

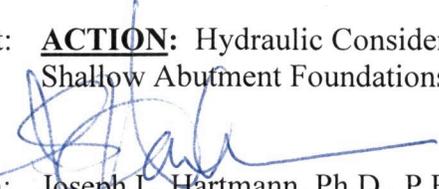


U.S. Department
of Transportation
**Federal Highway
Administration**

Memorandum

Subject: **ACTION:** Hydraulic Considerations for
Shallow Abutment Foundations

Date: December 21, 2018

From: 
Joseph L. Hartmann, Ph.D., P.E.
Director, Office of Bridges & Structures

In Reply Refer To:
HIBS-1

To: Directors of Field Services
Division Administrators
Federal Lands Highway Division Directors

The Office of Bridges and Structures is releasing a Technical Brief (TechBrief) entitled “Hydraulic Consideration for Shallow Abutment Foundations.” (see attachment to this memorandum, FHWA-HIF-19-007). This TechBrief provides programmatic and technical considerations for evaluating and mitigating abutment scour at bridges with shallow foundations. Please feel free to share this TechBrief with staff and our transportation partners and stakeholders.

The information supersedes all related shallow abutment foundation information contained in current editions of FHWA Hydraulic Engineering Circular No. 18, “Evaluating Scour at Bridges”, 5th edition (HEC-18) and No. 23 “Bridge Scour and Stream Instability Countermeasures”, 3rd edition (HEC-23), and provides an improved pressure scour method for the document “Design and Construction Guideline for Geosynthetic Reinforced Soil Abutment and Integrated Bridge Systems.” The TechBrief does not apply to piers or other elements affected by scour.

The TechBrief represents over 4 years of comprehensive research by FHWA and others on abutment scour and the performance of various abutment scour countermeasure designs. The research insights and outcomes apply to both new and existing bridges.

Specifically, for shallow foundations, the TechBrief provides information of Hydraulic Considerations and Processes; Scour Components, Evaluations, and Analyses; and Scour Countermeasures. The TechBrief provides images intended to help convey important aspects of such information.

This TechBrief will be effective until rescinded or superseded by any future editions of HEC-18 and/or HEC-23.

If there are any questions regarding the technical brief, please contact Mr. Paul Sharp, P.E., Office of Bridges and Structures (paul.sharp@dot.gov) or Dr. Kornel Kerényi, Ph.D., Office of Infrastructure Research and Development (kornel.kerenyi@dot.gov).

Attachment