

# LANDSCAPE ARCHITECTURE

## SAMPLE SPECIFICATIONS

### 1.01 MATERIALS

A. The following organic soil amendments, soil conditioner/fertilizer, and fertilizers are to be used for bidding purposes only. Specific amendments and fertilizer will be selected and specified after rough grading operations are complete and soil samples are tested submitted to the landscape architect prior to proceeding.

B. Provide standard, approved and first-grade quality materials, in prime condition when installed and accepted. Deliver commercially processed and packaged material in manufacturer's unopened containers bearing the manufacturer's guaranteed analysis. Supply a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance, or bearing the manufacturer's guaranteed analysis. Empty containers will also be kept on site in a neat, clean and orderly fashion until final inspection of the landscape architect.

#### C. ORGANIC AMENDMENTS

1. Nitrogen Stabilized: 0.56 to 0.84 percent N based on dry weight for wood residual or rice hulls.
2. Particle size: 95 to 100 percent passing 6.35 mm standard sieve; 80 to 100 percent passing 2.33 mm standard sieve.
3. Salinity: Ensure that saturation extract conductivity does not exceed 3.5 milliohms per centimeters at 25 degrees C. as determined by saturation extract method.

4. Iron Content: Minimum 0.08 percent dilute acid soluble Fe on dry weight basis.

5. Ash: 0 to 6 percent (dry weight).

#### D. SOIL AMENDMENTS

1. Soil Sulfur: Agricultural grade sulfur containing minimum of 99 percent sulfur (expressed as elemental).

2. Agricultural limestone

3. Gypsum (Agricultural): Agricultural grade product containing 98 percent minimum calcium sulfate.

4. Iron Sulfate: 20 percent iron (expressed as metallic iron) derived from ferric and ferrous sulphate, 10 percent sulfur (expressed as elemental).

#### E. SOIL CONDITIONER/FERTILIZER

1. Gro-Power Plus (bacteria included) with 1.00% soil penetrant and consisting of the following percents by weight: 5-nitrogen, 3-phosphoric acid, 1-potash, 70-humus, 15-humic acids.

2. Gro-Power (bacteria included) without penetrant. Percentages as stated #1.

3. Gro-Power Controlled Release: consisting of the following percents by weight: 12-nitrogen (100% from SCU), 8-phosphoric acid, 8-potash, 25-humus, 5-humic acids.

4. Gro-Power Hi-Nitrogen: consisting of the following percents by weight: 14-nitrogen, 4-phosphoric acid, 9-potash, 3-sulfur, 30-humus, 6-humic acids.

5. Gro-Power Premium Hi-Nitrogen: consisting of the following percents by weight: 18-nitrogen (40% from SCU), 3-phosphoric acid, 7-potash, 20-humus, 4-humic acids, 0.5-soil penetrant.

6. Gro-Power Planting Tablets: A 7 gram planting tablet that consists of the following percents by weight: 12-nitrogen, 8-phosphoric acid, 8-potash, 20-humus, 4-humic acids (1 year tablet).

### 2.01 GRADING AND SOIL PREPARATION

After approximate finished grades have been established, soil shall be conditioned and fertilized in the following manner. Materials shall, at the following rates, be uniformly spread and cultivated thoroughly by means of mechanical tiller into top 6' of soil per 1,000 square feet:

Application Rates:

200 lbs. Gro-Power Plus

2 cubic yards Nitrolized shavings

\*\* Additional amendments may be necessary pending the results of a soil analysis. Before starting soil preparation, submit results to landscape architect for approval and/or changes.

Weed Control:

After soil preparation and establishment of final grades prior to any planting, the contractor shall irrigate thoroughly for a period of time, two(2) to three(3) weeks or until the weed seeds have germinated. When there is sufficient weed seed germination, the contractor shall apply a post-emergent weed killer, according to the directions of a licensed pest control applicator. The contractor shall then wait an additional one(1) week to allow the weed killer to dissipate, then plant as indicated in the plans and specifications.

### 3.01 PLANTING

1. Excavation for planting: Excavation for planting shall include the tripping and stacking of all acceptable topsoil encountered within the areas to be excavated for trenches, tree holes, plant pits, and planting beds.

a. Protect all areas from excessive compaction when trucking plants or other material to the planting site.

b. All excavated holes shall have vertical sides with roughened surfaces and shall be of a size that is twice the diameter and 6" minimum deeper than the root ball.

c. Excess soil generated from the planting holes and not used as backfill or in establishing the final grades shall be removed from the site.

2. Planting:

No planting shall be done in any area until the area concerned has been satisfactorily prepared in accordance with these specifications.

