Flat surfaces:35 pounds per 1000 sq ft  $(170 \text{ kg}/1000 \text{ m}^2)$ Slopes 3:1 or less:46 pounds per 1000 sq ft  $(225 \text{ kg}/1000 \text{ m}^2)$ 

All slopes subject to windy conditions shall be seeded and mulched by hydraulic methods only.

**870.17 Compost.** Compost may be applied as a mulch instead of straw or wood fiber. Grass seed shall be thoroughly mixed with the compost and distributed over the prepared seed bed area using pneumatic equipment. Compost/seed mixture shall be applied to a minimum 1/4 inch (6 mm) depth. Mulch covering with tackifier is not needed when using compost in this method. No additional compensation will be made for this substitution.

**870.18 Watering.** , All permanent seeded areas (Classes 1 to 6), shall be thoroughly watered, after the seed has germinated. The total rate is 300 gallons per 1000 square feet ( $12.2 \text{ m}^3/1000 \text{ m}^2$ ) for a 7 day period. This rate shall be applied in at least 2 applications spread over seven days.. More than 2 applications may be required to get the needed total rate. The water shall be applied by means of a hydro-seeder or a water tank under pressure with a nozzle that will produce a spray that will not dislodge the mulch material. A second water application shall be made between 7 and 10 days after the first applications. When  $\frac{1}{2}$  inch (13 mm) or greater of rainfall has occurred within the first 7 day period, the second application may be delayed or omitted entirely, depending on weather conditions. Water shall be paid for and measured separately.

870.19 Maintenance. The Contractor shall maintain all seeded and mulched areas until final inspection. Damaged areas shall be repaired to the original condition and grade.

**870.20 Mowing**. Mowing may be required prior to permanent seeding and any time during the growing season following permanent seeding. The Contractor will be notified by the Engineer to begin mowing. The Contractor shall use suitable equipment for mowing. Mowers shall be of the rotary, flail, disk or sickle type. Bunching or wind-rowing of mowed vegetation will not be permitted. The final cutting height shall be no less than 6 inches (150 mm). More than one pass may be required for each mowing.

**870.21 Fertilization: 2<sup>nd</sup> Application.** Permanently seeded areas shall be fertilized with an application of 12-12-12 no less than 3 months after installation. A soil test shall be made to determine the need for the second application. In no case shall the second application be applied unless the grass has germinated. Fertilizer shall be broadcast evenly over the surface without incorporation at a rate of 10 pounds per 1000 sq ft (0.05 kg/m<sup>2</sup>). This shall be performed after all repair seeding and mulching or inter-seeding has been completed.

**870.22 Repair Seeding and Mulching.** The Contractor shall repair all damage or erosion of the seeded and mulched areas. The Department will pay for these repairs, except when damage or erosion of these areas occurs as a result of fault or negligence of the Contractor. Then the areas shall be satisfactorily repaired, fertilized, seeded and mulched at no additional cost to the Department.

The repairs shall be made prior to completion of the project by reworking or reshaping to grade.

Reworking or reshaping of the slopes shall include bringing in additional material, if necessary and using whatever equipment that is necessary to restore slopes to grade. Area shall then be fertilized, seeded, and mulched as per the specifications. Compost may be applied at a rate set in 870.17 in these areas. Such work will be measured and paid for as "Repair Seeding and Mulching."

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**870.23 Inter-seeding.** Inter-seeding is the practice of seeding existing thin and spotty growing turf with a slit or drill type seeder. This work shall only be performed from March 15 to May 15 and September 1 to October 15. Mowing may be required prior to seeding to achieve good seed soil contact. Cut material shall not be wind-rowed or left in a bunched condition.

A slit or drill type seeder shall be used. Exceptions may be when seeding steep slopes or inaccessible areas. Broadcast or hydraulic seeding methods may be used in these instances. Commercial fertilizer of 12-12-12 shall be broadcast over affected areas as specified. Water shall be applied at the rate specified in these areas to aid in seed/soil contact.

**870.24 Method of Measurement.** Topsoil, organic compost or other approved equal required to meet the specification shall be paid for by the number of cubic yards (cubic meters) furnished and placed. . . .

In the measurement of topsoil, organic compost, etc., no adjustment of the plan quantities or recalculation of the volumes shall be made for any volumes found different by less than five percent from the plan quantity. Unless there is quantity change greater than 5 %, the Contractor shall be paid the plan quantity. When the Contractor finds a discrepancy, submit supporting documentation concerning the possible changes. The quantity will be checked by using the average compacted or tracked depth measurements in the field.

The quantity of commercial fertilizer and agricultural lime will be the number of tons (kilograms) of each quantity of furnished, spread and incorporated.

Seeding and mulching will be the number of square yards (square meters) of the area seeded and mulched in accordance with these specifications. In the measurement of seeding and mulching, no adjustment of the plan quantities or recalculation of the areas shall be made for any areas found different by less than five percent from the plan quantity. Unless there is a change greater than 5%, then the Contractor is paid the plan quantity. When the Contractor finds a discrepancy, submit supporting documentation concerning the possible changes.

The quantity of repair seeding and mulching will be the number of square yards (square meters) of damaged or eroded areas reshaped, seeded and mulched.

The quantity of water shall be the amount in thousands of gallons (cubic meters) applied in accordance with the requirements of this item and measured in tanks, tank wagons or trucks of predetermined capacity, or by means of meters of a type satisfactory to the Engineer and furnished and installed by the contractor at his own expense, or determined by weight conversion.