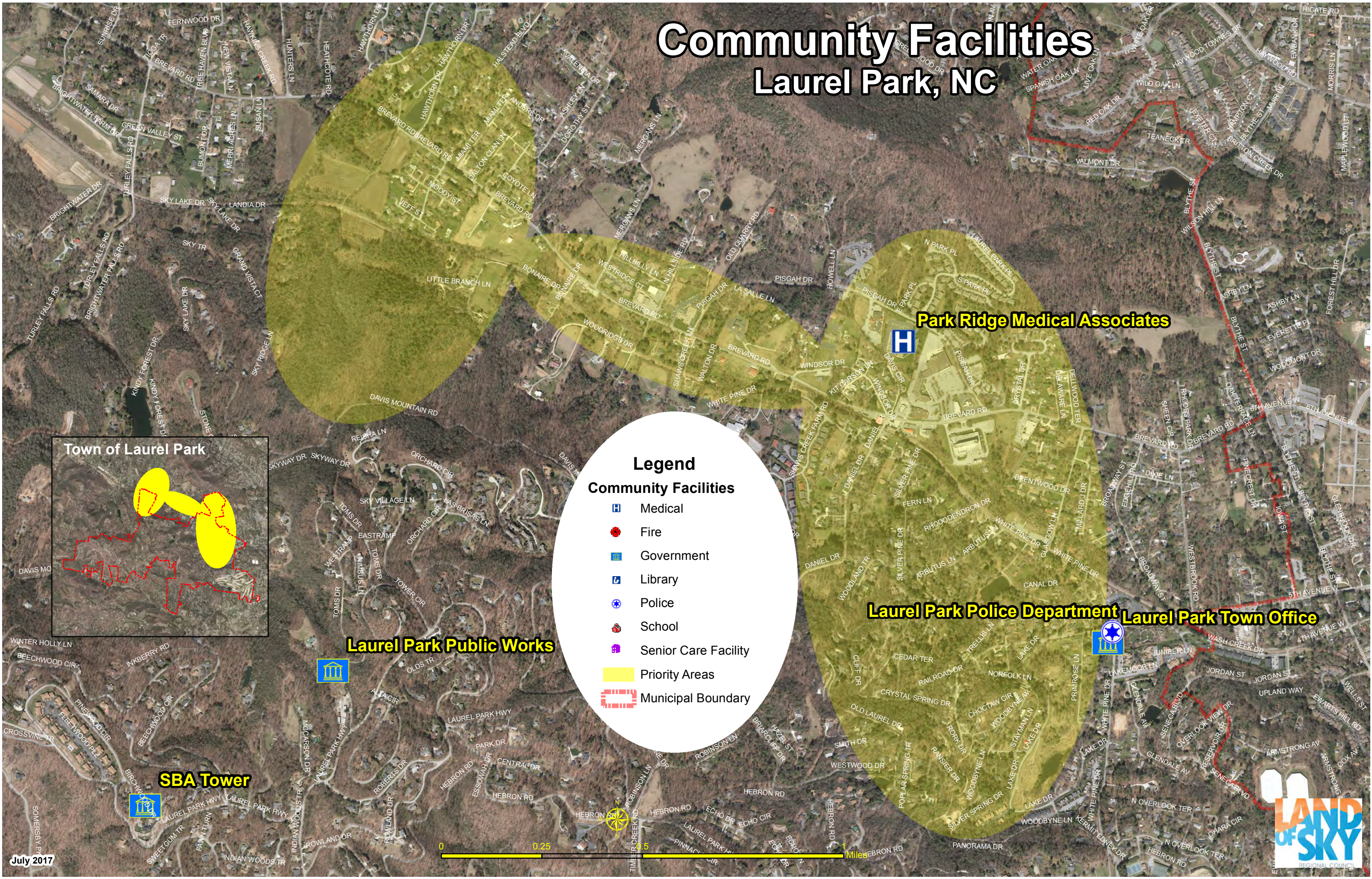
Park Ridge Medical Associates

Laurel Park Public Works

Laurel Park Police Department

Laurel Park Town Office

SBA Tower

July 2017

0   0.25   0.5   1
Miles

LAND OF SKY
REGIONAL COUNCIL

Appendix A.6
Town of Waynesville

City Overview
Waynesville, North Carolina, is the largest town in Western North Carolina and is a short drive from Asheville, NC. Downtown Waynesville has a quaint, urban charm, perfect for walkable shopping in local boutiques and gift shops for artisan goods. For visitors interested in enjoying a unique, flavorful Appalachian experience, Waynesville offers a vibrant farm-to-table restaurant and craft beer scene. Its proximity to popular hiking trails and waterfalls, Great Smoky Mountains National Park and the Blue Ridge Parkway make it a popular vacation destination for those looking to explore the great outdoors.

Downtown Waynesville's quaint old buildings, brick sidewalks, galleries, tempting foods and old-time general store will take you back to a more leisurely time. A time when people made you feel welcome and when you could slow down and really savor the present. When it's time to dine, there is everything from hearty country fare to the local specialty mountain trout, to fine international cuisine and high-end gourmet. The award-wining theatre features a full schedule of performances.

Nestled between Main Street and the Richland Creek in Waynesville is the Historic Frog Level. With the still operating railroad depot and eleven historic buildings, get a look into what built this great town. Find a variety of shops, art galleries, antiques, and brewery.

Waynesville by the Numbers
Population: 9,809[1]
Median Household Income: $36,473[2]
Total Housing Units: 6,052[3]
Number of Companies: 1,038[4]
Median Housing Value: $156,300[5]

Priority Areas
　　1. Economic Development
　　　　a. Downtown Business District (Main Street)

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[1] Vintage 2015 Population Estimate

[2] 2011-2015 ACS 5-Year Estimates

[3] 2011-2015 ACS 5-Year Estimates

[4] 2012 Survey of Business Owners

[5] 2011-2015 ACS 5-Year Estimates

       b. Frog Level
       c. Brown Avenue Corridor
       d. South Main Street Corridor
2. Residential
       a. Downtown mixed-use area
       b. Laurel Ridge Country Club Neighborhood

