

## Attachment A

### Task Descriptions for inclusion in Scope of Services for Review and Assessment of the Indianapolis North Levee System, Rocky Ripple Area

#### Purpose

Purpose of assessment is to provide technical support to the city regarding the selected Westfield alignment of the proposed next phase of the Indianapolis North Flood Damage Reduction Project, including an assessment of the information that is the basis of the alignment selection and to assess a possible range of options related to Rocky Ripple flood protection. The effort will include engineering and environmental assessments to determine if identified alternatives are compatible with Corps and FEMA requirements.

#### Tasks

1. Compile, review, and assess existing documents and studies (including, but not limited to: 1995, 2011, 2013) related to the proposed Westfield alignment selection and Rocky Ripple flood protection.
2. Conduct technical and economic feasibility analysis for flood barrier that would complete final phase of Indianapolis North Flood Damage Reduction Project by tying into the to-be-constructed earthen levee south of the Riviera Club. Evaluations will include modifying existing steady state HECRAS models to assess the impacts of Rocky Ripple levee alternatives on the flood profiles in the White River and potential permitting constraints associated with those impacts. The evaluation will also include a review and refresh of project cost estimates and flood damage reduction benefit models (assumes a USACE HEC-FDA model is available). This assessment will consider line of protection (levee/floodwall) costs and benefits only. Cost estimates will be based on the typical levee and floodwall design section developed by the USACE for other portions of the design.
  - i. Develop and evaluate potential for a tieoff that is FEMA certifiable and removes Rocky Ripple and Butler University property south of the town from the 100-year flood plain.
  - ii. Evaluate an alignment/elevation consistent with the Army Corps stated requirement that because prior phases were constructed to provide a 300-year level of protection, the final phase (3B3) south of the Riviera Club must also be built to that level. As part of this evaluation assess the impacts of not completing the final phase to a 300 year level of protection.
  - iii. Assess the current condition of the Rocky Ripple levee and potential options to remediate and improve the condition of the levee.

- iv. Assess opportunities to relocate properties built into the Rocky Ripple levee out of the clear zone, rather than removed (demolished) entirely. This will include a windshield site visit (no direct access to the property) to visually characterize the type of structures and foundation that would need to be relocated. The identified constraints to relocation will be noted and the likelihood of successful relocation qualitatively identified.
3. Evaluate three additional alternatives for the Rocky Ripple area including non-structural flood protection funded with FEMA HMGP or other grant programs, locally funded riverbank and restoration of the existing levee, a potential combination of those programs. The evaluation of additional alternatives will include:
  - a. Cost estimates at a conceptual level
  - b. Benefit and benefit cost ratios at a conceptual level
  - c. A timeline for due diligence, environmental impact review
  - d. A timeline for easement purchase and real property acquisition in Rocky Ripple
  - e. Assessment of construction start and end dates assuming funding is available.
  - f. Opportunities for Federal Funding
  - g. Local financing options
4. Draft Report and Final Report deliverables will be prepared to summarize the findings of this review and assessment.
5. The Consultant will attend up to two meetings. The initial meeting will be a kickoff meeting to identify the concerns and the goals of the City of Indianapolis. The second meeting will be to review the findings of the Draft Report. In addition, the consultant will participate in periodic conference calls with the City and with the US Army Corps of Engineers.