**NJ BEAD Project Plan Package Template**

The components of the “Project Plan Package” must be provided *per project[[1]](#footnote-1)*. When submitting the Project Plan Package, compress all components into a single ZIP file, and name the ZIP file as [ApplicantName]\_[ProjectName]\_ProjectPlan.zip.

The components of the Project Plan Package include:

1. **Technical Details**

* See Attachment A1 (fiber-optic), A2 (fixed wireless), A3 (coaxial cable), A4 (LEO satellite), and B (PE certification) below
  + If the proposed project involves multiple types of technology, provide the Technical Details using all relevant attachments
* Save as one PDF, name the PDF as [ApplicantName]\_[ProjectName]\_TechnicalDetails.pdf

1. **Network Design**

* Include a network design that demonstrates the ability of the project to meet the proposed technical performance and network capability. This design must include:
  + The proposed project area with PAU boundaries as a polygon and all the locations to be served (depicted as points)
  + Network infrastructure routes: fiber and/or coaxial routes; or placement of new and existing towers, small cell sites, and node sites, making distinctions between new and existing, and modeled coverage area; or placement of new and existing satellite ground equipment or stations, making a distinction between new and existing, and the area to be served by each station
  + Existing backhaul and middle-mile routes that will be relied upon for the project, designating the technology for each (e.g., fiber, microwave)
  + If applicable, planned backhaul and middle-mile routes that will be constructed as part of the project, designating the technology for each
* Save as shapefiles in one folder, name the folder as [ApplicantName]\_[ProjectName]\_Network Design

1. **Project Budget** (including the minimum 25 percent match)

* See “Attachment C1 – Project Budget Template\_Non-LEO.xslx” and “Attachment C2 – Project Budget Template\_LEO.xslx”
* Fill out the budget corresponding to the technology type of the project, and save as “[ApplicantName]\_[ProjectName]\_ProjectBudget.xlsx”

1. **Project Milestones**

* See “Attachment D1 – Project Implementation Plan Template\_Non-LEO.xlsx” and “Attachment D2 – Project Milestones Template\_LEO.xlsx”
* Fill out the template corresponding to the technology type of the project, and save as “[ApplicantName]\_[ProjectName]\_Milestones.xlsx”

1. **Financial Pro Forma**

* See “Attachment E – Financial Pro Forma Template.xlsx”
* Fill out and save as “[ApplicantName]\_[ProjectName]\_ProForma.xlsx”

*Attachment A1*

**New Jersey BEAD Program – Instructions: Technical Details for a Fiber-Optic Project**

Prepare “Technical Details” in a .pdf format. For each page, include the relevant title of each Section in bold at the top of the page, e.g. **Cover Page, Narrative Summary.**

**Sections**

1. **Cover Page** (Up to one page)

Include the full organizational name, project name, and the date of submission.

1. **Narrative Summary** (Up to one page)

Explain how the design supports the proposed number of passings, routes, speeds, and latency. Specify construction methods (aerial versus buried) and materials (e.g., conduit) and the age and condition of existing infrastructure that will connect to the new build. Specify whether utility coordination will be needed.

1. **Equipment details** (Up to one page)

Describe the network equipment that the applicant intends to deploy.

1. **Network Scalability** (Up to two pages)

Provide a distinct response to describe the extent to which the project will scale to meet each of the following network demands:

* Evolving connectivity needs of households and businesses
* Support the deployment of 5G
* Support the deployment of successor wireless technologies
* Support the deployment of other advanced services

Responses should include potential transitions to higher-speed services, increased subscriber load, or additional coverage areas. The applicant should provide an overview of the technical specifications of the technology being proposed and describe how the selected technology supports future scalability. The applicant should also describe the anticipated additional costs beyond awarded BEAD funds that will be necessary to support network scalability and upgrades.

1. **Permitting** (Up to one page)

List all applicable local, state and federal permits and zoning regulations that the applicant expects to obtain or comply with and all approvals that the applicant expects will be required under state and federal environmental review and historic preservation requirements in the proposed project. Describe the plan and schedule to obtain these permits and approvals.

