

Item No. 504S Adjusting Structures

504S.1 Description

This item shall govern the removal and replacement of surfacing, furnishing of materials, adjusting and/or repositioning existing structures, valve boxes, pull boxes, survey monument boxes and water meters in accordance with these specifications to the locations or elevations indicated on the Drawings or as directed by the Engineer or designated representative. This item shall also govern any pumping, bailing and drainage required to complete the Work and Standard Specification Item No. 509S, "Excavation Safety Systems" for trench walls when indicated on the Drawings.

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

504S.2 Submittals

The submittal requirements of this specification item include:

- A. Aggregate type, gradations and physical characteristics for the Portland cement concrete mix.
- B. Proposed proportioning of materials for the mortar mix.
- C. Type structures and proposed adjustment technique (lowering, raising, lateral displacement).
- D. Type structure, repair technique and materials to be furnished (new replacement or reuse of existing) Type of mixing plant and associated equipment including chart indicating the calibration of each cold bin

504S.3 Materials

Precast reinforced concrete rings and castings in good condition, which are removed from the structures to be adjusted, may be reused with the written approval of the Engineer or designated representative. Additional materials required shall conform to the details indicated on the Drawings.

A. Portland Cement Concrete

The Portland cement concrete shall be Class A conforming to Standard Specification Item No. 403S, "Concrete for Structures".

B. Mortar

Unless otherwise specified or approved by the Engineer or designated representative, the mortar for bedding castings shall consist of one (1) part Portland cement and three (3) parts sand, by volume based on dry materials. Sufficient water will be added to provide the desired consistency. The gradation of the fine aggregate shall meet the requirements for "Fine Aggregate" as given in Standard Specification Item No. 403S, "Concrete for Structures".

504S.4 Construction Methods

All adjustments shall be completed prior to the placement of the final surface.

Pull box and valve box components scheduled for reuse shall be carefully removed and the contact areas shall be cleaned of all mortar, concrete, grease and sealing compounds. Any items broken in the process of removal and cleaning shall be replaced in kind by the Contractor at its own expense.

If the adjustment involves slight lowering or raising a valve box or survey monument box, the outside shell of a slip or screw casing shall be excavated to its full length and adjusted to the proposed grade. Pipe castings shall be excavated to the depth required to cut from or weld a section to the casing as may be needed to adjust the ring to the proposed elevation. The ring shall be welded to the casing prior to pouring concrete around the casing.

*** See modifications for additional information**

~~If the adjustment involves a vertical (lowering or raising) or a horizontal reassignment of a water meter and the property owner's cut-off valve, this work shall be completed in accordance with Standard Installation Details included in the City of Austin Standard Details Series (501S-1, 504S-3, 511S-13A, 511S-13B, etc.).~~

After the adjustments have been completed and cured, structures within the paved area shall be paved as indicated on the Drawings.

504S.5 Measurement

The work performed and materials furnished as prescribed by this item as indicated shall be measured per each.

504S.6 Payment

The work performed, materials furnished and measures as provided above, will be paid by the unit bid price per each. The price shall include full compensation for furnishing all materials, handling, placing, labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under one of the following:

*** See modifications for additional information**

Pay Item No. 504S-1WM:	Adjusting Water Meters	Per Each
Pay Item No. 504S-1RM:	Repositioning & Adjusting Water Meters	Per Each
Pay Item No. 504S-3G:	Adjusting Gas Valve Boxes to Grade -	Per Each
Pay Item No. 504S-3S:	Adjusting Survey Monument Boxes to Grade -	Per Each
Pay Item No. 504S-3W:	Adjusting Water Valve Boxes to Grade -	Per Each
Pay Item No. 504S-4PB:	Adjusting Pull Boxes to Grade -	Per Each

End

<u>SPECIFIC</u> CROSS REFERENCE MATERIALS
Specification 504S, "Adjusting Structures"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 403S	Concrete for Structures
Item No. 509S	Excavation Safety Systems

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
No. 501S-1	Encasement Detail W/ Casing Spacers
No. 504S-3	Gas Valve Casing Adjustment
No. 511S-13A	Water Valve Box Adjustment to Grade w/ Full Depth Concrete
No. 511S-13B	Water Valve Box Adjustment to Grade w/ Concrete and HMAc

<u>RELATED</u> CROSS REFERENCE MATERIALS
Specification 504S, "Adjusting Structures"

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 501S	Jacking or Boring
Item No. 503S	Frames, Grates, Rings and Covers
Item No. 505S	Concrete Encasement and Encasement Pipe
Item No. 507S	Bulkheads
Item No. 508S	Miscellaneous Structures and Appurtenances
Item No. 511S	Water Valves

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
No. 1100S-1	Casting Adjustment
No. 725S-1	Monument, Type A Survey Identification Marker
No. 725S-2	Monument, Type B Survey Identification Marker
No. 725S-3	Monument, Type C Survey Identification Marker
No. 725S-7	Survey Identification Marker Non-Traffic Construction Detail
No. 725S-10	Survey Identification Marker Roadway Construction Detail
No. 725S-11	Adjustable Valve Box For Survey Monument

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No.421	Portland Cement Concrete