DIG ONCE POLICY: 16 STATE MODELS

July 2020

Purpose

The Fiber Optic Sensing Association (FOSA) has an interest in ensuring that states and localities have access to useful fiber optic sensing technologies. One of the primary barriers states and localities face in gaining access to these technologies is the cost of excavation associated with installing fiber optic cables underground. "Dig Once" policies aim to reduce this cost by future-proofing rights-of-way during construction of highways and other infrastructure. Such future-proofing is possible by adding multi-path conduit during original infrastructure construction, thereby allowing multiple fiber optic cables to be added at a later time without additional excavation.[1] Laws and policies that reduce excavation costs for broadband deployment purposes also make fiber optic sensing technologies more affordable for states and localities.

The purpose of this paper is to understand the direction of state law and policy regarding Dig Once. A special focus of the paper is to gain insight into practical aspects of those policies pertaining to funding and ownership of conduit, revenue generated from conduit, and reasonable exceptions to installation requirements. Though there is much more to be learned and understood about Dig Once laws and their effects on state costs and/or improving access to broadband, that is beyond the scope of this paper. Additionally, there are numerous local authorities implementing Dig Once policies that have been compiled into **Appendix B** for future research.

Method

There exist a few compilations of Dig Once laws and policies that overlap but are not consistent in substance.[2] At least some of the variation in substantive content may be due to the definitional scope

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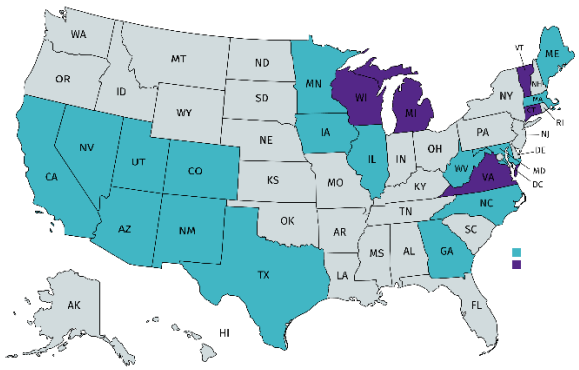
[1] *See generally* DURA-LINE, DIG ONCE MODEL LEGISLATION, https://www.duraline.com/contentassets/fc2c3f0fa41946e8b6441930585d1fe0/digonce-model-legislation.pdf?v=49b544.

[2] *See, e.g.*, State Broadband Policy Explorer, PEW, https://www.pewtrusts.org/en/research-and-analysis/data-visualizations/2019/state-broadband-policy-explorer (follow "Infrastructure access" hyperlink; then select "Dig once"); CONN. OFFICE OF LEGISLATIVE RESEARCH, 2019-R-0023, STATE AND LOCAL HIGH SPEED INTERNET INITIATIVES (Jan. 9, 2019), https://www.cga.ct.gov/2019/rpt/pdf/2019-R-0023.pdf; N.C. DEP'T OF TRANSP., DIG ONCE AND BROADBAND/DARK FIBER/CONDUIT INSTALLATION SURVEY (June 8, 2018), https://research.transportation.org/wp-content/plugins/AASHTO_RAC/download_file.php?fileid=634; Tyler Cooper, *Dig Once: The Digital Divide Solution Congress Squandered And Policy That Could Save $126 Billion On*

applied to "dig once." For this reason, a list of states discussed most in the Dig Once literature was compiled.[3] Following compilation of this list, each state's laws and policies were researched to discern where those states stood in terms of Dig Once policy by searching for primary or authoritative sources and updates on laws/policies. For the purposes of this paper, "dig once" is defined as policies designed to reduce the number and scale of repeated excavations for the installation and maintenance of broadband facilities in rights-of-way.[4]

Findings

Our review identifies 16 states with specific Dig Once policies (denoted in teal in the map below): Arizona, California, Colorado, Georgia, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Mexico, North Carolina, Texas, Utah, and West Virginia. Five other states — Connecticut, Michigan, Vermont, Virginia, and Wisconsin (denoted in purple in the map below) — are actively exploring or have recently explored the adoption of Dig Once policies. Information related to those five states may be found in **Appendix A**. Not included in this review are state policies that may have Dig Once effects but are aimed primarily at other matters, such as conduit relocation[5] or conduit access.[6]



Broadband Deployment, BROADBANDNOW (Aug. 7, 2019), https://broadbandnow.com/report/digonce-digital-divide/; U.S. DEP'T OF TRANSP., EXECUTIVE ORDER: ACCELERATING BROADBAND INFRASTRUCTURE DEPLOYMENT (2013), https://www.fhwa.dot.gov/policy/otps/successprac.pdf.

[3] This paper does not present an exhaustive representation of Dig Once policies in all 50 states. Rather, it represents a synthesis and audit of states mentioned most in Dig Once literature.

[4] *See* Exec. Order No. 13616 § 5(b), 77 Fed. Reg. 36903 (June 20, 2012). For a general overview of the main types of Dig Once policies that fit within this definitional scope, *see generally* DURA-LINE, DIG ONCE MODEL LEGISLATION 18–19, https://www.duraline.com/contentassets/fc2c3f0fa41946e8b6441930585d1fe0/digonce-model-legislation.pdf?v=49b544.

[5] *See, e.g.*, H. 5684 § 1(a)(17)–(18) (Ri. 2019). The law authorizes the Rhode Island Bridge and Turnpike Authority to make "reasonable regulations" for the installation of conduit but it seems only to apply to the authorization of relocation of conduit and not a dig-once policy that would require or encourage relocation projects to minimize excavation.

[6] *See, e.g.*, S. 2263 §4(1) (Ny. 2019). Though this provision states that the commission "shall prescribe just and reasonable rates, terms and conditions for attachments to utility poles and the use of utility ducts, trenches and conduits," the remainder of the paragraph is about the rates, suggesting that terms and conditions in the provision are tied to rates and are not to be construed so liberally as meaning that joint trenching or dig-once policies would be something that would fall under the category of "condition." *See Jarecki v. G.D. Searle & Co.*, 367 U.S. 303 (1961) (setting legal precedent for *noscitur a sociis*, meaning that a word is known by the company it keeps).

Average year of latest Dig Once enactments or policies for the compiled list is 2015, with a range from 2009 to 2019 and trending towards more recent years.

Dig Once policies in this list range from strong to nascent. Dig Once states with the strongest Dig Once policies — i.e., based on clear statutory or regulatory mandates of conduit installation and/or coordination designed to reduce excavations — are Illinois, Iowa, Minnesota, Nevada, and New Mexico.

Arizona

Law: ARIZ. REV. STAT. ANN. §§ 28-7381–82 (aka "Digital Arizona Highways Act of 2012")

Year Enacted: 2012

What It Does: Authorizes the installation and leasing of broadband conduit to providers for "covered rural highway construction projects."

