

Alabama Anchor Institution/Middle-Mile Program  
Phase 2  
Program Guide



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# Alabama Anchor Institution/Middle-Mile Program Phase 2 Program Guide

## Introduction

The Alabama Department of Economic and Community Affairs (ADECA) issues this Program Guide to provide additional information regarding the implementation of and requirements for the Alabama Anchor Institution/Middle-Mile Program Phase 2 (AIMM 2 Program or AIMM 2). The AIMM 2 Program follows the announcement of the initial round of AIMM Program grants in early 2024.

This document is intended as a guide for AIMM 2 Program participants. This guide is not binding, exhaustive, or final, and it may be updated by ADECA at any time. The AIMM 2 Program is subject to both federal and state law and guidance, and it is the responsibility of AIMM 2 participants to comply with all applicable laws and guidance for the program. This guide should be reviewed in conjunction with applicable law and the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Application and Application Guide*, *Alabama Anchor Institution/Middle-Mile Program Phase 2 Frequently Asked Questions*, and *Alabama Anchor Institution/Middle-Mile Program Phase 2 Rating Criteria* as well as the guidance issued by the U.S. Department of the Treasury (Treasury) regarding the Coronavirus State and Local Fiscal Recovery Funds (SLFRF) that support the AIMM 2 Program.<sup>1</sup>

The AIMM 2 Program is a competitive subaward program, through which ADECA expects to provide a single grant to a broadband service provider subrecipient. Specifically, the AIMM 2 Program will make additional necessary investments in broadband infrastructure by awarding a grant to a service provider subrecipient to support the deployment of middle-mile broadband infrastructure to anchor institution facilities (such as higher education, rural hospital, government, and public safety facilities) with an identified need for service and facilitate the deployment of last-mile broadband infrastructure in unserved areas of Alabama. In this way, AIMM 2-supported broadband infrastructure will expand affordable broadband network access to the citizens of Alabama.

The AIMM 2 Program is supported through a subaward of federal funds under Federal Award Identification Number SLFRP2635 Coronavirus State and Local Fiscal Recovery Funds (Assistance Listing No. 21.027), awarded to the State of Alabama by the Treasury.<sup>2</sup> The AIMM 2 Program will be administered by ADECA in accordance with: (a) Section 9901 of the American Rescue Plan Act of 2021, Pub. L. No. 117-2 (ARPA); (b) 42 U.S.C. § 802; (c) 31

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<sup>1</sup> AIMM 2 Program materials can be found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/>. Federal SLFRF guidance materials can be found on Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>.

<sup>2</sup> More information on the federal SLFRF can be found on Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>. The Assistance Listing for the federal SLFRF can be found at <https://sam.gov/fal/68467c9ed71e498aa904d8ef4970f5ee/view>.

C.F.R. Part 35, Subpart A; (d) the Final Rule adopted for the ARPA SLFRF, 87 Fed. Reg. 4338 (Jan. 27, 2022); (e) Ala. Act No. 2023-1; and (f) other applicable laws and guidance.

As a recipient of federal ARPA funds, ADECA must comply with and ensure subrecipients comply with applicable terms and conditions of the ARPA, regulations governing the expenditure of funds distributed from the ARPA, and interpretative guidance the Treasury has issued or will issue governing the expenditure of funds distributed from the ARPA. Importantly, ADECA must comply with and ensure subrecipients comply with all applicable provisions of 2 C.F.R. Part 200, the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Administrative Requirements).<sup>3</sup> ADECA and AIMM 2 Program subrecipients must comply with the Uniform Administrative Requirements, subject to any exceptions provided by law or as determined by Treasury.

### **AIMM 2 Program Application Process**

ADECA will accept AIMM 2 applications beginning on March 20, 2024, and applications must be submitted no later than 5:00 p.m. (Central) on April 10, 2024. Any application received by ADECA after the deadline will not be considered. Applications and all supporting documentation must be submitted to ADECA by email to [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov).

Applicants must use the AIMM 2 Program Application form contained in the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Application and Application Guide*, complete it in its entirety, and label attachments as instructed. The application must include all supporting documentation at the time of submission. Failure to comply with these requirements may result in a loss of points. Each AIMM 2 Program applicant must obtain a Unique Entity Identifier (UEI) from the federal System for Award Management (SAM) and provide its UEI to ADECA as part of its application. More information on obtaining a UEI and SAM can be found at <https://sam.gov/content/entity-registration>.

Applications for eligible AIMM 2 Program projects will be evaluated as described in the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Application and Application Guide* and in accordance with the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Rating Criteria*. ADECA will select an applicant for an AIMM 2 grant based on the applicant's score and ADECA's evaluation of all supporting documentation. ADECA anticipates awarding a single grant to the highest scoring applicant in the AIMM 2 Program. ADECA may request amended projects and/or offer reduced grant participation to the subrecipient. ADECA also reserves the right to contact applicants for additional information and/or clarifications regarding their AIMM 2 applications.

A successful AIMM 2 Program applicant will receive a letter of conditional commitment from ADECA, stating that the application has been conditionally selected for a grant and requesting additional information required for the subaward agreement. As part of this process, the successful applicant will be required to complete and submit the Beason-Hammon Alabama Taxpayer and Citizen Protection Act Certification, a complete copy of its E-Verify

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<sup>3</sup> More information on the Uniform Administrative Requirements can be found at <https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200>.

Memorandum of Understanding, the State of Alabama Disclosure Statement, the Signatory Authority Form, and other documentation and certifications required by federal and state law. The successful applicant also must register in the Alabama Buys eProcurement Portal, be eligible for federal grants, and obtain and maintain an active SAM registration. In addition, the successful applicant may need to provide subrecipient executive compensation information for federal reporting purposes. The Taxpayer ID number, entity name, and entity address must match across all documents and with the information in the Alabama Buys eProcurement Portal.

More information about the AIMM 2 Program application process can be found in the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Application and Application Guide*.

## **Key AIMM 2 Program Compliance Requirements and Procedures**

The following provides an overview of key AIMM 2 Program compliance requirements and procedures. However, AIMM 2 grants will be conditioned on compliance with the terms and conditions of the subaward agreement for the project as well as all applicable federal, state, and local laws and guidance.

More information on the compliance requirements and procedures applicable to AIMM 2 can be found in the *Alabama Anchor Institution/Middle-Mile Program Phase 2 Frequently Asked Questions* as well as on Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>.

### Applicant and Project Eligibility

Generally, an entity is eligible to apply for an AIMM 2 grant if it is a cooperative, corporation, limited liability company, partnership, non-profit, other private business entity, or unit of government that currently provides middle-mile, last-mile, or Anchor Institution broadband services. Entities that represent a collaboration among multiple entities – including consortia – are also eligible to apply for an AIMM 2 subaward, so long as a single, qualified entity serves as lead bidder and accepts all of the obligations and responsibilities of the subaward agreement. Additionally, at least one member of the collaborative entity must currently provide middle-mile, last-mile, or Anchor Institution broadband services.