Town of Waynesville Priority Area Maps

Community Facilities
Waynesville, NC
Downtown
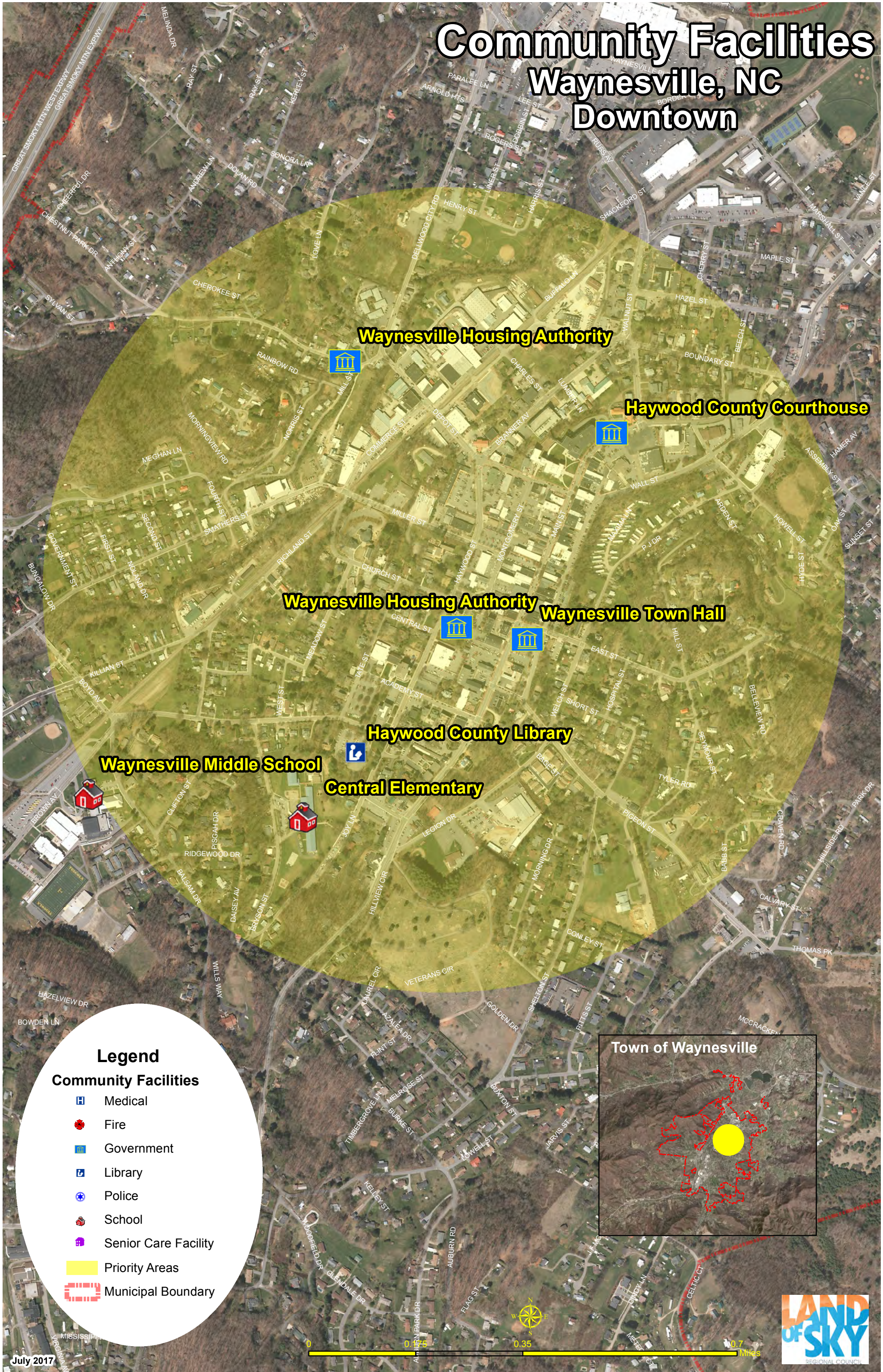
Waynesville Housing Authority

Haywood County Courthouse

Waynesville Housing Authority — Waynesville Town Hall

Haywood County Library

Waynesville Middle School

Central Elementary

Legend

Community Facilities

H	Medical
🔴	Fire
🏛	Government
📖	Library
✚	Police
🏫	School
🏥	Senior Care Facility
🟨	Priority Areas
▭	Municipal Boundary

Town of Waynesville

0   0.175   0.35   0.7 Miles

July 2017

LAND OF SKY REGIONAL COUNCIL
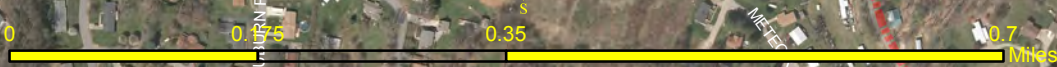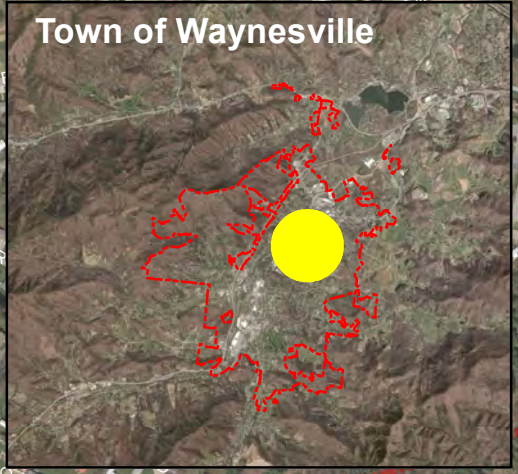
Community Facilities
Waynesville, NC
Southwest

Hazelwood Elementary

Legend
Community Facilities

- H Medical
- Fire
- Government
- Library
- Police
- School
- Senior Care Facility
- Priority Areas
- Municipal Boundary

Town of Waynesville

July 2017

LAND OF SKY
REGIONAL COUNCIL

0   0.25   0.5   1
Miles
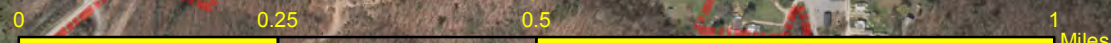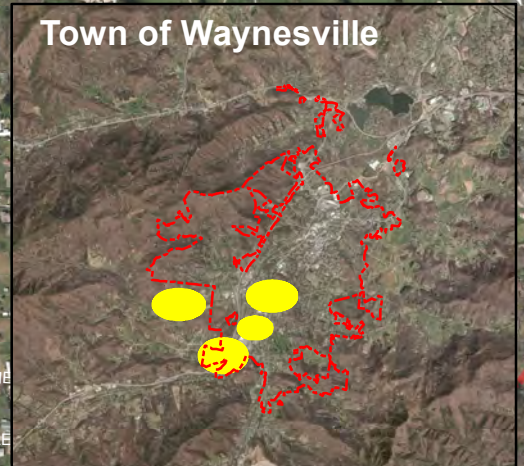
Accelerating Opportunities

There is a significant opportunity in Western North Carolina for **an advanced broadband service provider** to **capitalize on optimizing our region's "connective infrastructure."** This opportunity has been created by the passion of our citizens for a quality of life that has resulted in an **influx of new residents** and attracted **unparalleled national attention**.

The **Asheville region is poised for major economic growth that requires the availability of advanced broadband connectivity.** Because of this need, more than 80 regional leaders met in late 2016 and early 2017 to discuss the potential of a regional initiative. **Asheville, Biltmore Forest, Fletcher, Hendersonville, Laurel Park, and Waynesville combined forces to create the West Next Generation Network (WNGN),** an endeavor designed to accelerate the implementation of broadband service to build a 21st-Century economy.

This document is intended to help potential providers see the region as a phenomenal opportunity to form a strong public/private partnership. The region needs better broadband services, and our area's strong leadership is poised to accelerate this process. The WNGN initiative gives providers the opportunity to partner with local leaders and communities that have the vision, dynamism, diversity, and location to accelerate the future.

Table of Contents

A Place People Want to Be!

The broader **Asheville community is a "hot" commodity.** It is a destination where professionals, retirees, and the young want to live. Asheville and its environs have been recognized for their vitality and future potential. A few of the significant affirmations of this statement are found in various economic, environmental, gastronomical, and educational ratings. The area enjoys high rankings on livability, business, careers, innovative "green" technology, etc.

Asheville ranked #3 among World's Best Cities for Millennials

– matadornetwork.com

Asheville a top U.S. destination

– USA Today, Money magazine, Outside magazine, Forbes

Asheville: The Next Green Tech Town

– Huffington Post, 2014

Rated one of the best mid-markets in the South to relocate business headquarters

– Southern Business & Development, 2016

Asheville:
The Coolest
City in America

– matadornetwork.com

Asheville named #1 city for veteran entrepreneurs

– United Services Automobile Association & U.S. Chamber of Commerce, November 2016

Top 10 U.S. travel destination

– Travel & Leisure, 2016

Listed as #12 out of 200 cities as a best place for business and careers

– Forbes magazine, 2015

"An unexpected source of innovation"

– Forbes magazine, 2014

No. 1 travel destination

– Good Morning America, 2016

Region Poised for Success

The Asheville region is **expected to grow significantly over the coming decades.** The growth is likely to be from the **migration of highly educated young people and economically secure retirees.** The statistics are compelling:

Population ➤ *By 2036 Buncombe, Henderson, Madison and Haywood counties are expected to have a combined population of 552,056 residents, up from 425,494 in 2010.*

Jobs & Income ➤ *According to the Bureau of Labor Statistics, Buncombe County is in the top 10% for job growth and top 1/3 for wage growth among nation's largest 345 counties.*

Educated ➤ *59% of adults ages 25-44 have an associate's degree or higher, and 50% of adults ages 45+ have an associate's degree or higher (TownCharts.com).*

Young ➤ *Median age is 42 – 36% of the population is between the ages of 30 and 50 (2010 Access NC).*

Not-So-Young ➤ *Population of people ages 65 to 74 expected to grow 21% by 2020 (Asheville Citizen-Times).*

Diverse Economy Supports Area

The region has developed significant businesses and support organizations that will accelerate its economic growth and vitality. In just the past few years, the region has built entrepreneurial incubators, venture capital clubs, workforce career pathways, and energized its higher education community to better serve the region. **It is the world's center for data about climate change and sustainability.**

National Oceanic and Atmospheric Administration (NOAA): Asheville is the center of climate data and research, housing the National Centers for Environmental Information. It hosts 20 Nobel Prize-winning scientists.