Notes on Language/Conditions: Installation of broadband at the time of the project is not required, only authorized.[7] Installation of broadband conduit is conditioned on whether funding is received by the state department to cover the cost.[8] Lastly, it seems that the scope of "providers" is limited to telecommunications carriers.[9]

Effect: No effect until recently, since a strategic plan that would have put the law into action in 2012 was shelved and not taken up again until 2018.[10]

Reasonable Exceptions? "The director may limit provider access to any broadband facilities within the right-of-way for initial installation and infrequent access for maintenance purposes and may take other actions necessary to maintain highway safety."[11]

Ownership of Conduit? The State owns the conduit and leases it to providers at a cost-based rate. The State may allow providers to relocate their own conduit within the right-of-way at the providers' expense.[12]

Funding of Conduit Costs? Initial funding is the State's responsibility but shifts to broadband providers "regarding planning and relocating of broadband conduit and any related provider facilities within the right-of-way . . . if future highway improvements make the relocations necessary."[13]

Revenue Generation from Conduit? The State, at a cost-based rate.

California

Law: CAL. GOV'T CODE § 14051 (Deering 2020)

Year Enacted: 2016

What It Does: Requires the California Department of Transportation (Caltrans) to notify companies and organizations working on broadband deployment of department-led highway projects by posting it on its

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[7] *See* ARIZ. REV. STAT. ANN. § 28-7382(a) (using the word "may" instead of "shall" when referring to the installation of broadband conduit).

[8] *Id.*

[9] *See* ARIZ. REV. STAT. ANN. § 28-7381(5) ("Provider" means an entity that provides for the sale or resale of wholesale or retail broadband services in this state and that is recognized as an eligible telecommunications carrier by the Arizona corporation commission or that meets federal communications commission and industry carrier class service guidelines or is a political subdivision that has statutory authority to provide communications services.").

[10] ARIZ. DEP'T OF ADMIN., ARIZONA STATEWIDE BROADBAND STRATEGIC PLAN 9 (Feb. 2018), https://azlibrary.gov/sites/default/files/erate_2018_az_broadbandstrategicplan_final.PDF.

[11] ARIZ. REV. STAT. ANN. § 28-7382(b).

[12] *See id.*

[13] *Id.*

website and provides for collaboration between the department and the companies/organizations.[14] After receiving notification from Caltrans, a company or organization working on broadband deployment may collaborate with Caltrans to install broadband conduit as part of the project.

Notes on Language/Conditions: Includes a mandate for the department to develop guidelines to facilitate conduit installation. This was accomplished via an already-established[15] California Broadband Task Force, which brought together public and private stakeholders, one of which was Caltrans. Subsequently, Caltrans "published Deputy Directive DD-116 to provide guidance and direction regarding roles and responsibilities within Caltrans in promoting the facilitation of broadband conduit deployment on State highway right-of-way."[16] This guidance advocates for the concurrent installation of conduit along a right-of-way, but only in the case of when the state has a business need to run fiber optic cable adjacent to a roadway.[17]

Other Laws: CAL. GOV'T CODE § 61100(af) (Deering 2020) was subsequently passed, authorizing community services districts to "[c]onstruct, own, improve, maintain, and operate broadband facilities and provide broadband services. If the district later determines that a private person or entity is ready, willing, and able to acquire, construct, improve, maintain, and operate broadband facilities and to provide broadband services, and to sell those services at a comparable cost and quality of service as provided by the district, the district may do one of the following: (1) Diligently transfer its title, ownership, maintenance, control, and operation of those broadband facilities and services at a fair market value to that private person or entity; or (2) Lease the operation of those broadband facilities at a fair market value to that private person or entity." Community service districts are unincorporated areas,[18] so this law was enacted to empower those areas that were not covered by CAL. GOV'T CODE § 14051 to develop Dig Once policies.

Reasonable Exceptions? Conduit installation "shall not adversely impact the highway user or worker safety, transportation facility longevity, or highway aesthetic."[19]

Ownership of Conduit? In the case of conduit installed under § 14051, "Each conduit will be owned by that Wired Broadband Stakeholder to whom an encroachment permit is issued (Wired Broadband Conduit Owner). If each conduit is going to be shared by multiple Wired Broadband Stakeholders, these stakeholders should agree amongst themselves on the ownership of the conduit prior to approaching Caltrans with a request for the construction of that conduit in the project. The Wired Broadband Conduit Owner needs to place adequate conduit space at the time of the initial broadband conduit installation to provide and/or include access for other foreseeable users."[20] In the case of conduit installed by a

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[14] § 14051(b)(1)–(2).
[15] Cal. Exec. Order No. S-23-06 (Nov. 28, 2006), http://www.cetfund.org/files/executive_order_s2306_20061128.pdf.
[16] CAL. DEP'T OF TRANSP., INCORPORATING WIRED BROADBAND FACILITY ON STATE HIGHWAY RIGHTS-OF-WAY USER GUIDE i (Jan. 1, 2018), https://dot.ca.gov/-/media/dot-media/documents/wired-broadband-facility-user-guide-1st-ed-signed.pdf.
[17] *See id.* at 5.
[18] *See* CAL. GOV'T CODE §§ 61000–250.
[19] CAL. DEP'T OF TRANSP., INCORPORATING WIRED BROADBAND FACILITY ON STATE HIGHWAY RIGHTS-OF-WAY USER GUIDE 1 (Jan. 1, 2018), https://dot.ca.gov/-/media/dot-media/documents/wired-broadband-facility-user-guide-1st-ed-signed.pdf.
[20] *Id.* at 4–5.

community services district under § 61100(af), the district may retain ownership of the conduit and lease it to a private person or entity at fair market value.[21]
Funding of Conduit Costs? In the case of conduit installed under § 14051, cost would be borne by the Wired Broadband Conduit Owners.[22] In the case of conduit installed by a community services district under § 61100(af), cost would be borne by the district initially.
Revenue Generation from Conduit? If owned by Wired Broadband Conduit Owners, then to them.[23] In community service districts leased to Wired Broadband Stakeholders, then the government.[24]

Colorado
Law: COLO. REV. STAT. § 38-5.5-109 (2019) (aka "Broadband Deployment Act")
Year Enacted: 2014
What It Does: Requires states or political subdivisions to provide notice on a competitively neutral basis to broadband providers of any utility trenching project that it conducts.[25] Further, "[f]or any trenching project conducted by the state or a political subdivision, the state or political subdivision *shall* allow joint trenching by broadband providers on a nonexclusive and nondiscriminatory basis for the placement of broadband facilities."[26] However, that requirement does not restrict cost sharing.[27]
Notes on Conditions/Languages: No preemption on local requirements for joint trenching.[28] Private entities undertaking trenching projects are not bound by this law.[29]
Reasonable Exceptions? No notice required for emergency repair projects.[30] Joint trenching with broadband providers may be denied for safety concerns, potential delays in other utility construction or repair projects, obstruction to maintenance or operation of other utilities,[31] or if it would "prevent or delay commencement or progress of a construction, maintenance, or trenching project."[32]
Ownership of Conduit? Presumably the broadband provider.[33]
Funding of Conduit Costs? Unclear. Cost sharing is allowed, but not required.[34]
Revenue Generation from Conduit? Presumably the broadband provider.

