PREFACE

The South Dakota Drainage Manual has been developed to provide guidance to Department and consultant personnel performing drainage investigations and preparing hydraulic designs for SDDOT and local agency projects. The Manual is intended to comply with all State and Federal laws, statutes and regulations, and it presents SDDOT criteria, practices and procedures on the hydraulic design of drainage appurtenances. As practical, the user should follow the guidance presented in the Manual.

The Manual presents much of the information normally required for hydraulic analysis and documentation; however, it is impossible to address every situation that the user will encounter. Therefore, the user must exercise good judgment on individual projects and, frequently, must be innovative in the approach to address hydraulic issues and impacts. This may require, for example, additional research into the hydraulic literature or different approaches than those described in the Manual. Where questions exist regarding the appropriate approach, the user should seek guidance from the Bridge Hydraulic Engineer and other experienced and knowledgeable individuals.

It is also important to recognize that drainage policies and procedures continue to evolve with time. New laws will be passed, new regulations developed, existing regulations revised and new drainage design criteria issued. The hydraulic methods described in this Manual are not intended to restrict consideration or use of these new developments. However, the user must evaluate the suitability of the method for the specific application. Where questions exist regarding the use of new methods, the user should seek guidance from the Bridge Hydraulic Engineer. After appropriate review, this Manual may be modified to include these new methods.

The South Dakota Drainage Manual was developed by the Office of Bridge Design and Office of Road Design with assistance from the engineering consulting firm of Roy Jorgensen Associates, Inc., and its subconsultant, Mr. Phil Thompson. The Manual Review Committee consisted of:

Kevin Goeden Chief Bridge Engineer, South Dakota Department of Transportation
Rich Philips Bridge Hydraulic Engineer (retired), South Dakota Department of Transportation
Kevin Marton Bridge Hydraulic Engineer, South Dakota Department of Transportation
Steve Johnson Bridge Design Engineer, South Dakota Department of Transportation
Chad Downs Hydraulic Engineer, South Dakota Department of Transportation
Steve Van Mullem Hydraulic Engineer, South Dakota Department of Transportation
Kathy Rodgers Hydraulic Engineer, South Dakota Department of Transportation
Karen Olson Road Design Engineering Supervisor, South Dakota Department of Transportation
Brad Gall Road Design Engineer, South Dakota Department of Transportation
Karen Harris Road Design Engineer, South Dakota Department of Transportation
Paul Nikolas Road Design Engineer, South Dakota Department of Transportation
Ken Shearin Project Manager, Roy Jorgensen Associates, Inc.
Phil Thompson Hydraulics Specialist

Several other individuals from the SDDOT Environmental Office and Legal also participated in the preparation and review of the Manual specific to their individual area of expertise.
The South Dakota Drainage Manual is expected to be updated periodically as needed revisions within the Manual are identified and as new methods of drainage design are implemented. Before making these updates, revisions to the South Dakota Drainage Manual will be submitted and reviewed according to the following process.

**Revision and Review**

1. All proposed revisions should be submitted to the Bridge Hydraulic Engineer. The Revision Request Form (next page) should be used for the submittal.

2. The Review Committee will meet twice yearly, or as necessary, to review the proposed changes.

3. The Committee will submit its recommendations and will meet with the Bridge Hydraulic Engineer to determine if the proposed revisions should be incorporated into the Manual.

4. If the Manual will be revised as recommended, a memo describing the revision will be distributed by the Bridge Hydraulic Engineer and posted on the South Dakota Department of Transportation website.

**Review Committee**

In addition to the review of proposed revisions, the Review Committee will be responsible for the following:

- preparing all updates for the South Dakota Drainage Manual;
- maintaining a tabulated summary of all revisions to the Manual and the reason for the change in chronological order; and
- preparing minutes for each meeting of the Review Committee.
SOUTH DAKOTA DRAINAGE MANUAL
(Revision Request)

Identification

Date Submitted: ________________________________________________________

Section To Be Revised: ________________________________________________

Section Title: _________________________________________________________

Page Number(s): ______________________________________________________

Description of Revision

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

List other sections of the Manual that would be affected by the revision:

  A.  
  B.  
  C.  

Justification For The Revision

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