PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Fertilizer.
   2. Sod.

B. Related Sections:
   1. Section 02815 - Irrigation Systems
   2. Section 02920 - Fine Grading and Soil Preparation

1.2 REFERENCES


1.3 SUBMITTALS

A. Quality Control Submittals:
   1. Certificates: State, Federal and other inspection certificates shall accompany the invoice for materials showing source or origin. Submit to Landscape Architect prior to acceptance of material.

B. Contract Closeout Submittals:
   1. Warranty: At completion of work, furnish written warranty to Owner based upon requirements as specified.

1.4 QUALITY ASSURANCE

A. Source Quality Control:
   1. Sod Materials: Subject to inspection and acceptance. Landscape Architect reserves the right to reject at any time or place prior to acceptance, any work and sod which in the Landscape Architect's opinion fails to meet these specification requirements.
   2. Inspection: Primarily for quality; however, other requirements are not waived even though visual inspection results in acceptance. Notify Landscape Architect of intended sod farm prior to cutting for inspection. Inspection at growth site shall not preclude the right of rejection at project site.
   3. Promptly remove rejected sod from site.
4. Inspection will be made periodically during sodding, at completion and at end of warranty period by Landscape Architect.

B. Sod Standards:

1. General: Healthy, thick turf having undergone a program of regular fertilization, mowing and weed control; free of objectionable weeds; uniform in green color, leaf texture and density; healthy, vigorous root system; inspected and found free of disease, nematodes, pests and pest larvae by the entomologist of the State Department of Agriculture.

2. Each piece of Sod: Sandy-loam soil base that will not break, crumble or tear during sod installation.

3. Thickness: 3/4" thick, excluding top growth and thatch.

4. Thatch: Not to exceed 1/4" uncompressed.

5. Size: Cut in strips 18" wide no more than 24 hours prior to delivery.

1.5 DELIVERY, STORAGE AND HANDLING

A. General: Comply with Section 01600.

B. Sod: Deliver on pallets properly loaded on vehicles and with root system protected from exposure to sun, wind, and heat in accordance with standard practice and labeled with botanical and common name of each grass species in accordance with Federal Seed Act.

1. Protect from dehydration, contamination and heating at all times. Keep stored sod moist and under shade or covered with moistened burlap.

2. Do not drop sod rolls from carts, trucks or pallets.

3. Do not deliver more sod than can be installed within 24 hours.

4. Do not stack sod more than 2 feet deep.

C. Fertilizer: Deliver inorganic or chemical fertilizer to site in original unopened container bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, warranty and conformance to state law.

1. Material shall be inspected upon arrival at job site.

2. Immediately remove unacceptable material from job site.

1.6 PROJECT/SITE CONDITIONS

A. Existing Conditions:

1. Import and place any fill material required to adjust the fine grade to meet drainage requirements or to match hard surface fine grades.
2. Vehicular accessibility on site shall be as directed by Landscape Architect. Repair damage to prepared grounds and surfaces caused by vehicular movement during work under this section to original condition at no additional cost to Owner.

B. Environmental Requirements:

1. If possible install sod between spring and fall: April 1 - October 1 or anytime irrigation is available daily for one month and once a week for several months (especially for fall/winter sodding).
2. Do not install sod on saturated or frozen soil.

1.7 WARRANTY

A. Sod: Warrant sod for a period of one year from date of Substantial Completion be in a healthy, vigorous growing condition.

1. During the original warranty period, replace at once sod areas that die due to natural causes, etc., or which in Landscape Architect's opinions are unhealthy.
2. Replacement will not be required in any season definitely unfavorable for sodding.
3. Install replacements as originally specified and warranted.

1.8 MAINTENANCE

A. General: The maintenance period shall begin immediately after each area is sodded and continue until final acceptance of entire project. During this time, be responsible for watering, mowing, spraying, weeding, aerating, fertilizing, and all related work as necessary to ensure that sodded areas are in a vigorous growing condition. Furnish all supervision, labor, material and equipment to maintain turf areas.

B. Materials: Conform to specification or otherwise be acceptable to Owner.

C. Watering: Initially water sod upon completion of convenient work areas until installation is complete and the irrigation system can be operated under full control. Water sod sufficiently to moisten subsoil at least 4" deep in a manner not to cause erosion or damage to adjacent finished surfaces. Water shall be free of substances harmful to plant growth. Be responsible for furnishing water from underground sprinkler system, quick couplers or other source.