The Collider was created in 2016 as a meeting place for scientists and entrepreneurs to collaborate in the use of climate data to create new businesses.

Including GE Aviation, the region hosts 22 advanced manufacturing firms that employ more than 2,100 employees (Asheville Area Chamber of Commerce).

The region is a tourist destination: On average, 30,000 people visit Buncombe County each day, spending $5.2M daily (Convention and Visitors Bureau). Asheville is home to the iconic Biltmore Estate, pictured at right.

Healthcare has grown dramatically. The health services and private education sector makes up the largest percentage of total employment in the Asheville metro region. Since 2000, this sector has grown by 62.5% (Asheville Area Chamber of Commerce).

UNITE WNC was organized in 2017 to develop a grass-roots strategy for creating "the digital future." The group is working to create a shared vision for the Western North Carolina tech sector that will be realized by 2025.

Venture Asheville, started in 2012, is catalyzing Asheville's high-growth entrepreneurial ecosystem and connecting entrepreneurs with start-up funding, mentors, and talent.

The University of North Carolina at Asheville was ranked No. 1 nationally for "Making an Impact" by connecting liberal arts students with economic opportunities (The Princeton Review, February 2016). UNC Asheville also hosts the National Environmental Modeling and Analysis Center (NEMAC), a climate data and environmental visualization research facility.

Soul of the Community

The Knight Foundation has defined the "soul of a community" as being a key factor in defining livable regions. People give higher ratings to communities that "relate directly to their quality of life: an area's physical beauty, opportunities for socializing, and a community's openness to all people" ("Soul of the Community," Knight Foundation, 2010). These qualities provide a community with a unique "sense of place."

This region has the referenced "sense of place." There is a certain "weirdness" to the Asheville region that is created by its **openness to people of different ideologies, cultures, and backgrounds.** A recent UNITE WNC (Western North Carolina) tech-sector summit of 100 young "geeks" defined the area's "soul" or "core" by these adjectives:

- **Collaborative and generous, with a high level of acceptance for new people, diversity, and inclusion**
- **Resourceful: self-starters, self-sufficient, persistent, and resilient**
- **Creative: eclectic, curious, open-minded, passionate, and visionary**
- **Socially conscious: purposeful, committed to local businesses and community**
- **Education-centric, continuous learning, and improvement**
- **Leadership and expertise**

The region provides its residents with great opportunities for personal growth and development. Leadership Asheville, hosted by UNC Asheville, annually trains 30 to 50 mid-career professionals in leadership skills and community engagement. The program is in its 35th year of operation.

For seniors, Asheville hosts The Osher Lifelong Learning Institute at UNC Asheville. It is an award-winning, internationally-acclaimed learning community dedicated to promoting lifelong learning, leadership, community service, and research. It presently has 2,200 members.

The region is home to innovative community colleges (Asheville-Buncombe, Blue Ridge, and Haywood), UNC Asheville, the downtown Asheville campus of Lenoir-Rhyne University, the Biltmore Park campus of Western Carolina University, Warren Wilson College, Montreat College, Mars Hill University, and branch campuses or offices of North Carolina State University, Wingate University, and South College.

"Sense of Place"

The Internet economy has given people the freedom to choose where to live and where to locate businesses. **Again, our region's "sense of place" is a key variable in attracting the young, talented, socially engaged, and ambitious.** For many firms, tax rates and financial incentives are less important than being located in an enjoyable and sustainable area with

opportunities for employees to interact with both the environment and other interesting people. In Western North Carolina, one can do both. The region hosts more than 400 individually owned (i.e., non-chain) restaurants and bistros. It is also home to nearly 40 craft breweries, with 14 added in 2016 alone, along with three national-level artisan producers. These ventures provide locals with further opportunity to connect at "homegrown" establishments.

In addition, the opportunity for locals and visitors to engage in outdoor recreation is unsurpassed. The **Pisgah National Forest** is a 15-minute drive from downtown Asheville. "The Pisgah National Forest is a land of mile-high peaks, cascading waterfalls and heavily forested slopes. Comprised of more than 500,000 acres, the Pisgah is primarily a hardwood forest with whitewater rivers, waterfalls and hundreds of miles of trails" (visitncsmokies.com).

The **Blue Ridge Parkway** winds its way through the Smoky Mountains. The Parkway provides easy access to Craggy Gardens, the state Folk Art Museum, and hundreds of hiking trails.

The **North Carolina Arboretum's** 434-acre campus is nestled along the Blue Ridge Parkway and offers 65 acres of cultivated gardens including the Bonsai Exhibition Garden, 10 miles of forested hiking and biking trails, garden tours, an Art Walk, nature activities for families, ever-changing science, art and cultural history exhibits, and a cafe and gift shop.

Read about how the economic sectors of our region plan to use advanced broadband technology in the following sections of this report.

Downtown Hendersonville is a haven for small businesses. See more in the Commerce & Entrepreneurship section, Pages 12-13.

Economic sectors highlight need for advanced broadband

For the region's economic drivers to reach their full potential, adequate high-speed internet connectivity is required. The next sections of this report highlight 8 economic sectors that will utilize the services of an advanced broadband provider. These analyses are proof that Western North Carolina is eager to embrace a new broadband source!

"Smart grid" technology is one of the advanced broadband-related goals for municipalities involved in the West Next Generation Network initiative. Read about this in the Government section, Pages 16-17.

The Folkmoot USA international dance and music festival attracts thousands of tourists to Waynesville and Haywood County every year. The Tourism section is on Pages 24-25.

Advanced Manufacturing

Efficiency will be maximized with broadband's help

There are 22 advanced manufacturing companies in Western North Carolina. According to the Asheville Area Chamber of Commerce, this industry provides more than 2,100 jobs, with an average annual salary of about $50,000. High-speed internet will have an incredible impact on the trajectory of this economic sector and, therefore, the ability of Western North Carolina to attract and retain more high-paying advanced manufacturing jobs.

According to mountainareacareers.org:

- About 1 in 3 brake calipers sold in the U.S. is made in the Continental plant in Henderson County.
- The third-largest craft brewery in the U.S. (Sierra Nevada) is located in Henderson County, and the country's fourth-largest craft brewery (New Belgium) is located in Buncombe County.
- GE Lighting in Hendersonville produces and ships more than 3,000 LED lighting systems every day, saving cities $17 billion annually in lighting costs.
- The region is home to more than 25 outdoor-industry manufacturers, including Outrider USA in Henderson County, producer of the world's fastest sub-100 lb. vehicle and a recumbent mountain bike that can be modified for use by quadriplegics and people with traumatic spine injury.

Respondents to a survey distributed to manufacturers in Western North Carolina indicated that advanced broadband would serve local manufacturers by:

- Allowing for greater efficiency in customer service
- Providing access to online training for workers in remote locations
- Increasing the speed of business and demand for immediate responsiveness
- Improving the logistics sector by keeping up with the needs of global consumers
- Automating sales processes, due to increased availability of real-time customer data and reduced response time
- Boosting remote access to assembly lines and machines
- Attracting a younger workforce that is well-versed in technology
- Providing increased options for apprenticeships that could turn into permanent employment

Example responses from advanced manufacturing broadband survey

"We will not be able to grow our workforce here without Gig ... period."

