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Subject: National Broadband Research Agenda
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To: U.S. Department of Commerce – National Telecommunications and Information Administration & National Science Foundation

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Submitted by: American Planning Association – Technology Division & American Planning Association - Smart Cities and Sustainability Task Force

Introduction: The American Planning Association – Technology Division and the American Planning Association Smart Cities and Sustainability Task Force are pleased to submit these comments in response to the, “Request for Comments on the Development of a National Broadband Research Agenda” (Federal Register/Vol. 81, No. 175, Docket #160831802-6803-01)

Background: The American Planning Association (APA) is a membership organization that includes over 35,000 urban and regional planning professionals. The organization has 47 state chapters throughout the United States and 21 divisions that represent a variety of specialized fields within the profession. APA headquarters are located in Chicago, IL and the organization also has an office in Washington D.C. The mission of APA is:

“The American Planning Association provides leadership in the development of vital communities by advocating excellence in planning, promoting education and citizen empowerment, and providing our members with the tools and support necessary to meet the challenges of growth and change.”

As part of this mission, in 2014, the APA appointed a [Smart City and Sustainability Task Force](#) to address recent advances in technology and innovation which lead to smarter, more sustainable, and resilient cities. In 2015, the Task Force presented its findings at the APA National Conference in Seattle and the APA Board of Directors officially adopted the Task Force recommendations. The findings and recommendations of the Task Force are available on-line: [Smart Cities and Sustainability Task Force – Final Report](#)

The Task Force noted a direct link between smart city technologies and broadband. As noted in the report:

“All Smart City technologies require a robust and reliable broadband network to operate. Today, high-speed broadband networks are as critical as roads, water, sewer, and electricity. News headlines routinely describe how health care, education, public safety, and government institutions are being transformed by new information technologies that rely on high-speed communication networks. People stay connected to the community through social network applications. Video streaming and gaming over the Internet is replacing broadcast television as the main form of home entertainment. Businesses must have access to broadband networks to be competitive. As noted by the Smart City Council, “To build a proper foundation for a Smart City, you must have high-speed broadband and citywide communications.”

APA’s Response to the NTIA and NSF Suggested Comment Areas: A number of recommendations

from the Task Force directly relate to specific topic areas that are identified in the notice for comments.

Comment Area One: Section B. Broadband Access and Adoption:

Question 4: What are the critical data and research needs in the areas of broadband deployment and access?

Question 5: What specific research proposals, and associated methodologies, regarding broadband access should be prioritized? And why?

The Smart Cities and Sustainability Final report noted the following regarding broadband access and adoption:

“Reaching these areas is important because cities, and planners, are becoming more dependent on web sites and mobile apps as avenues for public involvement. For example, government forms and planning documents are now mostly on-line. City council meetings are streamed live over the Internet using high speed connections. More often households need high speed Internet for telework, telemedicine, and distance learning applications. Given the growing reliance on Internet technologies, planners must address the different reasons why people are not on-line including issues regarding lack of broadband access, lack of broadband adoption, and lack of technology skills.”

Additionally, the white paper noted that every community should be incorporating policies into their planning documents that will facilitate the deployment of these networks. Such policies may include:

1. Create a broadband task force & develop a broadband plan.
2. Work with providers to improve broadband networks – especially in underserved areas.
3. Amend subdivision regulations to require placement of conduit or dark fiber in the right-of-ways during road constructions.
4. Adopt right-of-way policies to coordinate with providers on management and construction issues for fiber deployment.
5. Amend zoning regulations to address wireless facilities.
6. Inventory community assets and identify co-location sites for data centers and wireless facilities.
7. Investigate investment in an open-access middle-mile fiber network.
8. Address issues regarding redundancy.
9. Identify broadband facilities as essential infrastructure for downtown plans, tax increment finance districts, industrial parks, and other plans.
10. Deploy a fiber network to connect public buildings
11. Aggregate demand to attract broadband investment.

Recommendation 1: We recommend that the APA should join with the NTIA and the NSF in completing a research program to survey APA members nationwide in order to better understand “best practice” policies for city planners, based on the areas listed above.

Comment area two: Section D. Opportunities for Federal Leadership in Data Collection and Research

Question 13: What opportunities exist to improve the sharing of research from federal research programs with external stakeholders (e.g., industry, academia)? Likewise, how can external stakeholders better share their research with federal agencies?

