

RESOURCE ALLOCATION CATEGORY (SUBPROGRAM) DESCRIPTION

Allocation Code and Title:

- 123, Bridge Scour Retrofit Program.

Process Owner:

- Bridge Group, Assistant State Bridge Engineer - Operations.

Program Purpose:

- The intent of this subprogram is to implement scour countermeasures to scour vulnerable structures. Bridges are a major transportation asset for ADOT constituting almost 1/3 of all highway assets. Preserving ADOT's bridge assets closely relates to ADOT's mission of "... providing a safe and efficient transportation system ...". Funds from this program may also provide for emergency bridge scour repairs required because of unexpected flood events.
- Most of the program funds are spent on construction costs.
- This program's mandate is to increasingly reduce the number of structures with vulnerable scour ratings until eventually eliminating all scour deficiencies.

Rationale for Desirable Allocation Level:

- The programming of bridge scour retrofit projects is based on a detailed prioritization model developed by ADOT staff and takes into account data from the Bridge Management System. The functional route classification, the type of bridge foundation, and certain inspection condition ratings are examples of input to the prioritization formula. A refined project selection method, including a field visit and a meeting with District Maintenance personnel, is then used to identify specific candidate projects.
- At the current allocation level, the goal stated above should be met within 20 year.

Expected Program Duration:

- This program is intended to preserve the Department's bridge assets. Discontinuing this program may lead to situations of partial or total failure of bridge foundation components which could possibly result in catastrophic bridge failure.
- This program is expected to be sunset within a 20-year horizon.

Program Management Process:

Budget Management

- The Assistant State Bridge Engineer for Operations is responsible for recommending subprogram allocation levels, line items and projects.
- Contingencies are used for project budget adjustments.
- Bridge scour retrofit projects are listed as line items for the current and following years of the 5-year construction plan. Beyond that the program funds are listed as a lump sum.

Authority and Process for Lump Sum Expenditures

- The Assistant State Bridge Engineer for Operations has authority to allocate the lump sum bridge scour retrofit project budgets. All allocations are subject to approval by PRB. New project recommendations require approval of PRB, PPAC and the Transportation Board. Contingency funds may be used to add new projects, increase funding for line item projects as required due to inadequate estimates, or for scope revisions. Contingency funds are obligated at bid advertisement for the projects they are associated with.

Project Recommendation Process

- The Bridge Hydraulics Section, using output from the scour retrofit prioritization method described earlier and results of bridge hydraulic analysis, identifies and prioritize project recommendations.
- The Assistant State Bridge Engineer for Operations recommends line item projects to the Bridge Group Program Committee. This committee is chaired by the State Bridge Engineer and consists of both Assistant State Bridge Engineers and Bridge Sections' Leaders.
- Scoping is performed by the staff of the Bridge Hydraulics Section or by Bridge Design On-Call Consultants. Bridge Hydraulics Section staff manage all bridge scour retrofit projects. Scoping documents are reviewed by all members of the Bridge Group Program Committee. After final approval by the State Bridge Engineer, they are sent out to all involved ADOT units for review and comments. A project determination form is circulated along with the scoping documents for signatures. The Master Project Management Form is initiated for creating the project. Once the scope is finalized, the project is created through adding it to the PRB agenda, then the PPAC.

Project Design Process

- Bridge scour retrofit projects are designed by Bridge Group staff whenever adequate resources are available. In the event that additional design resources are needed, the design of these projects is entrusted to the Bridge Design On-Call Consultants.
- Associated development costs (right of way, utilities, environmental) are funded through their own programs.