Only as many plants as can be planted and watered on that same day shall be distributed in a planting area.

Container plants shall be backfilled with:

6 parts native on-site soil, by volume

4 parts nitrolized shavings, or equal, by volume

18 lbs Gro-Power Plus per cubic yard mix

All plants which settle deeper than specified above shall be raised to the correct level. After the plant has been placed, additional backfill shall be added to the hole to cover approximately one-half of the height of the root ball. At this stage, water shall be added to the top of the partly-filled hole to thoroughly saturate the root ball and adjacent soil.

After the water has completely drained, planting tablets shall be placed as indicated below:

3 tablets per one-gallon container

8 tablets per five-gallon container

15 tablets per fifteen-gallon container

16 tablets per 20 - to 24-inch box

Larger sizes: For each 1/2" caliper measured 14" above soil level use 3 to 4 tablets.

The remainder of the hole shall then be backfilled.

\*\* Planting tablets shall be set with each plant on the top of the root ball while the plants are still in their containers so the required number of tablets to be used in each hole can be easily verified.

### 4.01 HYDROSEEDING

Hydroseeding shall include application of mulch, fertilizer, and seed, planting bed preparation, pre-and post-planting irrigation.

1. After soil preparation, establishment of final grades and weed control, the surface two (2) inches of soil shall be loosened by harrow or rototiller and floated level and irrigated just prior to planting.

2. Preparation: The slurry preparation shall take place at the site of work and shall begin by adding water to the tank when the engine is at half-throttle. When the water level has reached the height of the agitator shaft, good recirculation shall be established and at this time the seed and chemical additive shall be added. Fertilizer shall then be added, followed by wood pulp mulch. The wood pulp mulch shall only be added to the mixture after the tank is at least one-third filled with water. The engine throttle shall be opened to full speed when the tank is half-filled with water. All the wood pulp mulch shall be added by the time the tank is two-thirds of three-fourths full. Spraying shall commence five minutes after addition of the chemical additive when the tank is full.

Application rates:

Fiber 1,500 lbs. per acre

Seed See plans

Gro-Power Plus 1,100 lbs per ACRE

Gro-Power Controlled Release (12-8-8) 200 lbs. per ACRE

\*\* Note: for SOIL-PREPPED AREAS, apply 300 lbs. Gro-Power Hi-Nitrogen (14-4-9) per ACRE in the slurry only.

3. Application: The operator shall spray the area with a uniform visible coat by using the green color of the wood pulp as a guide. The slurry shall be applied in a sweeping motion, in an arched stream so as to fall like rain, allowing the wood fibers material to spread at the required rate per acre.

## 5.01 MAINTENANCE

Fertilize all planting areas with the following:

At 30-day intervals, 20 lbs. per 1,000 sq. ft. with Gro-Power Plus.

### PERFORMANCE SPECIFICATION

For Public Agencies Where Proprietary Specifications  
(Trademark)

Cannot be used \*

### FERTILIZER-SOIL CONDITIONER

The fertilizer-soil conditioner shall be derived from organic materials consisting of higher plant form life, composted beyond the fibrous stage. It shall NOT contain poultry, animal, or human waste (i.e., sewage sludge), pathogenic viruses, fly larvae, insecticides, fungicides, or poisonous chemicals that would inhibit plant growth; and shall have the following guaranteed analysis:

#### Ingredient

Nitrogen 5

Phosphoric Acid 3

Water Soluble Potash 1

Humus 70

Humic Acids 15

Soluble Metallic Iron 1

Soil Penetrant 1.00

Note: If Gro-Power Plus (with soil penetrant added) is needed, just add to the above analysis.

\* Use the above format if any other Gro-Power products are used in a performance specification.

### Lightweight Soil Mixes Specification

Materials:

1. Gravel for drainage beds at over structure planting areas. Washed gravel sizes varying from 1/2" to 3/4" diameter.
2. Soil separator: 100% polyester fabric.
3. Imported Artificial Soil Mix.

Amount: (per cubic yard mix)

50%

30%

20%

7 lbs

10 lbs

5 lbs

Per manufacturer specs

Ingredient:

Fine bark, horticultural grade

Fine washed nursery sand

Agricultural pumice 1/6" - 3/16"

Dolomite Lime

Gro-Power Controlled Release 12-8-8 (4-6 month release)

Premium Green Iron 40% Fe (Non-Staining)

Weight Factor: 50 lbs. per cubic feet (bark only)

18 lbs. per cubic feet (amendments)

Total 68 lbs. per cubic feet (measure with average moisture)

Planting tablet should be considered for plants also, since light mixture do not hold nutrients.