An entity may not receive an AIMM 2 grant if either it or its principals (or any of its contractors, subcontractors, or affiliates) are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in the AIMM 2 Program or other grant programs by any federal agency or by any department, agency, or political subdivision of the State of Alabama. ADECA will verify the suspension and debarment status of an AIMM 2 Program applicant before granting a subaward. More information about the suspension and debarment process can be found on the SAM website at <https://sam.gov/content/exclusions>.

To facilitate the goals of the AIMM 2 Program, as well as to align with Treasury requirements for broadband projects funded with ARPA SLFRF, ADECA will grant an AIMM 2 subaward only to an applicant that proposes a project that will be designed to provide: (a) at least one

service offering that is capable of delivering broadband services that reliably meet or exceed symmetrical 1/1 Gbps speeds to Anchor Institutions with an identified need and (b) middle-mile broadband services that can support last-mile broadband services that reliably meet or exceed symmetrical 100/100 Mbps speeds. AIMM 2 Program projects also must comply with the Fiber Construction Standards included as Appendix A to this guide.

For the purposes of the AIMM 2 Program, an Anchor or Anchor Institution may include an entity, such as a school, library, health clinic, health center, hospital or other medical provider, government/public safety entity, institution of higher education, public housing organization, or community support organization that relies on broadband for its own operations and/or facilitates substantial use of broadband service by members of the public, including vulnerable populations such as low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals. Applicants should contact ADECA by email at [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov) with any questions regarding whether a location is an Anchor Institution under the AIMM 2 Program.

For the purposes of the AIMM 2 Program, an unserved area is any rural area in which there is not at least one provider of terrestrial broadband service that is either (a) offering a connection to the internet providing 100/20 Mbps or higher speeds or (b) required under the terms of another state or federal grant to provide a connection to the internet providing 100/20 Mbps or higher speeds within the same or similar timeframe of projects of similar complexity or scale awarded during the AIMM 2 grant cycle.<sup>4</sup>

### Project Term

An AIMM 2 Program subrecipient normally must complete its project within two years of the subaward grant or an extended timeframe requested by the subrecipient in its application and approved by ADECA. If a subrecipient demonstrates that a project is progressing, it may request an extension of the project term for delays beyond its control, subject to ADECA program deadlines. AIMM 2 Program subrecipients must diligently pursue the implementation of their projects to ensure completion by the end of the term, including all necessary engineering, permitting, make-ready, construction, and customer activations. Subrecipients must certify in writing to ADECA that a project reached completion by the end of the term. Subrecipients also must submit all final invoices and other required documentation, demonstrating compliance with the subaward agreement and all reporting obligations, within 30 calendar days of the submission of the project completion certification or such other period as ADECA may establish consistent with federal law.

AIMM 2 Program subrecipients must submit all extension requests in writing to ADECA no less than 30 calendar days prior to the expiration of the term. Approval of any extension request will be at ADECA's sole discretion. If a subrecipient fails to complete a project within the required term, including any term extension, ADECA may revoke the subaward agreement and suspend and/or recoup payments of AIMM 2 grant funds.

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<sup>4</sup> A rural area is any area within Alabama not included within the boundaries of any incorporated city or town having a population in excess of 25,000 inhabitants, according to the last federal census. Terrestrial broadband service includes wireline or fixed wireless service and does not include cellular or satellite service.

## Eligible Project Costs

AIMM 2 grants will be in the form of payment of actual eligible expenses incurred by the subrecipient for the project through fixed progress payments. Subrecipient project costs eligible for payment generally will be limited to construction and construction-related costs of broadband infrastructure, in accordance with applicable law, AIMM 2 Program materials, and Treasury/ADECA guidance. Some examples of eligible project expenses include: (a) the costs of repair, rehabilitation, construction, improvement, and acquisition of broadband infrastructure for the project; (b) costs of long-term leases (i.e., for terms greater than one year) of facilities required to provide broadband service for the project (including infeasible right-of-use agreements and capital leases); and (c) personnel costs related to project deployment.

By contrast, subrecipient operating costs for the project, including but not limited to short-term operating lease costs, are not eligible for payment. Subrecipient indirect costs also are not eligible for payment. In addition, subrecipient costs for the project incurred before or after the term of the AIMM 2 subaward agreement will not be eligible for payment without advance ADECA approval. AIMM 2 grant funds may not be used for research and development costs and may not be used to cover costs that have been or will be reimbursed – or otherwise paid – by other federal or state funding sources. Subrecipient costs must be allowable, necessary, reasonable, and allocable for the project as well as adequately documented to be eligible for payment. However, subject to certain exceptions, AIMM 2 Program subrecipients will not be required to comply with the cost principles and procurement practices of the Uniform Administrative Requirements.

More information on eligible and ineligible AIMM 2 project expenses may be found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/> and Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>. AIMM 2 participants should contact ADECA by email at [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov) with any questions regarding the eligibility of AIMM 2 project expenses.

## Grant Amount and Payment

An AIMM 2 grant may not exceed the remaining funding available in the AIMM Program budget. In addition, the proposed match amount for an AIMM 2 project must be at least 10 percent of the total cost of the proposed project. ADECA currently estimates the remaining AIMM Program funding available to be at least \$43.5 million. ADECA anticipates that, once final AIMM Program funding numbers are available and after the AIMM 2 awardee is selected, the final AIMM 2 grant amount will be established not to exceed the remaining funding available in the AIMM Program budget. Any AIMM 2 grant, when combined with other forms of state or federal support or assistance dedicated to the proposed project, other than interest-bearing loans, may not exceed 90% of the total cost of the project. Applicants are reminded that the 10% match obligation represents the minimum required for consideration for AIMM 2 funding. Applicants are encouraged to commit additional match and will receive a higher score for including additional match commitments in their applications.



ADECA reserves the right to cancel the AIMM 2 subaward application solicitation, award multiple subawards, award less than the available amount, and/or issue another application solicitation as part of its ongoing administration of the program and in accordance with applicable law and guidance. Any subaward commitments made by ADECA to subrecipients are contingent upon the availability and receipt of SLFRF funds by ADECA.

AIMM 2 Program subrecipients will receive grant funds in the form of payment of actual eligible expenses incurred by the subrecipient for the project through fixed progress payments. ADECA will condition the release of any grant funds on the subrecipient's satisfaction of all subaward agreement requirements, including all project reporting and closeout obligations as well as the Fiber Construction Standards. Subrecipients will submit a payment request for each progress payment installment with ADECA, providing documentation demonstrating the progressive completion of the project and supporting the claimed subrecipient costs in the format specified by ADECA. Such requests will be subject to ADECA review and approval before any AIMM 2 grant progress payment is made. Subrecipients are responsible for accounting for their project costs appropriately and for maintaining records demonstrating that such costs are eligible for payment, in accordance with applicable law, AIMM 2 Program materials, and Treasury/ADECA guidance. ADECA may request additional information or documentation from subrecipients as part of the grant payment process.