"Every time we have to apologize for our inability to participate in the modern business world due to lack of digital infrastructure ... we reinforce the idea that this is a fun place to visit but not a place to invest."

"Our customers are located throughout the Americas. Improved broadband would allow us to be more timely and responsive to the needs of our customers, no matter where they are."

Top Advanced-Manufacturing Employers in Western North Carolina

Company	County	Local Employee Range	Market Area	Manufacturing Type
Evergreen Packaging	Haywood	1,000+	International	Paper
Continental Teves	Henderson	750-999	International	Transportation
Eaton Corporation	Buncombe	750-999	International	Electrical Equipment
BorgWarner Turbo Systems	Buncombe	500-749	International	Transportation Equipment
Thermo Fisher Scientific	Buncombe	500-749	International	Machinery
GE Lighting	Henderson	500-749	International	Energy and Technology
Wilsonart	Henderson	500-749	International	Laminated Plastics
Meritor	Henderson	400-499	International	Transportation
Kearfott Corp.	Buncombe	400-499	International	Transportation
Consolidated Metco	Haywood	400-499	North America	Transportation
GE Aviation	Buncombe	300-399	International	Aircraft Engines and Parts
Linamar	Buncombe	300-399	National	Vehicle Components

Commerce & Entrepreneurship

Advanced broadband is missing link for start-ups

The Asheville area is a growing hub for small businesses and entrepreneurial ventures. With our emphasis on community engagement, innovation, creativity, and personal enrichment, greater access to advanced broadband would not only increase economic opportunity for existing businesses and organizations, it would also generate greater entrepreneurial energy across Western North Carolina.

Mountain BizWorks, The Collider, and Venture Asheville are all organizations dedicated to expanding entrepreneurial activity in the Asheville region. They require access to high-speed broadband in order to connect their mentors and business partners to the growing number of entrepreneurs who come to them for training, collaboration, and a pathway to capital. **As our start-ups grow, so does their need for cutting-edge high-speed digital infrastructure. Without access to advanced broadband, our local start-ups are at a competitive disadvantage in the global arena.** Therefore, it is imperative for the six municipalities involved in this effort to be able to build out and expand their fiber backbone. High-speed internet is essential for Western North Carolina's start-ups!

According to a 2016 Federal Communications Commission report, North Carolina ranks ninth in the nation for broadband deployment initiatives that aim to overcome obstacles that diminish opportunities for social and economic growth within growing communities.

Josh Dorfman
Director of Entrepreneurship
Venture Asheville

"Broadband will unleash an enormous wave of entrepreneurial creativity. We are a city and region of highly skilled artisans, makers, and technologists. High-speed internet will enable our talent to create, connect, and build the kind of strong, sustainable businesses that are the backbone of Western North Carolina's economy."

Key factors affected by a lack of advanced broadband infrastructure are the following:

- **Weak competitiveness in the global tech market**
- **Inability to process petabytes of data over gigabytes of data**
- **Inability to effectively set up cloud infrastructure to service the Internet of Things (IoT), web sites, and private data storages**
- **Less-effective database management**
- **Decreased likelihood of global and commercial business growth**
- **Decreased reliability of security operations**

Three Drivers of Entrepreneurship in the Region

MOUNTAIN BIZWORKS

Mountain BizWorks' mission is to build a vibrant and inclusive entrepreneurial community in Western North Carolina by helping small businesses start, grow, and thrive. One of Mountain BizWorks' programs, ScaleUp WNC, provides intensive growth strategy development and implementation assistance to cohorts of 15 small businesses annually. In total, 150 Western North Carolina businesses with strong potential for growth and job creation have or will have the opportunity to participate in this highly competitive program. ScaleUp WNC is designed to yield a diverse and distinguished group of entrepreneurs, to drive innovation and economic development.

THE COLLIDER

The Collider brings together diverse expertise and stimulates a new industry: climate products and services. The Collider catalyzes market-driven climate solutions by hosting events and educational opportunities that include live-streamed meetings, virtual conferences, state-of-the-art presentations, specialized training, lectures, and workshops. It is, in part, a response to the growth of the "big data" analytics that are required in climate science – an economic sector that requires broadband.

"I've been active in creating 'The Collider' because of the importance of climate change, the use of climate data to build a new economic cluster, and the desire to build the future Asheville. We need better and faster broadband connectivity to make Asheville 'Climate City.'"

Mack Pearsall
Founder
The Collider

VENTURE ASHEVILLE

Venture Asheville grows Asheville's startup community and connects high-growth entrepreneurs to talent, mentors and investors through unique programming and events. Progress is measured in terms of high-growth ventures created, seed and venture capital invested, and high-salary jobs generated. In 2015-2016, Venture Asheville's efforts resulted in 132 jobs filled, 90+ start-up events held, 13 start-ups funded, and $600K+ invested.

Education

High-speed internet needed to boost learning

The digital age provides abundant opportunities to expand learning to times and places **beyond the classroom,** with access to **global knowledge and resources** available at the click of a mouse or the touch of a screen. **To realize the full benefits of the digital age, young people need access to advanced broadband** — high-speed internet that is always on and faster than traditional access — in order to maximize collaboration, creativity, and research. Current internet connections in schools and libraries are becoming increasingly inadequate to support **individualized technology-based learning** for all students. While nearly all of the country's schools and libraries are connected to the internet at a basic level, educational use of computers, tablets, mobile devices, and other online applications have increased the demand for **higher-performance broadband connectivity. Nowhere is this need more profound than in our underserved, under-represented communities.**

Colleges and universities offer a number of high-tech programs that would benefit greatly by advanced broadband (see table on the following page). In addition, three new high-tech high schools are in operation or are being planned for Western North Carolina: Buncombe County Schools' Martin Nesbitt Discovery Academy, Asheville City Schools' North Star Academy, and Henderson County Public Schools' Innovative High School.

**Dr. Tony Baldwin
Superintendent
Buncombe County
Schools**

"Currently, we are completing the second phase of, ultimately, a four-phase project of one-to-one device implementation. A high percentage of students have been able to take the devices home, but the issue that we run into is there are students who do not have internet at home. Some students simply cannot afford it. This will become a direct connection to socioeconomic status."

Respondents to a survey distributed to colleges and universities in Western North Carolina indicated that advanced broadband would serve local educators and students in the following ways:

- Increased virtual enhancement for delivery of educational content

- **Streaming capabilities that would connect college campuses, connect students to one another, and increase access to learning resources**

- **More collaboration with artists, scientists, statisticians, and other experts in remote areas**

- **Expanded use of learning management systems for training and instruction**

- **Heightened capabilities for students to access homework online, and to engage with metadata**

In addition, advanced broadband internet will serve education in Buncombe, Henderson, and Haywood counties by:

- **Improving the effectiveness of instruction and enhancing learning outcomes through more engaging, interactive activities**

- **Encouraging innovation in how education is delivered, including hybrid approaches to teaching**

- **Allowing students to engage in activities – such as educational modules and "serious" gaming – that are targeted at refining or extending technical skills**

- **Facilitating the collection and analysis of greater amounts of data to track student performance**

Key High-Tech Educational Programs/Initiatives in WNC	
One-on-one technology initiatives	• Buncombe County Schools • Asheville City Schools • Henderson County Public Schools
Engineering-related Programs	• Mechatronics programs offered jointly by UNC Asheville and NC State University, and a transfer pathway from Blue Ridge Community College • Engineering program delivered at Western Carolina University's Biltmore Park Campus • Engineering and Machining Technology at Asheville-Buncombe Technical Community College
Technology-based Programs	• Computer Science at UNC Asheville • Network Technology and Information Systems Security from Asheville-Buncombe Technical Community College • Cyber Security at Montreat College
High-Tech High Schools	• Buncombe County Martin Nesbitt Discovery Academy • Asheville City North Star Academy • Henderson County Innovative High School
Distance Learning	• Ability to connect with international students • Ability to do homework online • Ability to store digital projects

"Substantial tech capabilities with speed and bandwidth will enhance our cyber-security program's ability to access various software and programs. ... I think access to high-speed broadband is the necessary means toward leadership."

