

Item 161

Compost



1. DESCRIPTION

Furnish and place compost as shown on the plans.

2. MATERIALS

Furnish compost that has been produced by aerobic (biological) decomposition of organic matter and meets the requirements of Table 1. Compost feedstock may include, but is not limited to, leaves and yard trimmings, biosolids, food scraps, food-processing residuals, manure or other agricultural residuals, forest residues, bark, and paper. Ensure compost and wood chips do not contain any visible refuse, other physical contaminants, or any substance considered harmful to plant growth. Do not use materials that have been treated with chemical preservatives as a compost feedstock or as wood chips. Do not use mixed municipal solid waste compost. Provide compost meeting all applicable 40 CFR 503 standards for Class A biosolids and TCEQ health and safety regulations as defined in the TAC, Chapter 332, including the time and temperature standards in Subchapter B, Part 23. Meet the requirements of the United States Composting Council (USCC) Seal of Testing Assurance (STA) program.

Before delivery of the compost, provide quality control (QC) documentation that includes the following:

- the feedstock by percentage in the final compost product,
- a statement that the compost meets federal and state health and safety regulations,
- a statement that the composting process has met time and temperature requirements,
- a copy of the producer's STA certification, and
- a copy of the lab analysis, performed by an STA-certified lab, verifying that the compost meets the requirements of Table 1.

Provide a copy of the current TCEQ compliance statement signed by the facility manager when furnishing biosolids compost.

Table 1
Physical Requirements for Compost

Property	Test Method	Requirement
Particle Size	TMECC ¹ 02.02-B, "Sample Sieving for Aggregate Size Classification"	95% passing 5/8" 70% passing 3/8"
Heavy Metals Content	TMECC 04.06, "Heavy Metals and Hazardous Elements": 04.06-As, Arsenic 04.06-Cd, Cadmium 04.06-Cu, Copper 04.06-Pb, Lead 04.06-Hg, Mercury 04.06-Mo, Molybdenum 04.06-Ni, Nickel 04.06-Se, Selenium 04.06-Zn, Zinc	Pass
Salinity	TMECC 04.10-A, "1:5 Slurry Method, Mass Basis"	5.0 dS/m Max ²
pH	TMECC 04.11-A, "1:5 Slurry pH"	5.5-8.5
Maturity	TMECC 05.05-A, "% Emergence and Relative Seedling Vigor"	> 80%
Organic Matter Content	TMECC 05.07-A, "Loss-On-Ignition Organic Matter Method"	25-65% (dry mass)
Stability	TMECC 05.08-B, "Carbon Dioxide Evolution Rate"	≤ 8
Fecal Coliform	TMECC 07.01-B, "Fecal Coliforms"	1,000 MPN/g Max

1. *Test Methods for the Examination of Composting and Compost*, published by the United States Department of Agriculture and the USCC.
2. A soluble salt content up to 10.0 dS/m for compost used in compost-manufactured topsoil will be acceptable.

Maintain compost in designated stockpiles at the producer's site. The Department reserves the right to sample compost at the jobsite. Material may be tested to verify compliance with this Specification by a STA-certified lab. Make payment to the STA-certified lab approved by the Department. Submit lab invoices for passing tests to the Department for reimbursement. Maintain a complete record of all test reports for the previous and current calendar year.

- 2.1. **Compost Manufactured Topsoil (CMT).** Use CMT consisting of 75% topsoil blended with 25% compost measured by volume. Use topsoil conforming to Article 160.2., "Materials."
- 2.2. **Erosion Control Compost (ECC).** Use ECC consisting of 50% untreated wood chips blended with 50% compost measured by volume. Use wood chips less than or equal to 5 in. in length with 95% passing a 2-in. screen and less than 30% passing a 1-in. screen.
- 2.3. **General Use Compost (GUC).** Use GUC consisting of 100% compost.

3. CONSTRUCTION

Prepare the types of compost for use on the project and stockpile at the jobsite.

- 3.1. **Compost Manufactured Topsoil (CMT).** After excavation and embankment work is complete, remove and dispose of objectionable material from the topsoil before blending. Use equipment capable of blending CMT uniformly to the full depth as specified. Roll the CMT with a light corrugated drum.
- 3.2. **Erosion Control Compost (ECC).** Use only on slopes 3:1 or flatter. Apply a 2-in. uniform layer after excavation and embankment work is complete unless otherwise shown on the plans or directed. Use a light roller or other suitable equipment when rolling is specified.
- 3.3. **General Use Compost (GUC).** Apply in a uniform layer as a top dressing on established vegetation to the depth shown on the plans. Do not bury existing vegetation. Apply GUC as a backfill ingredient, in a planting soil mixture, for planting bed preparation, or as mulch, when shown on the plans.

4. MEASUREMENT

This Item will be measured by the 100-ft. station along the baseline of each roadbed, by the square yard complete in place, or by the cubic yard in vehicles at the point of delivery.

For ECC cubic yard measurement, the quantity will be the composite material, compost and topsoil or wood chips.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Compost Manufactured Topsoil," "Erosion Control Compost," and "General Use Compost" as follows:

For measurement by the station and square yard, payment will be for the depth specified;

For measurement by the cubic yard, payment will be made for material measured in vehicles.

This price is full compensation for loading, hauling, stockpiling, blending, placing, rolling, sprinkling, equipment, labor, materials (including topsoil for CMT and wood chips for ECC), tools, and incidentals. Costs associated with passing quality assurance (QA) testing will be paid for in accordance with the requirements of Article 9.7., "Payment for Extra Work and Force Account Method," at invoice price with no add-ons.