# SEN Initiative / OBAE Updates
## August 17, 2023
### OBAE / BDCP

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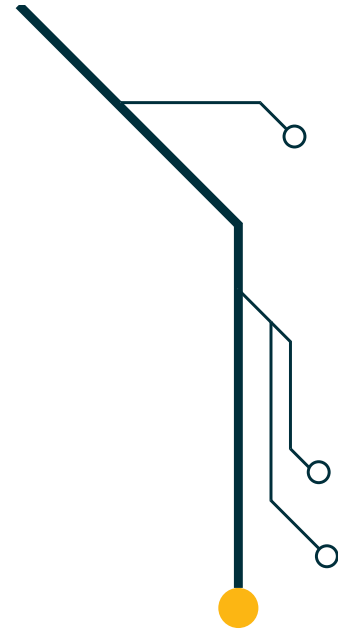
# Updates

- PSFA Broadband (BDCP) Team -> OBAE
  - Juanita, Paulo, Mike, Ovidiu
- New OBAE Albuquerque Office
- OBAE Team is growing
  - Vanessa, Alex, John, Monica, Jose, Richard
  - Three PM positions advertised
- Current and future workload
- New Mexico – 3 Year Strategic Plan (January 1st, 2023)
  - Connect.nm.gov

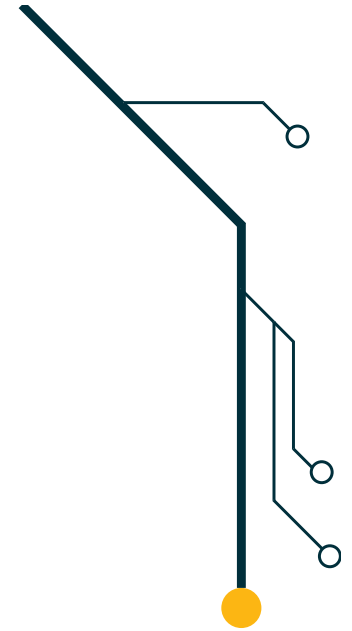Will require state investment in addition to federal funds

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## Updates

- Student Connectivity Projects
- Over $700M in broadband infrastructure projects
  - NM Broadband Pilot
  - Tribal Broadband Connectivity Program (& TBCP 2.0)
  - ReConnect (USDA)
  - NTIA Middle Mile
- Connect NM Fund $100M
- BEAD (Broadband Equity Access and Deployment): $675M

Will require state investment in addition to federal funds

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**Completing the NM Broadband Highway**

# Updates

- ## BEAD Process

  - 5 Year Plan (August 28)

  - Initial Proposal Volume 1 & Volume 2 (December 27)

  - Final Proposal – One year after Initial Proposal is approved

    - List of projects/awards – 100% Unserved (25/3) / Underserved (100/20) / Anchors
    - ~1B in broadband work (Last Mile primarily) / OBAE request $350M / Six years