Dr. Paul Maurer, President, Montreat College

Government

Broadband = Efficiency, public safety, better value

Future community services will demand higher- and higher-speed broadband. For example, new technologies will help electric and water utilities keep rates down for residents by spotting waste through what's called "smart grid" technology: the ability for utilities and consumers to track usage in real time. Hendersonville is among those leading the charge on development of "smart city" initiatives. The city plans to develop:

- **"Smart parking" and traffic control systems in the downtown area**
- **Real-time tracking of the public bus system**
- **Expansion of "smart meters" for utilities and customer support**
- **"Mobile citizen engagement" applications to help drive public priorities**
- **Greater transparency and interactive use of "open data"**

Hendersonville isn't alone. All six municipalities involved in the WNGN initiative are moving toward being "smart cities."

"The City of Hendersonville is growing in a region whose strengths are myriad. Providing robust broadband infrastructure builds on these strengths and will help our community continue to offer great public services while also serving as a key component of our continued economic success."

Barbara Volk
Mayor
City of Hendersonville

Esther Manheimer
Mayor
City of Asheville

"In order to maintain a strong economy, high-speed broadband is essential for residents and businesses alike. The City of Asheville is committed to being a partner to enable and enhance access to gigabit-speed broadband in the region."

Expected byproducts of "Smart City" implementation

- Increased citizen input and civic engagement
- Reduction in carbon emissions, energy consumption

- Reduction in crime
- Improved financial forecasting
- Better urban planning
- Reduction in traffic jams

- Attracting business investment

From "An Introduction to the Sunshine Coast Smart City Framework" – Cisco Systems, 2015

> "Our first responders stake their safety daily on the ability of large amounts of information to be communicated immediately during difficult situations. High-speed broadband is essential for us to perform our jobs in the information age."

**Scott Burnette
Fire Chief
City of Asheville**

Our leaders recognize that a region's quality of life hinges, in part, on truly advanced broadband services being available. In the world of emergency services, the availability of fiber optic cable for county 911 and city firefighters means faster and more reliable emergency response in an area's neighborhoods. Old-style "station alerting" (the process of the 911 center notifying the appropriate station of an emergency) can take precious seconds and delay firefighter response. New-style fiber optic alert notifications take a fraction of a second.

Home Value

Advanced Broadband a Prerequisite for 'Smart Cities'

A "smart city" collects, analyzes, and communicates data to enhance livability, workability, and sustainability. Information is collected through sensors and other devices. The captured data are communicated through wired or wireless networks. Then, the data are "crunched" to understand current situations, as well as to predict future occurrences. An extensive broadband network is a prerequisite to creating a "smart city" that is capable of providing better services for its residents. Various "value-added" services are identified as benefitting from improved technology infrastructure, data management strategies, and leadership. Area governments are moving toward using these services to improve the region. A few of the "smart city" value-added elements are described in the column to the right.

Energy

- Smart electrical grid & energy planning
- Electronic metering of homes, businesses
- Strategies for renewable energy management

Safety and Security

- Integrated operations centers
- Lighting efficiencies
- Public transportation route management
- Electronic security systems

Health

- Telehealth monitoring in the home
- Telecare via video conferencing
- Mobile clinical assistance

Transportation

- Supply chain and logistics management
- Private transportation optimization
- Parking

Information in this graphic from Smartcitiescouncil.com, 2017

It's common knowledge that high-speed internet is a must for high-quality teleconferencing, telemedicine, and distance learning, but it's not as well known that advanced broadband can add about 3% value to a home.

A 2015 study done by researchers at the University of Colorado and Carnegie Mellon University found that homes that have availability of neighborhood fiber-optic networks, plus access to high-speed internet, are valued at an average of 3.1% higher than similar homes without those amenities (see the graphic on Page 20).

Healthcare

Advanced broadband will strengthen medical services

High-speed supplementation with extra connection will strengthen and maintain services that local hospitals need to reach patients and staff. Such supplementation will allow our hospitals to expand access to and quality of healthcare and reduce cost. The use of advanced communications technology to transmit medical data and imaging in real-time, while linking patients to providers for direct consultation, removes geographical barriers and allows people to receive the medical care they need when and where it's needed.
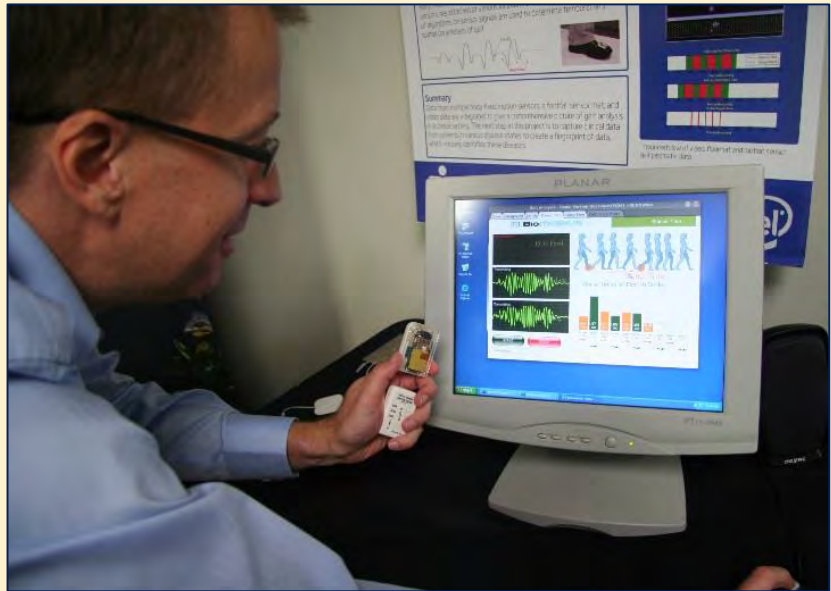
Local experts indicate that advanced broadband would benefit the healthcare industry in Western North Carolina in these ways:

- **Real-time transmission of medical imagery enables the interpretation of MRI, ultrasound, X-rays, and other diagnostic procedures to be performed remotely.**

- **The number of patient transfers, such as from a nursing home to a doctor's office, or for expectant mothers seeking prenatal care from a distant hospital, can be significantly reduced through remote monitoring and online consultations that are only possible through a high-speed internet connection.**

- **High-speed internet allows physicians to connect with distant specialists for real-time guidance in emergency situations, potentially saving lives by eliminating the delay of long ambulance rides when seconds count, such as during a stroke or heart attack.**

**Jill Hoggard Green, Ph.D.
Chief Operating Officer
Mission Health**

"Kaiser Permanente in California has been able to reduce their primary care visits by 40% through telehealth .... in Western North Carolina, we need our patients to have access in their homes."

