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## Instructions 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 46-4, prepare and outline job specific "Items of Work and Construction Details" (IWCD) in accordance with these instructions. For ease of utilization, the use of recyclable color paper for the IWCD should be considered.