Georgia
Law: 2017 Ga. Laws 423 (aka "Achieving Connectivity Everywhere Act")
Year Enacted: 2017

[21] CAL. GOV'T CODE § 61100(af)(2).
[22] CAL. DEP'T OF TRANSP., INCORPORATING WIRED BROADBAND FACILITY ON STATE HIGHWAY RIGHTS-OF-WAY USER GUIDE 5 (Jan. 1, 2018), https://dot.ca.gov/-/media/dot-media/documents/wired-broadband-facility-user-guide-1st-ed-signed.pdf.
[23] *Id*. at 4–5.
[24] CAL. GOV'T CODE § 61100(af)(2).
[25] COLO. REV. STAT. § 38-5.5-109(1)(a) (2019).
[26] COLO. REV. STAT. § 38-5.5-109(2)(a) [emphasis added].
[27] *See id.*
[28] COLO. REV. STAT. § 38-5.5-109(3)(a).
[29] COLO. REV. STAT. § 38-5.5-109(3)(b).
[30] COLO. REV. STAT. § 38-5.5-109(1)(a).
[31] COLO. REV. STAT. § 38-5.5-109(2)(b).
[32] COLO. REV. STAT. § 38-5.5-109(3)(d).
[33] COLO. REV. STAT. § 38-5.5-103(1)(a).
[34] COLO. REV. STAT. § 38-5.5-109(3)(d).

What It Does: Authorizes the Georgia Department of Transportation (GDOT), in consultation with the Georgia Technology Authority (GTA), to use or lease interstate and state rights-of-way for broadband services[35] and "other emerging communications technologies."[36] This may be achieved via contracting with private and/or public entities.[37] The law further requires the GDOT to establish "minimum elements" that must be addressed and included in the comprehensive plans of local governments.[38] One of these "minimum elements" is the "broadband services element," which requires local governments to include "an action plan for the promotion of the deployment of broadband services by broadband service providers into unserved areas within its jurisdiction."[39] The law also authorizes financial assistance to local governments that include "activities that lead to the installation or expansion of facilities and equipment that provide broadband services in unserved areas that are not currently served by such services."[40] Lastly, the law directs the Georgia Technical Authority to perform "a periodic analysis performed in conjunction with the State Properties Commission (SPC) of any state assets, including, but not limited to, real property and structures thereon, that may be leased or otherwise utilized for broadband services deployment."[41]

Notes on Language/Conditions: The Act is specifically focused on "unserved" (rural) communities.[42] Neither "conduit" or "installation" is mentioned in the Act, nor is "fiber optic" or "sensing." However, "installation" is included in the implementing regulations.[43]

Effect: Since the Act was relatively recent and some of the implementing regulations only took effect approximately a year before the time of writing,[44] the effect of the law is unclear with regards to increased conduit installation. However, a number of broadband projects and initiatives have been put forth since adoption of the Act. For example, the GDOT Broadband Deployment Project is a Public-Private partnership that would allow a private partner to design, build, finance, operate, and maintain a broadband fiber optic cable and small cell wireless network along 1,300 miles of GDOT right-of-way on interstates across Georgia for current and future uses. The contract would also allow the private partner to lease the utilization of the network to third parties for commercial activities while reserving capacity for GDOT

[35] All statutes and ordinances reviewed have the primary purpose of increasing broadband connectivity, rather than fiber optic sensing. The installation of fiber cable, however, will facilitate the use of the cable as a sensor as well.
[36] GA. CODE ANN. § 32-2-2(a)(20) (2019).
[37] *Id.*
[38] GA. CODE ANN. § 50-8-7.1(b).
[39] GA. COMP. R. & REGS. 110-12-1.03(4) (2020).
[40] *See* GA. CODE. ANN. §§ 50-34-1 et seq.; GA. COMP. R. & REGS. 413-9-1-.03.
[41] GA. CODE ANN. § 50-39-2(a)(3).
[42] *See e.g.,* GA. CODE ANN. § 50-39-80(a) ("There is a growing need for the government of this state to provide the much needed [sic] infrastructure to the homes and businesses without access to broadband services due to their location in rural and other unserved areas."); GA. CODE. ANN. § 50-39-81(a) ("On or before July 1, 2019, the Department of Community Affairs shall develop the 'Georgia Broadband Deployment Initiative' program to provide funding awards to expand broadband services to unserved areas of the state.").
[43] GA. COMP. R. & REGS. 413-9-1-.03.
[44] *See e.g.,* GA. COMP. R. & REGS. 413-9-.01 (stating that the regulation is effective June 17, 2019).

and the State's current and future broadband and wireless needs.[45] The project involves the mapping of existing conduit and determination of where future conduit is needed.[46]

Another recent development is a planned strategic leasing program of state properties to broadband companies. Most recently, the State has issued a Request for Information (RFI) from knowledgeable industry sources in order for the SPC to explore the possibility and viability of marketing state properties for long term leases (10 to 50-year terms) to broadband infrastructure or operator companies that would generate revenue to the State Treasury. Responses to the RFI were due November 1, 2019.[47]

Reasonable Exceptions? The local government action plans must provide for "cost-effective access" to broadband.[48]

Ownership of Conduit? Although conduit is not specifically mentioned, the statute allows establishment of "broadband services and other emerging communications technologies . . . by public or private providers, or both."[49]

Funding of Conduit Costs? Presumably the conduit owner would pay the costs, whether the provider is public, private, or both.

Revenue Generation from Conduit? The statute expressly contemplates that the State may receive revenues from broadband services or other emerging communications technologies. Presumably, private providers would receive the revenues when they are the owners.

Illinois

Law: 605 ILL. COMP. STAT. ANN. 5/9-131 (LexisNexis 2019).[50]

Year Enacted: 2009

What It Does: Requires collaboration of the Illinois Department of Transportation (IDOT) and Department of Central Management Services (DCMS) to install fiber-optic network conduit where it does not already exist in every new State-funded construction project that opens, bores, or trenches alongside a State-owned infrastructure, including, but not limited to, roadways and bridges.[51] The law further permits third-party management and leasing of conduit and fiber.[52] Lastly, the law requires that public bidding notices for such construction projects must describe the need for fiber optic conduit or cable.[53]

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[45] GA. DEP'T OF TRANSP., GDOT BROADBAND DEVELOPMENT PROJECT MOVES AHEAD (Feb. 20, 2018), https://mailchi.mp/dot/georgia-dot-broadband-deployment-project-moves-ahead?e=310fc75ca3.

[46] *See* GA. DEP'T OF TRANS., BROADBAND AND WIRELESS P3 INITIATIVE (Feb. 14, 2018), http://www.dot.ga.gov/AboutGeorgia/Board/Board%20Meeting%20Documents/BroadbandWirelessP3Initiative-Feb2018.pdf.

[47] GA. STATE PROP. COMM'N, BROADBAND STRATEGIC LEASING PROGRAM RFI, https://gspc.georgia.gov/broadband-strategic-leasing-program-rfi (last visited May 18, 2020).

[48] GA. COMP. R. & REGS. 110-12-1.03(4).

[49] GA. CODE ANN. § 32-2-2(a)(20).

[50] Even though the Illinois statute constitutes a clear Dig Once policy, IDOT told the NCDOT that they did not have a formal Dig Once policy but was studying the potential opportunity to partner with the private sector in expanding the broadband connectivity within their infrastructure as recently as June 8, 2018. *See* N.C. DEP'T OF TRANSP., DIG ONCE AND BROADBAND/DARK FIBER/CONDUIT INSTALLATION SURVEY (June 8, 2018), https://research.transportation.org/wp-content/plugins/AASHTO_RAC/download_file.php?fileid=634.

