Town of Princeville

Status: Submitted to FEMA

Subgrant ID: EMA-2020-BR-100-0032

Scope of work

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location)	**Town of Princeville**

Activities

Primary activity type	**Utility and infrastructure protection**
Primary sub-activity type	**Other**
If Other please specify	**Wastewater, potable water, stormwater, and electrical distribution.**
Secondary activity type (Optional)	
Geographic areas description	**Historic Princeville lies within the 100 year floodplain in the a dog leg of the Tar River. The 53 acre project area lies beyond the 100 year flood plain in an area not inundated by the Tar River.**

Community lifelines

Primary community lifeline	**Energy**
Primary sub-community lifeline	**Power grid**
Secondary community lifeline (optional)	**Food, water, shelter**
Secondary sub-community lifeline	**Water**

Tertiary community lifeline (optional)	**Health and medical**
Tertiary sub-community lifeline	**Public health**

Hazard sources

Primary hazard source	**Flooding**
Secondary hazard source (optional)	**Dam/Levee break**
Tertiary hazard source (optional)	

Is this a phased project?	**Yes**
Are you doing construction in this project?	**Yes**
Population affected	**25**
Detail/description of stated percentage	**The historic boundaries of the Town of Princeville lie within the 100 year flood plain. The 53 acre annexed site has carrying capacity supporting relocation of 25% of the Town's population beyond the floodplain. The Town's 2016 population is estimated at 2,357 persons living in 789 occupied housing units. As of the 2016 ACS Census update the Town of Princeville had 1,036 housing units of which 247 were vacant. Furthermore, the NCEM acquisition program (HMGP) is working with 75 additional homeowners to buyout their properties. Lastly, the North Carolina Office of Resilient Recovery (NCORR) is working with 100 property owners to acquire those residential units through CDBG-DR as well.**
Provide a clear and detailed description of your proposed activity	**The proposed project is build out of the requisite water distribution, wastewater collection, stormwater management, and power infrastructure on a 53 acre green field site to facilitate relocation of 25% of Princeville residents beyond the Tar River floodplain. Currently, the Town has $1.2 million dollars in appropriated funding sufficient to provide a 10% grant match for infrastructure construction. The proposed utility project removes a significant portion of utility infrastructure from the floodplain. Community relocation beyond the 100 year flood plain was identified as a strategy**

in the attached 2018 Recovery Plan produced by the Hurricane Matthew Resilient Recovery Initiative (HMDRRI). The historic center of the Town of Princeville lies in the center of the 100 year floodway. While FIRM maps show historic Princeville within SFHA and behind a levee, a 2016 FEMA working plan shows the town as clearly within the Tar River floodway. The FEMA working map illustrates that the levee is historically insufficient to prevent the Tar from inundating the Town as the river did in with in Hurricane Floyd in 1999, with Isabel in 2003, again with Irene in 2011, and most recently in 2016 with Hurricane Matthew. In order to promote the resilient social, economic, and operational recovery from repetitive and major flood events, the Town of Princeville seeks to develop the 53 acres of State acquired land beyond the 100 year flood plain. The 53 acre annex site allows the Town of Princeville to relocate critical infrastructure (and residents) beyond the 100 yer flood plain. Indeed, the Princeville Housing Authority is relocating 54 units of affordable housing to the 53 acre site. Also, the annexed area is the designated home of the relocating Town of Princeville critical operational and emergency support services, e.g. the Public Works/Emergency Operations Center, and the Princeville Volunteer Fire Department. Both these projects are FEMA/NCEM PA projects. The Town of Princeville 53 acre project is estimated to cost $12,187,100 to completely build out infrastructure and skeleton transportation network on 53 acres of greenfield land beyond the 100 year Tar River flood plain. The 53 acre project mitigates loss of service through facilitating relocation of Princeville critical infrastructure and residents. And, the 53 acre utility project removes residual loss due to the relocation of 25% of the population and necessary incumbent infrastructure. While theoretically protected from inundation by the Tar River behind a levee, in practice the Town of Princeville has experienced major and repetitive flooding events (most recently Hurricanes Fran, Floyd, and Matthew) for the waters of the Tar River overwhelm both the northern and southern termini of the earthen dam flooding much of historic Princeville. In order to protect the

	community while promoting economic, social, and operational resilience, the Town and its partners have taken a multi pronged approach. One, the federal government has assented to extending and improving the existing earthen levee to protect from the 100 year storm. The process of requesting right-of-entry from adjacent property owners has just now begun. The project is only funded through engineering and design. And, levee expansion is a long term construction project with a 5-8 year window. Two, the State of North Carolina through the NC Office of Resilient Recovery (NCORR) has established priority zones for acquisition of the most flood prone properties in the Town of Princeville. The strategic acquisition of homes susceptible to repetitive losses creates a priority need for resident relocation. The 53 acre site has been master planned for medium to high density housing and is ideal for resident relocation within the Town's boundaries. Three, the 53 acre project is complementary to the FEMA funded HMGP and HUD funded CDBG-DR acquisition activities. Both projects are targeted to assist residents through acquisition, with CDBG-DR specifically focused on economically disadvantaged individuals. Furthermore, the Town has assembled approximately $6 million ($3.4 million in CDBG-DR and $2.7 million in legislative appropriation) to initiate work on the annexed 53 acre site the state purchased on its behalf. This funding allows the Town to provide a match and begin work on acquisition of property in anticipation of the infrastructure build out. The Town of Princeville seeks funding to undertake and complete the construction of infrastructure on 53 acres of high ground (beyond the 100 year flood plain). In January 2021 an updated engineer's estimate of probable cost put the site infrastructure development at $12,187,100.
How will the mitigation activity be implemented?	**The creation of utility infrastructure on the 53 acre site has no obstacles from soils and engineering perspective. The site has had preliminary engineering with no obstacles to construction, maintenance, and operation of water distribution, electrical service provision, wastewater collection, or stormwater management. The preliminary environmental,**

