



DEPARTMENT OF THE ARMY  
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DAEN

OCT 07 2021

SUBJECT: Selma, Alabama, Flood Risk Management and Bank Stabilization

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of flood risk management and bank stabilization in Selma, Alabama. It is accompanied by the report of the Mobile District Commander. This report is an interim response to a resolution of the House of Representatives Committee on Public Works adopted 7 June 1961, which requested review of, "...the report on Alabama-Coosa Branch of Mobile River, Georgia and Alabama, published as House Document No. 66, Seventy-fourth Congress, first, session, with a view to determining the advisability of providing improvements for flood control on Alabama River in Dallas County, Alabama." The report also responds to Section 1203 of the Water Resources Development Act of 2018, which directed the Secretary to "expedite the completion of a feasibility study for each of the following projects, and if the Secretary determines that the project is justified in a completed report, may proceed directly to preconstruction planning, engineering, and design of the project: (1) Project for riverbank stabilization, Selma, Alabama." Pre-construction engineering and design (PED) activities for the project, if funded, will continue under this same authority.

2. The reporting officers recommend authorizing a plan for bank stabilization measures to reduce damages to historic buildings in the viewshed of the Edmund Pettis Bridge along the Alabama River in downtown Selma and a flood response plan to provide for life safety in the surrounding city wards. The Assistant Secretary of the Army (Civil Works) granted an exemption to the requirement that the U.S. Army Corps of Engineers (USACE) recommend the National Economic Development plan. A least-cost approach was used for formulating, evaluating, and determining the recommended plan, which includes:

a. Approximately 1,000 linear feet of soldier-pile wall along the Alabama River in the vicinity of downtown Selma, Alabama with a top elevation of 110-feet North American Vertical Datum of 1988 (NAVD88).

b. A flood response plan, to be developed during the PED phase, by which the City of Selma can direct actions to reduce life safety risk in advance of imminent flooding. The flood response plan will include:

i. identification of flood prone areas through floodplain mapping of several forecasted stages based on river stage forecasts;

DAEN

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- ii. identification of flood fighting actions to reduce impacts;
- iii. the appropriate level of response based on river stage forecast;
- iv. evacuation routes for inhabited, flood prone areas; and
- v. identification of critical infrastructure at risk.

3. The City of Selma, Alabama is the non-federal cost sharing sponsor for all features. Based on October 2021 price levels, the estimated total first cost of the recommended plan is \$23,897,000. In accordance with the cost sharing provisions of Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2213), the non-federal sponsor must contribute a minimum of 35 percent of construction costs, up to a maximum of 50 percent of construction costs allocated to structural flood risk management, with a minimum 5 percent cash contribution, and 35 percent of construction costs allocated to nonstructural flood risk management. The remaining portion of the non-federal share can be provided in lands, easements, rights-of-way, relocations and dredged or excavated material disposal areas (LERRD); in-kind contributions; cash; or a combination. The non-federal costs include the value of LERRD estimated to be \$222,000. The City of Selma would be responsible for operation, maintenance, repair, replacement and, rehabilitation (OMRR&R) of the project at \$31,000 per year.

4. Based on a 2.50 percent discount rate and a 50-year period of analysis, the average annual equivalent (AAEQ) costs of the project, including OMRR&R, are estimated at \$889,000. Benefits were calculated based on the cost of constructing the soldier-pile wall compared to the next least costly alternative of relocating at-risk structures along the riverbank. The recommended plan provides approximately \$2,786,000 AAEQ benefits. The net AAEQ benefits are estimated at \$1,897,000 and the project has a benefit-to-cost ratio of approximately 3.1 to 1.

5. The recommended plan is expected to reduce the risk of failure of ten historic structures along the riverbank viewshed and provide a response plan for imminent flooding events. The ten historic structures are at risk of failure due to riverbank erosion. While the soldier pile wall is expected to provide substantial protection, some residual risk remains. Failure of the wall and potential life loss and structural instability of the protected buildings is considered a very low risk. The flood response plan's residual risk is related to the sponsor's ability to implement and maintain the plan and willingness by residents to adhere to recommendations laid out in the plan and directed by the sponsor. The residual risks have been communicated to the non-federal sponsor, who understands and agrees with the assessment of the plan. The recommended plan has been designed to avoid or minimize environmental impacts while maximizing safety and economic benefits to the community. The study team organized and participated in stakeholder engagements throughout the process and worked with the local community to achieve a balance of project goals and public concerns.