[51] 605 ILL. COMP. STAT. ANN. § 5/9-131(b).

[52] *Id.*

[53] *Id.*

Notes on Language/Conditions: IDOT and DCMS are required to take reasonable steps to ensure market-based, non-discriminatory pricing.[54]
Reasonable Exceptions? N/A
Ownership of Conduit? The State.
Funding of Conduit Costs? The State.
Revenue from Conduit? The State.

Iowa
Law: IOWA CODE § 8B.25
Year Enacted: 2015
What It Does: Establishes the "fiberoptic network conduit installation program," which requires the Office of the Chief Information Officer to (OCIO) to lead and coordinate a program to provide for the installation of conduit where such conduit does not exist and consult and coordinate with public/private entities to ensure that the opportunity is provided to lay or install conduit wherever a State-funded construction project involves trenching, boring, a bridge, a roadway, or opening of the ground, or alongside any State-owned infrastructure.[55] Additionally, the law allows OCIO to contract with private parties to manage, lease, install, or otherwise provide fiber optic network conduit access for such projects.[56]
Effect: At the time of writing, a bill passed unanimously by the Iowa House that would require the Iowa DOT to publicize road construction projects that dig into ground where private companies could install fiber optic cables has been withdrawn.[57]
Reasonable Exceptions? Does not apply to non-publicly funded projects.[58]
Ownership of Conduit? For publicly funded projects, the State.
Funding of Conduit Costs? For publicly funded projects, the State.
Revenue from Conduit? For publicly funded projects, the State.

Maine
Law: ME. REV. STAT. ANN. tit. 35-A, §§ 9202 – 9204-A
Most recent amendment: 2019
What it Does: Establishes the ConnectME Authority, which is required to eliminate barriers to use of broadband service and facilitate and support public-private partnerships to increase the use of broadband service.[59] It further requires the Authority to notify parties interested in installing broadband conduit of underground facility construction projects.[60]

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[54] *Id.*
[55] *See* IOWA CODE § 8B.25(2).
[56] *See* IOWA CODE § 8B.25(3).
[57] Withdrawn from consideration on March 5, 2020. *See* H.F. 2107, 88th General Assemb. (Iowa 2019); STATE OF IOWA, HOUSE JOURNAL: THURSDAY, MARCH 5, 2020, https://www.legis.iowa.gov/docs/publications/HJNL/20200305_HJNL.pdf#page=26 (withdrawing H.F. 2107); O. Kay Henderson, *Bills Targeting Broadband Service Clear Iowa House*, RADIOIOWA (Mar. 6, 2020), https://www.radioiowa.com/2020/03/06/bills-targeting-broadband-service-clear-iowa-house/.
[58] *See id.*
[59] ME. REV. STAT. ANN. tit. 35-A, § 9204-A(3).
[60] *See* ME. REV. STAT. ANN. tit. 35-A, § 9204-A(6-A).

Notes on Language/Conditions: "Broadband service" is not defined. However, "advanced communications technology infrastructure" (see reasonable exceptions below) means any communications technology infrastructure or infrastructure improvement that expands the deployment of, or improves the quality of, broadband availability and connectivity.[61]
Effect: Although ConnectME issued a White Paper in 2013 that made vague recommendations for a Dig Once policy,[62] a formal policy has still not been implemented. However, Janet Mills, the current Governor of Maine, has said that her administration will implement a Dig Once policy to facilitate installation of fiber during public works projects.[63]
Reasonable Exceptions? For unserved or underserved areas, the Authority may only develop, acquire, fund, coordinate or otherwise undertake any project or make any grant, direct investment, or loan if the Authority determines that the installation of "adequate advanced communications technology infrastructure" would not occur in the same time period without its intervention or involvement.[64]
Ownership of Conduit? Presumably the party installing the conduit.
Funding of Conduit Costs? Presumably the party installing the conduit.
Revenue from Conduit? Presumably the party installing the conduit.

Maryland
Policy: State Highway Administration Policy
Year Enacted: Unclear.
What it Does: The State Highway Administration (SHA) allows non-exclusive use of its rights-of-way and its existing communications infrastructure by a public/private entity for the installation, operation, and maintenance of communications systems for themselves in exchange for providing communications equipment, services, and/or monetary revenue/compensation to the SHA.[65] Resource sharing undertaken by the SHA and a public/private entity may include installation of conduit and fiber optic cabling facilities, allocation of fiber strands acquired from previous resource sharing projects, or other transportation technologies.[66]
Other Laws: The "Connecting Rural Maryland Act of 2017" established the special Task Force on Rural Internet, Broadband, Wireless, and Cellular Services, tasked with determining and making recommendations as to how various rural counties could coordinate to obtain federal assistance in improving broadband in rural areas.[67]

[61] ME. REV. STAT. ANN. tit. 35-A, § 9202.
[62] TILSON FIBER TECH., HIGHWAY BROADBAND UTILIZATION STUDY, DIG ONCE WHITE PAPER, *in* CONNECTME AUTHORITY DOCUMENTS, Paper 10 (2013), https://digitalmaine.com/cgi/viewcontent.cgi?article=1010&context=connect_docs.
[63] *Improving Connectivity for Maine People and Businesses*, JANET MILLS FOR ME., https://www.janetmills.com/issues/broadband.
[64] *See* ME. REV. STAT. ANN. tit. 35-A, § 9204-A(8).
[65] Communications Resources Sharing, Maryland Department of Transportation State Highway Administration, https://www.roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=872.
[66] *Id.*
[67] *See* 2017 Md. Laws 621 § 1(f).

The Task Force issued two reports. The first report recommended that "[a] standard of conduit installation concurrently with all transportation projects should be developed."[68] As a result of the Task Force's report, HB 961 was passed, requiring the Department of Housing and Community Development (DHCD) to complete an inventory and map of all State and local government assets that could be used to assist with the expansion of broadband service to unserved and underserved areas of the State by June 1, 2020.[69]

The second, and final, report issued by the Task Force recommends allowing utilities to lease excess fiber rights for telecommunications, including broadband, without having to obtain a separate easement.[70] Further, a bill recently passed that requires an electric cooperative to "construct, maintain, or operate or allow others to construct, maintain, or operate conducting or communications facilities that furnish telecommunications, broadband internet access, or related services, along, on, under, or across . . . rights-of-way."[71] It also requires cost sharing between the electric cooperative and broadband services provider.[72]

Reasonable Exceptions? N/A

Ownership of Conduit? Mixed. The SHA policy appears to anticipate ownership by the State, a public/private entity, or both. The Task Force recommendations appear to anticipate ownership by utilities, broadband service providers, or both. A recent pricing schedule for fiber optics resource sharing describes pricing calculations for either companies using State property to install their own conduit or fiber *or* for companies using State-owned "dark fiber."[73]

Funding of Conduit Costs? Unclear. Presumably some mix of the State, public/private entities, utilities and broadband service providers.

Revenue from Conduit? The SHA policy expressly anticipates revenue/compensation to the SHA. It appears that both the SHA policy and the Task Force recommendations leave open the possibility of revenue to public/private entities, utilities, and broadband service providers.