- ## Digital Equity

  - Affordability (+ cybersecurity)
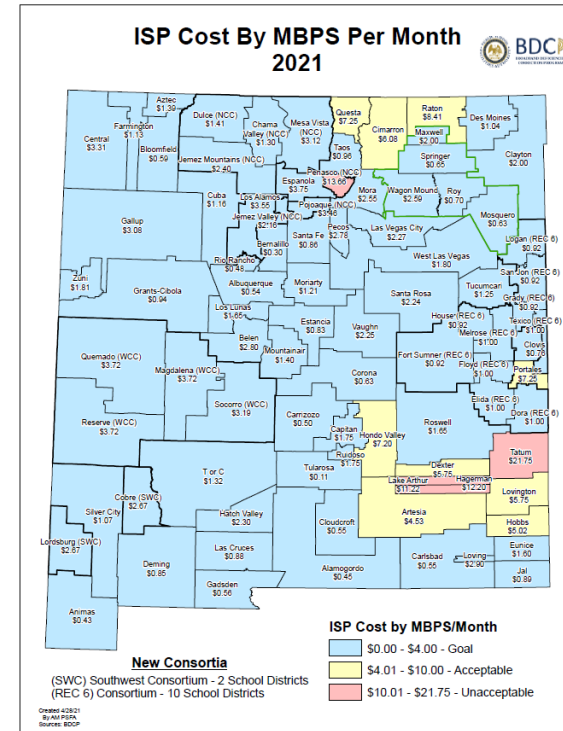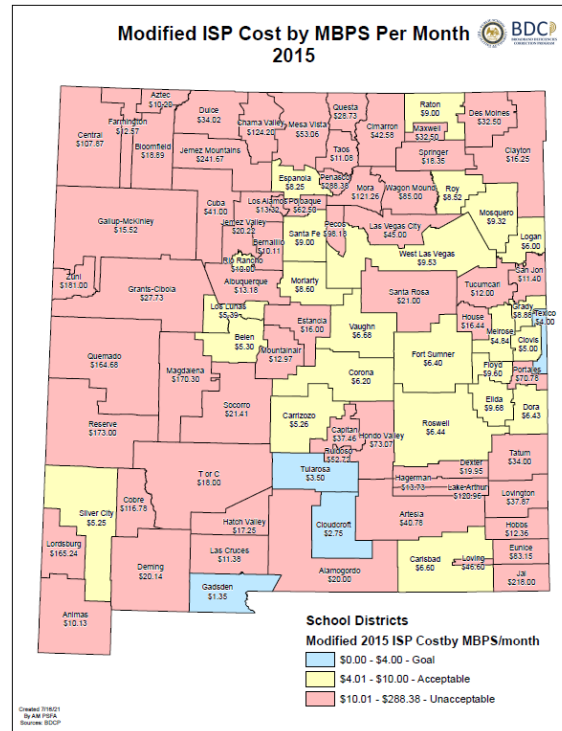
  - Digital skills + Devices

  - Workforce development

**Will require state investment in addition to federal funds**

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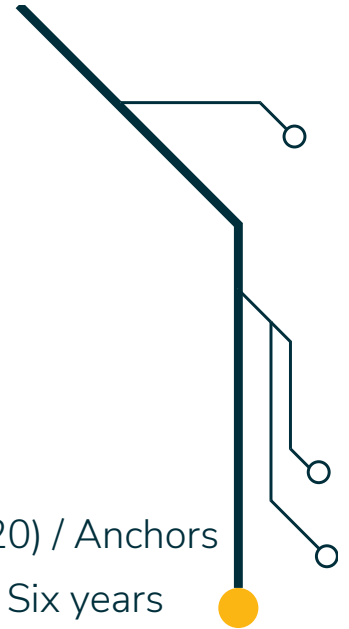
# 2015-2021 K12 Broadband work

