

## 512 Steel Sheet Piling

### 512.1 Description

- (1) This section describes providing permanent and temporary steel sheet piling.

### 512.2 Materials

#### 512.2.1 Permanent Steel Sheet Piling

- (1) Furnish permanent sheet piling conforming to [ASTM A328](#) and with the section modulus, the plans or special provisions specify.
- (2) Do not furnish used material under the Piling Steel Sheet Permanent bid items.
- (3) Submit the certified report of test or analysis, as specified for mill inspection and tests in [506.3.21](#), before or at delivery of steel sheet piling unless the engineer allows otherwise.

#### 512.2.2 Temporary Steel Sheet Piling

- (1) Furnish temporary steel sheet piling with a section modulus equal to or greater than the plans show. Extend one foot or higher above the retained grade unless the plans show a greater height. The contractor may employ used steel sheet piling in good condition instead of new material. Remove and dispose of temporary sheet piling when no longer needed.

### 512.3 Construction

#### 512.3.1 Driving and Cutting Off

##### 512.3.1.1 General

- (1) Coordinate driving operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations.
- (2) Drive sheeting with a variation of 1/4 inch or less per foot from the vertical or from the batter the plans show. Ensure that the sheet piles are within 6 inches of the plan position after driving. Do not damage sheet piles attempting to correct for misalignment.
- (3) Remove and replace, or otherwise correct, sheet piles the engineer deems unacceptable under [105.3](#). Submit details of planned corrections to the engineer for review and approval before initiating any corrective action.
- (4) Drive sheet piles to or beyond the required tip elevation the plans show.

##### 512.3.1.2 Driving System

- (1) Furnish a sheet pile driving system capable of driving the sheet piles to the required minimum tip elevation the plans show.
- (2) The engineer may order the contractor to remove a pile driving system component from service if it causes insufficient energy transfer or damages the sheet piles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.
- (3) Drive sheet piles with diesel, air, steam, gravity, hydraulic, or vibratory hammers.

##### 512.3.1.3 Cut-Offs

- (1) Cut off sheet piles at the elevations the plans show or as the engineer directs. Pile cut-offs become the contractor's property. Dispose of cut-offs not incorporated into the work.

##### 512.3.2 Wales

- (1) Brace the steel sheet piling with waling strips as the plans show. Preferably, make the wales one length between corners and bolt to the piles.

##### 512.3.3 Painting

- (1) Paint permanent steel sheet piling as specified for painting steel piling in [550.3.11.3](#).

### 512.4 Measurement

- (1) The department will measure Piling Steel Sheet Permanent Delivered by the square foot acceptably completed. The department will obtain the measured quantity by multiplying the length of the wall the plans show by the length of sheeting required.
- (2) The department will measure Piling Steel Sheet Permanent Driven by the square foot acceptably completed. The department will measure the area of the wall from the sheet pile tip elevation to the top cutoff. The department will make no allowance for overlap of the piles.
- (3) The department will measure Piling Steel Sheet Temporary by the square foot acceptably completed. The department will measure the area from the sheet pile tip elevation to one foot above the retained grade unless the plans show a greater height. The department will make no allowance for overlap of the piles.

### 512.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
512.0500	Piling Steel Sheet Permanent Delivered	SF
512.0600	Piling Steel Sheet Permanent Driven	SF
512.1000	Piling Steel Sheet Temporary	SF

- (2) Payment for Piling Steel Sheet Permanent Delivered is full compensation for providing and delivering acceptable piling for this work.
- (3) Payment for Piling Steel Sheet Permanent Driven is full compensation for driving, cutting off, and painting.
- (4) Payment for Piling Steel Sheet Temporary is full compensation for providing, driving, and removing.