Major Healthcare Providers in the Area

Charles George VA Medical Center	• A 273-bed facility in Asheville that serves 38,500 veterans from 20 counties • Rated by Veterans Affairs Administration as No. 1 VA facility for patient satisfaction in 2015 (SOURCE: Asheville Citizen-Times)
Haywood Regional Medical Center	• A 146-bed facility in Haywood County that includes 133 doctors and 183 nurses • Serves more than 25,000 patients annually in its emergency room (SOURCE: usnews.com)
Mission Health	• Region's largest employer (13,000+ jobs), headquartered in Asheville • Serves patients from 18 counties in Western North Carolina • Licensed for more than 800 beds and bassinets • Staff includes more than 540 physicians and 1,800 nurses (SOURCE: Mission Health)
Pardee Hospital	• Located in Hendersonville, Pardee is licensed for 222 beds with 230+ physicians on staff • Second-largest employer in Henderson County (SOURCE: Pardee Hospital)
Park Ridge Health	• Hendersonville-based system includes more than 1,100 care givers and 223 physicians (SOURCE: Park Ridge Health) • Third-largest employer in Henderson County (SOURCE: US Department of Commerce)

WNC healthcare providers serve aging population
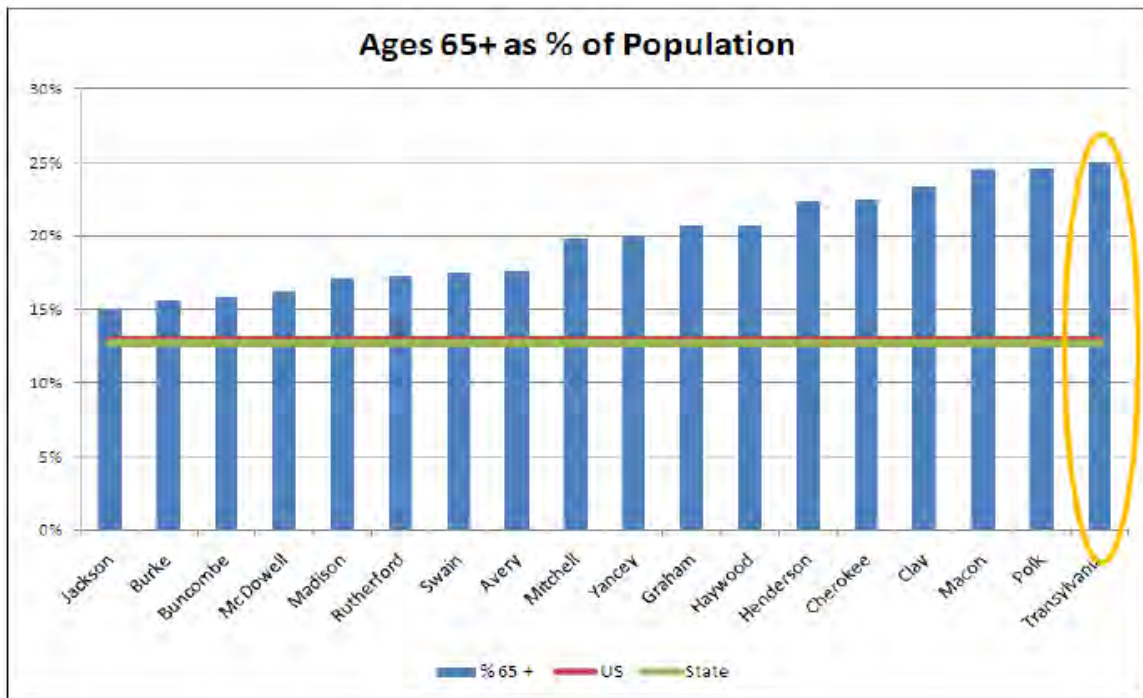
Source: US Census Bureau

Image provided by Mission Health

Housing & Communities

Access will spur inclusion for many WNC residents

Currently, Asheville and its surrounding communities are facing an affordable housing crisis. Bowen National Research concluded in 2015 that just 1% of apartments and multi-family units were vacant in Asheville, and found significant gaps between the local housing supply and household income. In response, the City of Asheville has committed to increasing housing to meet the growth.

Local communities will work with high-speed internet providers to ensure access to advanced broadband technology. High-speed internet access in surrounding towns, multi-family housing units (public and private), and community retirement communities can aid in creating solutions that would make housing more affordable for citizens. Kansas City, Cleveland, and Seattle are examples of cities that are closing the digital divide through providing gigabit technology in public housing units.

Advantages of Advanced Broadband for WNC Housing	
Housing type	**Benefit(s)**
Public Multi-Sector Buildings	• Greater efficiency in process to obtain public housing • Increases cost-effectiveness • Opportunities to close poverty gap
Surrounding Towns	• Telecommuting opportunities increase
Retirement Communities	• Increased efficiency in meeting healthcare needs • Greater access to family and community

Additionally, Western North Carolina is developing more and more multi-dwelling communities. Obtaining access to high-speed internet in these locations will be attractive to our workforce and residents, because it will provide more opportunities for telecommuting.

Asheville Retirement Community Cited for Broadband Success

Givens Gerber Park, an affordable senior housing community, was nominated for Property of the Month in July 2016 by *Broadband Community Magazine*. According to the community's technology director, residents' lives have been greatly enhanced through a fiber network that is shared by the property owner and a cable company.

"We're planning ahead and thinking about what will happen. Will residents need 3D video? Virtual reality? The medium that gives us most chance of success with these is fiber."

Ricky Foor,
Technology Director,
Givens Gerber Park

Better Broadband Boosts Home Value: Got Fiber?

The FTTH Council just released a study showing the positive correlation between home prices and fiber-delivered Internet, adding increased property value to the already long list of fiber's benefits.

Access to fiber adds **3.1%** to the value of a home.

The Fiber Effect
Access to fiber in your neighborhood raises the value of your home by
1.3%

The Speed Effect
Being able to get speeds up to one gigabit boosts the value another
1.8%

Put another way: that's an additional $5,437 for the sample median home price or like adding

A full fireplace.

Half of a bathroom.

Or a quarter of a swimming pool!

Real Estate & Development

Advanced broadband will be catalyst for local boom

Asheville is a premier destination for tourists and families **looking for opportunity. High property values accompany the beautiful views and unique vibe of Western North Carolina's growing population; therefore, future homeowners are looking for accessibility to fast and reliable internet. According to Isaac Chavez, CEO of Vermont Realtors, "internet is a must for those looking to buy a home." Residential broadband technology is becoming essential to our residents' connection with their employers and their children's educators.**

The local population is more connected than ever before. In current real estate practice, many of the processes that connect buyer and seller are through online interfaces. Local real estate firms competing with national platforms (Trulia, Zillow, and Realtor.com) are at a disadvantage without affordable advanced broadband access. High-speed internet technology will help local firms through faster responsiveness and greater access to data.

With vacation and seasonal housing being of interest in the real estate market, people are looking for homes to get away from their "everyday life," but not from civilization entirely. People desire the beautiful, scenic views of Western North Carolina, while still maintaining their connection to work, family, and friends. A local billboard for a WNC development reads, "fiber optics and chickens," which speaks to our residents' desire to live in a

"Gigabit technology is very important to our community. Healthcare, education, and economic development will greatly benefit from this infrastructure investment. This is crucial if our community is to remain competitive in the global economy. We need this to educate, retain and attract a creative and entrepreneurial workforce

Jack Cecil
President and CEO
Biltmore Farms

that catalyzes the broader community's real estate and development activities."

Development Statistics

According to the Asheville Area Chamber of Commerce, in the Asheville region:

- Construction jobs rose 14% from 2013 to 2015.
- New housing units rose from 1,381 in 2014 to 1,950 in 2015. This was up from 1,001 units in 2011.
- Overall housing units rose from 211,000 in 2011 to 216,000 in 2014.
- House sales totaled $540 million in 2011, and skyrocketed to $1.2 billion in 2015.
- New developments include:
    - Four designated Asheville innovation districts
    - A new 12-story Mission Health tower
    - A 170,000-square-foot Health Sciences building at A-B Tech Community College

sustainable and connected community. As developers build in our area, they should have the opportunity to cultivate infrastructure that can facilitate this technology.

