

'Dig Once' Speeds Broadband Deployment

Cities and states can reduce fiber optic deployment costs by requiring conduit be laid when roads are built or repaired.

By Kate McMahon ■ *Applied Communications*

"Dig once" is a simple principle: Either pay a little extra up front or pay a lot more later. Putting all the utilities in the ground at the same time is cheaper in the long run than digging up a road a second or third time to install utilities later.

Transportation projects are routinely designed around this principle. City administrators realize that replacing aging water lines and sewer pipes or burying electric utilities during road construction is cost-effective because it eliminates the need to open a trench for costly repairs in the future. However, when it comes to deploying fiber optic infrastructure, "dig once" is still not standard policy.

The Federal Highway Administration estimates that digging up and repairing an existing road to lay fiber is 10 times more expensive than digging a channel when the road is built or re-

Several members of Congress have introduced bills to implement dig once policies, but these bills have not been passed.

paired. Although adding fiber optic conduit or cable adds only 1 to 2 percent to the cost of a project and represents minimal up-front capital outlay, there is still a surprising amount of reluctance to adopt "dig once" policies for fiber optic deployment.

'DIG ONCE' POLICIES

The FCC National Broadband Plan recognizes the many advantages of joint trenching and includes the following policies to promote this practice:

Recommendation 6.7: The U.S. Department of Transportation (DOT) should make federal financing of highway, road and bridge projects contingent on states' and localities' allowing joint deployment of conduits by qualified parties.

BroadbandCommunities
SUMMIT12
APRIL 24 - 26 • INTERCONTINENTAL HOTEL - DALLAS

Don't miss Kate McMahon's presentation in the Modern Right-of-Way Management session at the Broadband Communities Summit in Dallas, April 24-26.

Recommendation 6.8: Congress should consider enacting "dig once" legislation applying to all future federally funded projects along rights-of-way (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads).

To implement these recommendations, U.S. Representative Anna Eshoo, D-Calif., introduced legislation in 2009 to require the inclusion of broadband conduit during the construction of federal highways. The bill did not advance out of committee and was reintroduced in the last session as the Broadband Conduit Deployment Act of 2011. In June 2009 and December 2011, Senator Amy Klobuchar, D-Minn., introduced similar legislation in the Senate. The General Accounting Office is preparing a report on the fiscal impact and other issues regarding the implementation of the bill. In the meantime, Rep. Eshoo sent a letter to DOT Secretary Ray LaHood urging him to administratively implement a "dig once" policy.

About the Author

Kate McMahon is a founding partner of Applied Communications, a Montana-based consulting firm that provides land-use planning, broadband planning and strategic planning for towns and community organizations. You can contact her at kate@appcom.net.

Federal “dig once” policies, even if implemented, represent only one piece of the policy puzzle. States and cities must implement similar policies to make “dig once” not just a best practice but a standard practice.

Although this legislation, if passed, would be a tremendous boost to advancing “dig once” practice, it represents only one piece of the policy puzzle. The bill applies only to new construction for highways that receive federal funding. Federal highways are typically where long-haul Internet backbone is routed – which means that the legislation would not cover middle-mile fiber routes that parallel state and county highways or last-mile segments that rely on local rights-of-way. To implement “dig once” everywhere, state and local governments must adopt similar policies.

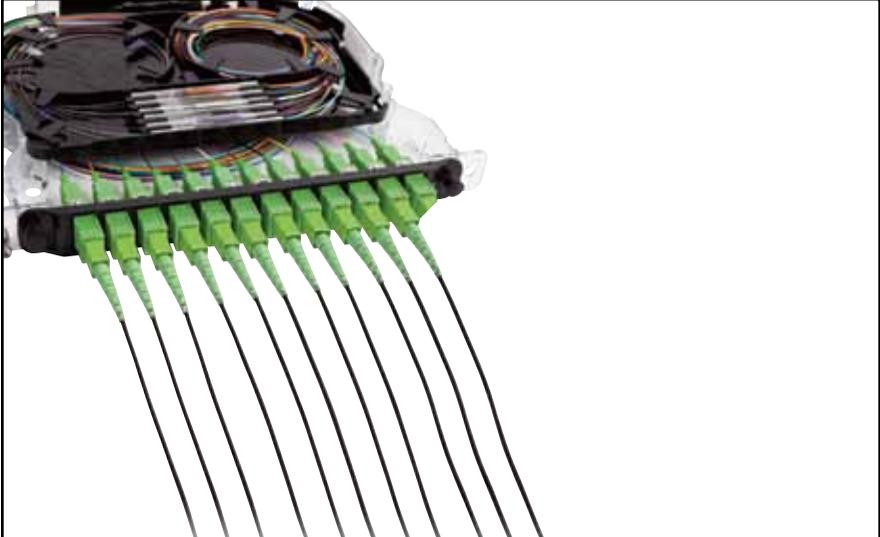
The proposed federal legislation allows for exemptions if the DOT and the FCC determine that no business case exists for the investment because of factors such as population density or existing broadband access. Unless local entities are proactive in demonstrating the need for enhanced broadband access in their regions, the deployment of conduit might be waived for new highways, especially in rural areas with low population density.

Because of these issues, state and local governments must understand the planning process to make certain that “dig once” policies are actually implemented. They must educate public officials about the benefits of broadband and about assessing local broadband needs, and they must include policies to advance the deployment of broadband infrastructure in comprehensive plans, capital improvement plans and transportation plans. Telecommunications professionals must educate themselves about the planning process to successfully advocate for these policies.

In October, Rahm Emanuel, Democratic mayor of Chicago, announced a budget to replace city water lines and requested that Internet providers in-

stall conduit as part of the project. The Minnesota Broadband Plan also contains “dig once” policies. Other cities

and states must follow these leaders and make “dig once” not just a best practice but a standard practice. ❖



**Get Smart
Be Smart**

Clearfield's Clearview Cassette is your **smart** answer for fiber management. From the central office and all the way to the home, Clearview is the building block for **FieldSmart** fiber management and protection. With **FieldSmart**, deployments are quicker, required inventories are reduced and technical training is virtually eliminated. And with **CraftSmart**, pedestals, vaults and other enclosures are optimized for your complete fiber network. Be **smart** -- contact Clearfield for your complete fiber management needs including FTTP, business class, cell backhaul and optical component integration.

 **CLEARFIELD**
Solving the Fiber Puzzle

Go to www.FiberPuzzle.com/ClearfieldCollege to “Get Smart” at Clearfield College. Our online fiber management training curriculum and white paper series will get you on your way to intelligent deployment practices throughout your fiber network.

www.ClearfieldConnection.com 800.932.9815 www.FiberPuzzle.com