- **Payment request:** Funds for an approved subaward may be requested by the submission of a payment request from the subrecipient using the Payment Request template found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/>. The Payment Request must be completed and include the remittance address that matches the subrecipient's Alabama Buys eProcurement portal information. The Payment Request must be signed by an authorized official certifying that all reporting obligations are up to date, the subrecipient is compliant with all terms and conditions of the subaward agreement, and the subrecipient is meeting progressive completion of the project. The subrecipient may not request payment that exceeds the grant amount specified in the subaward agreement or the most recently approved budget amendment to the subaward agreement.

In accordance with 2 C.F.R. § 200.305, AIMM 2 Program subrecipients may request payments on an advance payment basis under certain conditions. If these conditions cannot be met or are not met, the risk assessment score will not allow advance payments, or if the subrecipient requests reimbursement payments, the subrecipient will be paid by reimbursement. All costs previously submitted for advance payment must be supported with invoices and proof of payment prior to the approval of any subsequent Payment Request by the subrecipient.

- **Completed payment request supporting documentation summary:** The subrecipient will provide evidence of actual costs incurred to date for the project and ADECA will disburse a progress payment only after reviewing the subrecipient's costs incurred, evidence of progressive completion of the project, and compliance with program requirements. Each progress Payment Request must include a completed Payment Request Supporting Documentation Summary, which can be found on ADECA's website

at <https://adeca.alabama.gov/alanchormiddlemile/>. The subrecipient must also submit all invoices for incurred costs and proof of payments, if applicable, dated during the performance period for the claimed costs with the Payment Request Supporting Documentation Summary.

Proof of payment may consist of cancelled check images, email confirmations, or bank statements showing the transaction by electronic funds transfer or by check. It is not necessary to provide the full bank statement so long as the date of the payment, amount of the draft that corresponds with the invoice amount, and posting date are visible.

Supporting documents must be submitted in the order they are listed on the Payment Request Supporting Documentation Summary by budget category. Supporting document files shall be named by budget category with the same name listed under the source file name on the Payment Request Supporting Documentation Summary. All documentation must be submitted as attachments by email to [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov), or such other means as may be designated by ADECA, including an online portal. ADECA will request any clarifying documentation needed to support costs claimed during the review process.

Generally, costs incurred prior to the award are unallowable; however, an exception is made for purchased fiber or other broadband equipment acquired in advance of the award (stockpiled materials, materials on hand, etc.). The invoices and proof of payments should clearly denote the methodology used to determine the amount allocated to the grant as properly evidenced in the subrecipient's accounting system.

- **Timing of request:** When clearing the conditional commitment requirements, the subrecipient will elect to submit payment requests on a periodic basis (i.e., monthly, quarterly, bi-annually, annually) or at intervals marking project completion milestones (i.e., 10%, 25%, 50%, 75%, 100% complete). Any change to the payment process must be approved in advance by ADECA. Subrecipients may request a progress payment of the grant amount no more than once a month without prior approval from ADECA. ADECA will not disburse another progress payment to the subrecipient until the subrecipient expends the prior progress payment.

### Project Service Affordability Provisions

Consistent with current Treasury requirements, AIMM 2 Program subrecipients that provide service to households using AIMM 2-supported broadband infrastructure must, for as long as the AIMM 2-supported broadband infrastructure is in use, either participate in the Federal Communications Commission's Affordable Connectivity Program (ACP) through the lifetime of the ACP or otherwise provide access to a broad-based affordability program to low-income consumers in the proposed service area of the broadband infrastructure that provides benefits to households commensurate with those provided under the ACP through the lifetime of the ACP. In addition, AIMM 2 Program subrecipients that enter into agreements with last-mile service providers to use their AIMM 2-supported broadband infrastructure to provide service to households must require such service providers, for as long as they use AIMM 2-supported



broadband infrastructure, to either participate in the ACP through the lifetime of the ACP or otherwise provide access to a broad-based affordability program to low-income consumers in the proposed service area of the broadband infrastructure that provides benefits to households commensurate with those provided under the ACP through the lifetime of the ACP.

AIMM 2 Program subrecipients will be asked to provide information on any plans they have to meet the ACP requirements, including the service provider partner affordability obligations, and any plans by the subrecipients or by their service provider partners to offer last-mile services that are affordable to customers within the proposed funded service area(s). In addition, subrecipients will be required to provide service price information as part of the subaward reporting process.

In the event the ACP expires and a replacement program is not designated by Treasury, ADECA will provide additional guidance to AIMM 2 participants about any applicable project service affordability provisions. More information on the ACP can be found on the FCC's website at <https://www.fcc.gov/affordable-connectivity-program>.

### Environmental Compliance

AIMM 2 Program subrecipients and their contractors and subcontractors must comply with all applicable federal, state, and local environmental laws during project deployment. The National Environmental Policy Act, 42 U.S.C. § 4321 et seq. (NEPA), normally does not apply to projects funded by the AIMM 2 Program.<sup>5</sup> However, projects funded by the AIMM 2 Program may still be subject to NEPA review if they are also funded by, require the approval of, or otherwise involve other federal programs or agencies. AIMM 2 Program subrecipients and their contractors and subcontractors also must comply with all applicable federal, state, and local historic preservation laws during project deployment. Section 106 of the National Historic Preservation Act, 54 U.S.C. § 300101 et seq. (NHPA), normally does not apply to projects funded by the AIMM 2 Program.<sup>6</sup> However, projects funded by the AIMM 2 Program may still be subject to Section 106 of the NHPA if they are also funded by, require the approval of, or otherwise involve other federal programs or agencies. Subrecipients are required to retain records, permits, and other documentation necessary to show compliance with all applicable environmental and historic preservation protections, and provide such documentation to the Treasury or ADECA upon request.

### Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

AIMM 2 Program subrecipients and their contractors or subcontractors must comply with all applicable provisions of Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, which generally prohibits the use of federal grant funds to acquire certain services or equipment posing national security risks. Unless otherwise excepted by law, subrecipients and their contractors or subcontractors must not use AIMM 2 grant funds to: (a) procure or obtain; (b) extend or renew a contract to procure or obtain; or (c)

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<sup>5</sup> In accordance with Treasury guidance, NEPA does not apply to Treasury's administration of the SLFRF, which support AIMM 2 Program grants.

<sup>6</sup> In accordance with Treasury guidance, Section 106 of the NHPA does not apply to Treasury's administration of the SLFRF, which support AIMM 2 Program grants.

enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications and video surveillance services or equipment as a substantial or essential component of any system, or as critical technology as part of any system, as described in 2 C.F.R. §§ 200.216, 200.471. Subrecipients will not be paid for any costs to procure or obtain prohibited covered telecommunications and video surveillance services or equipment, and any AIMM 2 grant funds used by subrecipients for such costs will be subject to recoupment.

