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## Instruction for use Construction Specification 46—Tile Drains

### 1. Applicability

Construction Specification 46 is applicable to the installation of clay and concrete drain tile for land drainage.

### 2. Material specifications

The following material specifications complement Construction Specification 46:  
543—Nonreinforced Concrete Pipe  
544—Clay Pipe and Drain Tile

### 3. Included items

Items to be included in contract specifications and drawings follow:

- a. Line and grade for tile/pipe. Include statement in items of work that pipe shall be installed so that there is no reversal of grade between joints unless specifically shown otherwise on the drawings.
- b. Kind, size, and class of tile and/or pipe.
- c. Typical cross sections, including typical bedding details.
- d. Special fittings, appurtenances, and other items necessary to complete the work.
- e. Maximum and minimum trench widths.
- f. Procedures to use where unstable soils are encountered. Consider contractor's responsibility for construction safety.
- g. Typical pipe outlets.
- h. Details of appurtenances.
- i. Location and details of any special tile/pipe bedding requirements.
- j. Use or restrictions of automatic backfillers.
- k. Location of required compacted backfill.
- l. Details of any special fittings.
- m. Type of joint required (including spacers where required).

- n. Type, kind, and size of material to be used to cover joint or pipe.
- o. Type of envelope or filter.
- p. Gradation of sand-gravel envelope or filter material. Note the limits of the moisture content of sand material so bulking is avoided.
- q. Directions for covering pipe with envelope or filter material. Provide caution to avoid the dropping of gravel/rock material directly on clay tile.

### 4. Methods

Methods are included in sections 4, 5, and 7. The methods are self-explanatory.

When specifications are prepared using electronic procedures and all methods but one are deleted for use in the contract specification, delete from the last paragraph, ***All Methods The following provisions apply to all methods of measurement and payment.*** Left justify the remaining text.

### 5. Items of work and construction details

Starting at the top of page 46-3, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions.