- NM K12 average broadband unit cost decreased by 80%

- Broadband capacity increased 6X

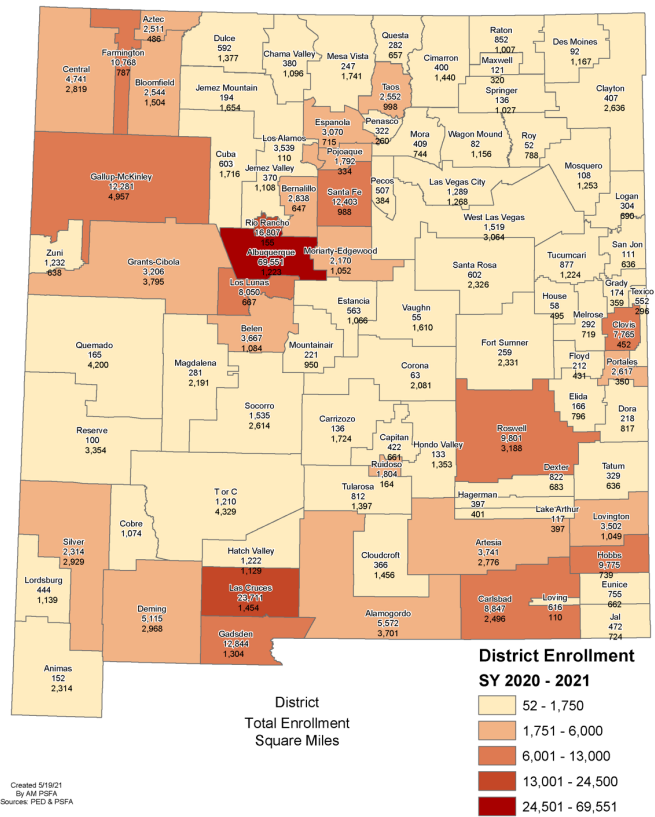- E-rate funding leveraged 2X

- NM Schools - top 10 for progress



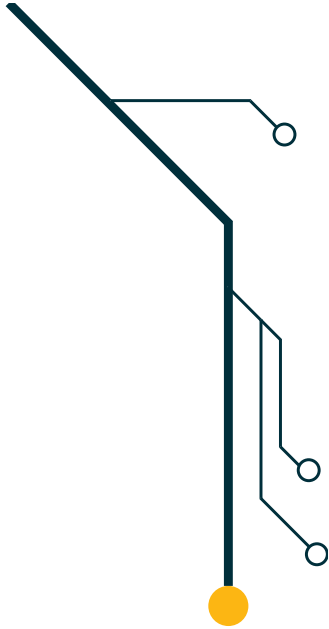Will require state investment in addition to federal funds

Completing the New Mexico Broadband Highway

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# NM School Districts

- NM is remote, rural & sparsely populated

- IT expertise is not uniformly available

- Statewide Education Network (SEN) will provide better connectivity and expert network management



**District Enrollment SY 2020 - 2021**

District
Total Enrollment
Square Miles

| | |
|---|---|
| | 52 - 1,750 |
| | 1,751 - 6,000 |
| | 6,001 - 13,000 |