DAEN

SUBJECT: Selma, Alabama, Flood Risk Management and Bank Stabilization

6. In accordance with USACE guidance on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and rigorous review process to ensure technical quality. This included district quality control review, agency technical review, and a headquarters policy and legal compliance review. All concerns of the reviews have been addressed and incorporated into the final report. Type I Independent External Peer Review (IEPR) was not required. A safety assurance review (Type II IEPR) may be conducted during the PED phase.

7. Washington level review indicates that the project recommended by the reporting officers is technically sound, environmentally, and socially acceptable, and economically justified. The plan complies with all essential elements of the 1983 U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation studies. The recommended plan complies with other administrative and legislative policies and guidelines. Also, the views of interested parties, including federal, state, and local agencies have been considered.

8. I concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to provide bank stabilization along the Alabama River in downtown Selma, Alabama and to develop a flood response plan for the city to reduce life safety risk be authorized in accordance with the reporting officers' recommended plan at an estimated project first cost of \$23,897,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. Federal implementation of the project for structural and nonstructural flood risk management includes, but is not limited to, the following required items of local cooperation to be undertaken by the non-federal sponsor in accordance with applicable federal laws, regulations, and policies:

a. Provide a minimum of 35 percent, up to a maximum of 50 percent, of construction costs allocated to structural flood risk management, and 35 percent of construction costs allocated to nonstructural flood risk management, as further specified below:

i. Provide, during design, 35 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

ii. Pay, during construction, a contribution of funds equal to 5 percent of construction costs allocated to structural flood risk management;

iii. Provide all real property interests, including placement area improvements, and perform all relocations determined by the Federal Government to be required for the project; and

DAEN

SUBJECT: Selma, Alabama, Flood Risk Management and Bank Stabilization

iv. Provide, during construction, any additional contribution necessary to make its total contribution equal to at least 35 percent of construction costs;

b. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) that might reduce the level of flood risk reduction the project affords, hinder operation and maintenance of the project, or interfere with the project's proper function;

c. Inform affected interests, at least yearly, of the extent of risk reduction afforded by the flood risk management features; participate in and comply with applicable federal floodplain management and flood insurance programs; prepare a floodplain management plan for the project to be implemented not later than one year after completion of construction of the project; and publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with the project;

d. Operate, maintain, repair, rehabilitate, and replace the project or functional portion thereof at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable federal laws and regulations and any specific directions prescribed by the Federal Government;

e. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-federal sponsor owns or controls for access to the project to inspect the project, and, if necessary, to undertake work necessary to the proper functioning of the project for its authorized purpose.

f. Hold and save the Federal Government free from all damages arising from design, construction, operation, maintenance, repair, rehabilitation, and replacement of the project, except for damages due to the fault or negligence of the Federal Government or its contractors;

g. Perform, or ensure performance of, any investigations for hazardous, toxic, and radioactive wastes (HTRW) that are determined necessary to identify the existence and extent of any HTRW regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675, and any other applicable law, that may exist in, on, or under real property interests that the Federal Government determines to be necessary for construction, operation and maintenance of the project;

h. Assume, as between the Federal Government and the non-federal sponsor, to be solely responsible for the performance and costs of cleanup and response of any HTRW regulated under applicable law that are located in, on, or under real property interests required for construction, operation, and maintenance of the project, including the costs of any studies and investigations necessary to determine an appropriate

DAEN

SUBJECT: Selma, Alabama, Flood Risk Management and Bank Stabilization

response to contamination, without reimbursement or credit by the Federal Government;

i. Agree, as between the Federal Government and the non-federal sponsor, that the non-federal sponsor shall be considered the owner and operator of the project for the purpose of CERCLA liability or other applicable law, and to the maximum extent practicable, shall carry out its responsibilities in a manner that will not cause HTRW liability to arise under applicable law; and

j. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, (42 U.S.C. 4630 and 4655) and the Uniform Regulations contained in 49 C.F.R Part 24, in acquiring real property interests necessary for construction, operation, and maintenance of the project including those necessary for relocations and placement area improvements; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

9. The recommendations contained herein reflect the information available at this time and current departmental policies governing formulation of individual projects. These recommendations do not reflect program and budgeting priorities inherent in the formulation of national civil works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to the Congress as proposals for authorization and implementation funding. However, prior to transmittal to the Congress, the non-federal sponsor, the state, interested federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.



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