



United States
Department of
Agriculture

Soil
Conservation
Service

P.O. Box 2890
Washington, D.C.
20013

June 11, 1986

DESIGN NOTE NO. 18, Amendment 2
210-VI

SUBJECT: ENG - UNATTACHED ES DRAWINGS

Purpose. To distribute the revised Engineering Standard Drawing, ES-195, "Standard Conduit Details", and cancel Engineering Standard Drawing, ES-154, "Standard for Pipe Conduits".

Effective Date. Effective when received.

Explanation. The latest revision of Technical Release No. 60 changed the method for controlling seepage along principal spillway structures from antiseep collars to drainage diaphragms with filters. Therefore, the present series of Standard Conduit Detail Drawings containing anti-seep collars are no longer applicable. A new set of Standard Conduit Detail Drawings consisting of only three sheets have been prepared to replace the forty eight sheets of the ES-50DD and ES-51DD series. The three new sheets (ES-61DD-C $\left[\begin{smallmatrix} E \\ R \end{smallmatrix}\right]$, ES-61DD-B $\left[\begin{smallmatrix} E \\ R \end{smallmatrix}\right]$, and ES-62DD-C $\left[\begin{smallmatrix} E \\ R \end{smallmatrix}\right]$) may be obtained by request to the SNTC.

Filing Instructions. Replace ES-195 of Design Note No. 18 with the enclosed Revised ES-195 dated 5-86. Delete the line "ES-154 Pipe Conduits" under Group B on page 1 of Design Note No. 18. ES-154 is hereby canceled and should be removed from Design Note No. 18.

Distribution. The distribution is shown on the reverse side. Additional copies may be obtained from Central Supply by ordering Form Catalog Order No. DN-18A.

 Acting for

EDWARD E. THOMAS
Deputy Chief for Technology

Enclosure

DIST: DN-18



The Soil Conservation Service
is an agency of the
United States Department of Agriculture



STANDARD PLANS: STANDARD CONDUIT DETAILS
 SCHEDULE SHOWING DRAWING NUMBERS

AVAILABLE STANDARD DETAIL DRAWINGS
 FOR
 REINFORCED CONCRETE PRESSURE PIPE
 PRINCIPAL SPILLWAYS

ES-61DD-C $\begin{matrix} E \\ R \end{matrix}$

ES-62DD-C $\begin{matrix} E \\ R \end{matrix}$

ES-61DD-B $\begin{matrix} E \\ R \end{matrix}$

Key to Drawing Numbers

The drawing numbers of the Standard Detail Drawings for Standard Conduit Details are given by:

$$ES-6\begin{matrix} 1 \\ 2 \end{matrix} DD-\begin{matrix} C \\ B \end{matrix} \begin{matrix} E \\ R \end{matrix}$$

where

$\begin{matrix} 1 \\ 2 \end{matrix}$ \equiv pipe is supported on A1 cradle or B1 bedding (1)
 pipe is supported on A2 cradle (2)

DD \equiv D = pipe conduit diameter, inches

$\begin{matrix} C \\ B \end{matrix}$ \equiv pipe is supported on cradles or beddings

$\begin{matrix} E \\ R \end{matrix}$ \equiv foundation is earth (yielding) or rock (non-yielding)

Completion of Standard Detail Drawings

Various items must be filled in to complete the drawings for inclusion in a set of construction plans. These are: the ES drawing number (the pipe diameter, DD, foundation is earth, E, or rock, R), the pipe strength requirements, the pipe joint requirements, the steel schedule, and material quantities. Relations are given from which the volumes of concrete may be obtained.

REFERENCE

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 ENGINEERING DIVISION - DESIGN UNIT

STANDARD DWG. NO.

ES- 195

SHEET 1 OF 1

DATE 5 - 8 6