

TECHNICAL SPECIFICATIONS
FOR
LANDSCAPE DEVELOPMENT, GENERAL

1. Description of Work

In addition to general requirements applicable to landscape work, this section includes requirements for the following:

- (a) Preparation of plant soil.
- (b) Furnishing of new topsoil.
- (c) Furnishing and application of soil amendments.
- (d) Furnishing and application of fertilizers.
- (e) Furnishing and application of miscellaneous landscape materials.

2. General

Excavation, filling and grading required to establish elevations shown on the drawings have been (or will be) done under a separate section. Verify subgrade elevations and bring any discrepancies to the attention of the Engineer. Do not proceed with landscape work until discrepancies have been corrected, or until directed by the Engineer to proceed. Contractor shall supply necessary topsoil for all planting.

3. Landscape Materials

(a) New Topsoil

- 1) Provide topsoil which is a fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter and free of roots, stumps, stones larger than 2" in any dimensions, and other extraneous or toxic matter harmful to plant growth.
- 2) Obtain topsoil from local sources or from areas having similar soil characteristics to that found at the side of the work. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 4"; do not obtain from bogs or marshes.

(b) Soil Amendments

1) Lime

Natural limestone containing not less than 85% of total carbonates and ground to such fineness that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.

Provide lime in the form of dolomite limestone meeting the specified requirements.

- 2) Peat Humus: FS Q-P-166, of the following types and characteristics:

For tree and shrub-planting soil mixture, provide moss peat composed of Type II mosses (other than sphagnum) or reed-sedge peat (Type IV) of a coarse fibrous texture and with a pH of 6.0 to 7.5, unless otherwise specified.

For acid-loving trees and shrubs, provide a moss peat with a pH of 3.2 to 4.5 and of a coarse fibrous texture, Type I, Class B (medium divided sphagnum moss peat) or Type IV (reed-sedge moss peat).

For lawns and other bed-type planting soil mixtures, provide a peat of a finely divided or granular texture and with a pH of 6.0 to 7.5 composed of Type II moss peat (other than sphagnum), or peat moss (Type II), or reed-sedge peat (Type IV).

(c) Fertilizer

Commercial Fertilizer: Complete fertilizer of neutral character, with some elements derived from organic sources and containing the following percentages of available plant nutrients:

For trees and shrubs, provide 10-10-10 fertilizer with not less than 10% available phosphoric acid and from 3% to 5% total nitrogen and from 3% to 5% soluble potash.

4. Installation, General

(a) Planting Time

Plant or install materials only during normal planting season for each type of landscape work required. Correlate planting with specified maintenance periods to provide maintenance until occupancy by the Owner.

(b) Planting Schedule

Proceed with and complete the landscape work as rapidly as portions of the site become available, working within the seasonal limitations of each kind of landscape work required.

(c) Utilities

Determine location of underground utilities and perform work in a manner which will avoid possible damage. Do not permit heavy equipment such as trucks, rollers, or bulldozers to damage utilities. Hand excavate, as required, to minimize possibility of damage to underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by all parties concerned.

(d) Excavation for Planting

Where rubble fill is encountered, notify Engineer and prepare planting pits properly by use of clay or other acceptable methods. When conditions encountered are severe, the Engineer may issue a change order to direct the installation of pit linings.

(e) Obstructions

If rock, underground construction work, or other obstructions are encountered in excavation for planting of trees or shrubs, notify the Engineer. New locations may be selected by the Engineer, or the Engineer may issue change order to direct

removal of obstructions to a depth of not less than 6" below the required planting depth.

(f) Preparation of Planting-Soil Mixtures

- 1) Before mixing, clean topsoil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- 2) Mix specified soil amendments and fertilizers with topsoil at the rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- 3) For pit and trench type backfill, mix planting soil prior to backfilling and stockpile at the site.
- 4) For bed type planting, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.

Mix lime with dry soil prior to mixing of fertilizer.

Prevent lime from contacting roots of acid-loving plants.

Apply phosphoric acid fertilizer (other than that constituting a portion of complete fertilizers) directly to subgrade before tilling.

5. Landscape Maintenance and Guarantee Requirements

- (a) Begin maintenance period immediately after planting of landscape materials.
- (b) Maintain trees and shrubs until final acceptance but in no case less than the following period:
One full growing season.
- (c) Guarantee trees and shrubs through the specified maintenance period, and until final acceptance.
- (d) Remove and replace trees, shrubs, and other plants found to be dead or in unhealthy condition during the guarantee period. Plant missing trees, shrubs and plants. Make replacements during the growth season following end of guarantee period. Furnish and plant replacements which comply with requirements shown and specified. Also, replace trees and shrubs which are in doubtful condition at the end of the guarantee period; unless in the opinion of the Engineer, it is advisable to extend the guarantee period for a full-growing season. The Engineer will make another inspection at the end of the extended guarantee period, if any, to determine acceptance or rejection. Only one replacement will be required at the end of the guarantee period, except for losses or replacements due to failure to comply with specified requirements.

6. Inspection and Acceptance

- (a) When the landscape work is completed, including maintenance, the Engineer will, upon request, make an inspection to determine acceptability.
- (b) The landscape work may be inspected for acceptance in parts agreeable to the Engineer, provided the work offered for inspection is complete, including maintenance, and that the area comprises one complete unit, not too small for individual consideration.

- (c) If landscape work is not acceptable to the Engineer, replace rejected work and continue specified maintenance until reinspected by the Engineer and found acceptable.

7. Clean-up, Protection, and Repairs

- (a) During landscape work, store materials and equipment where directed. Keep pavements clean and work area in an orderly condition.
- (b) Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.
- (c) Barricade open excavations and post with warning lights for the safety of persons. Operate warning lights during hours from dusk to dawn each day.

8. Basis of Payment

No separate payment for work described in this General Specification will be made. Payment will be made under the specific item described in other sections of these Specifications.