#### Compliance with Labor Laws

AIMM 2 Program subrecipients must comply with all applicable federal, state, and local labor laws. While the federal Davis-Bacon Act prevailing wage rate requirements generally do not apply to projects funded solely by the AIMM 2 Program, Treasury and ADECA encourage subrecipients to ensure that projects incorporate strong labor standards and competitive wages to promote effective and efficient delivery of high-quality infrastructure projects and support economic recovery through strong employment opportunities for workers. AIMM 2 Program applicants and subrecipients will be asked to provide information on any plans to prioritize strong labor, workforce development/continuity, and local hiring practices and hiring of workers from historically underserved communities for the proposed project. In addition, subrecipients may be required to provide additional labor information as part of the subaward reporting process.

#### Compliance with Nondiscrimination Laws

AIMM 2 Program subrecipients must comply with all applicable federal, state, and local nondiscrimination laws. Such laws prohibit recipients of federal financial assistance from denying benefits or services, or otherwise discriminating on the basis of race, religion, color, national origin (including limited English proficiency), disability, age, or sex (including sexual orientation and gender identity). Such laws include, but are not limited to: (a) Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d et seq., and Treasury's implementing regulations, 31 C.F.R. Part 22; (b) Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 794; (c) Title IX of the Education Amendments of 1972, 20 U.S.C. § 1681 et seq., and Treasury's implementing regulations, 31 C.F.R. Part 28; (d) Age Discrimination Act of 1975, 42 U.S.C. § 6101 et seq., and Treasury's implementing regulations, 31 C.F.R. Part 23; and (e) Title II of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101 et seq. Subrecipients will ensure that their contractors and subcontractors for a project comply with all applicable nondiscrimination requirements. In accordance with federal law, subrecipients will provide any documentation or assurances that Treasury or ADECA may require demonstrating their compliance with the nondiscrimination requirements.

#### Ownership of Project Property and Property Standards

In accordance with Treasury guidance, the federal government will retain an interest in the real property or equipment acquired or improved under an AIMM 2 grant (Project Property) until December 31, 2034 (Federal Interest Period). Title to Project Property will vest in an AIMM 2 Program subrecipient, so long as the subrecipient meets certain conditions during the Federal Interest Period. These conditions require that the subrecipient (and any successors or transferees):

- Must use the Project Property for the authorized purposes of the project in the same manner as they use comparable real property and equipment within their networks in the ordinary course of their business, subject to the rights to disposition provided below;
- Must continue to provide internet service to the service areas and at the standard initially agreed upon by ADECA and the subrecipient;
- Must participate in federal programs that provide low-income consumers with subsidies on broadband internet access services, as applicable;
- Must comply with the requirements of 2 C.F.R. § 200.310, which may be satisfied by adequate self-insurance;
- Must comply with the use and management requirements for equipment in 2 C.F.R. §§ 200.313(c)(4), 200.313(d), which may be satisfied by applying the subrecipient's commercial practices for meeting such requirements in the normal course of business (e.g., commercial inventory controls, loss prevention procedures, etc.), provided that such inventory controls indicate the applicable federal interest;
- Must maintain records of real property that include an indication of the applicable federal interest;
- May dispose of Project Property in the ordinary course of business when no longer needed to operate the network, such as in order to upgrade equipment and improve facilities, provided that at least the same level of service provided by the network is maintained and there is no material interruption to service and that such upgraded property is subject to the same requirements as other Project Property;
- May otherwise sell or transfer Project Property only after provision of notice to Treasury that identifies the successor or transferee and after securing the agreement of the successor or transferee to comply with these requirements and the acknowledgement of the successor or transferee of the federal property interest; and
- Must notify ADECA and Treasury upon the filing of a petition under the Bankruptcy Code, whether voluntary or involuntary, with respect to the subrecipient or its affiliates.

AIMM 2 Program subrecipients must hold Project Property in trust for project beneficiaries for the duration of the Federal Interest Period but may encumber Project Property under certain circumstances. AIMM 2 Program subrecipients must comply with applicable provisions of the Uniform Administrative Requirements to the extent any federally-owned real property or equipment is used by the subrecipients for projects. If AIMM 2 Program subrecipients do not meet Treasury's conditions for Project Property ownership, they must request disposition instructions from Treasury pursuant to the Uniform Administrative Requirements.

More information on subrecipient ownership of Project Property and service provider property standards can be found on Treasury's website at <https://home.treasury.gov/system/files/136/SLFRF-and-CPF-Supplementary-Broadband-Guidance.pdf>.

## Audit and Monitoring Procedures

All subrecipients of federal funds must follow the Audit Requirements in the Uniform Administrative Requirements (2 C.F.R. Part 200, Subpart F), as applicable. Non-profit subrecipients that expend \$750,000 or more during their fiscal year in federal awards must have a single or program-specific audit conducted for that year in accordance with the provisions of 2 C.F.R. Part 200. All entities that have a single audit must submit the reporting package and data collection form to the Federal Audit Clearinghouse in accordance with 2 C.F.R. § 200.512. Additionally, if any subrecipient receives more than \$500,000, collectively, in Alabama State General Fund appropriations in its fiscal year from ADECA, it must have an audit in accordance with Government Auditing Standards (the Yellow Book) and Generally Accepted Auditing Standards established by the American Institute of Certified Public Accountants.

Under federal law and in accordance with Treasury guidance, for-profit subrecipients are not subject to the audit obligations established by 2 C.F.R. Part 200, Subpart F, including those set forth in 2 C.F.R. § 200.501. However, ADECA has an obligation to ensure for-profit subrecipient compliance, which may include pre-award audits, monitoring during the agreement, and post-award audits. As a result, Treasury and ADECA may utilize their auditors to conduct audits of AIMM 2 Program subrecipients in accordance with applicable law. More information on the application of the audit provisions of the Uniform Administrative Requirements to AIMM 2 Program subrecipients can be found on Treasury's website at <https://home.treasury.gov/system/files/136/SLFRF-and-CPF-Supplementary-Broadband-Guidance.pdf>.

AIMM 2 Program subrecipients must establish and maintain effective internal controls to manage their grants in compliance with applicable law and the subaward agreement. A successful AIMM 2 Program applicant will be evaluated for risk of noncompliance with federal and state statutes, regulations, and the terms and conditions of the grant before the subaward agreement is executed. ADECA staff will monitor AIMM 2 Program subrecipients as necessary to ensure that projects are completed in a timely manner and program funds are used for authorized purposes. ADECA may revise its subrecipient risk assessment based on project performance/reporting and may impose specific conditions or enforcement actions on a subrecipient in accordance with applicable law. Subrecipients must maintain sufficient records to substantiate the information they submit to ADECA as part of a project. Upon request, subrecipients will provide any pertinent records to authorized Treasury/ADECA personnel for the purpose of making audits, inspections, financial reviews, examinations, excerpts, transcripts, or other investigations related to their projects.