In order to improve the sharing of research and best-practice recommendations from local planners and various stakeholders that would come as a result of the above collaborative survey, the APA Smart City Task Force recommends the following actions that should be incorporated in the National Broadband research agenda:

Recommendation1: Invest in developing an information clearinghouse that would provide a robust catalogue of great ideas, best practices and applications of technology to improve cities' efficiency and/or quality of life.

- **Benefits** – Compiling best practices, model ordinances and templates that are specifically developed for city planners will provide a resource for local governments and city planners that are interested in engaging in broadband planning efforts. The availability of such a resource through a web portal will increase the likelihood that cities can successfully undertake broadband projects.
- **Costs** – APA is in the process of developing a knowledge based web-site that can be a means to reach its 35,000 members. The primary cost is personnel time to identify and maintain relevant content.
- **Agencies** – Planning is an interdisciplinary professional that address housing, transportation, economic development and environmental issues. Planners routinely work with the U.S. Dept. of Housing and Urban Development, U.S. Department of Transportation, Environmental Protection Agency, Economic Development Administration, U.S. Dept. of the Interior as well as the U.S. Department of Commerce. The best practices database would include initiatives from all such federal agencies that address broadband issues.
- **Rationale** - A survey of members that was conducted by the Task Force for the research paper, indicated that while planners had a high level of interest in broadband planning initiatives, they had limited knowledge of the subject and felt that model ordinances and guidebooks would be useful in these efforts. Although there are a number of existing guidebooks on broadband planning, few of them address issues specific to city planners. In 2012, APA published a Planning Advisory Service Report, “Planning and Broadband”, <https://www.planning.org/publications/book/9026893> . The effort to compile resources and best practices would be helpful in updating this research report and would make it relevant for city planning professionals.
- **Stakeholders** – American Planning Association. With a national membership of 35,000 located in rural and urban areas and working for local governments, regional agencies, state and federal agencies as well as academic institutions, APA has a broad network to

disseminate research and information on broadband issues.

Question 14: What are suggestions for enhancing cross-disciplinary collaboration in broadband research?

Recommendation 2: Develop Comprehensive Plan Smart City Guidelines for Land Use, Transportation, & Economic Development. To make a community “smarter” and to get the most value out of technology, prioritizing technology investments based on established and overarching community goals is

very important. Many comprehensive plans in communities focus on making sure technology and infrastructure is adequate, but what should also be addressed are how the key investments in technology better position a community to achieve their long-term goals, such as improving quality of life and competing in the global economy.

- **Benefits** – Comprehensive plans provide the basis for establishing priorities for capital expenditures and provide the legal basis for adopting development codes and regulations that would facilitate broadband deployment. Developing comprehensive plan guidelines for broadband deployment would increase the likelihood that cities will incorporate broadband policies in their planning documents.
- **Costs** – APA has an initiative underway to adopt Comprehensive Plan standards. Smart city and broadband standards can easily be incorporated into this document. The primary cost is the research involved in identifying communities that have included broadband policies in their planning documents and evaluating these plans to determine best practices.
- **Agencies** – This action could be coordinated with the current NTIA Broadband toolbox initiative.
- **Rationale** - An APA survey in 2013 indicated that only 15% of respondents had any policies in their comprehensive plans that addressed broadband deployment. An update of this survey to include a broader sample of planners would determine the barriers that planners face in undertaking broadband planning efforts and what resources would facilitate such efforts. The survey would also help identify model policies that communities could adopt.
- **Stakeholders** – American Planning Association. With a national membership of 35,000 located in rural and urban areas and working for local governments, regional agencies, state and federal agencies as well as academic institutions, APA has a broad network to disseminate research and information on broadband issues.

Summary: City planners are key to broadband planning and implementation on a local level, and are a valuable resource for understanding local issues that affect the successful dissemination of broadband throughout the nation. With highly-educated, technical representation in nearly every town and city in the nation, the APA, with its 35,000 members is uniquely placed as an organization to help the NTIA and the NSF in their efforts at data collection, analysis, research, and the recommendation of applications for the benefit of broadband policy development, program

implementation, and program evaluation.

A collaborative research program, the development of “Comprehensive Plan Smart City Guidelines,” and the creation of a “knowledge portal” would greatly enhance our members’ ability to access leading research, learn about new technology applications, and understand broadband implementation best practices. This is information that they need to effectively plan and implement ongoing broadband policy at the town and city level; information that at this point is not available to them.

In addition, it is likely that combining NTIA “toolkit” recommendations with planning-specific recommendations will greatly enhance the ability of municipalities to create cogent broadband policies, and to better access and utilize NTIA, NSF and other federal funding opportunities.

Respectfully Submitted by:

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