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[68] TASK FORCE ON RURAL INTERNET, BROADBAND, WIRELESS, AND CELLULAR SERVS., TASK FORCE REPORT 18 (Jan. 9, 2018), https://rural.maryland.gov/wp-content/uploads/sites/4/2018/01/2017_MSAR11269_Task-Force-for-Rural-Broadband-Report.pdf.

[69] TASK FORCE ON RURAL INTERNET, BROADBAND, WIRELESS, AND CELLULAR SERVS., TASK FORCE REPORT 4 (Jan. 2, 2019), https://rural.maryland.gov/wp-content/uploads/sites/4/2019/01/2018_MSAR11544_Task-Force-for-Rural-Internet-Broadband-Wireless-and-Cellular-Service-Report-1.pdf.

[70] TASK FORCE ON RURAL INTERNET, BROADBAND, WIRELESS, AND CELLULAR SERVS., TASK FORCE REPORT 17 (Jan. 2, 2019), https://rural.maryland.gov/wp-content/uploads/sites/4/2019/01/2018_MSAR11544_Task-Force-for-Rural-Internet-Broadband-Wireless-and-Cellular-Service-Report-1.pdf.

[71] 2019 Md. Laws 277 § 1(a)(12).

[72] 2019 Md. Laws 277 § 1(c).

[73] STATE OF MD., INFORMATION TECHNOLOGY ASSETS: FIBER OPTICS RESOURCE SHARING (July 18, 2019), https://www.roads.maryland.gov/OOC/Fiber-Resource-Sharing-Standard-Pricing-Schedule.pdf.

Massachusetts

Policy: State Department of Transportation Utility Accommodation Policy

Year Last Updated: 2013

What It Does: The Massachusetts Department of Transportation (MassDOT) may require the installation of excess capacity (or empty conduit[74]) and the announcement of co-build opportunities during "clear zone"[75] installations in an effort to accommodate multiple telecommunications service providers during the same installation process.[76] No further installation is allowed on that segment of right-of-way unless and until all existing cable and conduit capacity has been exhausted.[77] Requires co-building for installations where MassDOT intends to limit installation to one time, such as for bridges, crossings, tunnels, or other unique locations where MassDOT is required to maintain a higher level of access control.[78] The policy further leaves open the possibility of requiring telecommunications service providers to provide other telecommunications service providers with reasonable notice (a period of not less than 90 days) of a co-build opportunity associated with the anticipated or planned opening of the right-of-way within an area where installation will be limited to one time.[79]

Reasonable Exceptions? "Exceptions to [the] Utility Accommodation Policy may be allowed if it is demonstrated that extreme hardships or unusual conditions provide justification, and where alternative measures can be prescribed to fulfill the intent of these policies and procedures."[80] "These policies and procedures are limited to sound engineering principles that preserve and protect the integrity and visual qualities of the highway and the safety of the motoring public."[81]

Ownership of Conduit? Telecommunications service providers and fiber optic facilities are treated differently in terms of ownership of conduit. Master License Agreements and Site License Agreements are utilized to grant wireless telecommunications service providers the right to construct, install, operate, and maintain their personal property on MassDOT-owned real estate.[82] Lease Agreements are utilized for the accommodation of fiber optic facility installation, operations, and maintenance along State highways,[83] at a market-based rate. [84] Sublease agreements are also allowed.[85]

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[74] *See* MASS. DEP'T OF TRANSP., MASSDOT UTILITY ACCOMMODATION POLICY 36 (2013), https://www.mass.gov/doc/utility-accommodation-policy-0/download (describing what proposals for new facilities, fiber optic strands, or access to empty fiber optic conduit must include).

[75] The clear zone is the total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area. The desired width is dependent upon the traffic volumes, speeds, and roadside geometry. *Id.* at 9.

[76] *Id.* at 43.

[77] *Id.*

[78] *Id.* at 45.

[79] *See* i*d.*

[80] *Id.* at 6.

[81] *Id.* at 5.

[82] *Id.* at 20.

[83] *Id.*

[84] *See* U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-687R, PLANNING AND FLEXIBILITY ARE KEY TO EFFECTIVELY DEPLOYING BROADBAND CONDUIT THROUGH FEDERAL HIGHWAY PROJECTS 7 (2012), https://www.gao.gov/assets/600/591928.pdf.

[85] *See* MASS. DEP'T OF TRANSP., MASSDOT UTILITY ACCOMMODATION POLICY 10 (2013), https://www.mass.gov/doc/utility-accommodation-policy-0/download (defining a "co-locator" as "[a]n individual, corporation, government agency, or entity such as a telecommunications service provider leasing or licensing space . . . within a wireline telecommunications conduit owned by [a] tenant. The co-locator is subject to rent and other

Funding of Conduit Costs? Mixed.
Revenue from Conduit? Mixed.

Minnesota
Law: MINN. STAT. § 116J.391 (2020); MINN. STAT. § 161.462 (2020)
Year Enacted: 2013
What It Does: Requires the Office of Broadband Development (OBD), in collaboration with the Department of Transportation (MNDOT), to "encourage and coordinate 'dig once' efforts for the planning, relocation, installation, or improvement of broadband conduit within the right-of-way in conjunction with any current or planned construction, including, but not limited to, trunk highways and bridges."[86] The law further requires (if practicable), the OBD to encourage and assist local governments to adopt and implement their own Dig Once policies.[87] Lastly, the law establishes the Fiber Collaboration Database, requiring the MNDOT to post the list of upcoming construction projects on its website for the purpose of collaborating with broadband providers.[88]
Notes on Language/Conditions: Requires the OBD to annually report the number of current and planned projects using the Dig Once approach, any gains in broadband speed or access associated with the project, and any costs or cost savings to the State, private entity, or end user of broadband services.[89] It would be useful if the reports laid out this information plainly and in a way that allows for easy comparison over a number of years, but that does not seem to be the case.
Effect: According to the most recent annual report from the OBD, implementation of the policy has run into barriers due to a lack of funding to deploy, track, and manage the conduit.[90] Despite those challenges, the OBD has made progress in addressing permitting delays and participated in meetings to plan for broadband infrastructure necessary to support autonomous vehicles.[91] Further, OBD assisted in establishing the Governor's Task Force on Broadband and assisted with its first meeting in December 2019.[92] The task force is required to create an annual report that, amongst other things, assesses the needs, barriers, issues, and goals for broadband access.[93] The first report is expected December 31, 2020.[94]
Reasonable Exceptions? Practicability of OBD's assistance and encouragement of local governments' development and use of Dig Once policies.[95]
Ownership of Conduit? Unclear. Presumably the State, local governments, or private entities.
Funding of Conduit Costs? Presumably the State, local governments, or private entities.
Revenue from Conduit? Presumably the State, local governments, or private entities

provisions set forth by the sublease agreement or the license agreement. Co-locator is synonymous with subtenant and licensee.").
[86] MINN. STAT. § 116J.391(2)(a).
[87] *See* MINN. STAT. § 116J.391(2)(c).
[88] MINN. STAT. § 161.462.
[89] MINN. STAT. § 116J.391(3).
[90] MINN. OFFICE OF BROADBAND DEV., ANNUAL REPORT 16 (Jan. 15, 2020), https://mn.gov/deed/assets/broadband-annual-report-2020_tcm1045-416256.pdf.
[91] *See id.*
[92] *Id.* at 5.
[93] Exec. Order No. 19-10 § 4(a).
[94] Exec. Order No. 19-10 § 4.
[95] MINN. STAT. § 116J.391(2)(c).