Advanced broadband would benefit real estate developers in the following ways:

● Boosting values: Access to high-speed internet typically increases a home's value by 3%
● Aiding people who want to telecommute: 20% of all Americans work from home
● Making homes located outside of central Asheville more attractive to buyers
● Creating a competitive advantage for real estate companies
● Providing better access to educational opportunities

Tourism

Service providers & visitors crave better access

Tourism is big business in Western North Carolina. This sector includes commerce generated by hotels, entertainment, and restaurants. According to the Asheville Convention & Visitors Bureau, 30,000 people visit Buncombe County every day, and they spend $5.2 million daily. A large percentage of jobs (14%) within Buncombe County are supported by the tourism industry, and visitors spend $1.7 billion annually, which generates $2.6 billion in economic impact.

Advanced broadband will benefit the local tourism industry by:

- **Easing access** to information about museums, hotels, restaurants, and events, which would improve consumers' knowledge about the area. **Broadband-supported virtual reality will play a key role in the presentation of such information**, according to Marla Tambellini, vice president of marketing and deputy director for Explore Asheville.

Clockwise from top: The Biltmore Estate is owned and operated by the Biltmore Co., Main Street in Hendersonville during early autumn, a sign designating Waynesville as "Gateway to the Smokies."

Stephanie Brown
CEO, Explore Asheville

"Meetings mean business in Asheville and broadband is essential for successful group events. High-speed connectivity is a requirement for today's technology-intensive tourism industry, which generates revenue for local businesses and supports 27,000 jobs in Buncombe County."

- Allowing conference speakers and attendees to simultaneously access internet during large meetings and presentations.
- Expanding marketing opportunities that allow hoteliers and other industry experts to **utilize state-of-the-art software programs that are instrumental for growing their business.**
- Improving the **quality of industry services**, particularly in the area of cloud-based software systems.
- Deepening the **bargaining power** of both the industry and the consumer.

The Tourism Landscape

- 417,000 passengers flew into or out of the Asheville airport in 2016, compared to 317,000 in 2012, an increase of 32%*.
- About 15% of all jobs in Buncombe County are tourism-related.
- Visitor spending was close to $2 billion in 2016, up from about $1.5 billion in 2011.
- Approximately 11 million people visited the area in 2016, up from 8.2 million in 2011.
- Hotel room demand is outpacing supply; therefore, several hotels are being built.
- Including indirect sales, tourism generated $2.9 billion in 2016.
- Tourism supports about 27,000 jobs in the Asheville area.
- Tourism generated $366 million in tax revenue in 2016.

All data from the Asheville Convention and Visitors Bureau, except for *, which was supplied by the US Bureau of Transportation Statistics.

Summary

In 2016, community leaders decided that our region needs advanced broadband coverage and service. They concluded that internet access, speed, and capacity are prerequisites for growth. **The internet is not only an essential part of a sound economy, it is also a vital component in the types of proactive social policy decisions that will lead to a sustainable, strategic, fiscally responsible and symbiotic future for our region.**

The WNGN initiative grew out of those conversations. Six municipalities have banded together and are eager to work with an innovative internet service provider (ISP) to help accelerate our future.

The WNGN cities want potential ISPs to consider the following:

1. Our region is home to a dynamic, diverse, and growing community that has awesome potential.
2. Entrepreneurial elements indicating future success are here and ready for expansion and development.
3. Increasingly, critical local economic sectors are relying on broadband services to be successful and have plans for future expansion of advanced broadband services.
4. A public/private partnership will be the appropriate model to help our cities meet their needs.
5. WNGN municipalities are willing to partner and help find ways to reduce bureaucratic roadblocks, access public resources, and market the partnership.

If you have any questions or comments, please let our WNGN team have an opportunity to respond. Questions related to the associated RFI should be addressed to Sherry McCuller (SMcCuller@Magellan-Advisors.com). General questions can be addressed to William Sederburg at wsederburg@gmail.com.

WNGN Coordinating Committee

- Dr. William Sederburg – Retired College President
- Corey Atkins – Vice President of Public Policy, Asheville Area Chamber of Commerce
- Dr. Otis Brown – Director, NC State University's North Carolina Institute for Climate Studies
- Dr. Michael Dempsey – Dean & Director, Lenoir-Rhyne University, Center for Graduate Studies of Asheville
- Hunter Goosmann – Executive Director and CEO of ERC Broadband/Board of Directors, North Carolina Technology Association
- Justin Hembree – Executive Director, Land-of-Sky Regional Planning Council
- Dr. Edward Katz – Associate Provost and Dean of University Programs, UNC Asheville

WNGN Steering Committee

- Erica Anderson – Director of Economic and Community Development, Land-of-Sky Regional Planning Council
- Jonathan Feldman – CIO, City of Asheville
- John Connet – City Manager, City of Hendersonville
- Jon Feichter – Alderman, City of Waynesville
- Jonathan Kanipe – Town Administrator, Town of Biltmore Forest
- Alyson Alexander – Town Manager, Laurel Park
- Mark Biberdorf – Town Manager, Town of Fletcher

Special Thanks to These Community Leaders for Their Input

- Dr. Tony Baldwin, Buncombe County Schools
- Dr. David Brown, HUB Economic Community Development Alliance
- Stephanie Brown, Explore Asheville
- Scott Burnette, City of Asheville
- Jack Cecil, Biltmore Farms
- John Connet, City of Hendersonville
- Josh Dorfman, Venture Asheville
- Dr. Jill Hoggard Green, Mission Health
- Esther Manheimer, City of Asheville
- Dr. Paul Maurer, Montreat College
- Mack Pearsall, HUB Economic Community Development Alliance/The Collider
- Megan Robinson, The Collider
- Marla Tambellini, Explore Asheville
- Barbara Volk, City of Hendersonville

Testimonials: What People Are Saying

These anonymous quotes are excerpts compiled from a survey that was distributed to about 1,000 business people in 2016. The quotes represent several of the economic sectors that are the backbone of Western North Carolina commerce.

"The better the access, the more flexible the future."

"Involving patients in our care through a patient portal improves their engagement and their ability to understand their treatment plan. This improves compliance with their plan and, therefore, improves outcomes. Patients in broadband communities use internet-connected patient monitoring systems to feed data back to their providers, so problems can be detected earlier."

"Everyone would love to live and build a business here, but without the infrastructure it won't happen."

"We manufacture, produce, and sell beer. Automation of the brewing process is occurring. Access to real-time connectedness via gigabit availability would enhance our processes, which are spread out in different locations."

"The movement of data centers from current on-premises locations to remote hosted services such as AWS, Azure, and other cloud infrastructures would benefit greatly from improved connectivity."

"Increased broadband would strengthen our ability to meet the growing needs of the community and would help us grow as an organization by keeping up with technology instead of being left behind."

"Gigabit infrastructure is absolutely key to small businesses surviving, and more importantly ... thriving."

"I am growing a national business and am considering moving due to the lack of internet solutions."

"A lot of what my company does is directly tied to the internet. Some of my data can take hours to upload and the whole time my computer is locked down and dedicated to that single task."

"We would like to offer load management incentives to our customers, which would save them money and save energy at peak times, if there were more customers who had access to broadband at home."

"We are looking at solar projects, and real-time data of electrical usage would be instrumental."

"Remote management of business technology is now standard, as well as work-from-home options."

"Coupling research data with real-time controls is essential in many manufacturing applications."

"We're expanding into Europe, where the internet is much faster. We have to be faster to compete."

"I am investing in technology for online ordering and our region has a weakness in that there are vast numbers of customers that cannot access our services."

"We are a technical community college, so high-speed internet is integral for everything we do."

"Increased use of real-time video interaction – connecting college campuses, connecting students to one another, connecting students to resources (such as financial aid or student services) – is so important."

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Developing and Implementing
Broadband Friendly Policies and Ordinances

Municipalities can take action to accelerate advanced broadband services for their communities by developing and implementing "Broadband Friendly" policies and ordinances that can lower capital costs and speed deployment of broadband infrastructure by service providers, while also lowering municipalities' costs of broadband communications and access to the Internet.