## Recoupment of AIMM 2 Program Grant Funds

In the event the State of Alabama is required to repay ARPA funds delegated to ADECA, including AIMM 2 Program grant funds, as a result of a subrecipient's noncompliance with the terms and conditions of the AIMM 2 Program subaward agreement or any applicable law, regulation, or guidance, ADECA will have the right to recoup such repayments from the subrecipient in the amount attributable to the subrecipient's noncompliance without offset, including by reducing or withholding future progress payments. To the extent permitted by law, ADECA will provide the subrecipient with written notice of such noncompliance and allow the

subrecipient an opportunity to correct or otherwise cure such noncompliance before seeking recoupment, in accordance with Treasury guidance.

### Alabama Broadband Map Participation

If an applicant is a last-mile broadband service provider, it must submit, within the one-year period preceding the awarding of an AIMM 2 grant, its broadband service availability information to Alabama's broadband mapping program to be eligible for an AIMM 2 grant. Such entities must continue to participate in Alabama's broadband mapping program throughout the entire project period by providing accurate, complete, and timely responses to mapping data requests from ADECA or its contractors should they receive an AIMM 2 grant.

### **AIMM 2 Program Reporting and Closeout Obligations**

AIMM 2 Program subrecipients will provide any project information requested by ADECA necessary to support compliance by ADECA and the State of Alabama with any reporting, audit, or informational obligations required by the conditions of the ARPA funds delegated to ADECA. Subrecipients will be required to report on the progressive completion of their projects until closeout. Grants for projects not showing progress may be terminated. Upon project completion, subrecipients will be required to conduct further broadband performance testing and provide additional information to ADECA as part of the closeout process. Subrecipients will be required to provide both planned information about their projects as well as actual information once projects are completed. Subrecipient compliance with all reporting and closeout obligations is a condition for the receipt of each progress payment of the grant amount and ADECA will verify subrecipient compliance with all current reporting and closeout obligations before releasing each payment.

The following provides an overview of AIMM 2 Program reporting and closeout obligations established by the Treasury and ADECA. These requirements are subject to change and are regularly updated. Subrecipients will be responsible for complying with the most current reporting and closeout obligations at the time of submission. In accordance with federal law, the reporting and closeout obligations may be modified by ADECA as part of its subrecipient risk assessment and monitoring.

More information on the project reporting and closeout obligations applicable to the AIMM 2 Program can be found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/> as well as Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds/recipient-compliance-and-reporting-responsibilities>.

The AIMM 2 Program reporting and closeout obligations will include, but not be limited to, the following:

*Initial Project Report and Quarterly Project and Expenditure Report* – AIMM 2 Program subrecipients must submit an Initial Project Report to ADECA when executing the subaward agreement, which will provide an initial "snapshot" of key project metrics. AIMM 2 Program subrecipients also must submit a Quarterly Project and Expenditure Report to ADECA no later

than 10 calendar days after the last day of each calendar quarter, which will provide a project status update. AIMM 2 Program subrecipients will submit each report by the deadline established by ADECA and in the format established by ADECA, including through the completion of ADECA-provided templates. Specific reporting instructions and requirements will be provided by ADECA to subrecipients in advance of submission, however, some of the information subrecipients will be required to provide in the Initial Project Report and Quarterly Project and Expenditure Report includes:

- Project information/status (e.g., projected/actual construction start date, projected/actual initiation of operations date).
- Obligations and expenditures, both for the current reporting period and cumulative for the project.
- Labor practices (for projects receiving over \$10 million in SLFRF funding through an AIMM 2 Program grant).<sup>7</sup>
- Project performance indicators and project data, including location specific information for the project (in the format set by Treasury). Such information will include Fabric ID Numbers from the FCC Broadband Serviceable Location Fabric for each location to be served by the project, the subrecipient's FCC-issued Provider ID Number, and service speed and latency at each location post-SLFRF investment.<sup>8</sup>
- Any updates or changes to project design elements, including any changes to the project budget, financing, or milestones.
- Test results for portions of the project completed in the covered period (see Closeout Obligations and Reporting below).

*Closeout Obligations and Reporting* – AIMM 2 Program subrecipients must submit a final Closeout Report to ADECA following project completion, demonstrating full and complete performance of the terms and conditions of their subaward agreements and required broadband service offerings. AIMM 2 Program subrecipients will submit the Closeout Report in the format established by ADECA, including through the completion of ADECA-provided templates. Specific reporting instructions and requirements will be provided by ADECA to subrecipients in advance of submission, however, some of the information subrecipients will be required to provide in the Closeout Report includes:

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<sup>7</sup> More information on labor practice reporting can be found on Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds/recipient-compliance-and-reporting-responsibilities>.

<sup>8</sup> More information on broadband location data reporting can be found on Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds/recipient-compliance-and-reporting-responsibilities>. More information on FCC identifiers can be found on the FCC's website at <https://www.fcc.gov/BroadbandData>. Speed and latency data reported must be consistent with the compliance standards and testing protocols for speed and latency adopted by the Treasury and established by the FCC in multiple contexts, including the Connect America Fund and Rural Digital Opportunity Fund. See, e.g., *Connect America Fund*, WC Docket No. 10-90, Order, 33 FCC Rcd 6509 (WCB/WTB/OET 2018); *Connect America Fund*, WC Docket No. 10-90, Order on Reconsideration, 34 FCC Rcd 10109 (2019).



- Middle-Mile Network Performance Testing: Subrecipients will satisfy the following performance testing obligations for completed portions of the middle-mile network, submit data on completed portions each quarter, and submit a final report compiling all of the quarterly information upon project completion:

- Fiber Acceptance Testing Requirements

Fiber optic performance testing is required for final acceptance of the project and may be required for both terminated and unterminated fiber cables depending on the scope of the construction. It will also be required for fiber segments leased from other entities. Testing shall include Optical Time Domain Reflectometer (OTDR) traces at 1310 nm and 1550 nm and will require optical power meter testing. Performance criteria specified below shall apply to all fiber tests.

Performance testing of unterminated fiber cables during construction or upon completing construction of unterminated cables shall validate that the installed cable is not damaged or defective and that any intermediate splices meet performance specifications. This testing will require the use of bare fiber adapters for temporary connection to the test equipment.

Final acceptance of terminated fiber cables shall be contingent upon successful end-to-end testing of each terminated fiber strand. The testing will validate the optical performance of the entire link, as well as verify that fiber splicing has occurred according to previously supplied splice matrices. Testing will consist of bi-directional end-to-end OTDR traces, as well as direct optical attenuation and continuity testing using a calibrated optical source and power meter. This testing shall occur only after fibers are terminated on both ends of a link, and all intermediate construction and/or splicing involving the re-entry of installed splice cases or handling of the fiber optic cable has been completed for a particular segment.

