<u>NOTE TO CONSULTANTS</u>: Edit with <u>Track Changes</u> turned on, any text in this section that appears in bold and italics then turn off the bold and italics for the final approved version. This Specification must be edited for each project's special conditions. Do not include these instructions in the Contract Documents).

The attached Seattle Parks and Recreation (SPR) Standard Specifications represent the minimum acceptable standards for Mechanical (Drill) Seeding of Athletic Fields. There are several options for execution of Soil Preparation operations as needed for the individual project requirements depending upon the existing conditions of the site, or as specified at the Park Engineer's direction. The Consultant shall choose the options that best suit the project conditions and edit the specifications accordingly. The following guidelines shall be followed:

<u>Grading</u>:
Maintaining positive drainage to a drainage structure or detention facility is required at all times. Grades shall be a minimum of 2%. Areas that are intended to be regularly mowed shall not exceed a ratio of 5 horizontal to 1 vertical (5:1).

<u>Soil Preparation Options</u>:
Refer to Section 32 91 13 - Soil Preparation, for soil preparation and amendment options based on soil testing and/or existing conditions of native soils at the project site or as directed by the Engineer. One of the soil preparation options shall be chosen and the specifications shall be edited accordingly to fit preparation strategy.

<u>Compaction of Soils</u>:
Condition 1 - Soils require full compaction to levels as described in Section 31 00 00 – Earthwork and Section 32 91 13 – Soil Preparation.
Condition 2 - Soils require cultivation to lessen compaction density to acceptable levels.

PART 1- GENERAL

1.01 Description: Provide Mechanical (Drill) Seeded Turf Grass as shown on the drawings and as specified. The work shall include the following:

A. Preparation of Sub-grades, Rough Grading, Soil Preparation and Finish Grading.

B. Drill ("Brillion") Seeding of Turf Grass Seed Mix.

C. Installation of Fertilizers.

D. Mowing, Watering and Other Maintenance, as required.

1.02 Related Sections:

Section 31 00 00 – Earthwork
Section 32 91 13 - Soil Preparation

1.03 Quality Assurance: All construction shall be in accordance with the City of Seattle Standard Specifications and Plans (most recent edition) and all other pertinent Seattle Parks and Recreation (SPR) Standard Specifications and Details.

A. The Seed Mix shall be furnished in containers that show the following information: seed name, lot number, net weight, percentage of purity, germination, weed seed and inert material.

B. Seed that has become wet, moldy, or otherwise damaged will not be accepted.

C. Seed shall conform to the requirements of the Washington State seed law and when applicable the Federal Seed Act, and shall be "certified" grade or better.

1.04 Submittals: Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight and percentages of purity, germination and weed seed for each grass species.

1.05 Delivery, Storage and Handling: Deliver seed and fertilizer materials in original unopened containers showing weight, analysis, and name of the manufacturer. Store seed mix in such a manner that will prevent wetting and deterioration.

1.06 Project Conditions: Restrict traffic from lawn areas until grass is established. Erect signs and fencing as required protecting newly seeded areas. Fencing shall remain in place until grass is established and accepted by SPR.

1.07 Warranty: Provide a uniform stand of grass. Re-seed areas, which fail to provide a uniform stand of grass with, specified materials until all affected areas are accepted by the Engineer.

PART 2 - PRODUCTS

2.01 Seed Mix:

A. Description: Seed Mix shall be 100 percent Perennial Rye Grass seed. All seed varieties shall be certified seed, in separate packages, to be approved prior to mixing. Seed shall be packed in clean, sound containers of uniform weight. Seed shall also be:
Minimum pure seed percent - 98
Minimum germination percent - 80
Maximum weed seed percent - 0.5

2.02 Hydromulch: Mulch shall be wood cellulose fiber from Alder, containing no growth or germination inhibiting substances; a soil-binding agent (tackifier) is required; mulch shall be dyed a suitable color to facilitate placement.

2.03 Fertilizers: Refer to Section 32 91 13 - Soli Preparation for fertilizer recommendations.

PART 3 - EXECUTION

3.01 Inspection: Examine all finished surfaces. Do not start seeding work until unsatisfactory conditions are corrected.

3.02 Playfield Soil:

A. See Section 31 00 00 - Earthwork, for the placement of Playfield Soil.

B. Install and prepare Playfield Soil mix per Section 32 91 13 - Soil Preparation to eliminate uneven areas and low spots. Maintain lines and grades as shown on the Drawings.