1. **Network Resiliency** (Up to one page)

Describe the applicant’s risk management plans to account for the project’s infrastructure reliability and resilience and design elements of the proposed infrastructure that will ensure reliable and resilient service. Account for impacts to technology infrastructure, including from weather, natural disasters, operational challenges and cybersecurity best practices.

1. **Outage Management Plan** (Up to one page)

Describe the proposed service outage management and restoration plan for the proposed project. The plan must include preventive maintenance schedules, mean time for outage response and restoration, channels for informing customers about outages and expected restoration times. Discuss plans to mitigate the impact of outages from weather, natural disasters, cybersecurity breaches, and other operational challenges.

1. **Logical Network Design Drawing or Diagram** (Up to one page)

Upload a drawing or diagram in a .pdf format that includes:

* The logical connectivity of the network
* Architecture of the network for placement and redundancy of core network electronics and hardware
* Architecture of the network that demonstrates internet access redundancy

1. **Professional Engineer (PE) Certification** (Up to one page)

Engineer's certification on the drawing signifying review and approval of the design, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project (see “Attachment B”).

Note: The PE Certification is required for the design. Per the Conditional Limited Programmatic Waiver issued by NTIA, the PE Certification Requirement for the capital investment schedule is waived conditioned on the submission of a capital investment schedule evidencing complete build-out and initiation of service within four years of the date on which the entity receives the subgrant.[[2]](#footnote-2) Applicants are expected to provide their capital investment schedules as part of their Financial Pro Forma. The PE Certification requirement remains in place and applicants are expected to submit a signed PE Certification on the technical feasibility of the project to meet BEAD program rules.

*Attachment A2*

**New Jersey BEAD Program – Instructions: Technical Details for a Fixed Wireless Project**

Prepare “Technical Details” in a .pdf format. For each page, include the relevant Section title in bold at the top of the page, e.g. **Cover Page, Narrative Summary.**

**Sections**

1. **Cover Page** (Up to one page)

Include the full organizational name, project name, and the date of submission.

1. **Narrative Summary** (Up to one page)

Explain how the design supports the proposed number of locations served, speeds, and latency. Specify construction methods and materials, including a description of the age and condition of existing infrastructure (towers, water towers, etc.) that will host the new equipment. Ensure responsiveness to the following questions:

* How many locations are co-locations that will not require modifications or upgrades to deploy BEAD funded equipment? Does the applicant have the signed collocation agreements or other necessary authority to deploy equipment in place?
* How many locations will require upgrades or modifications to place BEAD-funded equipment or to support the BEAD-funded network? Does the applicant have the signed collocation agreements or other necessary authority to make changes and deploy equipment in place?
* How many locations are new tower builds? Does the applicant have a ground lease agreement in place? Does the applicant have access and utility easements agreements in place if needed?

1. **Equipment details** (Up to one page)

Describe the network equipment that the applicant intends to deploy.

1. **Network Scalability** (Up to one page)

Provide a distinct response to describe the extent to which the project will scale to meet each of the following network demands:

* Evolving connectivity needs of households and businesses
* Support the deployment of 5G
* Support the deployment of successor wireless technologies
* Support the deployment of other advanced services

Responses should include potential transitions to higher-speed services, increased subscriber load, or additional coverage areas. The applicant should provide an overview of the technical specifications of the technology being proposed and describe how the selected technology supports future scalability. The applicant should also describe the anticipated additional costs beyond awarded BEAD funds that will be necessary to support network scalability and upgrades.

1. **Permitting** (Up to one page)

List all applicable local, state and federal permits and zoning regulations that the applicant expects to obtain or comply with and all approvals that the applicant expects will be required under state and federal environmental review and historic preservation requirements in the proposed project. Describe the plan and schedule to obtain these permits and approvals.

1. **Network Resiliency** (Up to one Page)

Describe the applicant’s risk management plans to account for the project’s infrastructure reliability and resilience and design elements of the proposed infrastructure that will ensure reliable and resilient service. Account for impacts to technology infrastructure, including from weather, natural disasters, operational challenges and cybersecurity best practices.

