SECTION 02902 - LANDSCAPING FOR UTILITIES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Furnish and install topsoil, fertilizer, seed, mulch, sod, trees, bushes, ornamental plants, fencing, mail boxes, planters, and related items necessary to complete work shown or specified.
- B. The Contractor shall repair or replace lawn areas, trees, and ornamental plants damaged or destroyed during construction of the work included in this Contract, unless otherwise shown on the drawings. The Contractor shall repair or replace fences, mail boxes, planters, and other items damaged or destroyed during construction of the work included in this Contract, unless otherwise shown on the drawings.
- C. Lawn areas include grassed areas which are cut and maintained on a routine basis. Lawn areas include lawns at homes and businesses and grass shoulders of streets, roads, and highways.
- D. Replacement of underbrush in fields and woods, along farm fences and roads, and in similar areas is not required, unless otherwise shown on the drawings.

1.2 JOB CONDITIONS

- A. Seed between February 15 and June 1 and between August 15 and November 1. Do not sow seed during adverse weather conditions. Do not broadcast seed during high wind. Do not sow seed when the moisture content of the soil it too low or too high for seed germination.
- B. Plant trees and ornamental plants during the proper time and under the proper conditions for the particular tree or plant.

PART 2 - PRODUCTS

2.1 LAWN PRODUCTS

- A. Limestone: Limestone shall be agricultural grade with a minimum total neutralizing power of 90. At least 40% of the limestone shall pass a No. 100 sieve, and at least 90% shall pass a No. 8 sieve.
- B. Fertilizer: Fertilizer shall be 12-12-12 grade.

C. Seed:

1. Seed mix shall be as follows:

Seed Description	Percent by Weight
Kentucky Blue Grass (Poa parteusis)	35 to 40
Kentucky 31 Fecuse (Festuca arundinacea var. KY 31)	30 to 35
Perennial Rye (Lolium multiflorm)	30 to 35

- 2. Seeds shall not contain more than 5% inert matter. Seed shall not contain objectional weeds or material.
- D. Mulch: Mulch shall be straw, grass, hay, pine needles, or wood fiber. Straw shall be threshed straw of cereal grain such as oats, wheat, barley, rye, and rice. Mulch shall not contain objectional weed seeds or other material that might be detrimental to the planting being established.

2.2 SOD

Provide strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth and development when planted (viable, not dormant). Provide sod composed principally of Kentucky Bluegrass (Poapratensis).

2.3 TOP SOIL

- A. Provide new topsoil that is 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 1 inch in dimension, and other extraneous or toxic matter harmful to plant growth.
- B. Obtain topsoil from local sources or from areas having similar soil characteristics to that found at the project sire. Obtain topsoil only from naturally, well drained sites where topsoil occurs in a depth of not less than 4 inches. Do not obtain from bogs or marshes.

2.4 FENCE AND OTHER PRODUCTS

Replacement fence, mail boxes, planters, and other items shall be new and unused. Fence, mail boxes, planters, and other items shall be the same type as the items removed. Fence, mail boxes, planters, and other items shall be of equal quality to the items removed when the items removed were new.

PART 3 - EXECUTION

3.1 GRADING

Fine grade all non-paved areas disturbed during construction. Areas shall be smooth and uniform. Finish elevations and grades shall be the same as elevations and grades prior to construction, unless otherwise shown on the drawings.

3.2 PREPARATION OF PLANTING SOIL

- A. Before mixing. clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- B. Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
- C. "Schedule of Planting Soil Mixture Requirements" is attached at the end of this section.
- D. For pit and trench type backfill, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
- E. For planting beds and lawns, mix planting soil prior to backfilling, and stockpile at site.
 - 1. Mix lime with dry soil prior to mixing fertilizer.
 - 2. Apply phosphoric acid fertilizer (other than that constituting a portion of complete fertilizers) directly to subgrade before applying planting soil and tilling.

3.3 SEEDING

A. Loosen the seed bed to a depth of from 1 to 2 inches below finished grade.

- B. Seeds and fertilizers can be sown with standard agricultural drills. Grass seeds may be sown broadcast or with a special seeder attachment on agricultural drills, but shall not be covered with more than 1/2-inch of soil, whether drilled or raked in. If not covered by the drill, all uncovered seed shall, immediately after sowing, be slightly rakes or harrowed to cover the seed.
- C. Apply fertilizer in the amount of 20 pounds per 1,000 square feet.
- D. Sow grass seed at the rate of not less than four pounds per 1,000 square feet.
- E. Apply adequate mulching material following seeding and fertilizing.
- F. Keep seeded and fertilized areas adequately watered until germination of all seed is completed and uniform grass cover is accomplished.

3.4 PREPARATION OF SODDED AREAS

- A. Prior to preparation of areas to be sodded, remove existing grass, vegetation, and turf. Dispose of such material in an appropriate and proper manner. Do not turn over any removed material into the soil being prepared for sodding.
- B. Loosen subgrade of areas to be sodded to a minimum depth of 4 inches. Remove stones over 1-1/2 inch in any dimension and sticks, roots, rubbish, and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation.
- C. Place 4 inches of topsoil to be sodded.
 - 1. Spread planting soil mixture to minimum depth required to meet lines, grades, and elevations shown, after light rolling and natural settlement.
 - 2. Place approximately one-half of total amount of planting soil required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil.
 - 3. Allow for sod thickness in areas to be sodded.
- D. Grade areas to be sodded to smooth, even surface with loose, uniformly fine texture. Roll and rake and remove ridges and fill depressions as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.
- E. Moisten prepared areas to be sodded before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

F. Restore areas to be sodded to specified condition if eroded or otherwise disturbed after fine grading and prior to planting

3.5 SODDING

- A. Sod areas indicated on drawings to be sodded.
- B. Loosen the surface to a depth of 1 to 2 inches and rake area before sod is placed. Remove clods, lumps, boulders, and debris.
- C. Apply limestone at a rate of 25 pounds per 1,000 square feet. Apply fertilizer at a rate of 10 pounds per 1,000 square feet.
- D. Lay sod strips by hand. Fit sod to surrounding grade and fixed objects. Butt sod strips together so there are no open joints. Tamp or roll sod after initial watering. The sod shall have a smooth even surface after tamping and rolling.
- E. Stake or peg sod when the sodded area has a slope of less than 4 feet horizontal to 1 foot vertical.
- F. Lay sod within 24 hours from time of stripping. Do not plant dormant sod or if ground is frozen.

3.6 PLANTING TREES AND OTHER PLANTS

A. Plant trees and other plants in the proper manner for the particular planting. Keep trees and plants properly watered until growth is assured.

3.7 FENCING AND OTHER RESTORATION

- A. Locate fences, mail boxes, planters, and other items in the same location that the item has been prior to construction. Erect wire and board fences plumb and on straight lines. Set mail boxes, posts, poles, and similar items plumb. Restore planters and similar items to the same shape the items has been prior to construction.
- B. Wire fences shall have the proper tension for the type of wire fence restored.

3.8 CLEAN-UP

Cleanup the job site following landscaping. Remove rubbish, excess materials, temporary structures, and equipment. Leave the work in a neat and presentable condition.

END OF SECTION 02902