The following table summarizes the testing requirements for various construction scenarios:

Construction Scope Scenario	OTDR Test	Optical Power Meter
<b>Unterminated fiber cable installed with <u>no</u> intermediate splicing</b> (i.e., coiled at both ends for future termination outside project scope)	Uni-directional trace of all fiber strands at 1310 nm and 1550 nm. Trace must validate cable length and attenuation. There must be no reflective events present.	None required.
<b>Unterminated fiber cable installed with intermediate splices</b> (i.e., coiled at both ends for future termination outside project scope)	Bi-directional trace of all fiber strands at 1310 nm and 1550 nm. Trace must validate cable attenuation and splice loss criteria.	None required.

<b>Terminated fiber cable installed with or without intermediate splices</b>	Bi-directional trace of all fiber strands at 1310 nm and 1550 nm. Trace must validate cable attenuation and splice loss criteria.	Power meter test of all terminated fiber strands to validate end-to-end link loss and adherence to splice design.
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○ Testing Criteria

Testing shall be deemed successfully completed if:

- (1) maximum fiber losses meet manufacturer specifications, with an allowance for splices and connectors;
- (2) individual splice losses do not exceed 0.1 dB; and
- (3) maximum mated connector losses do not exceed manufacturer specifications.

If a maximum loss of 0.1 dB is not achieved for a given splice after three unsuccessful attempts to resplice, a threshold of 0.2 dB will be allowed. The location, fiber number, and confirmation of resplice attempts for any splice exceeding 0.1 dB loss must be noted in the as-builts and in the test results submittals, in addition to the standard test documentation required below.

Testing will be performed by subrecipient personnel and may be observed by designated representatives of ADECA. ADECA may request and/or perform additional testing to verify results prior to accepting test data.

▪ OTDR Testing Procedure

An OTDR shall be used to measure and document splice losses and connector losses. To correctly identify abnormalities at a short range, a 100-meter or longer launch cable shall be used between the OTDR and the fiber under test. If the connection of the launch cable to the patch panel requires optimization by the operator, including cleaning or reseating of connectors, sampling acquisition will commence upon completion of the optimization.

Each fiber will be identified, and the results of the test for each fiber will be recorded as indicated below. The test will be repeated for each of the fibers linking a particular site. All tests will be made at 1310 nm and 1550 nm. All testing shall be performed to the test equipment manufacturer's instructions and current industry standards.

A uniform file-naming scheme complying with conventions mutually agreed upon by ADECA and the subrecipient shall be used for recorded data.

The optical fiber OTDR test documentation shall include:

- Date of test;
- End point locations;

- Fiber identification, including tube color and fiber color;
- Total fiber length;
- Individual fiber traces for complete fiber length;
- Losses of individual splices and connectors;
- Losses of other anomalies;
- Wavelength tested;
- Measurement directions;
- Manufacturer, model, and serial number of the test equipment; and
- Name and company of the technician performing the tests

All data collected at each location during the tests shall be recorded at the time of the tests using electronic means.

▪ **Optical Power Meter Testing Procedure**

Optical power meter measurements shall be made at the same time as the OTDR tests to determine overall fiber loss and to ensure that fibers have appropriate end-to-end continuity based on the splice designs. Power meter testing shall be performed at both 1310 nm and 1550 nm and shall report the relative loss measurement of each fiber strand.

Testing must be performed in accordance with manufacturer instructions. The technician performing the test shall avoid placing bends having a diameter of less than 100 mm (4 inches) in any jumper cables used to conduct the test.

The power meter test documentation shall include:

- Date of test;
- End point locations;
- Fiber identification, including tube color and fiber color;
- Reference power measurement (when using a power meter that does not have a calibrated “relative” power measurement mode);
- Measured attenuation of the link segment;
- Acceptable link attenuation based on measured cable length with allowances for actual splices and connectors;
- Wavelength tested;
- Manufacturer, model, and serial number of the test equipment; and
- Name and company of the technician performing the tests

▪ **On-Site Validation**

ADECA reserves the right to conduct visual validation of construction at any time. ADECA also reserves the right to conduct fiber testing of any segment of

the completed construction and will arrange for such testing with the subrecipient. Such validation may be conducted by ADECA staff or their authorized representatives.

- **Engineering As-Builts**

Subrecipients shall perform field markups of engineering/as-built drawings during construction or repairs. All such documentation shall be provided to ADECA and any designated engineering personnel so that ADECA's as-built documentation may be accurately maintained.

As-built drawings, documentation, and GIS data shall identify the location of all underground plant attributes on the engineering drawings. For all handholes, provide precise latitudinal and longitudinal coordinates and offset measurements (relative to the edge of the pavement, curb, landmarks, etc.). For underground conduit, provide depth and offset measurements validated at intervals of no greater than 50 feet.

As-built drawings, documentation, and GIS data shall identify aerial plant attributes necessary to validate that all cable attachment heights adhere to the applicable pole attachment agreement and licenses as well as ensuring that the installation has followed the engineering drawings. Sequential cable footages shall be documented for all fiber optic cable installed. These footage markings shall be documented at the "beginning" and "ending" points for each pole, handhole, and slack loop throughout the entirety of the cable segment.

If applicable, redlined prints shall identify any deviations from preconstruction engineering drawings, including actual cable slack distances placed (whether more or less than specified). When applicable, the subrecipient shall supply ADECA with log data from the directional bore guidance system used during construction, indicating depth of the conduit placement. Also, redlines shall indicate measured depth of conduit placement for conduit placed using open trenching or open cut methodologies.

All redlines and as-builts should be provided to ADECA in electronic formats, as applicable to each type of deliverable (CAD, PDF, GIS files, etc.).

- **Optical Equipment Tests**

Subrecipients shall perform activation testing of electronics to demonstrate their ability to provide services over each activated optical path. Testing shall simulate the performance of services as they will be delivered in a loaded network.