C. Remove foreign materials and undesirable plants and their roots. Do not bury foreign material beneath areas to be seeded. Remove contaminated sub-soil. Fine grade and compact per Section 31 00 00 - Earthwork.

D. Scarify playfield soil lightly to a depth of 1/2 inch with tines spaced 3 inches apart maximum.

3.03 Installation/Starter Fertilizer: Incorporate starter fertilizer into the playfield soil with mechanical drop seeder/fertilizer at the rate of 1 pound of Nitrogen per 1,000 square feet (approx. 415 pounds per acre).

3.04 Mechanical (Drill) Seeding:

A. Grass seed mixes shall be spread at the rate of eight (8) pounds per 1,000 square feet (350 pounds per acre). Apply grass seed mix using ‘Brillion’ (or, approved equal) drill seeding equipment. Seed shall be drilled in 2 passes with half the seed being

sown at right angles to the first drilling. Roll entire seeded area for firm even finish grade.

B. Seeding shall not be done during windy weather (above 25 mph) or when the ground is overly wet (saturated) or frozen. Contractor shall give the Owner 48 hours notice of seeding operations. Seeding, fertilizing, and mulching of prepared areas shall be performed during the following time frames:

1. Seeding shall be done from April 1 to May 31 or from September 1 to October 31.
2. No seeding shall be done before or after these dates without the Engineer's written approval. Written permission to seed from June 1 to August 31 may be granted only if automatic irrigation is available and operational at the site. Permission to seed from November 1 to March 31 will only be given when completion of the Project is imminent and the environmental conditions are conducive to acceptable growth. No seeding shall be done on weekends or legal holidays without written approval of the Engineer.
3. Application of pre-germinated seed, moisture retention agents and/or provision for supplemental watering may be required by the Engineer should the Contractor schedule this portion of the Work outside the time frames listed in item 1 immediately above.
4. All areas that are partially completed to grade, shall be prepared and seeded during the first available planting period and shall not be allowed to sit idle for long periods of time without receiving the erosion control specified in the Contract.
5. When environmental conditions are not conducive to acceptable results from seeding operations, the Engineer may order the Work suspended, and it shall be resumed only when the desired results are likely to be obtained.

3.05 Mulching: Apply hydromulch evenly over newly seeded area at a rate of 50 pounds per 1000 sf. All Hydromulch shall contain tacifier.

3.06 Irrigation: Irrigate newly seeded lawn as required with the automatic irrigation system if available. If automatic irrigation is not available the Contractor shall provide other means of irrigating the seeded areas until established and accepted by the Engineer.

3.07 Maintenance and Establishment:

A. Maintain seeded areas until grass is well established and exhibits a vigorous growing condition.

B. Maintenance shall include protection, watering, weeding, maintenance fertilizing and at least two mowings.

C. Grass clippings shall be removed from the site if directed by the Engineer.

3.08 Maintenance/Follow-up Fertilizer: Approximately 30 days after seeding or after first mowing (whichever comes first), when turf is well established and growing vigorously, incorporate maintenance fertilizer into the turf with mechanical drop spreader at the rate of 1lb of N per 1,000 square feet.

3.09 Inspections:

A. Inspection to determine acceptance of seeded areas will be made by the Engineer upon Contractor's request. Provide notification at least ten (10) working days before requested inspection date by calling the **SPR Inspection Request Line @ (206) 684-7034 or by email at parksconstruction.inspection@seattle.gov**. Seeded areas will be accepted as meeting the requirements of Substantial Completion, provided all requirements including maintenance, have been complied with and grass is well established and exhibits a vigorous growing condition.

B. Upon Physical Completion, the Owner shall assume all lawn maintenance.

3.09 Cleaning: Perform cleaning during installation of the work and upon completion of the work. Remove all excess materials, soil, debris, and equipment from the site. Repair any and all damage resulting from seeding operations.

3.10 Warranty and Replacement: All seeded areas must have a relatively uniform stand of turf grass or other seed mixes as specified with no bare spots over 6" square at the time of Substantial Completion. Reseed at the original rate and fertilize at the rates as for all blended materials. All areas failing to vigorously establish within 90 days after germination or one growing season (whichever is longest), shall be redone at the Contractor’s expense.

END OF SECTION