| | 13,001 - 24,500 |
| | 24,501 - 69,551 |

Created 5/19/21
By AM PSFA
Sources: PED & PSFA

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# SEN Rationale

- Optimize the connectivity to schools

- Allow sharing of resources
  - Lessons plans, instructional material, learning platforms, professional development

- Leverage and maximize E-rate funding

- Reduce administrative burden

- Reduce cybersecurity risks (DDoS mitigation, monitoring)

- Same cost to the school (or lower)

Will require state investment in addition to federal funds

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# Completing the NM Broadband Highway
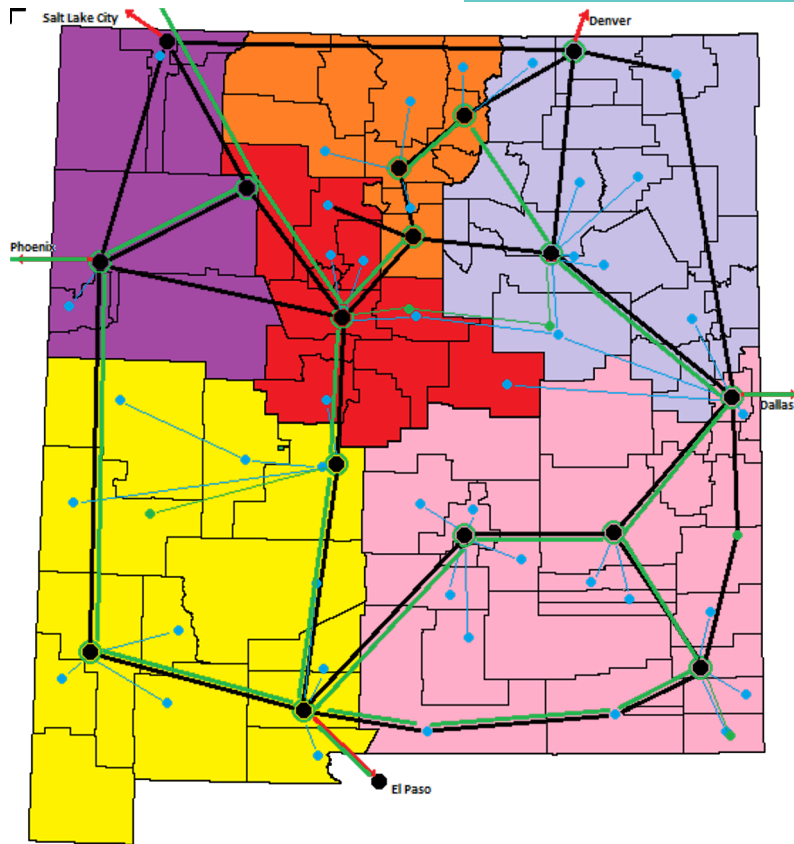
## SEN is the foundation for the State-Coordinated Middle Mile