Nevada

Law: 2017 NEV. STAT. 120

Year Enacted: 2017

What It Does: Requires the Director of the Office of Science, Innovation and Technology to prioritize construction projects that affect or involve the expansion or deployment of broadband services in the State.[96] Further, the law allows the Department to require coordination between approved telecommunications providers in planning and working with other contractors performing work in the same geographic area and require installation in a joint trench when two or more telecommunications providers are performing installations at the same time and equitably share costs.[97] Lastly, it requires the Director to coordinate with telecommunications providers for the reasonable, efficient, and cost-effective installation, maintenance, operation, relocation, and upgrade of telecommunications facilities within rights-of-way.[98] On non-interstate rights-of-way, the law allows the Department to place additional conduit in the ground for use by telecommunications providers based on potential future use and to grant use of such conduit to telecommunications providers in exchange for a trade value.[99]

Reasonable Exceptions: A telecommunications provider is not entitled to compensation for its expenses to relocate from the conduit infrastructure of the Department unless such provider has a right of occupancy in its current location because it holds a compensable real property interest.[100]

Ownership of Conduit? Telecommunications providers, although the State is allowed to install its own conduit on non-interstate rights-of-way.

Funding of Conduit Costs? The conduit owner, whether telecommunications provider or the State.

Revenue from Conduit? The conduit owner, whether telecommunications provider or the State.

New Mexico

Law: 2017 N.M. Laws 6 (aka "Local Economic Development Act")

Year Amended: 2017

What It Does: Allows the State and local governments to keep open trenches and place conduit needed for new broadband infrastructure by expanding the meaning of "economic development project" or "project" to include rights-of-way infrastructure, including trenching and conduit, for the placement of new broadband telecommunications network facilities.[101] The bill further enables the State and local governments to use Local Economic Development Act funds for trenching and conduit placement needed for broadband development.[102]

Effect: "The New Mexico Department of Transportation (NMDOT) issues permits for utility installation, including fiber-optic cable and other broadband-related infrastructure, in State-owned highway right-of-way."[103] NMDOT is exploring the use of resource sharing agreements under which the State grants the

[96] NEV. REV. STAT. § 223.610(5)(d).
[97] NEV. REV. STAT. § 408.55027(3).
[98] NEV. REV. STAT. § 408.200(2).
[99] NEV. REV. STAT. § 408.200(2)(a).
[100] NEV. REV. STAT. § 408.200(2).
[101] *See* N.M. STAT. ANN. § 5-10-3(e).
[102] *Bill to Facilitate Broadband Infrastructure Development Heads to Governor's Desk*, SENATE DEMOCRATS (Mar. 4, 2017), http://www.nmsenate.com/2017/03/04/digonce/.
[103] N.M. LEGISLATIVE FIN. COMM., R-19-05, PROGRAM EVALUATION: FUNDING, OVERSIGHT, AND COORDINATION OF BROADBAND PROGRAMS 33 (Nov. 1, 2019),

use of its right-of-way to run data transmission lines in exchange for connecting to and using this infrastructure for free or at reduced cost, citing several states that have implemented Dig Once policies.[104]
Reasonable Exceptions? N/A
Ownership of Conduit? The State and/or local governments.
Funding of Conduit Costs? The State and/or local governments using Local Economic Development Act funds.
Revenue from Conduit? Presumably the State and/or local governments, although NMDOT is exploring exchanging right-of-way grants for connectivity.

North Carolina
Law: Exec. Order No. 19-91
Year Enacted: 2019
What It Does: Requires the North Carolina Department of Transportation (NCDOT) and Department of Information Technology (DIT) to work together to develop and issue a uniform Dig Once policy to reduce the scale and number of repeated excavations related to state road projects for the installation and maintenance of broadband infrastructure in rights-of-way by July 21, 2019.[105] For local governments, the law requires the NCDOT and DIT to develop model Dig Once policies for their potential use.[106]
Effect: Per the DIT's most recent "Broadband Plan," the DIT recommended the following policy options for the State to take: 1) Install multiple or segmented conduit during projects and enter into cost-based lease agreements with broadband providers and consider bartering or exchanging the use of the conduit for the installation or use of fiber-optic cables for their traffic signaling and Smart Transportation initiatives; 2) Notify broadband providers of new road projects eligible for broadband facility installation when the project is announced and include standards, locations, and estimated costs; and 3) Provide notifications to all broadband providers quarterly and hold bi-annual meetings with ISPs to review new projects and work through anticipated issues.[107] Lastly, the plan recommends that the DIT work with the North Carolina League of Municipalities (NCLM) and the North Carolina Association of County Commissioners (NCACC) to "create unified standards and best practices for local governments to incent providers to lay dark fiber or conduit when expanding roads—a dig once policy should apply at the local level when relevant."[108]

The DIT advocates "Dig Smart" policies, which "mandate the installation of conduit throughout public rights-of-way, lowering costs for providing broadband service and making a community more attractive for broadband providers hoping to break into a new market or expand their existing

https://www.nmlegis.gov/Entity/LFC/Documents/Program_Evaluation_Reports/Program%20Evaluation%20-%20Funding,%20Oversight,%20and%20Coordination%20of%20Broadband%20Programs.pdf.
[104] *See id.*
[105] Exec. Order No. 19-91 § 8.
[106] *Id.*
[107] *See* N.C. DEP'T OF INFO. TECH., CONNECTING NORTH CAROLINA: STATE BROADBAND PLAN AV1.5, https://www.ncbroadband.gov/connectingnc/broadband-availability/ (last visited May 21, 2020).
[108] *Id.*

operations."[109] DIT also references model legislation that the State or local governments could adopt to create "Dig Smart" requirements.[110]

Reasonable Exceptions? The model legislation referenced by DIT would exempt emergency excavations and rights-of-way projects less than 900 contiguous linear feet from "Dig Smart" requirements.[111] Practicability and feasibility are also included as reasonable exceptions.[112]

Ownership of Conduit? Per the model legislation, the State.[113]

Funding of Conduit Costs? Per the model legislation, the State.[114]

Revenue from Conduit? Presumably the State.

Other Notes: Per the model legislation, North Carolina may have adopted almost directly Minnesota's policy of state facilitation of local government Dig Once policies.[115]

Texas

Law: Tex. Transp. Code Ann. § 201.672 (2019)

Year Enacted: 2019

What It Does: Requires the Texas Department of Transportation (TxDOT) to provide notice on its website of ongoing and planned highway construction projects for which the department will provide voluntary joint trenching opportunities for broadband providers in the State's rights-of-way.[116] Secondly, the law allows for collaboration between broadband providers and the TxDOT for the deployment of conduit.[117] Lastly, the law requires, where practicable, the State to assist local governments in taking advantage of voluntary joint trenching opportunities.[118]

Notes on Language/Conditions: Rural areas are especially preferred for joint trenching and coordination.[119]

Reasonable Exceptions? Practicability of the State's assistance for local governments' joint trenching opportunities.[120]

Ownership of Conduit? Broadband provider. Unclear if the law anticipates ownership by the State or local governments.

