

**STATE OF NEW MEXICO
OFFICE OF BROADBAND ACCESS AND EXPANSION**

**AGREEMENT #: GWEP-24-021
AMENDMENT 1**

THIS **AMENDMENT** is made by and between the State of New Mexico, Office of Broadband Access and Expansion administratively attached to the Department of Information Technology, hereinafter referred to “OBAE” and **Navajo Technical University** hereinafter referred to as the “Grantee” and collectively referred to as the “Parties”.

WHEREAS the Parties initially executed Grant Writing, Engineering, and Planning Grant Agreement # GWEP 24-021 on December 10, 2024.

WHEREAS, the Parties agree that an administrative error led to a failure to attach Exhibit A SCOPE OF WORK, and Exhibit B – REQUEST FOR REIMBURSEMENT to the executed agreement.

The purpose of this Amendment is to attach and incorporate the **EXHIBIT A – SCOPE OF WORK**, and **EXHIBIT B – REQUEST FOR REIMBURSEMENT**, as referenced in Article 2(A), into the Agreement.

All other articles and deliverables of the original agreement remain the same.

Exhibit A - Scope of Work

1. Project Title: Grant Writing, Engineering, and Planning – Navajo Technical University”
2. Purpose(s) of Grant Award:

Grant Writing

Engineering

Planning (e.g. network design)

3. Award Amount: \$100,000
4. Description of Proposed Broadband Project: Navajo Technical University (NTU) is the largest (enrollment 1,860) and most technologically advanced tribal college or university in the United States. NTU operates a campus network and external connectivity to Albuquerque, NM and Denver, CO. As a recipient of National Science Foundation funding to improve external connectivity. The National Science Foundation (NSF) *Nilch Bee Naa Alkaa Go Ohooa Doo Eidii Tii* (Using Air ‘Technology’ to Learn and Understand New Things), Award Abstract # 1827199 project planned and built a dedicated network in support of science programs at NTU. As part of the NTU CARES Act program, NTU established a 100 Gbps service from Crownpoint, NM to Albuquerque, NM. Their campus

and regional network terminate services at the University of New Mexico, ABQ-G aggregation location at the H5 Datacenter (505 Marquette). Subsequent projects added 1 Gbps services to Diné College's academic and research program. NTU established a commodity service for tribal and campus services at ABQ-G with Cogent for 40 Gbps of blended services. Finally, NTU is a participating member of the Front Range Gigapop (FRGP) in Denver, CO. NTU gains access to Internet2 research and peering at FRGP via a 100 Gbps shared connection over the Western Regional Network (WRN). The University of New Mexico, FRGP, the Pacific Northwest Gigapop, the Corporation for Network Initiatives in California (CENIC), and the University of Hawaii comprise WRN's membership to share regional connectivity and Internet2 services. NTU is actively pursuing secondary high-capacity network routes to Los Angeles, Phoenix, Salt Lake City, Las Vegas, and Window Rock. The NTU fiber-based network replaced much of the 2009 UNM Established Program to Stimulate Competitive Research (EPSCoR) funded microwave network. The microwave network delivered connectivity to isolated tribal communities such as the Zuni Pueblo, Zia Pueblo, and to unserved and underserved Navajo populations.

The addition of fiber-based services for campus and community initiatives improved performance, reduced latency, and added capacity to re-invent tribal connectivity as an abundance of resources intended to meet their technical and engineering mission and their obligation to collaborate with the Navajo Nation, Office of Diné Education and Diné College (Tsaile, AZ and a branch campus in Crownpoint, NM). NTU's preparation to improve external connectivity in support of NTIA BEAD and other digital equity programs demonstrates their leadership in support of critical tribal cyberinfrastructure. The addition of high performance and low latency network capacity services enables NTU to continue efforts to connect students and community members. In 2008, NTU established the "Internet to the Hogan" initiative to build services in support of access and equity on the Navajo Nation. NTU requests planning resources to rebuild the tribal microwave network and to plan for the deployment of citizen's band radio services (CBRS) or alternative wireless systems to connect students and community members. NTU proposes to reach tribal unserved and underserved population to enable digital participation in their Diné education and academic programs. See exhibit 1 for a the legacy NTU microwave network. UNM Gallup has been removed and the other connections require structural analysis updates (for added or additional equipment placement) and microwave equipment upgrades. The current Harris equipment was turned down in 2019.