### Nodes

Upgrading electrical and cooling systems for Higher Ed facilities housing SEN Nodes
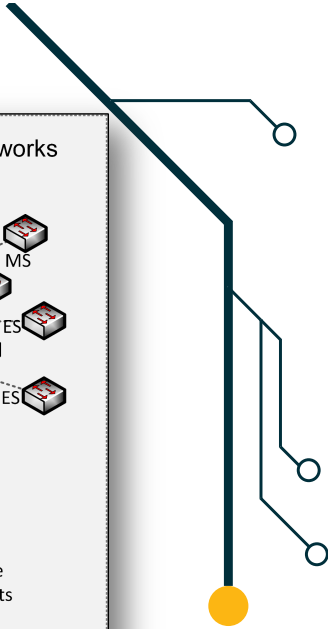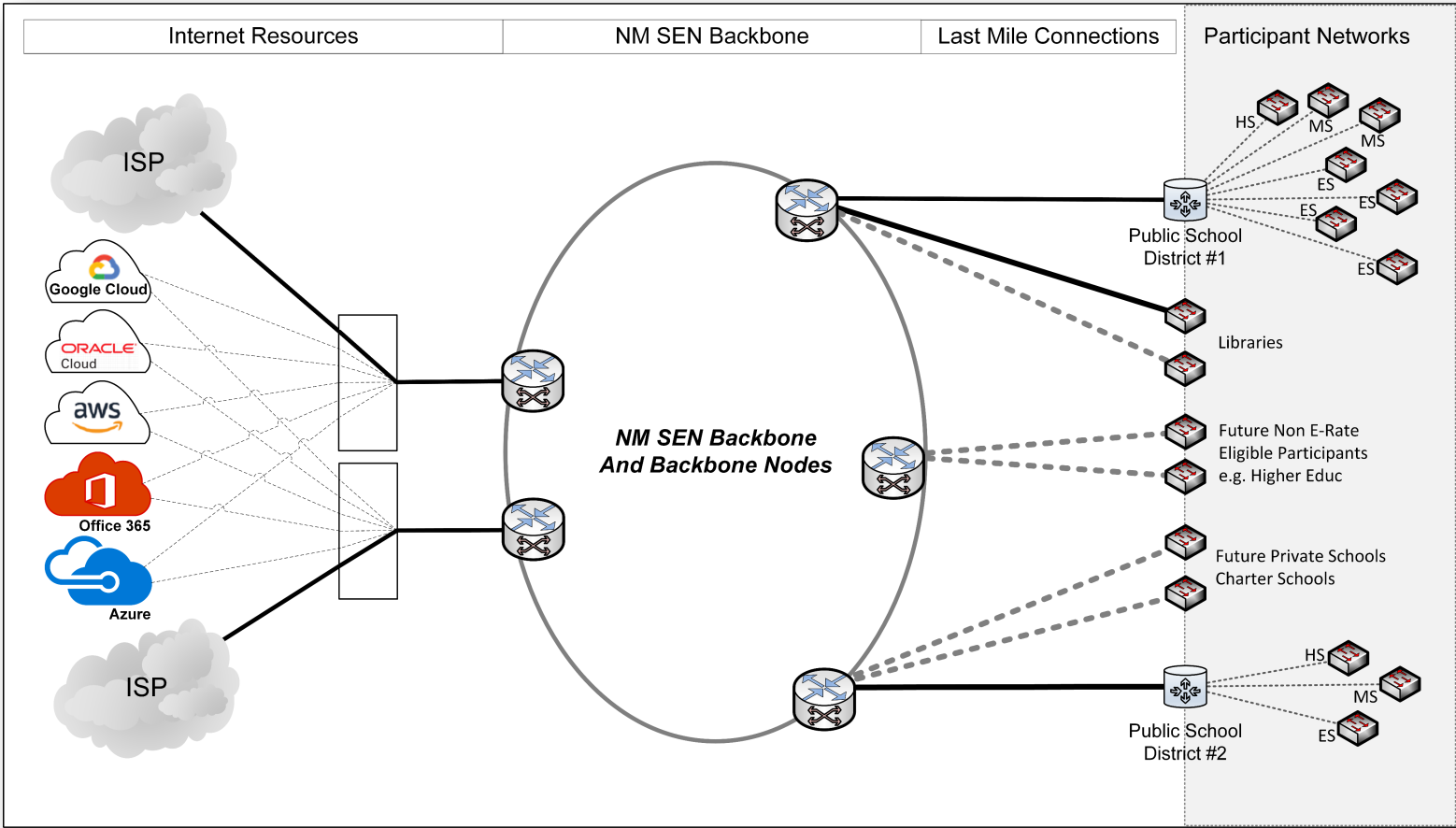
### Major Routes/Internet