Funding of Conduit Costs? Presumably the broadband provider. Unclear if the law anticipates funding by the State or local governments.

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[109] FIBER TO THE HOME COUNCIL AMERICAS, DIG SMART: BEST PRACTICES FOR CITIES AND STATES ADOPTING DIG ONCE POLICIES 1 (2018), https://www.ncbroadband.gov/wp-content/uploads/2018/01/FTTHCouncil-DigOnceDigSmart11.pdf.

[110] *See id.* at 13.

[111] *See* FIBER TO THE HOME COUNCIL AMERICAS, DIG SMART: BEST PRACTICES FOR CITIES AND STATES ADOPTING DIG ONCE POLICIES 14 (2018), https://www.ncbroadband.gov/wp-content/uploads/2018/01/FTTHCouncil-DigOnceDigSmart11.pdf.

[112] *See id.*

[113] *See id.*

[114] *See id.*

[115] *See* MINN. STAT. § 116J.391(2)(c); FIBER TO THE HOME COUNCIL AMERICAS, DIG SMART: BEST PRACTICES FOR CITIES AND STATES ADOPTING DIG ONCE POLICIES 15 (2018), https://www.ncbroadband.gov/wp-content/uploads/2018/01/FTTHCouncil-DigOnceDigSmart11.pdf.

[116] TEX. TRANS. CODE ANN. § 201.672(a).

[117] *Id.*

[118] TEX. TRANS. CODE ANN. § 201.672(c).

[119] TEX. TRANS. CODE ANN. § 201.672(b).

[120] TEX. TRANS. CODE ANN. § 201.672(c).

Revenue from Conduit? Broadband provider. Unclear if the anticipates revenue flowing to the State or local governments.

Utah

Law: UTAH ADMIN. CODE r.907-64-1 et seq. (2019)
Last Amended: 2013
What It Does: Allows the Utah Department of Transportation (UDOT) to require approved broadband providers to install conduit "into the same general location on the interstate system, coordinate their planning and work, install in a joint trench, and equitably share costs."[121] Further, it requires the Telecommunication Advisory Council to advertise for and hold a public meeting whenever a permit for longitudinal access has been submitted to the department to access highway segments in the interstate system, allowing other broadband providers the opportunity to share joint placement of conduit.[122]
Effect: The UDOT installs empty conduit during highway construction.[123] The State installs small sections of conduit and broadband providers cooperate in helping to extend the infrastructure and provide services to rural communities.[124] Further, UDOT helps local governments attract broadband providers by working with them to learn how to install their own conduit, providing construction standards and contact information.[125] Lastly, "UDOT trades existing or planned conduit and fiber on a foot-by-foot basis, and trades fiber optic on a foot-by-foot strand basis. Trade agreements are for 30 years with automatic five-year renewals. Telecoms are responsible for maintenance of all fiber lines and conduit."[126]
Reasonable Exceptions? Interstate system integrity, safety, normal interstate system operation or maintenance activities exceptions.[127]
Ownership of Conduit? Mixed. In some cases, broadband providers install the conduit, and in other cases the State or local government does.
Funding of Conduit Costs? Mixed.
Revenue from Conduit? Mixed. Presumably broadband providers gain revenue from the use of their conduit, while the State may trade conduit and fiber with broadband providers.

West Virginia

Law: W. VA. CODE §§ 17-2E-1 et seq. (2020)
Year Enacted: 2018
What It Does: Establishes a State Dig Once policy. The law requires that broadband providers compensate the State for use of spare State-owned or controlled conduit along rights-of-way.[128] The law requires broadband providers to enter into a lease agreement with the State before obtaining a permit for the construction or installation of conduit in a right-of-way.[129] Broadband providers are required to notify

[121] *See* UTAH ADMIN. CODE r.907-64-5(3).
[122] *See* UTAH ADMIN. CODE r.907-64-8.
[123] UTAH BROADBAND ADVISORY COUNCIL, UTAH BROADBAND PLAN 8 (Jan. 14, 2020), https://broadband.utah.gov/wp-content/uploads/2020/02/Utah-Broadband-Advisory-Council-Plan-2020.pdf.
[124] *See id.*
[125] *See id.*
[126] *Id.*
[127] UTAH ADMIN. CODE r.907-64-4(2). *See also* UTAH ADMIN. CODE r.907-64-5(2).
[128] *See* W. VA. CODE § 17-2E-3(d).
[129] *See* W. VA. CODE § 17-2E-3(a).

other broadband providers of their intentions to dig when applying for permits and reach an agreement with those providers should they show interest in sharing a trench.[130] Lastly, if two or more telecommunications carriers are required or authorized to share a single trench, each carrier in the trench must share the cost and benefits of the trench in a fair, reasonable, competitively neutral, and nondiscriminatory manner.[131]

Reasonable Exceptions? Dig Once requirements do not apply to: (1) Projects where the trench is less than 1,000 feet in length; (2) Projects that use the direct bury of cable or wire facilities; (3) Projects that are solely for the service of entities involved in national security matters or where the disclosure or sharing of a trench location would be against federal policy; or (4) Projects where the telecommunications carrier installs an amount of spare conduit or innerduct equal to what is being installed for its own use and which is made available for lease to competing telecommunications carriers on a nondiscriminatory basis at rates established by the rules of the Federal Communications Commission. All carriers installing spare conduit or innerduct shall notify the council of the location and capacity of such spare conduit and innerduct upon completion of the project, and the council shall make such information publicly available for competing telecommunications carriers.[132]

Ownership of Conduit? Mixed: broadband provider and/or State.

Funding of Conduit Costs? Mixed.

Revenue from Conduit? Mixed.

[130] *See* W. VA. CODE § 17-2E-5(a)–(c).
[131] W. VA. CODE § 17-2E-5(e).
[132] W. VA. CODE § 17-2E-5(g).

APPENDIX A: OTHER STATE POLICY DEVELOPMENTS

Connecticut

Related Law: No current Dig Once law, but there is an ongoing exploration of it. For example, as recently as January 2019, Connecticut's Office of Legislative Research issued a report examining state and local high-speed internet initiatives that included Dig Once policies.[133] In 2016, a consultant issued a report to the Connecticut Office of Consumer Counsel that advocated for Dig Once policies.[134]

Michigan

Related Law: Exec. Order No. 2018-2

Year Enacted: 2018

What It Does: Established the Michigan Consortium of Advanced Networks (MCAN), tasked with creating a roadmap for broadband service through the State.

Effect: MCAN issued a report in 2018 recommending the development of model Dig Once policies for rights-of-way maintained by local units of government with the guidance of the Michigan Infrastructure Council by 2020.[135] There does not seem to have been an actual development of a model Dig Once policy, but rather an aggregation of "best practices" that provide snapshots of local Dig Once policies in Sandy, OR; Mesa, AZ; and Boston, MA.[136] Appendix B contains these and other municipalities that states have considered when investigating the feasibility of Dig Once policies. It is unclear if the State intends to follow these best practices as its own Dig Once policy.