5. Outcomes:

- a. *Microwave Network Rebuild.* NTU proposes to plan for the use of existing tower locations that will provide backhaul to NTU Crownpoint for commodity, research, and peering services at 1 Gbps or higher (licensed or unlicensed). NTU locations include (source: Magellan Tower Survey, 2017):

- i. Marsh Pass - NTU
 - ii. Roof Butte – Questar
 - iii. Tower Crownpoint - NTU
 - iv. Pueblo Pintado NTU
 - v. Red Mesa - NTU
 - vi. Pastora Peak - NTU
 - vii. Cow Springs - Questar
 - viii. Mount Powell - NTU
 - ix. Millenium Tower - NTU Co-location NNFTV
 - x. Pajarito Peak - Zia Pueblo
 - xi. Crow's Flat - Zia Pueblo
 - xii. Dezza Bluff - NNFTV
 - xiii. Black Rock - Zuni Pueblo American Tower
 - b. Planning includes site upgrade/structural analysis (if needed), equipment refresh (functional analysis, installation, and sustainability), and service in support of CBRS or alternative wireless systems. The microwave rebuild is intended to support community wireless services for unserved or underserved populations. NTU intends to collaborate with Navajo Office of Broadband, the Navajo Nation eligible telecommunications carriers (ETCs), and others to plan and propose a reference technical architecture for tribal last mile services for higher education institutions.
6. Planning Scope of Work. NTU proposes to plan for the deployment of CBRS or alternative wireless services for unserved and underserved populations located on the Navajo Nation. Planning assistance will include working with students, initial grant / funding, and preparation for engineering/quotes for service. Planning for last mile connectivity for unserved tribal populations will include:
- a. Chapter Houses. Navajo Nation requires approval from the respective chapter house. The project will contact and secure the require Navajo Nation approvals for placement of a wireless broadcast system for each chapter house.
 - b. Navajo Nation, Office of Land Use. Navajo Nation requires approvals from the Navajo Nation Land Office to place towers for commercial and community use. The project will secure the appropriate approvals to place broadcast equipment.
 - c. Navajo Nation, Office of Broadband. Navajo Nation is in process of developing and submitting fixed wireless and middle mile fiber initiatives (as of Oct 2024). The project will confer with the Office of Broadband to align proposed wireless and fiber installations needed for each community/chapter house location. If fiber or alternative backhaul (e.g., low orbit satellite, fiber, or other aggregation options) is required, the project will plan in coordination for the use, placement, and implementation of the service with the Office of Broadband.

- d. Wireless/Microwave Equipment. The project will select or issue a request for quotes (RFQ) for wireless broadcast equipment or microwave backhaul (if needed) to connect each community location to NTU's community network (with access to commodity or educational network services at Albuquerque (H5).
 - e. Educational Wireless. NTU will investigate the use of alternative wireless services to reach difficult to reach or non-line of sight (NLOS) locations where topology, distance, or other environmental conditions require a novel wireless deployment to support minimum broadband standards.
 - f. Funding Development (initial). The project will include the development of grant requests or resource sharing with higher education or other entities to improve the sustainability of the services delivered by NTU.
 - g. Student Service Learning. The project will plan for the recruitment and deployment of NTU students to install equipment, communicate with Chapter Houses, and prepare for digital learning, and digital literacy services for Navajo Nation residents and collaborators.
7. Proposed Cost: NTU requests \$100,000.00 to hire professional services organization to conduct the planning assessment. NTU requires 30-45 days to complete a contractual agreement with an external consultant. Acceptance of the award requires NTU Board approval.
8. Timeline: Project(s) are required to be completed by 6/30/2025 from the period of performance start date.
9. Reimbursements: The awardee may submit reimbursement requests monthly or quarterly until the awarded amount is exhausted. All reimbursement requests must be submitted no later than June 30, 2025.

