

*San Antonio Water System Standard Specifications for Construction*

**ITEM NO. 200  
FLEXIBLE BASE**

**200.1**      **DESCRIPTION:** This item shall govern a foundation course for surfacing, pavement, or other base courses in conformity with the typical sections shown on the plans and to the lines and grades as established by the Engineer.

**200.2**      **MATERIAL:** The material shall be crushed as necessary to meet the requirements hereinafter specified, and shall consist of durable stone crushed and/or screened to the required particle size, with or without other approved fine-sized material. The material shall be from approved sources.

Testing of flexible base materials shall be in accordance with the following TXDOT standard laboratory test procedures:

|   |                        |
|---|------------------------|
| Preparation for Soil Constants and Sieve Analysis | Tex-101-E              |
| Liquid Limit                                      | Tex-104-E              |
| Plastic Limit                                     | Tex-105-E              |
| Plasticity Index                                  | Tex-106-E              |
| Linear Shrinkage                                  | Tex-107-E              |
| Sieve Analysis                                    | Tex-110-E              |
| Los Angeles Abrasion                              | ASTM<br>C131 (Grade A) |

Samples for testing the material shall be taken prior to the compaction operations.

The material shall be well graded and, when properly tested, shall meet the following requirements:

|                               |            |
|-------------------------------|------------|
| Retained on 1- 3/4 inch sieve | 0%         |
| Retained on No. 4 sieve       | 45 to 75 % |
| Retained on No. 40 sieve      | 60 to 85 % |

The material passing the No. 40 sieve shall be known as Soil Binder and shall meet the following requirements:

|                                   |    |
|-----------------------------------|----|
| Liquid Limit shall not exceed     | 40 |
| Plasticity Index shall not exceed | 12 |

The crushed stone shall have an abrasion of not more than 40 when subjected to the Los Angeles Abrasion Test.

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**CONSTRUCTION METHODS:** The flexible base material shall be placed on the approved subgrade in courses not to exceed 6 inches compacted depth. It shall be the responsibility of the Contractor that the required amount of material be delivered and uniformly spread and shaped. All material shall be moved from the place where it is dumped by cutting into windrows. It shall be sprinkled, spread, shaped, and rolled in proper sequence to prevent segregation and as necessary for required compaction.

The surface upon completion shall be smooth and in conformity with typical sections and to the established lines and grades. Any deviation in excess of ¼ inch in cross section and in length of 16 feet measured longitudinally shall be corrected. All irregularities, depressions, or weak spots which develop shall be corrected.

Flexible base shall be compacted to an apparent dry density of not less than 95% of the maximum dry density as determined in accordance with TXDOT Test Method Tex 113-E. Test for density will be made within 24 hours after compaction operations are completed. If the material fails to meet the density specified, it shall be reworked as necessary to meet the required density. Just prior to the placing of any succeeding course of flexible base or surfacing on a previously completed course, the density and moisture of the top 3 inches of flexible base shall be checked and if the test shows the density to be more than 2% below the specified minimum or the moisture content to be more than 3% above or below the optimum, the course shall be reworked as necessary to obtain the specified compaction and moisture content.

**MEASUREMENT:** "Flexible Base" will be measured by the square yard, complete in place, for the thickness specified on the plans, or by the cubic yard, complete in place as indicated in the proposal.

**PAYMENT:** This item will be paid for at the contract unit price bid for "Flexible Base" which price shall be full compensation for all work herein specified, including the furnishing, hauling, and placing of all materials, for all water required, and for all equipment, tools, labor, and incidentals necessary to complete the work.