Subapplicant information

Name of federal agency

FEMA

Type of submission

Application

CITY OF RAEFORD

315 N MAIN ST

RAEFORD, NC 28376 United States

State	DUNS#	EIN#
NC	016985251	566001313

Subapplicant type

Local Government

Is the subapplicant subject to review by Executive Order 12372 Process?

No - Not selected

Is the subapplicant delinquent on any federal debt?

No

Contact information

Subrecipient Authorized Representative (SAR)

Scott Edwards Primary phone Mailing address 9108758161 ext 223

Work

Point(s) of contact

sedwards@raefordnc.org

Charlie McGouganPrimary phoneAdditional phonesMailing addressProject Manager91091582003369531173P.O. Box 1215WorkMobileSouthern Pines NC 28374

cmcgougan@mbd-eng.com

Community

Please provide the following information. If the Congressional district number for your community does not display correctly, please contact your State NFIP coordinator.

Add Communities

Please find the community(ies) that will benefit from this mitigation activity by clicking on the Find communities button. If needed, modify the Congressional District number for each community by entering the updated number under the U.S. Congressional District column for that community. When finished, click the Continue button. NOTE: You should also notify your State NFIP coordinator so that the updated U.S. Congressional District number can be updated in the Community Information System (CIS) database.

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
HOKE COUNTY *	093	370397	N		1,2,7

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District	
RAEFORD, CITY OF	093	370132	N		2,7	

Please provide any additional comments below (optional).

Raeford, NC is denoted as an economically distressed rural community (EDRC). Census Tract No. 37093970300 that covers the City of Raeford has a 2020 CDC/ATSDR Social Vulnerability Index score of 0.9603. Within Hoke County, the City of Raeford and Ashley Heights CDP have the largest LEP populations, with Spanish as their primary language. Within Hoke County, Bowmore, Silver City and the City of Raeford are largely African American. Median Household: the median household income of the population aged 25 years old to 64 years old is \$45,829 in Hoke County, while it is \$53,097 in North Carolina. For those communities where household income statistics were available, median income of the population aged 25 years old to 64 years old ranged from a high of \$86,697 in the Five Points CDP to a low of \$27,266 in the City of Raeford.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Hoke County-City of Raeford.pdf	11/08/2022	cmcgougan@mbd-eng.com	Community Attachments	This attachment provides a view of Raeford in relation to Ft. Bragg and other local governments within proximity to the City.	
Hoke Co CDC-ATSDR - Social Vulnerability Index - 2020.pdf	11/08/2022	cmcgougan@mbd-eng.com	Community Attachments	Map showing overall Social Vulnerability and themes.	
Hoke County CDC SVI Data 2020 comps other similar counties poppdf	11/13/2022	mglasscock@withersravenel.com	Community Attachments	CDC SVI Data 2020 with comparable counties in NC	
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Imp Technical Scoring Suport.pdf	01/17/2023	cmcgougan@mbd-eng.com	Community Attachments	Technical Scoring narratives and backup documents.	

Mitigation plan

Please provide your plan information below.

Is the entity that will benefit from the proposed activity covered by the current FEMA approved multi-hazard mitigation plan in compliance with 44 CFR Part 201?

Yes

Please provide plan detail

 Plan name
 Plan type
 Plan approval date

 Cumberland Hoke Regional Hazard
 Local Multijurisdictional Multi-Hazard
 06/23/2021

 Mitigation Plan
 Mitigation Plan

Proposed activity description

Please provide any additional comments below (optional).

The FEMA approval letter for the Cumberland-Hoke Regional Multi-Jurisdictional Hazard Mitigation Plan is dated June 23, 2001. The City of Raeford adopted the Plan by Resolution on August 2, 2021 (See attachment). The Mitigation Action Plan specific to the City of Raeford is excerpted and attached. Raeford is committed to incorporating green infrastructure that add needed protections for flood control measures. Raeford's flooding history is noted in the attached Hoke County-Hurricane Matthew Resilient Redevelopment Plan (2017) and the NCORR RISE program vulnerability assessment. Both plans place a high priority on mitigation for projected increasing rain and severe storm drainage. The Matthew Resilient Redevelopment plan specifically notes culvert upgrades, specifically the culvert at Peddlers Branch and Prospect Ave (an excerpt from the Plan is attached). Raeford actively participates in all planning efforts related to emergency management, resiliency, health, economic development, equity, inclusivity and enhanced community engagement.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Resolution Adopting Cumberland-Hoke Hazard Mitigation Plan - 8.2.21.pdf	11/08/2022	cmcgougan@mbd-eng.com	Mitigation Plan Attachments	Resolution #2021-09 by the City of Raeford adopting the Cumberland-Hoke Regional Hazard Mitigation Plan.	
City of Raeford - Mitigation Action Plan.pdf	11/08/2022	cmcgougan@mbd-eng.com	Mitigation Plan Attachments	Excerpt from Cumberland Hoke Regional Hazard Mitigation Plan describing the City of Raeford's Mitigation Action Plan in general terms.	
Hoke County - Hurricane Matthew Resilient Redevelopment Plan Excerpt - May 2017.pdf	11/08/2022	cmcgougan@mbd-eng.com	Mitigation Plan Attachments	Excerpt from Hoke County - Hurricane Matthew Resilient Redevelopment Plan describing culvert upgrade locations.	
Region N Vulnerability Assessment_FINAL DRAFT_FOR PUBLIC COMMENT 2022,pdf	11/17/2022	mglasscock@withersravenel.com	Mitigation Plan Attachments	Draft copy of NC Office of Recovery and Resiliency Vulnerability Assessment 2022	