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**NOTICE OF OBLIGATION TO REIMBURSE GRANTEE
EXHIBIT B**

Notice of Obligation to Reimburse Grantee # _____

DATE: _____

TO: Department Representative: _____, _____

FROM: Grantee Entity: _____

Grantee Official Representative: _____

SUBJECT: Notice of Obligation to Reimburse Grantee

Grant Number: _____

Grant Termination Date: _____

As the designated representative of the Department for Grant Agreement number _____ entered into between Grantee and the Department, I certify that the Grantee has submitted to the Department the following third party obligation executed, in writing, by the third party's authorized representative:

Vendor or Contractor: _____

Third Party Obligation Amount: _____

Vendor or Contractor: _____

Third Party Obligation Amount: _____

I certify that the State is issuing this Notice of Obligation to Reimburse Grantee for permissible purposes within the scope of the project description, subject to all the terms and conditions of the above referenced Grant Agreement.

Grant Amount: _____

The Amount of this Notice of Obligation: _____

The Total Amount of all Previously Issued Notices of Obligation: _____

The Total Amount of all Notices of Obligation to Date: _____ \$ 0.00

Note: Contract amounts may exceed the total grant amount, but the invoices paid by the grant will not exceed the grant amount.

Department Rep. Approver: _____

Title: _____

Signature: _____

Date: _____

STATE OF NEW MEXICO
Request for Payment Form
Exhibit B

I. Grantee Information

(Make sure information is complete & accurate)

- A. Grantee: _____
- B. Address: _____
(Complete Mailing, including Suite, if applicable)

City, State, Zip
- C. Contact Name/Phone #: _____
- D. Grant No: _____
- E. Project Title: _____
- F. Grant Expiration Date: _____

II. Payment Computation

- A. Payment Request No. _____
- B. Grant Amount: \$ 0.00
- C. AIPP Amount (If Applicable): \$ 0.00
- D. Funds Requested to Date: \$ 0.00
- E. Amount Requested this Payment: \$ 0.00
- F. Reversion Amount (If Applicable): \$ 0.00
- G. Grant Balance: \$ 0.00
- H. CNMF GF GOB STB
- I. Final Request for Payment (if Applicable)

III. Fiscal Year : 2027 (July 1, 2026 - June 30, 2027)
(The State of NM Fiscal Year is July 1, 20XX through June 30, 20XX of the following year)

IV. Reporting Certification: I hereby certify to the best of my knowledge and belief, that required reporting is up to date; to include the accuracy of expenditures and grant balance, project status, project phase, achievements and milestones; and in compliance with [the Grant Agreement](#).

V. Compliance Certification: Under penalty of law, I hereby certify to the best of my knowledge and belief, the above information is correct; expenditures are properly documented, and are valid expenditures or actual receipts; and that the grant activity is in full compliance with Article IX, Sec. 14 of the New Mexico Constitution known as the "anti donation" clause.

Grantee Fiscal Officer
 or **Fiscal Agent** (if applicable)

Grantee Representative

 Printed Name

 Printed Name

Date: _____

Date: _____

(State Agency Use Only)

Vendor Code: _____ Fund No.: _____ Loc No.: _____

I certify that the State Agency financial and vendor file information agree with the above submitted information.

 Division Fiscal Officer Date

 Division Project Manager Date

IN WITNESS WHEREOF, the parties have duly executed this Amendment as of the date of execution by the final signatory.

GRANTEE

By: ^{DocuSigned by:}
Jason Arviso 12/30/2024
DA94FBA8F4C64FC...
Jason Arviso Date
Vice President of Operations

OFFICE OF BROADBAND ACCESS AND EXPANSION

By: ^{DocuSigned by:}
Drew Lovelace 1/2/2025
3F27FC46E7C4438...
Drew Lovelace Date
Acting Director

Approved for financial sufficiency:

By: ^{Signed by:}
Manny Barreras 1/2/2025
32A0D0595C7C493...
Date
Chief Financial Officer, DoIT

Approved for legal sufficiency:

By: ^{DocuSigned by:}
Cassandra Brulotte 1/2/2025
C0140201B6F94E1...
Cassandra Brulotte Date
General Counsel, OBAE