

Section 560

**SECTION 560
SHOULDER CONSTRUCTION**

560-1 DESCRIPTION

Perform the work covered by this section including, but not limited to, furnishing the source of the borrow; building; maintaining and obliterating haul roads; clearing and grubbing the borrow source; removal, hauling and disposition of overburden and other unsuitable material; excavation; hauling; formation of roadway shoulders include the reshaping and finishing of slopes adjacent to the shoulders and roadway ditches; restoration of the source and haul roads to an acceptable condition; disposal of surplus stockpiled material; and seeding and mulching.

560-2 MATERIALS

Refer to Division 10.

Item	Section
Shoulder Borrow	1019-2
Aggregate Shoulder Borrow	1019-3

560-3 CONSTRUCTION METHODS

Construct the top 6 inches of shoulders with soils capable of supporting vegetation.

Construct the shoulders in proper sequence with the type of base and pavement being constructed. Perform the work so as to provide proper drainage at all times. Shape and roll the shoulder material during placement to provide for bonding of layers and compaction to the satisfaction of the Engineer.

Before placing any earth material on existing graded shoulders, remove all existing vegetation and scarify the existing shoulders to ensure a proper bond.

Perform the final shaping of the shoulders, adjacent slopes and ditches in accordance with the typical section shown on the plans.

Provide adequate equipment to perform the work. Do not damage base, surface, pavement or drainage features during the construction of the shoulders. Should damage occur because of the Contractor's operations, repair the damaged portions or remove and replace them as directed at no cost to the Department.

560-4 MEASUREMENT AND PAYMENT

(A) General

Shoulder borrow will be measured in its original position or in the haul truck, as directed by the Engineer.

No measurement will be made of material transported directly from unclassified excavation or fine grading and deposited directly in place on the shoulder.

The quantity of shoulder borrow will be paid at the contract unit price per cubic yard for *Shoulder Borrow*, except as otherwise provided below.

(B) Measured in Original Position

The quantity of shoulder borrow to be paid will be the actual number of cubic yards of approved material, measured in its original position in the borrow source or stockpile by cross sectioning and computed by the average end area method, which has been incorporated into the completed and accepted work. No measurement will be made of any overburden or unsuitable material removed from the borrow source, nor of any material excavated before cross sections being taken.

(C) Truck Measurement

The quantity of shoulder borrow to be paid will be the actual number of cubic yards of approved material, measured in trucks, which has been incorporated into the completed and accepted work. Each truck will be measured by the Engineer and shall bear a legible identification mark indicating its capacity. Load each truck to its measured capacity at the time it arrives at the point of delivery. The recorded capacity will be adjusted by making a 25% deduction to allow for shrinkage, and the adjusted capacity will be the quantity to be paid.

When shoulder material is obtained as a result of fine grading operations, trenching out existing subgrade or shaping slopes and ditches, no direct payment will be made for the work of shoulder construction as such work will be incidental to the work of constructing the base or pavement.

No payment will be made for the removal and disposal of any surplus material remaining in the stockpile after the shoulders have been completed.

Where the borrow source has been furnished by the Department, payment for clearing and grubbing the source will be made as provided in Article 200-8 and payment for draining the source will be made as provided in Article 240-4. Where the source has been furnished by the Contractor, no separate payment will be made for clearing and grubbing or draining the source as such work will be incidental to the work covered by this section.

If aggregate shoulder borrow (ASB) is used for borrow, a unit weight of 140 lb/cf will be used to convert the weight of ASB to cubic yards.

Payment for seeding and mulching all borrow sources will be made at the contract unit prices for the items established in the contract as payment for the work of seeding and mulching.

Payment will be made under:

Pay Item	Pay Unit
Shoulder Borrow	Cubic Yard