

SECTION 627 MULCHING

627.1 Description

- (1) This section describes furnishing, placing, and anchoring a mulch cover, usually in connection with seeding the surfaces of the roadway.

627.2 Materials

- (1) Mulching material consists of straw or hay in an air-dry condition, wood excelsior fiber, wood chips, or other suitable material of a similar nature that the engineer approves, and is substantially free of noxious weed seeds and objectionable foreign matter.
- (2) If using tackifier, the department will prequalify it before use. Select tackifiers from the department's erosion control product acceptability list (PAL). The contractor may obtain a copy of the PAL and the prequalification procedure for products not on the PAL from the department.

627.3 Construction

627.3.1 General

- (1) Unless directed otherwise, place the mulch on the specified area within 2 days after completing the seeding.
- (2) The contractor shall not perform mulching during periods of excessively high winds that might preclude proper mulch placement.
- (3) Place the mulch loosely or open enough to allow some sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, conserve soil moisture, and prevent or reduce erosion.
- (4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes before final or partial acceptance of the work.

627.3.2 Placing

- (1) The contractor may perform the work as specified in one of the following ways: Method A, Method B, or Method C, or a combination of the 3, unless a specific method is specified in the contract.

627.3.2.1 Method A, Netting

- (1) Uniformly spread the mulching material over the designated areas to a loose depth of 1/2 to 1 1/2 inches (13 to 38 mm). Use a specific rate of application; dependent on the character of the material, that results in a cover conforming to the requirements specified above in 627.3.1. Loosen or make fluffy the mulch material from compacted bales before spreading in place. Unless directed otherwise, begin mulching at the top of the slopes and proceed downward.
- (2) Securely anchor straw or hay mulch by using engineer-approved netting anchored to the ground with pegs or staples to prevent it from floating as the vegetation grows. Instead of this anchorage, the contractor may secure mulch by heavy biodegradable twine fastened by pegs or staples to form a grid with 6 to 10 feet (1.8 to 3 m) spacing.
- (3) The contractor may use department-approved erosion control mats, listed in the PAL, instead of separately applying mulch and netting.

627.3.2.2 Method B, Tackifier

- (1) Treat straw or hay with a tackifier, blow from a machine, and uniformly deposit over designated areas in one operation. Place straw or hay uniformly over the area 1/2 to 1 inch (13 to 25 mm) deep, using 1/2 to 3 tons (3.4 to 6.7 Mg) of mulch per acre. Mix and place tackifier according to the PAL. Within the above limits, the engineer will determine, on the job, the application rate of the mulch and the tackifier, and the engineer may vary the rates during mulching to produce the desired results. Use an engineer-approved machine to place the mulch that blows or ejects by constant air stream a controlled amount of mulch and applies a spray of tackifier to partially coat the straw or hay, sufficient to hold together and keep in place the deposited straw or hay. The contractor may apply the tackifier as an overspray in a separate operation after placing the straw or hay.
- (2) Apply wood fiber, wood chips, or similar material with engineer-approved blowing machines, or other engineer-approved methods, that place a controlled amount of mulch uniformly over the area 1/2 to 1 1/2 inches (13 to 38 mm) deep. Treat areas receiving wood chip mulch, with one pound (0.5 kg) of available nitrogen per 1000 square feet (100 m²) before or after applying the chips.

- (3) Throughout the process, feed the mulch material into the blowing machine to produce a constant and uniform ejection from the discharge spout, and operate in a position to produce mulch of uniform depth and coverage.

627.3.2.3 Method C, Crimping

- (1) Spread the straw or hay mulch uniformly over the designated areas to a loose depth of 1/2 to 1 1/2 inches (13 to 38 mm), using 1 1/2 to 3 tons (3.4 to 6.7 Mg) of mulch per acre, by blowing from a machine, as specified in Method B, or by other engineer-approved methods.
- (2) Immediately after spreading, anchor the mulch in the soil by using a mulch crimper consisting of a series of dull, flat discs with notched edges. Space the 20 inch (500 mm) diameter discs at about 8 inch (200 mm) centers. Equip the crimper with a ballast compartment to permit adjusting the weight for depth control.
- (3) Impress the mulch into the soil 1 1/2 to 2 1/2 inches (38 to 64 mm) deep in one pass of the crimper. The department will not allow mulch crimpers to operate on slopes so steep that damage to the mulch, seedbed, or soil occurs. Anchor the mulch on these areas by one of the following methods: Method A or Method B. Equip and operate tractors to minimize disturbing or displacing the soil. This process may require more than one pass of the crimper to ensure adequate anchoring of the mulch.
- (4) The contractor shall not use Method C if it cannot impress the mulch to a minimum of 1 1/2 inch (38 mm).

627.4 Measurement

- (1) The department will measure Mulching acceptably completed by the square yard or by the ton, whichever the contract specifies.
- (2) If measured by the square yard, the measured quantity equals the number of square yards of surface area that the contractor applied the mulch.
- (3) If measured by the ton, the measured quantity equals the number of tons of mulch provided, placed, and acceptably completed.
- (4) Tackifiers or nitrogen used for treating mulch are incidental to the cost of the work.

627.5 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>
627.0200	Mulching	SY
627.0205	Mulching	TON

- (2) Payment for Mulching is full compensation for providing all materials, including tackifiers or nitrogen; for all hauling, treating, placing, spreading and anchoring of the mulch material; and for maintaining the work and repairing all damaged areas.
- (3) If the contractor opts to use department-approved erosion control mats instead of separately applying mulch and netting, the department will pay for it at the contract unit price for Mulching only.