Vermont

Related Law VT. STAT. ANN. tit. 30, § 202c–d (2019)

Last Amended: 2019

What It Does: Requires the Department of Public Service (DPS) to develop a 10-year Telecommunications Plan every 3 years[137] that is required to serve as the basis for State telecommunications policy and programs for a 10-year period.[138] The Telecommunications Plan is required to include an assessment of opportunities for shared infrastructure, open access, and neutral host wireless facilities[139] as well as an analysis of alternative strategies to leverage the State's ownership and management of the public rights-of-way to create opportunities for accelerating the buildout of fiber-optic broadband.[140] Lastly, it establishes a policy to support deployment

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[133] *See* CONN. OFFICE OF LEGISLATIVE RESEARCH, 2019-R-0023, STATE AND LOCAL HIGH SPEED INTERNET INITIATIVES 3 (Jan. 9, 2019), https://www.cga.ct.gov/2019/rpt/pdf/2019-R-0023.pdf.

[134] *See* CTC TECH. AND ENERGY, BROADBAND IN CONNECTICUT: OPPORTUNITIES FOR THE STATES AND LOCALITIES TO ENABLE WORLD-CLASS BROADBAND 30–37 (2016), https://portal.ct.gov/-/media/OCC/Telecom/Broadband/CTgig_Project/ATTACHMENTB20160322CTCReportBroadbandinConnecticutpdf.pdf.

[135] MICH. INFRASTRUCTURE COMM'N, MICHIGAN BROADBAND ROADMAP xv (Aug. 2018), https://connectednation.org/michigan/wp-content/uploads/sites/13/2019/02/MCAN_final_report_629873_7.pdf.

[136] *See* CONNECTED NATION MICH., LOCAL POLICY BEST PRACTICES AND EXAMPLES 3, http://connectmycommunity.org/wp-content/uploads/2016/09/Local-Policy-Guide.pdf (obtained from Michigan Community Broadband Playbook § 3.5, https://www.arcgis.com/apps/Cascade/index.html?appid=2291501adb3a419583f3a2d7f385491b).

[137] *See* VT. STAT. ANN. tit. 30, § 202d(f).

[138] VT. STAT. ANN. tit. 30, § 202d(b)(1).

[139] VT. STAT. ANN. tit. 30, § 202d(b)(6).

[140] VT. STAT. ANN. tit. 30, § 202d(b)(9).

of broadband infrastructure that "does not negatively affect the ability of Vermont to take advantage of future improvements in broadband technology or result in widespread installation of technology that becomes outmoded within a short period after installation."[141]

Notes on Language/Conditions: Requires a notice and comment procedure for the Telecommunications Plan.[142]

Effect: The next Telecommunications Plan is not expected until 2021. Though the previous Telecommunications Plan, issued in 2018, did not specifically mention "dig once," "conduit," or "installation," it was also not bound by the recently amended[143] provisions of VT. STAT. ANN. tit. 30, § 202c–d.[144]

Virginia

Related Law: H.R.J. Res. 77 (Va. 2018)

Year Enacted: 2018

What It Does: Directs the Secretary of the Commerce and Trade to request the Center for Innovative Technology (CIT) to study the feasibility of a statewide Dig Once policy, including the installation of conduits with bridge construction projects.[145] In conducting its study, CIT is required to examine the feasibility of a blanket policy for all nine of the Virginia Department of Transportation (VDOT) districts and consult various stakeholders, such as the Virginia Broadband Advisory Council, VDOT, telecommunication and cable providers, and utility providers.[146]

Effect: The CIT's Feasibility Study found that "[a] dig once policy that requires VDOT to install and maintain conduit in all VDOT-maintained ROW, including bridges and tunnels, appears to be a cost prohibitive use of taxpayer dollars. Conduit installation would likely be slow – potentially even slower for areas that are in significant need of broadband. Furthermore, there is a possibility that conduit installed in VDOT [rights-of-way] may not be utilized by providers due to technical concerns, space availability, and access costs." Because of these difficulties, CIT recommended that any Dig Once policy should focus primarily on bridges and tunnels throughout the State and create more uniformity.[147] It further advocated for further analysis, coordination, and planning focus on streamlining the permitting process and associated costs. Though CIT has made recommendations about what Dig Once should achieve, those recommendations have not yet been acted upon.[148]

Wisconsin

Related Law: No formal law. State Senator Jeff Smith recently introduced legislation that would have allowed municipalities to require installation of empty conduit lines for future fiber optic cable expansion and require companies that install cable in the right-of-way to provide public service to consumers along the way, but the legislation did not pass.[149]

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[141] VT. STAT. ANN. tit. 30, § 202c(b)(8)(B).
[142] *See* VT. STAT. ANN. tit. 30, § 202d(e).
[143] *See* 2019 Vt. Acts & Resolves 79.
[144] When and if next Telecommunications Plan is issued in 2021, it is anticipated that Vermont could be moved into the category of having some sort of Dig Once policy.
[145] H.R.J. Res. 77 (Va. 2018).
[146] *Id.*
[147] CTR. FOR INNOVATIVE TECH., DIG ONCE FEASIBILITY STUDY 13–14 (Jan. 9, 2019), https://rga.lis.virginia.gov/Published/2019/HD3/PDF.
[148] It is anticipated that once those recommendations have been acted upon, Virginia would be moved into the category of having a Dig Once policy.
[149] *See* SB 835 (Wis. 2020).

APPENDIX B: LOCAL DIG ONCE POLICIES[150]

Although local Dig Once policies go beyond the scope of this paper, local governments that have adopted such policies include the following:

- Flagstaff, AZ
- Mesa, AZ
- Berkeley, CA
- Brentwood, CA
- Central Coast Broadcast Consortium (Monterey, Santa Cruz, & San Benito Counties, CA)
- El Dorado County, CA
- Gonzales, CA
- Humboldt County, CA
- Loma Linda, CA
- Riverside, CA
- San Francisco, CA
- Santa Monica, CA
- Washington, DC
- Coral Gables, FL
- Boston, MA
- Saint Louis, MI
- Chicago, IL
- Columbus, OH
- Sandy, OR
- Celina, TX
- Houston, TX
- Arlington County, VA
- Virginia Tech, eCorridors (VA)
- Bellevue, WA
- Mount Vernon, WA
- Poulsbo, WA

[150] *See, e.g.*, Tyler Cooper, *Dig Once: The Digital Divide Solution Congress Squandered And Policy That Could Save $126 Billion On Broadband Deployment*, BROADBANDNOW (Aug. 7, 2019), https://broadbandnow.com/report/digonce-digital-divide/; CTC TECH. & ENERGY, TECHNICAL GUIDE TO DIG ONCE POLICIES (2017), https://www.ctcnet.us/wp-content/uploads/2017/05/CTC-White-Paper-Dig once-20170414.pdf; U.S. DEP'T OF TRANSP., EXECUTIVE ORDER: ACCELERATING BROADBAND INFRASTRUCTURE DEPLOYMENT (2013), https://www.fhwa.dot.gov/policy/otps/successprac.pdf.

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