1. **Outage Management Plan** (Up to one Page)

Describe the proposed service outage management and restoration plan for the proposed project. The plan must include preventive maintenance schedules, mean time for outage response and restoration, channels for informing customers about outages and expected restoration times. Discuss plans to mitigate the impact of outages from weather, natural disasters, cybersecurity breaches, and other operational challenges.

1. **Spectrum** (Multiple pages)

Include proof of Spectrum License. List the applicant’s frequency band and ranges that it expects to use for this proposed project.

1. **Propagation Map** (Multiple pages if needed, at least one page)

In .pdf format, provide a propagation map(s) showing signal strength (as a heat map) from each tower. Label each tower with a unique identifier. The map(s) should show factors like terrain, buildings, and other obstacles, covering all location area, including Interference Analysis.

1. **Logical Network Design Drawing or Diagram** (Up to one page)

Upload a drawing or diagram in a .pdf format that includes:

* The logical connectivity of the network
* Architecture of the network for placement and redundancy of core network electronics and hardware
* Architecture of the network that demonstrates internet access redundancy

1. **Professional Engineer (PE) Certification** (Up to one page)

Engineer's certification on the drawing signifying review and approval of the design, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project (see “Attachment B”).

Note: The PE Certification is required for the design. Per the Conditional Limited Programmatic Waiver issued by NTIA, the PE Certification Requirement for the capital investment schedule is waived conditioned on the submission of a capital investment schedule evidencing complete build-out and initiation of service within four years of the date on which the entity receives the subgrant.[[3]](#footnote-3) Applicants are expected to provide their capital investment schedules as part of their Financial Pro Forma. The PE Certification requirement remains in place and applicants are expected to submit a signed PE Certification on the technical feasibility of the project to meet BEAD program rules.

*Attachment A3*

**New Jersey BEAD Program – Instructions: Technical Details for a Coaxial Cable Project**

Prepare “Technical Details” in a .pdf format. For each page, include the relevant title in bold at the top of the page, e.g. **Cover Page, Narrative Summary.**

**Sections**

1. **Cover Page** (Up to one page)

Include the full organizational name, project name, and the date of submission.

1. **Narrative Summary** (Up to one page)

Explain how the design supports the proposed number of passings, routes, speeds, and latency. Specify construction methods (aerial versus buried) and materials (e.g., conduit) and the age and condition of existing infrastructure that will connect to the new build. Specify whether utility coordination will be needed.

1. **Equipment details** (Up to one page)

Describe the network equipment that the applicant intends to deploy. Specify the version of DOCSIS that will be deployed in the network. Describe any upgrade plans in the proposed Project Area during the grant performance period and grant interest period.

1. **Network Scalability** (Up to two pages)

Provide a distinct response to describe the extent to which the project will scale to meet each of the following network demands:

* Evolving connectivity needs of households and businesses
* Support the deployment of 5G
* Support the deployment of successor wireless technologies
* Support the deployment of other advanced services

Responses should include potential transitions to higher-speed services, increased subscriber load, or additional coverage areas. The applicant should provide an overview of the technical specifications of the technology being proposed and describe how the selected technology supports future scalability. The applicant should also describe the anticipated additional costs beyond awarded BEAD funds that will be necessary to support network scalability and upgrades.

1. **Permitting** (Up to one page)

List all applicable local, state and federal permits and zoning regulations that the applicant expects to obtain or comply with and all approvals that the applicant expects will be required under state and federal environmental review and historic preservation requirements in the proposed project. Describe the plan and schedule to obtain these permits and approvals.

1. **Network Resiliency** (Up to one page)

Describe the applicant’s risk management plans to account for the project’s infrastructure reliability and resilience and design elements of the proposed infrastructure that will ensure reliable and resilient service. Account for impacts to technology infrastructure, including from weather, natural disasters, operational challenges and cybersecurity best practices.

1. **Outage Management Plan** (Up to one page)

Describe the proposed service outage management and restoration plan for the proposed project. The plan must include preventive maintenance schedules, mean time for outage response and restoration, channels for informing customers about outages and expected restoration times. Discuss plans to mitigate the impact of outages from weather, natural disasters, cybersecurity breaches, and other operational challenges.

