

**Item No. 593S**  
**P. C. Concrete Retards**

**593S.1 Description**

This item governs Portland cement concrete retards used to anchor underground pipe. Retards shall be constructed as indicated on the Drawings, presented in City of Austin Standard Detail 593S-1 or as directed by the Engineer or designated representative in accordance with these specifications.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the SI units are given preference followed by inch-pound units shown within parentheses.

**593S.2 Submittals**

The submittal requirements of this specification item include:

- A. Class D p.c. concrete mix design,
- B. Construction details (i.e. reinforcing steel, curing membrane).

**593S.3 Materials**

- A. Portland Cement Concrete

The concrete materials used in construction under this item shall conform to Class D, Standard Specification Item No. 403S, "Concrete for Structures".

- B. Reinforcement

Reinforcement shall conform to Standard Specification Item No. 406S, "Reinforcing Steel".

**593S.4 Construction Methods**

Prior to placement of Portland cement concrete, excavation for retards shall be made to proper section and depth. If considered necessary by Engineer or designated representative, the bottom of the excavation shall be hand tamped and sprinkled. The excavated area for concrete retards shall be moist when the Portland cement concrete is placed.

After the Portland cement concrete has been placed, consolidated and shaped to conform to the dimensions indicated on the Drawings and after sufficiently set, it shall be given a moderately rough finish by floating with a wood float (Standard Specification Item No. 411S, "Surface Finishes for Concrete").

No mortar or concrete work shall be undertaken, when the ambient temperature is below 35°F (1°C) and Work shall be protected from freezing. After completion of the concrete retard, exposed surfaces shall be covered with burlap, cotton mats or other approved covering and kept moist for a minimum period of 3 days. White pigmented curing compound conforming to Item No. 409S, "Membrane Curing", Type 2, will be permitted when applied to exposed surfaces.

Unless directed otherwise by the Engineer or designated representative, the material excavated during trenching shall be disposed of at a permitted site.

### 593S.5 Measurement

Concrete Retards will be measured either by the cubic yard per Drawing dimensions or on a unit basis complete in place.

### 593S.6 Payment

Work performed and materials furnished as prescribed by this Standard Specification item, measured as provided under the "Measurement" section will be paid for by the cubic yard or the unit price bid for "Concrete Retards", as indicated in the Contract Documents. The bid pay item price shall include full compensation for excavation, reinforcing, furnishing, hauling and placing all materials required in the construction, the disposal of excavated material and any manipulation, labor, tools, equipment and incidentals necessary to complete the work.

This item shall also govern any pumping, bailing and dewatering or drainage necessary to complete the work when Concrete Retards are indicated on the Drawings or required by the Engineer or designated representative.

Payment will be made under one of the following:

<b>Pay Item No. 593S-A:</b> Portland Cement Concrete Retards	Per Cubic Yard.
<b>Pay Item No. 593S-B:</b> Portland Cement Concrete Retards	Per Each.

**End**

<b><i>SPECIFIC</i> CROSS REFERENCE MATERIALS</b>
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City of Austin Standard Specification Items

<u>Designation</u>	<u>Description</u>
Item No. 403S	Concrete for Structures
Item No. 406S	Reinforcing Steel
Item No. 409S	Membrane Curing
Item No. 411S	Surface Finishes for Concrete
Item No. 507S	Excavation Safety Systems

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
No. 593S-1	Concrete Retard

<b><i>RELATED</i> CROSS REFERENCE MATERIALS</b>
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City of Austin Special Specifications

<u>Designation</u>	<u>Description</u>
Item No. 402S	Controlled Low Strength Material
Item No. 405S	Concrete Admixtures
Item No. 407S	Fibrous Concrete
Item No. 501S	Jacking or Boring Pipe
Item No. 504S	Adjusting Structures
Item No. 505S	Concrete Encasement and Encasement Pipe

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 506	Manholes
Item No. 507S	Bulkheads
Item No. 510	Pipe
Item No. 511S	Water Valves

TxDOT Specifications

<u>Designation</u>	<u>Description</u>
Item 421	Portland Cement Concrete
Item 440	Reinforcing Steel
Item 526	Membrane Curing

Item 532      Concrete Erosion Retards