Scope of work

Tertiary activity type (Optional)

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.

Management costs

Subapplication title (include type of activity and location)

Patterson Street and East Prospect Avenue Storm Drainage Improvements

Activities

Primary activity type

Primary sub-activity type

Primary sub-activity type

Primary sub-activity type

Stormwater sewer system

Secondary activity type (Optional)

Secondary sub-activity type

Community flood control

Geographic areas description

The City of Raeford is located in central Hoke County. The culvert replacement project has two (2) sites. These are the intersection of Peddlers Branch and Patterson St. and the intersection of Peddlers Branch and Prospect Avenue. These 2 stream/roadway intersections are approximately 1,000 fee apart along Peddlers Branch.

Community lifelines

Primary community lifeline

Primary sub-community lifeline

Secondary community lifeline (optional)

Secondary sub-community lifeline

Tertiary community lifeline (optional)

Tertiary sub-community lifeline

Hazard sources

Primary hazard source

Secondary hazard source (optional)

Tertiary hazard source (optional)

Is this a phased project?

Are you doing construction in this project?

Percentage of population impacted

Provide detailed description of population impacted

Provide a clear and detailed description of your proposed activity

Transportation

Highway/roadway/motor vehicle

Safety and security

Fire service

Safety and security

Law enforcement/security

Flooding

Nο

Yes

100

This project benefits all 4,559 residents of the City of Raeford. The City of Raeford has a Social Vulnerability Index of 0.96 for Census Tract 9703. The population is 60.1% African American and Latino/Latina. The City has a 27.2% poverty rate and the median household income ins \$34,231.

In 2016 as a result of Hurricane Matthew, the City of Raeford experienced extreme flooding with significant residual and roadway damage along Peddlers Branch at the stream/roadway intersections with Prospect Avenue and Oakwood Avenue. Significant flooding also occurred at the intersection with Patterson Street. FEMA PA funds paid approximately \$700,000 to Raeford in damage costs for Matthew alone. Because of what was seen at Patterson St. and Prospect Ave., in 2019 the City commissioned a Hydrologic and Hydraulic Study of the lower portion of the Peddlers Branch drainage basin. The study was conducted with the culverts at Patterson St. and Prospect Ave. as the points of interest. The H&H study determined that the existing 60" diameter RCP culvert at Patterson St. cannot pass the 2-year flood recurrence interval. Furthermore, the study determined that the maximum storm that the existing 8' x 5' Reinforced Concrete Box Culvert (RCBC) at Prospect Ave. could pass is the 2-year flood recurrence interval. The H&H study made recommendations for the installation of replacement culverts sized to meet the 25-year storm recurrence interval. Specifically, the existing 5' diameter Reinforced Concrete Pipe at Patterson St. would be replaced with a double line of 8' x 5' RCBC . The existing 8' x 5' RCBC at Prospect Ave. would be replaced with a double line of 9' x 5' RCBC. The proposed larger culverts will mitigate damage from overtopping to the existing City of Raeford roadway infrastructure during storm events up to the 25-year recurrence interval. Sizing the culverts to meet a higher flood recurrence interval than 25-years is not possible based on upon the stream channel dimensions. The proposed project will improve the City or Raeford's storm drainage system along Peddlers Branch by replacing the existing undersized culverts at Patterson St. and Prospect Ave. with larger culverts. Additionally, a 350 linear foot section of asphalt ditch along Prospect Ave. will be demolished and replaced