	geotechnical, and civil engineering work on the 53 acre site make it an ideal candidate for relocation of critical infrastructure and future development. In order to promote the relocation of residents to the 53 acres. The Town will land swap land parcels with current property owners in the flood plain. Those acquired lots become Town property and subject to building restrictions that limit their use to passive open-space recreation, small scale (micro) agriculture, or similar uses.
Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.):	**Lying within theTar River floodway, the Town of Princeville experiences repetitive riverine flooding. During extreme flooding events largely the entire Town is inundated by the swollen Tar River. Relocating critical infrastructure and population mitigates the threat of flooding impacts by moving infrastructure and people out of harms way. The 53 acre site is completely beyond the 100 year flood plain promoting cost effective infrastructure, life safety, and property damage mitigation. The best flood-proofing method is effectively removing infrastructure from flood prone areas. The aim of the 53 acre project is creating the necessary infrastructure to relocate people from the most flood prone areas of Princeville. The 53 acre project promotes relocation through incentivizing land swaps from flood prone historic Princeville to the higher elevation 53 acre site. Relocation strategy is the cost effective and provides the safest alternative.**
Who will manage and complete the mitigation activity?	**The mitigation activity and construction, will be managed by Town of Princeville staff with technical assistance from contract engineers and NCEM.**
Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?	**The 53 acre Princeville project proposes the relocation of critical infrastructure to beyond the 100 year flood plain. The elimination of infrastructure from the flood plain removes residual risk and eliminates loss of service and repetitive losses in the flood hazard area. There is no residual risk upon project completion.**
When will the mitigation activity take place?	**The mitigation activity will commence upon a notice to proceed from FEMA and NCEM. Project is envisioned to take 36 months from design to construction completion.**

Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?	**The only realistic alternative to utility relocation is to do nothing. There is no other cost effective, long term solution to removing utilities from the flood hazard area. Moreover, relocating infrastructure and people is in the best interest of public safety and general welfare of town residents. Do nothing alternatives results in loss of infrastructure and property through repetitive losses and possible life safety issues during flood events. Elevation in place is a relatively costly alternative that results in less than desirable aesthetics, unwieldy implementation, and does not mitigate infrastructure and community disruptions against flood events, i.e. impacts to transportation, power, water, and sewerage disposal. The NCDOT conducted an analysis of the floodplain and determined relocation was the most cost effective mitigation strategy in dealing with repetitive flood losses in the Tar River Basin. A BCA based on historical damages bears out this cost-effectiveness analysis of utility relocation with a 1.41 BCR.**
Please identify the entity that will perform any long-term maintenance and provide a maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?	**The infrastructure created as a result of the 53 acre project will be maintained by Edgecombe County as the Town of Princeville is officially considered District 6 in the Edgecombe County water and waste water system. Electrical service is both Edgecombe-Martin Co-Op or Dominion Energy. The M&O to the 53 acre project is incorporated into the Town's annual operating budget. Estimated annual maintenance costs are approximately $60,000. The cost of services are largely shifted from the low lying areas that will be vacated to the 53 acre project area.**
Additional comments (optional)	**The Town of Princeville in conjunction with Conservation Trust North Carolina (CTNC), Conservation Fund of NC, and North Carolina State University (NCSU) Coastal Dynamics Design Lab has authored a "Floodprint" plan for effectively dealing with acquisitions, vacant land, and public owned parcels in the lowest lying areas of Princeville. The Floodprint outlines plans for wetland restoration, public recreation, and floodplain restoration. While technically behind the levee, the low topography**

of these areas of Princeville is well suited to returning to a wetland condition.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
53 Acre site FEMA work map.PDF	12/15/2020	gknight@townofprinceville.com	Scope of Work Attachments	Princeville FEMA Work Map and Inundation	
Master Plan_Color Coded_10-16-19.pdf	12/14/2020	gknight@townofprinceville.com	Scope of Work Attachments	53 Acre Site Master Plan	
PH I ESA Report - Edgecombe Princeville 53 Acres 1.pdf	12/16/2020	gknight@townofprinceville.com	Scope of Work Attachments	53 Acre Site Phase I ESA	
tar_mitigation_report.pdf	01/07/2021	gknight@townofprinceville.com	Scope of Work Attachments	NCDOT Mitigation Report	
4305-19-035 Edgecombe Princeville 53 Acre Site Prelim. Geotech Report 1.pdf	12/16/2020	gknight@townofprinceville.com	Scope of Work Attachments	53 Acre Site Geotech	
Princeville Floodprint Document.pdf	01/07/2021	gknight@townofprinceville.com	Scope of Work Attachments	Floodprint Plan for utilizing vacant land and acquisitions	
Princeville-Recovery-Plan.pdf	01/07/2021	gknight@townofprinceville.com	Scope of Work Attachments	HMDRRI Princeville Recovery Plan 2018	

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