1. **Logical Network Design Drawing or Diagram** (Up to one page)

Upload a drawing or diagram in a .pdf format that includes:

* The logical connectivity of the network
* Architecture of the network for placement and redundancy of core network electronics and hardware
* Architecture of the network that demonstrates internet access redundancy

1. **Professional Engineer (PE) Certification** (Up to one page)

Engineer's certification on the drawing signifying review and approval of the design, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project (see “Attachment B”).

Note: The PE Certification is required for the design. Per the Conditional Limited Programmatic Waiver issued by NTIA, the PE Certification Requirement for the capital investment schedule is waived conditioned on the submission of a capital investment schedule evidencing complete build-out and initiation of service within four years of the date on which the entity receives the subgrant.[[4]](#footnote-4) Applicants are expected to provide their capital investment schedules as part of their Financial Pro Forma. The PE Certification requirement remains in place and applicants are expected to submit a signed PE Certification on the technical feasibility of the project to meet BEAD program rules.

*Attachment A4*

**New Jersey BEAD Program – Instructions: Technical Details for a Low Earth Orbit Satellite (LEO) Project**

Prepare “Technical Details” in a .pdf format. For each page, include the relevant Section title in bold at the top of the page, e.g. **Cover Page, Narrative Summary.**

**Sections**

1. **Cover Page** (Up to one Page)

Include the full organizational name, project name, and the date of submission.

1. **Narrative Summary** (Up to one Page)

Explain how the design supports the proposed number of locations served, speeds, and latency. Specify construction methods and materials, including a description of the age and condition of existing infrastructure (gateways, etc.) that will host the new equipment.

* If the project area includes locations in historically hard-to-serve topographies (e.g., with expected interference), specify how the applicant will ensure service at required levels.

1. **Equipment details** (Up to one page)

Describe the network equipment that the applicant intends to deploy.

1. **Network Scalability** (Up to one page)

Provide a distinct response to describe the extent to which the project will scale to meet each of the following network demands:

* Evolving connectivity needs of households and businesses
* Support the deployment of 5G
* Support the deployment of successor wireless technologies
* Support the deployment of other advanced services

Responses should include potential transitions to higher-speed services, increased subscriber load, or additional coverage areas. The applicant should provide an overview of the technical specifications of the technology being proposed and describe how the selected technology supports future scalability. The applicant should also describe the anticipated additional costs beyond awarded BEAD funds that will be necessary to support network scalability and upgrades.

1. **Permitting** (Up to one page)

List all applicable local, state and federal permits and zoning regulations that the applicant expects to obtain or comply with and all approvals that the applicant expects will be required under state and federal environmental review and historic preservation requirements in the proposed project. Describe the plan and schedule to obtain these permits and approvals.

1. **Network Resiliency** (Up to one Page)

Describe the applicant’s risk management plans to account for the project’s infrastructure reliability and resilience and design elements of the proposed infrastructure that will ensure reliable and resilient service. Account for impacts to technology infrastructure, including from weather, natural disasters, operational challenges and cybersecurity best practices.

1. **Outage Management Plan** (Up to one Page)

Describe the proposed service outage management and restoration plan for the proposed project. The plan must include preventive maintenance schedules, mean time for outage response and restoration, channels for informing customers about outages and expected restoration times. Discuss plans to mitigate the impact of outages from weather, natural disasters, cybersecurity breaches, and other operational challenges.

1. **LEO Satellite Details**

For each answer, include the corresponding question in bold, followed by the answer. The type of answer is indicated in the bracket.