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with a grass lining, which will increase the water quality in this area of the Peddlers Branch drainage basin. The following is a bulleted construction sequence that applies to both culvert replacements. 1. Mobilization 2. Implement Traffic Diversion Measures. 3. Set up Bypass Pumping Operations & Install Erosion Control Measures. 4. Cut and Remove Asphalt Roadway. 5. Demolish and Remove Existing Culvert. 6. Install New Culvert, Head Wall, and End Wall. 7. Backfill and Compaction. 8. Repave and Stripe Asphalt Roadway. 9. Final Grading and Cleanup. 10. De-commission Traffic Diversion Measures and Re-open Roadway

The project will be implemented by construction contract. A bid package for the project comprised of construction drawings, detailed specifications, and contract documents will be produced by a qualified Consulting Engineer hired by the City. The Owner will be the City of Raeford. Once the project has been bid, awarded, and construction contracts executed, the City will issue Notice to Proceed. From the Notice to Proceed the project will be administered by the City with assistance from their engineering consultant.

In 2019, a Hydrologic and Hydraulic Study and Project Area Flood Study was conducted for two (2) points of interest along Peddlers Branch in the City of Raeford. The two points of interest were the intersection with Patterson Street culvert capacities of an existing 5' diameter Reinforced Concrete Plpe at Patterson St.and an existing 8' x 5' Reinforced Concrete Box Culvert at Prospect Ave. are significantly exceeded during the 25-year recurrence interval or higher. As a result, roadway overtopping could occur during these storm events as was experienced in 2016 with Hurricane Matthew. The Study recommended a double line of 8' x 5' Reinforced Concrete Box Culvert at Patterson St. and a double line of 9' x 5' Reinforce Concrete Box Culvert at Prospect Ave. to replace the existing undersized culverts. The recommended culvert replacements were based upon a 25-year recurrence interval based on NCDOT design criteria and a target freeboard of 1.0' from the lowest surveyed pavement edge in accordance with Hydraulic Engineering Standards. Culvert capacity evaluations in the study utilized USDOT Federal Highway Administration Publication No. FHWA-HIF-12-026 Hydraulic Design Series Number 5 (HDS-5). A copy of the H&H Study is attached.

The City of Raeford with assistance from their Consulting Engineer. The City will be supported throughout the life cycle of the project by a grant administration project manager with ten years experience managing federal grant funds, including FEMA PA, HMGP, FMA, BRIC and other programs under 2 CFR Part 200.

The project will address flooding hazards resulting in overtopping of Patterson St. and Prospect Ave. caused by 25-year recurrence interval storms. Higher recurrence interval storms could result in overtopping of these roadways resulting in damage.

Yes

The project will be designed and permitted ready for bid in July 2023 to coincide with award from FEMA. Project bid award is anticipated for October 2023 with project construction completion anticipated for Summer 2026.

The alternatives considered are "No-Action" versus "Culvert Replacement" as described in this section. The "No-Action" alternative leaves the roadways vulnerable to overtopping and washout during heavy rain events, which is unacceptable. The "Culvert Replacement" alternative maximizes the culvert capacity based upon the available free-board and stream channel cross sectional area, thereby mitigating potential roadway and culvert damage through the 25-year recurrence interval storm.

removing debris from the proposed boxed culverts on an annual basis at a cost of \$1,500 annually per culvert.

How will the mitigation activity be implemented?

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 and the intersection with E. Prospect Ave. The evaluation revealed that the 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.):

Who will manage and complete the mitigation activity?

Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?

Does the mitigation activity incorporate nature-based solutions?

When will the mitigation activity take place?

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?

Please identify the entity that will perform any long-term maintenance and provide a The City of Raeford will perform the long-term maintenance required by the maintenance, schedule and cost information. The subapplicant or owner of the area replacement culverts. The maintenance will consist of cleaning out and to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?

Additional comments (optional)

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Patterson St. & E. Prospect Ave. Storm Drainage Improvements - Technical Feasibility Support.pdf	11/17/2022	cmcgougan@mbd-eng.com	Scope of Work Attachments	Technical Feasibility Support documents.	
BRIC2022-1-Risk Reduction & Resilience Effectiveness.pdf	01/03/2023	cmcgougan@mbd-eng.com	Scope of Work Attachments	Risk Reduction & Resilience Narrative	
BRIC2022-5-Outreach Activities.pdf	01/03/2023	cmcgougan@mbd-eng.com	Scope of Work Attachments	Outreach Activities Narrative.	
BRIC2022-4-Population Impacted.pdf	01/03/2023	cmcgougan@mbd-eng.com	Scope of Work Attachments	Population Impacted Narrative	
City of Raeford - Patterson & Prospect H&H Study.pdf	11/02/2022	cmcgougan@mbd-eng.com	Scope of Work Attachments	Hydrology and Hydraulic Study with Points of Interest for project components.	
NC Official FRIS Map - Raeford.pdf	11/13/2022	mglasscock@withersravenel.com	Scope of Work Attachments	Longer-range view of North Carolina Flood Risk map (NC FRIS) showing the City of Raeford's position in relation to streams and river.	
Raeford NC FRIS map - flood margins damage hotspots FIRM plot and buildings.pdf	11/13/2022	mglasscock@withersravenel.com	Scope of Work Attachments	A closer look at the NC FRIS map in relation to the City of Raeford.	
BRIC2022-3-Implementation Measures.pdf	01/18/2023	cmcgougan@mbd-eng.com	Scope of Work Attachments	Implementation Measures narrative and attachments.	

