

845 - CLEANING EXISTING STRUCTURES AND UNDERDRAINS

SECTION 845

CLEANING EXISTING STRUCTURES AND UNDERDRAINS

845.1 DESCRIPTION

Clean the designated existing structures and underdrains as shown in the Contract Documents.

BID ITEMS

Cleaning Existing Structures
Cleaning Existing Underdrains

UNITS

Lump Sum
Linear Foot

845.2 MATERIALS - None specified.

845.3 CONSTRUCTION REQUIREMENTS

a. Cleaning Existing Structures. Remove all foreign material from the structures designated in the Contract Documents. Use hand, mechanical, pressurized water or a combination of methods to expose all inside surfaces of the designated structures.

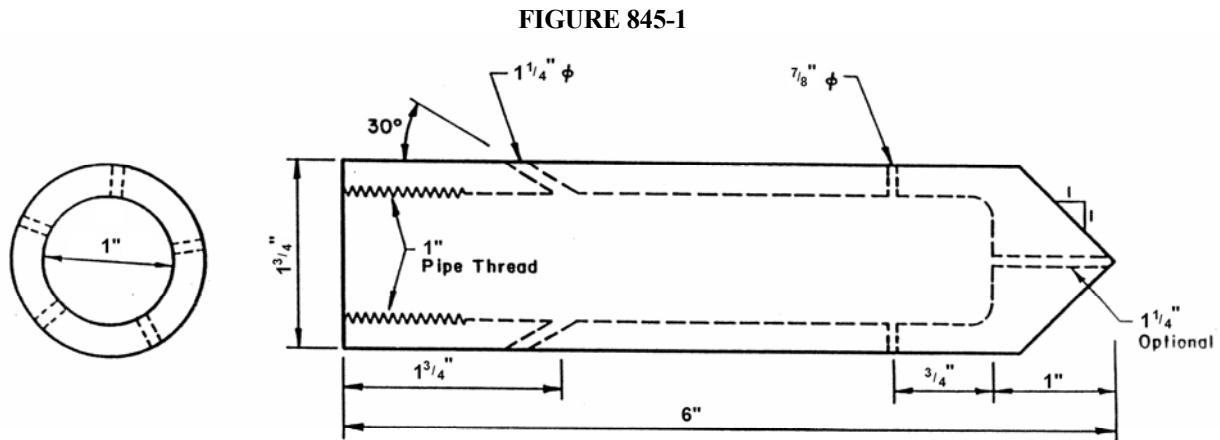
Do not move the existing structure out of position or damage the structure. Correct structures moved out of position, and repair or replace structures damaged because of the Contractor's operations.

Dispose of the material removed from the structure. The Engineer may allow placement of suitable material on the embankment slopes adjacent to the structures.

Grade the structure channel to provide drainage before cleaning the structure. Schedule the cleaning of the structures so that drainage is provided during the project construction operations. Maintain the cleaned structures until the project is accepted.

b. Cleaning Existing Underdrains. Clean the underdrains designated in the Contract Documents before completing any extensions or replacements of outlet sections. The Engineer will observe the cleaning operations.

Clean the underdrains using pressurized water. Use a cleaning unit consisting of a high-pressure pump (100 gallons per minute at 500 psi, minimum) connected to a hose (1 inch minimum) with a cleaning nozzle. Use a hose that is capable of traversing and cleaning up to 600 feet of underdrain. Use a cleaning nozzle similar to **FIGURE 845-1**.



Dimensions of the High Pressure Pipe Cleaning Nozzle.
FHWA/RD-81/078

Do not damage the underdrains. Repair or replace underdrains damaged because of the Contractor's operations.

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c. Video Inspection of Cleaned Underdrains. In the presence of the Engineer, perform a video inspection of all underdrains shown in the Contract Documents.

For the video inspection, provide a video camera complying with the following requirements:

- high resolution, high sensitivity, waterproof and color;
- capable of negotiating the various angle fittings used in the edge drain system;
- with sufficient lighting to provide a true color picture of the entire periphery of the diameter of the pipe; and
- with attachments that will maintain the camera's position in the center of the pipe.

Provide a portable control unit of the video camera complying with the following requirements:

- capable of adjusting the iris, focus, and light level intensity;
- have a color monitor (8 inch minimum) to track the camera's progress through the inspections;
- have 2 video input/output jacks for video recording, as well as tape playback verification through the built-in monitor; and
- have audio input to allow for dubbing of the video to incorporate comments as necessary.

Provide a video camera system complying with the following requirements:

- have sufficient cable/push rod to conduct inspections to a length of 500 feet, and a distance counter to monitor the length of the inspection;
- have a color video printer that will produce color prints of any observations of interest during the course of the inspection; and
- include a video recorder (minimum quality 4-head industrial grade VHS type) with audio dubbing, still frame and slow speed capabilities.

Provide an experienced video technician to operate the video camera system.

Using the same equipment noted above, re-clean any underdrains found to still contain soils and not working as intended.

Acceptance by the Engineer of the cleaned underdrain will be based on observations made during the video inspection.

845.4 MEASUREMENT AND PAYMENT

The Engineer will measure cleaning of the designated structures by the lump sum.

The Engineer will measure cleaning of the designated underdrains by the linear foot. The Engineer will measure the length of hose and nozzle inserted into the underdrain.

Payment for "Cleaning Existing Structures" and "Cleaning Existing Underdrains" at the contract unit prices is full compensation for the specified work.