1. Does the applicant certify that it will reserve sufficient capacity to provide service of at least 100/20 Mbps to all unserved and underserved (i.e. eligible) BSLs in the project area during the first four years of the grant performance period and will maintain that capacity reservation throughout the grant performance period for an additional ten years? [Yes/No]
2. Does the applicant certify that it will reserve sufficient capacity to meet the scalability requirements as committed to above and will maintain that capacity reservation throughout the grant performance period for an additional ten years? [Yes/No]
3. How many total satellites will the project require to reserve sufficient capacity to provide service to all eligible BSLs in the project area? [Numerical]
4. In addition to the number of existing satellites the applicant currently has deployed in low earth orbit, how many additional satellites will need to be launched to complete the proposed project and comply with all BEAD Program rules? [Numerical]
5. What is the timeline for the launch and deployment of those additional satellites? Confirm that the timeline listed here matches the timeline for launch provided in the Project Milestones Template. [Short answer]
6. Which version of the technology does the applicant plan to deploy using BEAD funds? [Short answer]
7. Provide the number of ground stations included in the funding request, their location(s), and the type of equipment to be deployed. [Short answer]
8. What percentage of the applicant’s project budget represents expenses for customer premises equipment and customer premises equipment installation costs? [Short answer]
9. Specify the manufacturer and model of the customer premises equipment [Short answer]
10. State which spectrum bands applicant will use to provide service to covered-BSLs in the proposed project area. [Short answer]
11. Describe applicant’s plans to avoid or mitigate interference with terrestrial wireless networks, public safety networks, and other communications network infrastructure. [Narrative (character limit: 10,000)]
12. Specify the minimum satellite elevation angle supported by the network’s satellite constellations required to provide service that meets the minimum BEAD performance standards for the proposed project area. [Short answer]
13. **Logical Network Design Drawing or Diagram** (Up to one page)

Upload a drawing or diagram in a .pdf format that includes:

* The logical connectivity of the network
* Architecture of the network for placement and redundancy of core network electronics and hardware
* Architecture of the network that demonstrates internet access redundancy

1. **Professional Engineer (PE) Certification** (Up to one page)

Engineer's certification on the drawing signifying review and approval of the design, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project (see “Attachment B”).

Note: The PE Certification is required for the design. Per the Conditional Limited Programmatic Waiver issued by NTIA, the PE Certification Requirement for the capital investment schedule is waived conditioned on the submission of a capital investment schedule evidencing complete build-out and initiation of service within four years of the date on which the entity receives the subgrant.[[5]](#footnote-5) Applicants are expected to provide their capital investment schedules as part of their Financial Pro Forma. The PE Certification requirement remains in place and applicants are expected to submit a signed PE Certification on the technical feasibility of the project to meet BEAD program rules.

*Attachment B*

**New Jersey BEAD Program – Professional Engineer Certification**

I, [\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_], am a licensed professional engineer in the State of [\_\_\_\_], with license number [\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_].

I have reviewed the plans, specifications, and documents, including the network design, diagram, project costs, build-out timeline, and milestones for project implementation, related to the proposed project.

I certify that, to the best of my knowledge and belief, the design and planned construction of the project comply with all applicable laws, regulations, and codes.

The project has been designed and prepared in accordance with accepted engineering practices and standards.

The project is feasible and it is reasonable to expect successful completion of the project.

Signed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The term “project” means an undertaking by a subgrantee to construct and deploy infrastructure for the provision of broadband service. [↑](#footnote-ref-1)
2. https://broadbandusa.ntia.gov/funding-programs/policies-waivers/BEAD\_-\_Conditional\_Limited\_Programmatic\_Waiver\_and\_Clarification\_of\_Professional\_Engineer\_Certification [↑](#footnote-ref-2)
3. https://broadbandusa.ntia.gov/funding-programs/policies-waivers/BEAD\_-\_Conditional\_Limited\_Programmatic\_Waiver\_and\_Clarification\_of\_Professional\_Engineer\_Certification [↑](#footnote-ref-3)
4. https://broadbandusa.ntia.gov/funding-programs/policies-waivers/BEAD\_-\_Conditional\_Limited\_Programmatic\_Waiver\_and\_Clarification\_of\_Professional\_Engineer\_Certification [↑](#footnote-ref-4)
5. https://broadbandusa.ntia.gov/funding-programs/policies-waivers/BEAD\_-\_Conditional\_Limited\_Programmatic\_Waiver\_and\_Clarification\_of\_Professional\_Engineer\_Certification [↑](#footnote-ref-5)