Schedule

Specify the work schedule for the mitigation activities.

Add tasks to the schedule

Please include all tasks necessary to implement this mitigation activity; include descriptions and estimated time frames.

Task Name Surveying, Design, and Permitting	Start Month	Task Duration (in Months) 15 months
<i>y g</i> , <i>g</i> ,		
	Task Description Surveying in support of	of Engineering Design. Produce plans, specifications and contract documents.
	Secure regulatory peri	
Task Name	Start Month	Task Duration (in Months)
Bid Solicitation and Award	16	3 months
	Task Description	
	Advertise for and rece	ive Bids. Project Award and Construction Contract Execution.
Task Name	Start Month	Task Duration (in Months)
Construction	19	18 months
	Task Description	
	Construction Contract	Administration and Project Closeout.

Project grant administration	19	18 months
	Task Description	
	lask Description	
	The costs associated with spec	ific tasks related to tracking, monitoring activities, reporting and
	compliance will be managed by	a consultant.
	compliance will be managed by	y a consultant.

Task Name State Grant Contracting	Start Month 1	Task Duration (in Months) 2 months
	Task Description NCDPS Subrecipient Grant Co	ntracting

Estimate the total duration of your proposed activities (in months).

Proposed project start and end dates

 Start Date
 2023-07-01

 End Date
 2026-06-30

Introduction

Project location

Provide a detailed description of the proposed project's location.

The project location is along Peddlers Branch at the intersections with

Patterson St. and Prospect Ave. in the City of Raeford, NC. The attached map

illustrates the project location.

Latitude **34.982534**Longitude **-079.202725**

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Peddlers Branch FIRM Map.pdf	11/17/2022	cmcgougan@mbd- eng.com	Project Location Attachments	The Flood Insurance Map for the Project Location.	
Upper Rockfish Creek Basin Report.pdf	11/17/2022	cmcgougan@mbd- eng.com	Project Location Attachments	The Upper Rockfish Creek Basin Report including Peddlers Branch.	
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Improvements - Project Map.pdf	11/03/2022	cmcgougan@mbd- eng.com	Project Location Attachments	Map indicating location of culverts to be replaced along Peddlers Branch in Raeford, NC.	

Project benefiting area

Provide a detailed description of the proposed project's benefiting area.

The project Hydrology and Hydraulic study determined that the proposed mitigation project would reduce the Base Flood Elevations along Peddlers Branch from a point approximately 300' upstream of Patterson St. to Prospect Ave. This area is considered the project benefitting area with respect to the adjacent residences. The attached map highlights this area.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Improvements - Project Map w-	11/03/2022	cmcgougan@mbd- eng.com	Location project benefiting area Attachments	Raeford's project location (high priority per regional HM plan approved by	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Benefiting Area.pdf				FEMA.)	

Project impact area

Provide a detailed description of the proposed project's impact area.

The project impact area is considered to be the Peddlers Branch Drainage Basin. The project location lies near the confluence between Peddlers Branch and Rockfish Creek. The attached map illustrates the Peddlers Branch drainage basin upstream of the project location. It includes 2.57 square miles, 24.6% of which is impervious.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Patterson & Prospect H&H Study - Drainage Area Map.pdf	11/03/2022	cmcgougan@mbd- eng.com	Location project impact area Attachments	Hydrology and Hydraulic Study document.	

Project site inventory

Does this project subapplication propose to mitigate a property/structure(s)? (Examples: residential home, commercial building, bridge, fire station, levee, pumping station, wastewater treatment plant, telephone pole, electric line, etc.) No

Please download the excel template, and then fill out the template with building or infrastructure data.