Adding key "Middle Mile" corridors, closing of rings for resiliency (a "box" around the SEN)

### "Meet Me" and aggregation points become launching points for "Last Mile"

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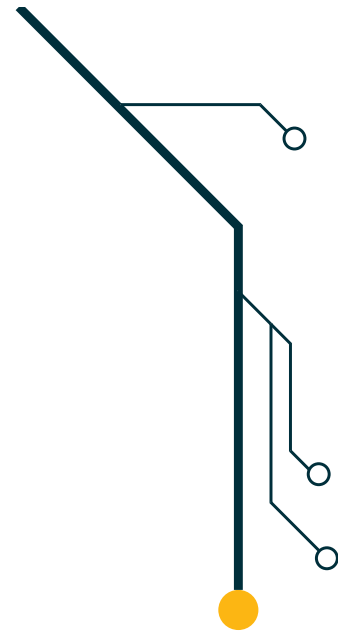Office of Broadband Access & Expansion
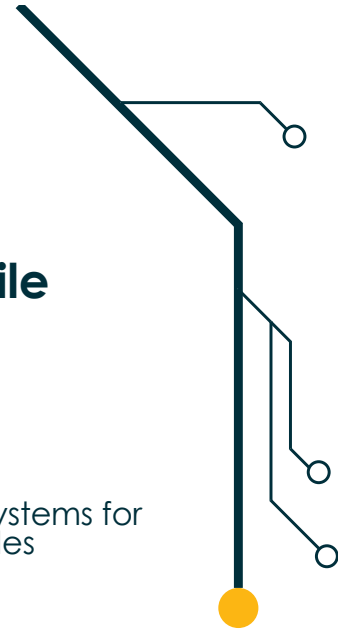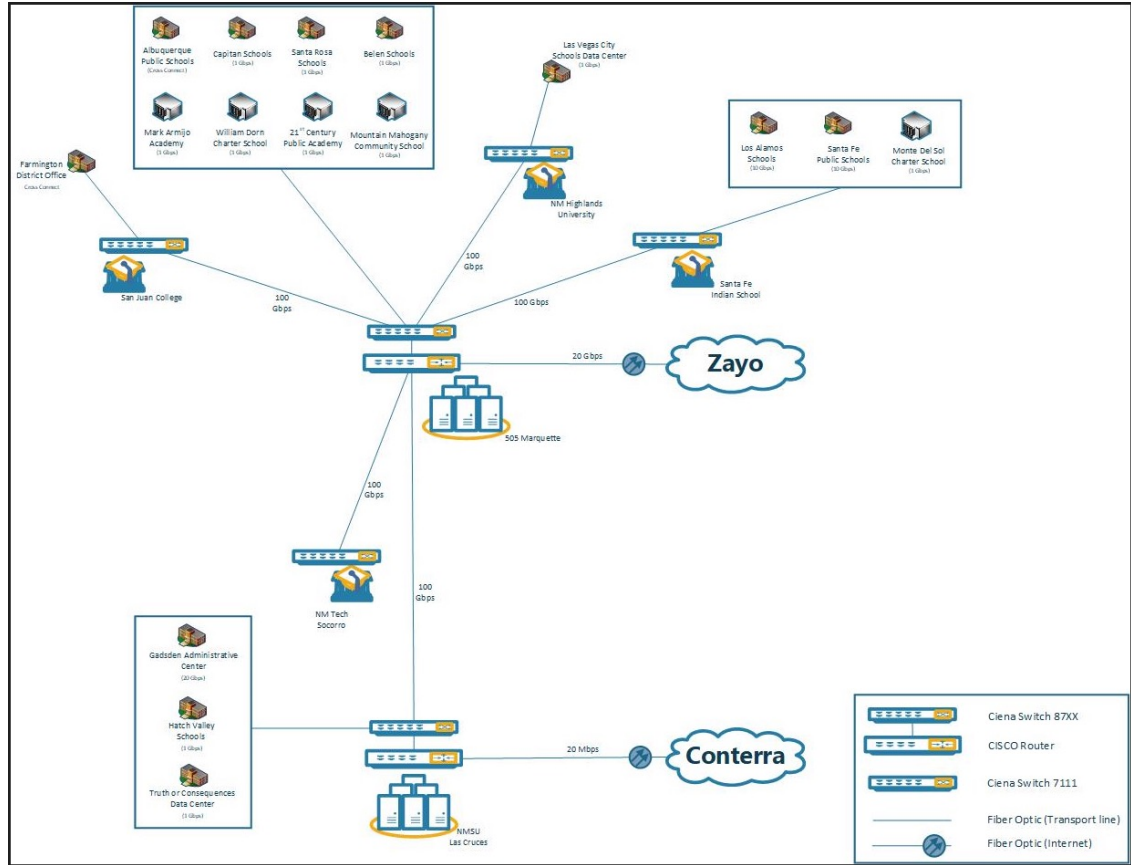
Completing the NM Broadband Highway