- **Anchor Institution Service Location Performance Testing:** Subrecipients will conduct performance testing and submit test results to ADECA according to the following process:
  - ADECA will select locations within the subrecipient's project area for performance testing
  - The subrecipient will conduct speed and latency tests for each location selected by ADECA

- Tests will be conducted, at a minimum, once per hour from 6:00 PM to 12:00 AM, for a minimum total of six tests per location
- Tests will be conducted from the premises of the selected active subscribers to a remote test server located at, or reached by passing through, an FCC-designated Internet exchange point (IXP), which is any building, facility, or location housing a public Internet gateway that has an active interface to a qualifying Internet Autonomous System (ASN)<sup>9</sup>
- The subrecipient must notify ADECA verbally or in writing of the completion of testing on the same day testing is completed. The subrecipient must submit test results to ADECA as soon as possible, but no later than three calendar days after testing is completed.
- Test results must conform to the following Performance Testing Specifications:
  - At least 80% of the speed test results must be at a minimum of 80% of the speed tiers committed to in the subaward agreement for upload and download
  - At least 95% of latency measurements must be at or below 100 milliseconds round-trip time
  - If none of the locations selected by ADECA subscribes to a top-tier speed offering, the subrecipient will include testing at a location that does subscribe to a top-tier speed offering. If there are no locations within the project area that subscribe to the top-tier service offering, the subrecipient will upgrade one of the locations selected by ADECA temporarily to allow for testing at the top-tier speed.
- Final Quarterly Project and Expenditure Report
- Completed Final Payment Request: The subrecipient must identify any differences between the grant amount in the subaward agreement and the final payment request. The subrecipient must explain the reasons for the differences and the impacts or changes to the project budget as a result of these differences, which will be subject to ADECA review. The subrecipient may not request payment that exceeds the grant amount specified in the subaward agreement or the most recently approved budget amendment to the subaward agreement.

Funds for an approved subaward may be requested by the submission of a payment request from the subrecipient using the Payment Request template found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/>. The Payment Request must be completed and include the remittance address that matches the subrecipient's Alabama Buys eProcurement portal information. The Payment Request must be signed by an authorized official certifying that all reporting obligations are up to date, the subrecipient is compliant with all terms and conditions of the subaward agreement, and the subrecipient has met progressive completion of the project.

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<sup>9</sup> More information about acceptable test paths and remote server locations is available at <https://www.usac.org/wp-content/uploads/high-cost/documents/Tools/PMM-Test-Paths-and-Remote-Server-Locations-1.pdf>. Qualifying ASNs are listed in Appendix B of *Connect America Fund*, WC Docket No. 10-19, Order on Reconsideration, 34 FCC Red 10109 (2019), which can be found at <https://docs.fcc.gov/public/attachments/FCC-19-104A1.pdf>.

- Completed Payment Request Supporting Documentation Summary: The subrecipient will provide evidence of actual costs incurred for the project and ADECA will disburse the final progress payment only after reviewing the subrecipient's costs incurred, evidence of completion of the project, and compliance with program requirements. The final Payment Request must have a completed Payment Request Supporting Documentation Summary submitted with it that describes the documentation supporting all eligible expenses incurred and requested for each budget category for the project. The subrecipient must submit all invoices for incurred costs and proof of payments, if applicable, dated during the performance period for the claimed costs with the Payment Request Supporting Documentation Summary. Supporting documents must be submitted in the order they are listed on the Payment Request Supporting Documentation Summary by budget category. Supporting document files shall be named by budget category with the same name listed under the source file name on the Payment Request Supporting Documentation Summary. All documentation must be submitted as attachments by email to [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov), or such other means as may be designated by ADECA, including an online portal. ADECA will request any clarifying documentation needed to support costs claimed during the review process.

Proof of payment may consist of cancelled check images, email confirmations, or bank statements showing the transaction by electronic funds transfer or by check. It is not necessary to provide the full bank statement so long as the date of the payment, amount of the draft that corresponds with the invoice amount, and posting date are visible.

Generally, costs incurred prior to the award are unallowable; however, an exception is made for purchased fiber or other broadband equipment acquired in advance of the award (stockpiled materials, materials on hand, etc.). The invoices and proof of payments should clearly denote the methodology used to determine the amount allocated to the grant as properly evidenced in the subrecipient's accounting system.

Funds which have been properly obligated by the end of the subaward term will have 30 days in which to be liquidated (expended). Except under extenuating circumstances, and as approved by ADECA, no funds will be paid beyond the 30-day closeout period. Any funds remaining in the subaward after 30 days will revert to ADECA.

*Report Submission and Review* – AIMM 2 Program subrecipients will submit all reports to ADECA by email at [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov) or such other means as may be designated by ADECA, including an online portal. Subrecipient reports are subject to ADECA review and ADECA may request additional information. Upon request, AIMM 2 Program subrecipients will provide access to their facilities, including but not limited to interconnection points and cable plant, for authorized Treasury/ADECA personnel to verify project status/testing and for other purposes related to project monitoring and reporting. ADECA may request and/or perform additional testing to verify data reported by subrecipients.

Information provided in subrecipient reports will be disclosed to Treasury as required by the conditions of the ARPA funds delegated to ADECA. ADECA's receipt and use of subrecipient reports will not constitute approval of the information submitted by the subrecipient or of the procedures used in creating the reports. Subrecipients remain responsible for the accuracy and



completeness of their reports. ADECA assumes no liability for any damages arising out of or in any way connected with the receipt and use of subrecipient reports, and ADECA will have the right to recoup any repayments of ARPA funds attributable to a subrecipient's failure to provide accurate and complete reports.

### **Additional Information and Guidance**

Additional resources providing information and guidance relevant to the AIMM 2 Program can be found on ADECA's website at <https://adeca.alabama.gov/alanchormiddlemile/> as well as Treasury's website at <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>.

For more information regarding the AIMM 2 Program, please call (334) 353-0767 or send questions to [broadband.fund@adeca.alabama.gov](mailto:broadband.fund@adeca.alabama.gov).

## Appendix A. Fiber Construction Standards

AIMM 2-supported projects must be undertaken and completed in a manner that is technically sound, meaning that they must meet design and construction methods and use materials that are approved, codified, recognized, fall under standard or acceptable levels of practice, or otherwise are determined to be generally acceptable by the design and construction industry. The following are the minimum technical standards that are required for projects funded under the AIMM 2 Program.

### Access

- Subrecipient shall designate access points for authorized customers and users. Examples may include but are not limited to meet points within points-of-presence and data centers, and splice enclosures on utility poles and in manholes or handholes.
- Subrecipient shall provide a procedure for access. Examples may include but are not limited to escorted access to subrecipient-operated meet points, customer-specific handholes or cabinets, access to designated cages or rooms within a point-of-presence, or cross-connects in data centers.

### Material Requirements

- Material will comply with commercial grade industry standards including those established by UL and NEMA. All materials will be new and free from defects.
- The location and type of conduit and fiber cable and cable components within any building shall comply with applicable code and be verified with the building owner.
- All manholes, handholes, and vaults shall be Alabama Department of Transportation approved and load rated per industry standards for the environment where they are placed (e.g., roadways, non-roadways, railways).
- All fiber shall be constructed in conduit. Minimum conduit configuration in laterals shall be two 2" duct or approved equivalent.
- Fiber cables shall have a strand count taking into account the needs of anchor institutions and the needs of current and future last-mile providers, both in the immediate area and for services that may pass into and out of the service area. Minimum count shall be 144 for any lateral cable and 12 for any drop cable.
- Fiber must be single-mode with the following specifications:
  - Single-mode G.652D ITU standard or approved equivalent
  - For single-mode fiber, loss shall not exceed 0.5 dB per km at 1310 nm and shall not exceed 0.4 dB per km at 1550 nm
- Connector types shall be LC/APC unless otherwise specified.