Budget

Budget cost estimate should directly link to your scope of work and work schedule. You must add at least one item(s) greater than 0 for your cost estimate. As necessary, please adjust your federal/non-federal cost shares, and add the non-federal funding source(s) you are planning to use this project. Once you have completed this section, please click the Continue button at the bottom of this page to navigate to the next section.

Add budget cost types and item(s)

First, click the Add cost type button below to add cost type cost estimate and then click the Add item(s) button to add the item(s) for the cost estimate.

Grand total: \$1,427,672.40

Budget type: Construction

Cost type: Cost estimate \$1,359,688.00

Cost type: Management cost \$67,984.40

Program income (optional)

Cost share

Cost share or matching means the portion of project costs not paid by federal funds.

Proposed federal vs. non-federal funding shares

Hazard mitigation assistance (HMA) funds may be used to pay up to 75% federal share of the eligible activity costs. Building Resilient Infrastructure and Communities (BRIC) and small impoverished communities may be eligible for up to 90% federal share. Flood Mitigation Assistance (FMA) and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share.

		% Percentage	€ Cellar amount	
Is this an Economically Disadvantaged Rural Community? 1	Proposed federal share	70.00	999370.40	
This determines your federal/non-federal share ratio.	Proposed non-federal share	30.00	428302.00	
No			Pase ^d on total budget cost, \$1 427 572 40	
			P1 427 672 40	

Non-federal funding sources here

That portion of the total costs of the program provided by the non-federal entity in the form of in-kind donations or cash match received from third parties or contributed by the agency. In-kind contributions must be provided and cash expended during the project period along with federal funds to satisfy the matching requirements.

	Funding source	Funding amount	% Non-federal share by source
•	Funding source: The City of Raeford, NC	100.00%	\$428,302.00

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
BRIC2022-Raeford-SVIscore.pdf	01/12/2023	kaine.riggan@ncdps.gov	Budget Attachments	2022 map defining NC counties with SVI > .80 designation, Raeford's SVI Score = .92	
C or R - Patterson St. & E. Prospect Ave. Cost Opinion 1.13.23.pdf	01/17/2023	cmcgougan@mbd- eng.com	Budget Attachments	Total Project Cost Opinion.	
Funding Commitment 1.17.23.pdf	01/17/2023	cmcgougan@mbd- eng.com	Budget Attachments	Owner Funding Commitment Letter.	

Cost-effectiveness How was cost-effectiveness determined for this project?

✓ BCA completed in FEMA's BCA toolkit Subapplicant must attach supporting documentation.	
Pre-calculated benefits Substantial damage in special flood hazard area Other BCA methodology approved by FEMA in writing Not applicable	
Not applicable	
What are the total project benefits? (\$)	1650193
What are the total project cost? (\$)	1402808
What is the benefit-cost ratio (BCR) for the entire project?	1.17
Was sea level rise incorporated into the flood elevations in the BCA?	No
Were environmental benefits added to the project benefits?	Yes
Were social henefits added to the project henefits?	Yes

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Please provide any additional comments below (optional).

The BCA was completed using FEMA's BCA toolkit. The BCA uses historical roadway repair costs and a 2-year storm recurrence interval based on the flow capacity of the existing culverts at Patterson St. and East Prospect Ave. A traffic study was conducted for the location of interest in November 2022 by NCDOT and the vehicle counts are summarized in the attached report. A traffic re-routing map in included as well. "The Census Tract that includes the project area has a Centers for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI) rating among the highest in the nation: 0.92 offering the BCA waiver and further assistance from FEMA in addressing any issues found with the BCA in the NTR review. Evidence is presented in the Technical Scoring Support document in the Evaluation section"

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
C or R - Patterson St. & Prospect Ave. Storm Drainage Imp BCA Report.pdf	01/18/2023	cmcgougan@mbd- eng.com	Cost Effectiveness Attachments	BCA Report with Narrative from FEMA BCA Toolkit and Backup Documents.	
FEMA BCA Toolkit - City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Improvements - Historical.xlsx	01/16/2023	cmcgougan@mbd- eng.com	Cost Effectiveness Attachments	FEMA BCA Toolkit Spreadsheet.	

Environmental/Historic Preservation (EHP) Review Information

Introduction

Attachments

An environmental/historic preservation review is required for all activities for which FEMA funds are being requested. FEMA will complete this review with the assistance of both the state or tribal government and the local applicant. It is important that you provide accurate information. If you are having problems completing this section, please contact your application point of contact.

