



October 30, 2024

The Honorable Patty Murray
Chair
Senate Appropriations Committee
United States Senate
Washington, DC 20510

The Honorable Susan Collins
Vice Chair
Senate Appropriations Committee
United States Senate
Washington, DC 20510

The Honorable Tom Cole
Chair
House Appropriations Committee
United States House of Representatives
Washington, DC 20515

The Honorable Rosa DeLauro
Ranking Member
House Appropriations Committee
United States House of Representatives
Washington, DC 20515

Dear Chair Murray, Vice Chair Collins, Chair Cole, and Ranking Member DeLauro:

As the U.S. Senate and U.S. House of Representatives Appropriations Committee work to complete action on the fiscal year 2025 (FY25) appropriations bills, the Fiber Optic Sensing Association (FOSA) respectfully requests that you preserve report language that was included in the FY25 Transportation, Housing and Urban Development, and Related Agencies (THUD) report (H.Rept. 118-543) and include it in the final FY25 THUD appropriations conference report:

*TITLE I—DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
COMMITTEE RECOMMENDATION*

Multi-use fiber optic cable.—The Committee directs the Secretary, in consultation with the Secretary of Energy and Secretary of Commerce, to develop and publish guidelines on best practices for States, Tribes, and units of local government regarding the deployment of “multi-use” fiber optic cable within Federally-funded infrastructure projects.

FOSA is a non-profit trade association comprised of member organizations that manufacture, install, test, evaluate, support, or use distributed fiber optic sensing (DFOS) systems and equipment. Distributed fiber optic sensing (DFOS) systems are sensor technologies used around

the world to constantly and consistently monitor pipelines, power stations, terrestrial and subsea power cables, railways, roads, bridges, international borders, critical infrastructure, and telecom networks.

Federal, state, and private funding of fiber optic infrastructure is at an unprecedented level right now. In November 2021, the Infrastructure Investment and Jobs Act (IIJA) was enacted into law, which provided \$65 billion for broadband. The National Telecommunications and Information Administration (NTIA) is using those funds to expand broadband Internet access and adoption in the U.S., expand the use of spectrum by all users, and ensure that the Internet remains an engine for continued innovation and economic growth. This rapid broadband infrastructure build will continue for the foreseeable future. However, even with this considerable increase in funding, new build or even revitalization of existing communications infrastructure is expensive and constrained by both economics for the singular application (telecommunications and broadband) as well as by a limited pool of field technicians.

In addition to broadband intended infrastructure, the IIJA provided significant funding to rapidly address other critical aging underground and aerial infrastructure, including electric substations and the electric grid, water infrastructure, bridges, rail, and surface transportation. The transformation to clean energy, emergence of electric vehicles, dramatic anticipated surge of artificial intelligence and computing power, and ever-increasing population pressure on water resources is driving this multi-pronged impetus to improve our nation's infrastructure.

The concept of "multi-use" as it relates to optical fiber infrastructure pertains to the ability to utilize both existing and new build optical fibers for additional advantageous and complimentary applications that can provide situational awareness, enhance life and safety, and increase the economic benefit.

Multi-use of optical fiber cables in reusable conduit for opportunities that extend well beyond broadband dramatically impact the ability of the U.S. to provide more safe, resilient, and sustainable infrastructure for multiple critical vertical markets. Multi-use also increases the return on investment on expended funds. For example, broadband buildout along rail lines can simultaneously be used to detect rail damage and rolling stock wheel defects. Along highways and local roads, the fiber optic communication cable can also be used to enable smart roads to improve safety, efficiency and reduce congestion. And as part of the electric grid, fiber optic cable can be used for communication, SCADA systems, and as distributed temperature, strain, and vibration sensors to improve grid efficiency and resiliency.

For a multi-use effort to be successful, it will require increased awareness in both the private and public sectors. The federal government can lead the effort by providing States, Tribes, and units of local government with guidelines on best practices for the deployment of multi-use fiber optic cable in federally-funded infrastructure projects.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Hines". The signature is fluid and cursive, with a large initial "M" and a distinct "H".

Mike Hines
Executive Director
Fiber Optic Sensing Association
mhines@fiberopticsensing.org
<https://fiberopticsensing.org>

CC: The Honorable Brian Schatz, Chair, Transportation, Housing and Urban Development, and Related Agencies Subcommittee, U.S. Senate Appropriations Committee

The Honorable Cindy Hyde-Smith, Ranking Member, Transportation, Housing and Urban Development, and Related Agencies Subcommittee, U.S. Senate Appropriations Committee

The Honorable Steve Womack, Chair, Transportation, Housing and Urban Development, and Related Agencies Subcommittee, U.S. House Appropriations Committee

The Honorable Mike Quigley, Ranking Member, Transportation, Housing and Urban Development, and Related Agencies Subcommittee, U.S. House Appropriations Committee