## Specifications

### *Permits and Traffic Control*

- The subrecipient must adhere to all applicable laws, rules, and requirements and must obtain permits to place infrastructure per specification per county or city ordinance applicable to where the infrastructure is being placed.
- All traffic control, in accordance with local, state, county, or permitting agency laws, regulations, and requirements, will be the subrecipient's responsibility. The subrecipient's construction schedule will take into consideration sufficient time for the development and approval of a traffic control plan.

### *Underground Construction*

- Large-radius sweeps shall be provided where required for offset or change in direction of conduit. Bend radius rating of the cable must be adhered to for all conduit bends, pull boxes, and handholes.
- The subrecipient will locate underground lines of third parties in the planned cable route area and perform any other utility location required by ordinances, regulations, and industry standards.
- As required, subrecipient will secure permits before placing or excavating in the public right-of-way, placing or excavating on private property, crossing streams, or pushing pipe or boring under streets and railways. Pre-survey shall be done prior to each job, as well as test-pitting according to standard industry practice.
- Tracer wire shall be placed with all conduit, unless armored or traceable cable is used. The subrecipient will provide the tracer wire and shall install, splice, and test the tracer wire.
- Except where otherwise specified, cable shall be placed to a minimum depth of 24" along roadways and 18" on private property. Greater cable depth will be required at the following locations:
  - Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the parallel drainage ditch, whichever is greater, unless the controlling authority required additional depth, in which case the greatest depth will be maintained.
  - Where cable crosses existing sub-surface pipes, cables, or other structures: at foreign object crossings, the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the object's owner, whichever is greater.
- All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction.
- Subrecipient shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn.
- Where the cable route crosses railroad right-of-way, the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the parallel drainage

ditch, whichever is greater, unless the controlling authority requires additional depth, in which case the greatest depth will be maintained.

- Cable markers shall be placed within 48 hours of cable installation. Unless the right-of-way or property owner specifies otherwise, cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and other points on the route not more than 1,000 feet apart.
- On highway right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.
- Handholes will be placed in accordance with standard industry practice. Special attention and planning must be exercised to ensure accessibility by authorized parties after construction has been completed.
- All splice handholes/manholes will be grounded.
- A minimum of 100' coil of cable shall be stored in each handhole or building.

#### *Aerial Construction*

- Fiber cable storage loops shall be installed using suitable “snowshoe” hardware, consisting of no less than an additional 10% cable length compared to the physical route distance, or at locations prescribed by approved engineering drawings.
- All work performed shall be done in accordance with requirements and regulations of the authority having jurisdiction and the utility pole owners.
- As required, subrecipient will secure pole attachment agreements and permits before construction.

#### *Splicing*

- Fiber-to-fiber fusion splicing of optical fibers at each point is required.
- Individual splice loss will be 0.1 dB for single-mode unless after 3 attempts these values cannot be achieved, then a threshold of 0.2 dB will be allowed.
- All cables to buildings shall be fusion spliced within a minimum of 50' entering a building at a location to be determined by the owner with an existing single-mode fiber and terminated at customer's rack.

#### *Service Level Requirements*

- The subrecipient shall be responsible for the operation and maintenance of the fiber optic network, including the splice connections, splice boxes and vaults, and network sites in accordance with generally accepted industry standards and shall perform all required maintenance.
- In the event of any situation where the fiber network may be compromised or work is occurring near the fiber network, the provider will notify ADECA and customers and users of the network. The subrecipient's network operations center (NOC) shall also alert customers and users within 15 minutes via email of network outages that may affect their dark fiber services.

- The subrecipient shall be responsible for the relocation of the fiber due to relocation of rights-of-way, easements, physical plant, or subrecipient data center.
- The subrecipient shall provide a number for the network’s NOC and an escalation list if a customer or user is aware of an outage on the network. The NOC shall be staffed to provide 24 hours a day coverage for monitoring the network and reporting outages. The subrecipient shall maintain a ticketing system for customers and users to track the status of outages.
- The subrecipient shall have personnel on site for repair within two hours of being notified of the location of the fiber outage. The personnel shall assess the situation, determine the resolution based on industry standards, and implement a temporary repair within eight hours of determination. In order to accomplish such objective, it is acknowledged that the repairs so effected may be temporary in nature. In such event, within 24 hours after completion of any such unscheduled maintenance, the provider shall commence its planning for permanent repair, and thereafter promptly shall notify ADECA of such plans and shall implement such permanent repair within an appropriate time thereafter.
- Scheduled maintenance shall include:
  - Routine maintenance and repair of conduit and fiber;
  - Maintenance of a “One Call” program, where applicable, and all required and related cable locates;
  - Maintenance of signposts along the fiber routes with a phone number; and
  - Assignment of fiber maintenance employees to locations along the fiber routes at reasonable intervals dependent upon terrain, accessibility, locate ticket volume, etc.

For scheduled maintenance, the subrecipient shall notify, via email, the customers and users 72 hours prior to the event. The subrecipient shall outline the potential sites and routes impacted and the duration of the maintenance. The subrecipient shall make a best effort to perform scheduled maintenance outside of normal business hours (7 a.m. to 7 p.m.).

### **References, Standards, and Codes**

Listed in the table below are references, standards, and codes applicable to outside plant communications systems design. If questions arise as to which reference, standard, or code should apply in a given situation, the more stringent shall prevail. As each of these documents is modified over time, the latest edition and addenda to each of these documents is considered to be definitive.

**Table 1 — References, Standards, and Codes**

<b>Standard/Reference/ Code</b>	<b>Name/Description</b>
BICSI CO-OSP	BICSI Customer-Owned Outside Plant Design Manual
BICSI TDMM	BICSI Telecommunications Distribution Methods Manual
BICSI TCIM	BICSI Telecommunications Cabling Installation Manual
ITU G.652	Characteristics of a single-mode optical fiber and cable
TIA/EIA – 568	Commercial Building Telecommunications Cabling Standard
TIA/EIA – 569	Commercial Building Standard for Telecommunication Pathways and Spaces
TIA/EIA – 606	The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
TIA/EIA – 607	Commercial Building Grounding and Bonding Requirements for Telecommunications
TIA/EIA – 455	Fiber Optic Test Standards
TIA/EIA – 526	Optical Fiber Systems Test Procedures
IEEE 802.3 (series)	Local Area Network Ethernet Standards, including the IEEE 802.3z Gigabit Ethernet Standard
NEC	National Electric Code, NFPA
NESC	National Electrical Safety Code, IEEE
OSHA Codes	Occupational Safety and Health Administration, Code of Federal Regulations (CFR) Parts 1910 - General Industry, and 1926 - Construction Industry, et al.



Disclaimer

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