A. National Historic Preservation Act - Historic Buildings and Structures

1. Does your project affect or is it in close proximity to any buildings or structures 50 **No** years or more in age?

	lease confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other
se	ection of the application, please attach the required documents below.) The property address and original date of construction for each property affected (unless this information is already noted in the Properties section).
	A minimum of two color photographs showing at least three sides of each structure (Please label the photos accordingly).
	A diagram or USGS 1:24,000 scale quadrangle map displaying the relationship of the property (s) to the project area.
То	be help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)
	Information gathered about potential historic properties in the project area, including any evidence indicating the age of the building or structure and presence o buildings or structures that are listed or eligible for listing on the National Register of Historic Places or within or near a National Register listed or eligible historic district. Sources for this information may include the State Historic Preservation Officer, and/or the Tribal Historic Preservation Officer (SHPO/THPO), your local planning office, historic preservation organization, or historical society.
	Consideration of how the project design will minimize adverse effects on known or potential historic buildings or structures, and any alternatives considered or implemented to avoid or minimize effects on historic buildings or structures. Please address and note associated costs in your project budget.
	For acquisition/demolition projects affecting historic buildings or structures, any data regarding the consideration and feasibility of elevation, relocation, or flood proofing as alternatives to demolition.
	Attached materials or additional comments.
Ple	ease provide an explanation and any information about this project that could assist FEMA in its review. (optional)
'lease	e provide an explanation and any information about this project that could assist FEMA in its review.

Filename	Date uploaded	Uploaded by	Label	Description	Action

B. National Historic Preservation Act - Archeological Resources

Does your project involve disturbance of ground?

Ye

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

A description of the ground disturbance by giving the dimensions (area, volume, depth, etc.) and location.

▼ The past use of the area to be disturbed, noting the extent of previously disturbed ground.

✓ A USGS 1:24,000 scale or other site map showing the location and extent of ground disturbance.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

Any information about potential historic properties, including archeological sites, in the project area. Sources of this information may include SHPO/THPO, and/or the Tribe's cultural resources contact if no THPO is designated. Include, if possible, a map showing the relation of any identified historic properties to the project area.

Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

The ground disturbance for this project will be minimal. The scope of construction involves removal of two (2) existing roadway culverts and replacing these with wider culverts. The work will be confined primarily within the existing roadway rights-of-Way. The excavations will be confined primarily to existing roadway fill sections. A USGS map is attached indicating the project sites.

Please provide an explanation and any information about this project that could assist FEMA in its review.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Imp Quad Map.pdf	11/07/2022	cmcgougan@mbd-eng.com	involveDisturbanceOfGround.attachmentIds	A USGS Quad map edited to indicate the proposed culvert replacement sites.	
NC FRIS Raeford NC 2022.pdf	11/13/2022	mglasscock@withersravenel.com	involve Disturbance Of Ground. attachment Ids	FRIS map of project area.	

C. Endangered Species Act and Fish and Wildlife Coordination Act

1. Are federally listed threatened or endangered species or their critical habitat No present in the area affected by the project?

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please provide the required documents either through attachment and/or comment box below.)

Information you obtained to identify species in or near the project area. Provide the source and date of the information cited

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

Any request for information and associated response from the USFWS, the National Marine Fisheries Service (NMFS) (for affected ocean-going fish), or you
State Wildlife Agency, regarding potential listed species present and potential of the project to impact those species.

Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

2/23, 10:30 AM		F	FEMAGO - Subapplication		
Please provide an explanation and any information a	bout this proje	ect that could assist l	FEMA in its review.		
2. Does your project remove or affect vegetation?		N	lo		
Please confirm that you have provided the in section of the application, please provide the		•	• , •	•	y other
Description of the amount (area) and type of	vegetation to	be removed or affect	cted.		
A site map showing the project area and the	extent of vege	etation affected.			
Photographs or digital images that show bot	h the vegetation	on affected and the	vegetation in context of its surroundings	8.	
To help FEMA evaluate the impact of the proj Attached materials or additional comments.	ect, please in	idicate below any c	other information you are providing.	(optional)	
Please provide an explanation and any information a	bout this proje	ect that could assist l	FEMA in its review. (optional)		
Please provide an explanation and any information a	bout this proje	ect that could assist l	FEMA in its review.		
3. Is your project in, near (within 200 feet), or likely to body of water?	affect any typ	oe of waterway or Y	es		
If Yes, and project is not within an existing bu		•		ou have not provided these docur	nents in
✓ A USGS 1:24,000 scale quadrangle map sho	owing the proj	ect activities in relati	ion to all nearby water bodies (within 20	00 feet).	
Any information about the type of water body possible changes to the water body, if any. Id					d
A photograph or digital image of the site sho	wing both the	body of water and the	he project area.		
To help FEMA evaluate the impact of the proj	ect, please in	dicate below any o	other information you are providing.	(optional)	
 Evidence of any discussions with the US Fis potential for the project to affect any water be 		Service (USFWS), a	and/or your State Wildlife Agency conce	erning any potential impacts if there	is the
Please provide an explanation and any informati assist FEMA in its review. (optional)	on about this _l	project that could	The USGS Quad Map previously atta Peddlers Branch. The attached map Carolina Surface Water Quality Clas classified "C", which protects it for and "secondary recreational contact Branch and the downstream end of	in this section is taken from the l sifications Map. Peddlers Branch uses such as "aquatic life propag t. The attached photo shows Ped	North is gation" dlers
Attachments					
Filename	Date uploaded	Uploaded by	Label	Description	Action
City or Raeford- Prospect Ave. Culvert & End Wall.pdf	11/07/2022	cmcgougan@mbd eng.com	- endangeredSpecies.attachmentIds	The photograph shows the downstream end of the existing Prospect Ave. culvert.	
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Imp Water Quality Classification Map.pdf	11/07/2022	cmcgougan@mbd eng.com	- endangeredSpecies.attachmentIds	The map is an excerpt from the NC Surface Water Quality interactive map.	