Broadband Friendly policies cost little to develop and implement but, given time, they can have a very big impact on expansion of affordable access to reliable, high-capacity broadband services by the private sector.

Broadband Friendly communities plan, develop and manage underground infrastructure as "basic infrastructure" that adheres to a common set of standards, is available for public use, and is managed as an asset in line with other public property.

Critical Factors Determining Effectiveness of Policies:

There are five essential factors determining the success of Broadband Friendly policies:

1. Integrated planning and coordination of underground infrastructure deployment projects.
2. Collection, management, and sharing of information and project mapping for coordination of construction and targeting priority areas of need.
3. Establishment of industry standards and specifications for underground infrastructure
4. Implementation of a Dig Once Policy and related agreements to expand duct throughout the serving area at low cost, and funding of reserves to pay for deployment.

5. Access to City Resources at reasonable cost to service providers. Staff is open to bringing partnership proposals to governing boards to greatly reduce costs.

1. Plan Ahead

Becoming a Broadband Friendly community requires integrated planning:

- Adopt policies to ensure that broadband infrastructure goals are included as elements of all comprehensive municipal plans
- Coordinate and share information with city departments, local and state transportation departments

- Update zoning laws as required to respond to new infrastructure needs.

2. Capture and Share Information

- Develop and maintain a reporting and project mapping system to coordinate information about broadband needs and deployment opportunities with city departments, developers and providers, and develop a process for submission of plans.

- Adopt a policy to require that all construction permits issued will require submission of final as-built drawings in a GIS .shp file or .kmz Google Earth file format.

- Develop and maintain an inventory of municipal assets and properties that could be utilized to lower the costs and accelerate deployment of broadband infrastructure by the private sector. List locations of assets and sites, allowable uses, costs of access, availability of power and upstream connectivity, availability of secure access and other necessary information.

- Keep a GIS database of all infrastructure.

3. Establish Standards and Specifications for Underground Infrastructure

● Underground infrastructure should be installed in accordance with uniform standards and specifications regarding placement, material and method, and should adhere to other best practices.

● Coordination with Engineering and Public Utilities departments should establish clear Right-of-Way standards or update them for broadband infrastructure deployment.

● Adopt standards for placement of conduit and fiber-optic cable in new developments to require all new commercial and residential developments to install fiber optic infrastructure.   Building codes will describe uniform standards and specifications for placement. Provide access to City rights of way for deployment.

4. Establish Dig Once Policies

The Dig Once policy is one of the most effective Broadband Friendly policies when measured over time.

A Dig Once policy is a commonsense approach that leverages the costs of trenching for placement of conduit to allow additional underground infrastructure to be deployed by other parties at very low cost.

The highest cost components of broadband infrastructure deployment are trenching and underground boring for installation of conduits in which fiber-optic cable will be placed.   Policies that allow for placement of conduit or fiber optic cable whenever a

trench is opened in the public right of way will *significantly* reduce capital costs of broadband network construction. Estimates of the costs of trenching range from 40% to 80% of total project costs.

Municipalities should place duct and vaults in every location where a trench is being opened in a city's right of way, both for their own needs and to allow low cost access to conduits by service providers.

A policy will be required to fund a reserve for duct deployment by a municipality. It is essential to fund the reserve so that duct can be placed whenever there is an opportunity.

City-owned duct should be placed in an infrastructure database, which should be continuously maintained.

Funding for duct can be prioritized for underserved or low-income areas, for economic development, telehealth, telemedicine and other target priorities.

Engineering Standards and specifications should be established to determine sizing of the conduits, vaults and access locations.

In general:

- Conduit installed for the purposes of Middle-Mile or long-haul routes, or that is installed in major streets or arterials should be the equivalent minimum of 4" in diameter.

- Conduit installed for the purposes of Last-Mile or distribution routes should be a minimum of 1½" in diameter.

- Conduit should be installed at the intersection of streets that is the equivalent of at least 4" in diameter and made accessible via vaults or similar appropriate means.

- Encourage the use of microduct or similar technology in conduit installations to segregate provider fiber-optic cables.

- A reasonable amount of space should be retained by the owner of the underground infrastructure for potential future use, including by the city.

- Allow developers who install conduit to recover their costs through renting or leasing space in conduit at a fair and competitive price until the point that the cost of installation is paid off.

A Dig Once Policy typically has the following components:

- All public works or installation of other telecommunications, cable or utility infrastructure allows for conduit to be placed on behalf of the local or State government and any other entities that want to participate. If there is an open trench, the policy provides for coordination of street cuts and excavations with utilities, public works, developers and other interested parties. This maximizes the opportunity for broadband-specific conduit installation, while minimizing cost, community disruption and damage to existing infrastructure.

- A notice period informing other entities that an open trench will be available for placement of their conduit and/or fiber optic facilities.

- Allows for "shadow" conduit to be placed on behalf of the local government. This installation of empty and/or spare conduit by a public agency when excavations occur in the public right of way, limits the agency's costs to the incremental costs of the conduit and placement only.

Projects conducted on Municipal property, including rights-of-way, shall follow a "Dig Once" objective.

- Install conduit in public streets during construction/re-construction for future communications infrastructure use.

- Accommodate construction of conduit laterals leading to private property for potential future use.

- Interested parties should be notified of any opportunity for installing additional conduit or infrastructure in open trenches in Municipal right-of-way.

- Look for opportunities to place new conduit through joint utility trenches, such as utility trenches.

- Require formal notification of utilities and interested parties of a joint trench opportunity prior to issuance of permit for construction work.

- Require installation of secondary or tertiary conduit whenever new conduit is being installed in public Rights of Way to accommodate future use/growth

Joint Build, Joint Trench or **Joint Use Agreements** may be established under a Dig Once Policy.

A **Joint Build Agreement** shares costs of construction, ownership and maintenance of underground infrastructure, for example by jointly sharing in the deployments costs to place multiple ducts, with different ducts owned by each party to the agreement and maintenance costs shared on a pro rata basis based on the number of ducts owned.

A **Joint Trench Agreement** is a similar type of agreement, except that the party contracting for construction pays to deploy the trench in which the ducts will be placed, with others paying only for the costs of additional ducts placed in the trench for their own use. There may an agreement to pay a pro rata share of maintenance costs based on the number of ducts owned.

A **Joint Use Agreement** is a type of lease, either capital or operating lease, that typically allows two or more parties to share in the use of certain network assets, such as a conduit, or a facility.

Forms of these agreement are commonplace in the industry.

5. Provide Access to City Property and Resources

Provide access to City property and resources to lower capital costs for service providers to deploy broadband infrastructure and facilities, for example, buildings and electric power.

- Streamlined, Low-cost Permitting

  Reducing the time and cost of permitting can accelerate broadband deployment. A blanket permit may be utilized to grant a single permit for a portion of the area or the entire area of a municipality.

- Standardization of Pole Attachment Rates for Placement of Aerial Fiber

  Pole attachment rates generally range from approximately $12.00 to $37,00 per pole per year, and can range higher up to $65. Pole attachment fees are payable annually each year for the operating life of the network (30 years or longer) and are subject to rate increases based on changes to the Consumer Price Index. Standardizing and lowering pole attachment fees for poles owned by municipalities will lower service provider operating expenses.

- "One-Touch" Pole Make-Ready

  Streamlining make-ready policies for pole attachments can accelerate the deployment of high performance broadband networks. Communities adopting "one touch" policies allow a single construction crew—with sufficient skill and experience to be approved and chosen by the pole owner—to complete all the work to make a pole ready for a new attachment.

  "One touch" not only accelerates deployment but it reduces the disruption and inconvenience in a community's streets that come from multiple construction crews performing "make ready" to move existing attachers and a final crew to attach the new entrant.

  "One touch" is also equitable because the use of a recognized authorized contractor protects the pole owner and other companies or entities that have equipment attached to poles, and all communications attachers have the same right to use the "one touch" process.