# SEN Phase 1

## Completing the NM Broadband Highway

SEN Phase 1

Internet

Cloud Service

NMSU Cisco NCS 5700

505M Cisco NCS 5700

NMSU Ciena 8114

505M Ciena 8114

Ciena 8114

Ciena 8114

Ciena 8114

Client Router

Client Router

Client Router

*Private Service Network*

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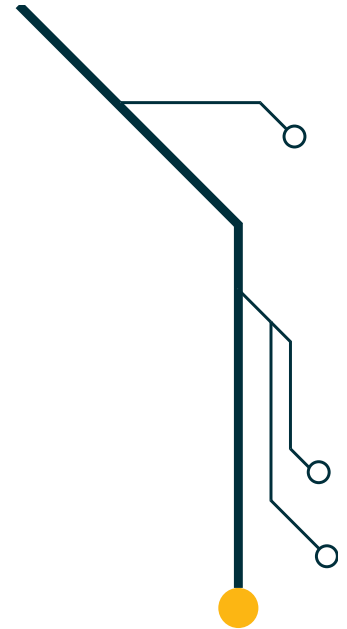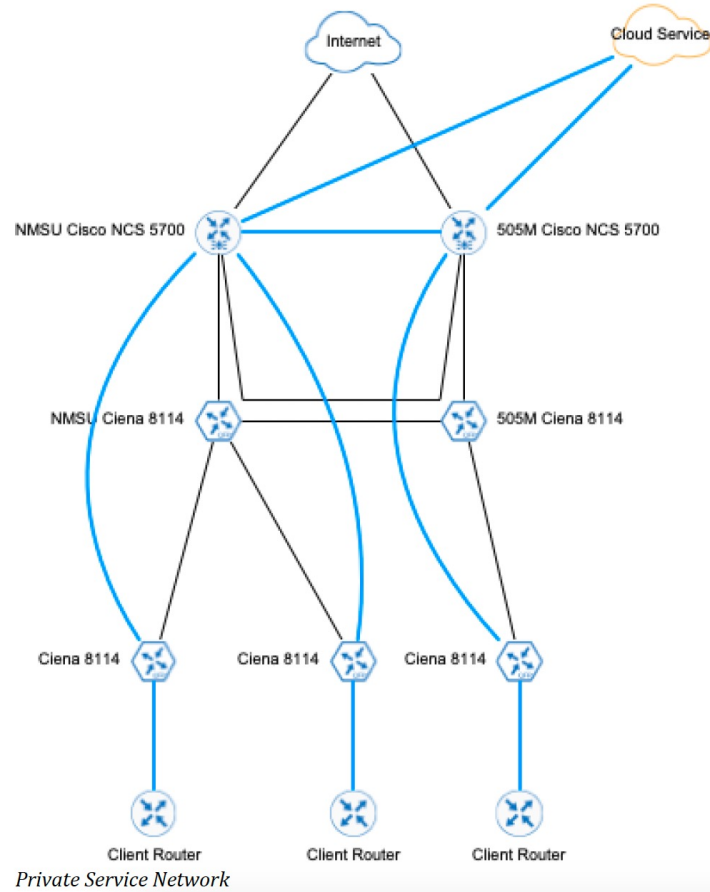
## Completing the NM Broadband Highway

## Sequence

- **Phase 1:**
  - Nodes in Albuquerque, Socorro, Farmington, Santa Fe, Las Cruces, Las Vegas (& Gallup, Roswell, Silver City, Clovis)
  - Backbone circuits between nodes
  - Commodity Internet in two locations
  - Switch over Last Mile Circuits

- **Phase 2**
  - RFP for additional Last Mile circuits (expiring '23/24) – 45 districts/charters
  - Negotiations & Contracting
  - Add schools to the SEN

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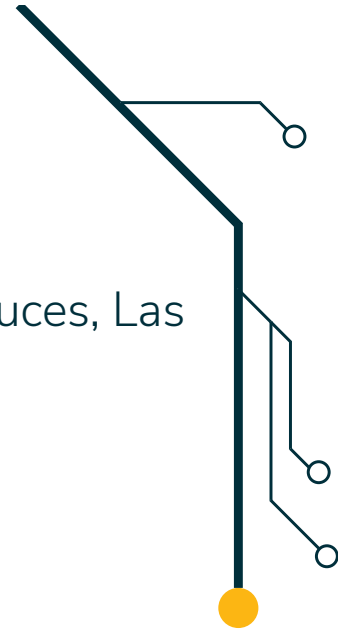
## SEN Status

- ### Phase 1:

  - Nodes Upgrades: Under design, Phased Approach

  - Equipment:
    - Cisco Routers – Delivered
    - Ciena Aggregation Routers – Mid September (first 4-6)