D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)

1. Will the project involve dredging or disposal of dredged material, excavation, adding fill material or result in any modification to water bodies or wetlands designated as 'waters of the U.S' as identified by the US Army Corps of Engineers or on the National Wetland Inventory?

E. Executive Order 11988 (Floodplain Management)

Yes

1. Does a Flood Insurance Rate Map (FIRM), Flood Hazard Boundary Map (FHBM), hydrologic study, or some other source indicate that the project is located in or will affect a 1% annual chance floodplain, a 0.2% annual chance floodplain, a regulatory floodway, or an area prone to flooding?

Please explain in the text box below and/or provide any documentation to identify the means or the alternatives considered to eliminate or minimize impacts to floodplains (See the 8 step process found in 44 CFR Part 9.6.) to help FEMA evaluate the impact of the project:

Upsizing the culverts at Patterson St. and Prospect Ave. is expected to eliminate roadway overtopping during the 25-year recurrence interval or smaller storm events. The larger culverts will also change toe hydraulic characteristics of Peddlers Branch. The Flood Elevations are expected to reduce from a point 310' upstream of Patterson Ave. to Prospect Ave when the larger culverts have been installed. Hydrologic conditions downstream of Prospect Ave. are not expected to change however. The proposed upsized culverts will cause changes to Special Flood Hazard Areas as defined by FEMA. The City of Raeford is a participating community in the National Flood Program and will have additional floodplain management permitting requirements associated with this project.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?

Yes

If Yes, please indicate below any other information you are providing to help FEMA evaluate the impact of the project:

- W Hydrologic/hydraulic information from a qualified engineer to demonstrate how drainage and flood flow patterns will be changed and to identify down and upstream effects.
- Request for information and response letter from the state water resource agency, if applicable, with jurisdiction over modification of waterways.
- Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

The Hydrology and Hydraulic Study for the project contains information regarding changes to flood patterns both upstream and downstream.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
City of Raeford - Patterson & Prospect H&H Study.pdf	11/11/2022	cmcgougan@mbd-eng.com	affectToPercentAnnualChanceFloodplain.attachmentIds	Hydrology and Hydraulic Study for project.	
NC FRIS Raeford NC 2022.pdf	11/13/2022	mglasscock@withersravenel.com	affectToPercentAnnualChanceFloodplain.attachmentIds	NC FRIS map outlining Raeford in relation to streams/river.	

F. Coastal Zone Management Act

1. Is the project located in the state's designated coastal zone?

No

G. Farmland Protection Policy Act

1. Will the project convert more than 5 acres of prime or unique farmland outside city limits to a non-agricultural use?

No

H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)

- 1. Is there a reason to suspect there are contaminants from a current or past use on **No** the property associated with the proposed project?
- 2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?
- 3. Does any project construction or operation activities involve the use of hazardous **No** or toxic materials?
- 4. Do you know if any of the current or past land-uses of the property affected by the proposed project or of the adjacent properties are associated with hazardous or toxic materials?

I. Executive Order 12898, Environmental Justice for Low Income and Minority Populations

1. Are there low income or minority populations in the project's area of effect or adjacent to the project area?

J. Other Environmental/Historic Preservation Laws or Issues

- 1. Are there other environmental/historic preservation requirements associated with **No** this project that you are aware of?
- 2. Are there controversial issues associated with this project?
- 3. Have you conducted any public meeting or solicited public input or comments on **No** your specific proposed mitigation project?