D. Fertilizing: If work has not received final acceptance within 45 days after initial fertilizer application to sodded areas, repeat fertilizer application to maintain optimal sod vigor.

E. Mowing and Trimming:

1. Mow and Trim around trees (keeping mulch in saucers and beds), walls, fences, etc., maintaining turf at 2½-2 3/4" height. Do not remove more than 33% of grass leaf in single mowing. Remove grass clippings from pavement areas.
F. Resodding: Resod spots larger than 1 sq. ft. not having healthy, uniform stand of grass.

G. Weed Control: As required, using selective herbicides approved by Owner.

H. Insect and Disease Control: As required, using insecticides and fungicides approved by Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Sod: Colorado grown Kentucky Bluegrass blend having a healthy, vigorous root system. Blend shall contain a minimum of 3 improved varieties. Submit proposed blend to Landscape Architect for review and approval prior to application.

B. Water: Free of substances harmful to plant growth. Be responsible for furnishing water from underground sprinkler system, quick couplers or other source.

C. Fertilizer: Inorganic mixture with following chemical composition:

1. First Application: Under Section 02920, 2.01 C.

PART 3 - EXECUTION

3.1 EXAMINATION

A. General - Verify that existing site conditions are as specified and indicated before beginning work under this section.

1. Layout: Verify layout of sodded areas as indicated prior to starting operations.
2. Grades: Verify that grades are within 0.04 ft. of grades indicated and specified.

B. Unsatisfactory Conditions: Report in writing to General Contractor with copy to Landscape Architect.

C. Beginning of installation means acceptance of existing conditions by this Contractor.

3.2 PREPARATION

A. Protection:

1. Pay for repairs made by contractors designated by Owner.
2. Identify prepared sod areas requiring protection and erect barriers for proper protection and traffic control.

B. Sodding Areas: Remove weeds, debris and rocks larger than ½" which may hinder sodding. Dispose of accumulated debris at direction of Landscape Architect.

C. Adjustment: Adjust irrigation heads to proper watering height according to depth of sod material but lower than compacted blade height to enable lawn mowers to cut grass freely without damage to the sprinkler system.

D. Fine Grading: Perform as required to maintain positive drainage, prevent ponding and direct run-off into catch basins, drainage structures, etc., and as required to provide smooth well-contoured surface prior to proceeding. Tolerance: ± 0.04 foot.

3.3 FERTILIZING
A. First Application to newly sodded areas: Under Section 02920 2.1C.

3.4 SODDING
A. Sodding:
   1. Soil on which sod is laid: Slightly moist.
   2. Lay with longest dimension parallel to contours and in continuous rows.
   3. Tightly butt ends and sides of sod together. Stagger and compact vertical joints between sod strips by rolling so sod will be incorporated with the ground surface, insuring tight joints between adjacent pieces.

B. Rolling: When soil and sod are moist, roll sod lightly as soon as possible after it is laid. Delay rolling until just before the second watering.

C. Topsoil: Add along exposed edges to match adjacent grade. Feather topsoil out approximately 1 ft. from edge of sod.

D. Drainage: Assure finished areas of sod are such that positive drainage of storm and irrigation water will occur and ponding of water will be minimized.

3.5 REPAIR OF EXISTING SOD AREAS DISTURBED BY RENOVATION
A. Repair existing sod areas disturbed by renovation work (utilities, paving, etc.), as indicated, in accordance with specifications of this section.

3.6 NOTIFICATION OF INSPECTION
A. Notification: Give notice requesting inspection by Landscape Architect at least 7 days prior to the anticipated date of completion. All sod must be alive and healthy in order to be considered complete.
B. Deficiencies: If deficiencies exist, Landscape Architect shall specify such deficiencies to the Contractor who shall make satisfactory adjustments and will again notify the Landscape Architect for final inspection.

3.7 CLEANING

A. Cleaning: Remove pallets, unused sod, and other debris from site. Clean paved and finished surfaces soiled as a result of work under this Section in accordance with directions given by Landscape Architect. Clean out drainage inlet structures.

3.8 PROTECTION

A. General: Provide and install barriers as required and as directed by Landscape Architect to protect sodded areas against damage form pedestrian and vehicular traffic until acceptance by Owner. Contractor is not responsible for malicious destruction of sodding caused by others.

END OF SECTION 02932