  - Optical waves delivery – site visits in progress

  - Last Mile contracts – in progress

  - Network Management RFP
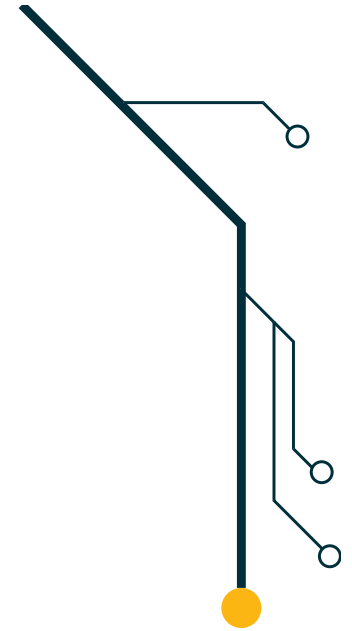
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# Completing the NM Broadband Highway

## Timeline

| | Nov-22 | Dec-22 | Jan-23 | Feb-23 | Mar-23 | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 | Oct-23 | Nov-23 | Dec-23 | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Phase 1 (17 schools)**
- Core Network E-rate App. (Jan-24)
- Contracts Negotiation (Nov-22 – Feb-23)
- Equipment Delivery / Configuration / Core Network / Testing (Feb-23 – Dec-23)
- Last Mile Circuits Phase 1 (Jan-24 – Jun-24)
- Nodes Upgrades (Higher Ed): ~6-12 Nodes

**Phase 2 (45+ schools)**
- Last Mile E-rate App. (Jan-24)
- RFP (Last Mile) (Sep-23 – Oct-23)
- Evaluation&Awards (Nov-23 – Dec-23)
- Contracts (Jan-24 – Feb-24)
- Last Mile Circuits Phase 2 (Mar-24 – Jun-24)

**Phase 3 - 2024 (XXX Schools)**
- Phase 3 RFP (Last Mile) - 2024/2025 (Aug-23 – Jun-24)

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Completing the New Mexico Broadband Highway

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# SEN – Other Priorities

- ## Statewide Education Network – Enabler
  - Cybersecurity
  - Access to other tools and platforms
  - Education Technology
    - Professional development
    - Online classes
    - Instructional (vetted) material – lesson plans/instructional videos/digital books
    - Online libraries

- ## Call to Educational Professionals Community
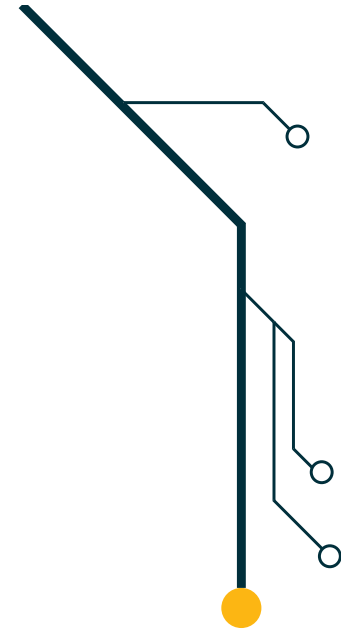
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# BEAD & Digital Equity – Other Priorities

- ## Workforce Development

    - ### K12

    - ### Higher Ed (Research & Community Colleges)

        - Fiber splicers, tower climbers, technicians, electricians, project engineers, network engineers, PMs, permit specialists, sales, office support, helpdesk....

    - ### Industry

        - Apprenticeships

        - Project development & Implementation

        - Maintenance & Operations / Sustainability

- ## Digital Equity / Digital Literacy

**Will require state investment in addition to federal funds**

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Questions?
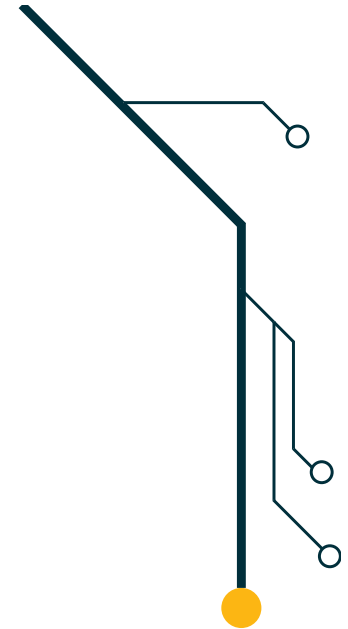
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