K. Summary and Cost of Potential Impacts

Having answered the questions in parts A. through J., have you identified any aspects of your proposed project that have the potential to impact environmental resources or historic properties?

No

No

Evaluation

Is the applicant participating in the Community Rating System (CRS)?

Is the applicant a <u>Cooperating Technical Partner (CTP)</u>?

Was this application generated from a previous FEMA HMAAdvance Assistance or Project Scoping award or any other federal grant award, or the subapplicant is a past recipient of Building Resilient Infrastructure and Communities (BRIC) non-financial Direct Technical Assistance?

Has the applicant adopted building codes consistent with the international codes? No

Have the applicant's building codes been assessed on the <u>Building Code</u> <u>Effectiveness Grading Schedule (BCEGS)</u>?

Yes

4

Select rating.

FEMAGO - Subapplication

Describe involvement of partners to enhance the mitigation activity outcome.

Partners for the project include the following: 1. Hoke County Emergency Management 2. Hoke County Board of Education 3. Sandhills Community College 4. Hoke County Health Department These partners will take an active role in advocating for the project. All will benefit from the project's outcome in relation to emergency services access and continuity of their own operations.

Discuss how anticipated future conditions are addressed by this project.

Climate change will increase flash flooding incidents, including future rain events, and will become more frequent and severe in Raeford as evidenced from Hermine and Matthew. The hydraulic capacity of the existing culverts at Patterson St. and Prospect Ave. were determined to be undersized relative to the 25-yr. storm event, which is the standard design level for this type of infrastructure. The proposed project will increase the culvert size at Patterson St. from an existing 60" RCP to a proposed double 8' x 5' rectangular box culvert. The existing Prospect Ave. culvert will be increased from an existing 8' x 5' RBC to a double 9' x 5' RBC. The proposed larger culverts will significantly increase the stormwater design capacity and prevent roadway overtopping up to and beyond the 25-yr. storm event.

Additional comments (optional)

Raeford, NC has participated in hazard mitigation and resiliency planning in relation to obvious effects from climate change. Raeford participated in the planning process to determine mitigation efforts in conjunction with other local governments for the December 2020 Cumberland Hoke Regional Hazard Mitigation Plan, approved by FEMA. Areas defined in this plan discuss the City of Raeford's propensity for various environmental impacts. The City's area includes 350 acres located within the 100-yr special flood hazard area.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
48285 RAEFORD NC Final Report BCEGS.pdf	11/17/2022	mglasscock@withersravenel.com	Evaluation Attachments	Raeford NC BCEGS (2020)	
Raeford project images-climate brief HCHM 2020 FEMA approved.pdf	11/13/2022	mglasscock@withersravenel.com	Evaluation Attachments	Images from previous period of flooding.	
BRIC2022-2-Future Conditions.pdf	01/03/2023	cmcgougan@mbd-eng.com	Evaluation Attachments	Future Conditions Narrative	
HazardReport_RaefordNC-HokeCounty.pdf	01/06/2023	cmcgougan@mbd-eng.com	Evaluation Attachments	A state required attachment.	
BRIC2022-6-Leveraging Partners.pdf	01/03/2023	cmcgougan@mbd-eng.com	Evaluation Attachments	Leveraging Partners Narrative	
City of Raeford - Patterson St. & Prospect Ave. Storm Drainage Imp Technical Scoring Suport.pdf	01/17/2023	cmcgougan@mbd-eng.com	Evaluation Attachments	Scoring support narratives and supporting documents.	

Comments & attachments

▶ Community	1 comment, 4 attachments
Mitigation plan	1 comment, 4 attachments
▶ Scope of work	0 comment, 8 attachments
▶ Budget	0 comment, 2 attachments
▶ Cost-effectiveness	1 comment, 2 attachments
▶ Evaluation	1 comment, 6 attachments
▶ Environmental/Historic Preservation (EHP)	0 comment, 6 attachments

▶ Location 0 comment, 5 attachments

Assurances and certifications

CMB number: 4040_0000 Explication date: 02/20/2025 View burden statement

SF-424D: Assurances - Construction Programs

Content:

OMB Number: 4040-0009 Expiration Date: 02/28/2025

Certain of these assurances may not be applicable to your project or program. If you have any questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- 1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
- 2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- 3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
- 4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- 5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
- 6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
- 8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C.§794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C.§§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (F.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- 13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C.§874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
- 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (F.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (F.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

- 16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- 17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §469a--1 et seq.).
- 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
- 19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
- 20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

Certifications regarding lobbying

OMB Number: 4040-0013 Expiration Date: 02/28/2025

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- 1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- 3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.