

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-24 DRAINFILL

1. SCOPE

The work shall consist of furnishing and placing drainfill required in the construction of structure drainage systems and filter diaphragms around conduits.

2. MATERIALS

Drainfill shall be sand, gravel, or crushed stone. It shall be composed of clean, hard, durable mineral particles free from organic matter, clay balls, soft particles, or other substances that would interfere with their free-draining properties. Aggregates of crushed limestone may be used only for coarse drainfill but shall be thoroughly washed and screened so that not more than 3 percent by weight is finer than a No. 4 sieve.

Coarse drainfill shall be graded as follows:

<u>U.S. Sieve Designation</u>	<u>Percent Passing Sieve</u>
1 1/2	100
3/4	75-100
1/2	25-80
3/8	20-60
No. 4	0-10
No. 8	0-5
No. 100	0-3

Fine drainfill shall be graded as follows:

<u>U.S. Sieve Designation</u>	<u>Percent Passing Sieve</u>
3/8	100
No. 4	95-100
No. 8	75-95
No. 16	50-70
No. 30	25-50
No. 50	10-20
No. 100	0-6
No.200	0-3

3. BASE PREPARATION

Foundation surfaces and trenches shall be free of organic matter, loose soil, foreign substances, and standing water when the drainfill is placed.

4. PLACEMENT

Drainfill shall not be placed until the trench excavation has been inspected and approved by NRCS. Installation of the drainage conduit shall be inspected and approved by NRCS before covering it with drainfill. No foreign materials shall be allowed to become intermixed with or otherwise contaminate the drainfill. Drainfill material shall be placed in a manner to avoid segregation of particles by size.

5. COMPACTION

A. Foundation Trench Drain

- (1) No compaction will be required beyond that resulting from the placing and spreading operations.

B. Filter Diaphragm

- (1) Each layer of sand material shall be flooded with clean water prior to compaction.
- (2) Compaction shall be accomplished while the material is wet from step (1) above.
- (3) Each layer shall be compacted by a minimum of 2 passes of a hand directed vibratory plate compactor over the entire layer surface.
- (4) Layer thickness shall not exceed 12 inches after compaction.

C. Filter Diaphragm Outlet

- (1) Sand material shall be placed so the layer thickness does not exceed 4 inches after compaction.
- (2) Each layer shall be compacted by a minimum of 2 passes of a hand directed vibratory plate compactor over the entire layer surface.

7. SPECIAL SPECIFICATIONS