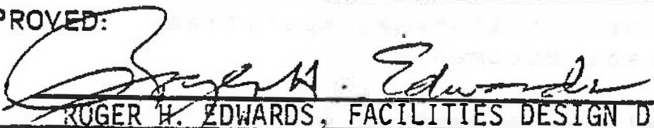


TO:		ENGINEERING INSTRUCTION	
SUPERSEDED BY EI 88-008		NEW YORK STATE DEPARTMENT OF TRANSPORTATION	
EFFECTIVE 7/14/88		T: TURF ESTABLISHMENT	
		Subject Code: 7.27-1-610	
Distribution:		Code: EI 86-10	
31	Main Office	33	Regions
		34	Special
APPROVED:		Date: 6/13/86	
 ROGER H. EDWARDS, FACILITIES DESIGN DIVISION		Supersedes:	

Section 610 - Turf Establishment of the Standard Specifications has been completely revised. The key features of this revision are:

1. Sampling and testing of seeds by the Department is no longer routinely required. Acceptance of seeds is based on the seed container label (bag tag) information unless sampling and testing is required in the contract documents. By law, the information required to be shown on the label has been determined by a certified seed testing laboratory.

Sampling and testing, when required, must be clearly indicated in the supplemental landscape development specifications in project proposals. It is anticipated that sampling and testing will only be specified in such special cases as:

- . Where a high quality turf is being established and maintenance is expected to be performed by others, such as at a golf course, park, school or residential area.
 - . When named seed varieties are specified.
2. The separate pay item for mulching is eliminated.
 3. Applying Soil Conditioners is changed to Applying Soil Amendments with no change in the work requirements.

Also, information regarding seeds that more appropriately belongs in the materials section is now included in Section 713-04 Seeds.

A copy of the new Section 610 - Turf Establishment and the concurrent revisions to Section 713-04 Seeds is included with this E.I. These changes are effective with the letting of October 30, 1986.

Payment Items 610.01 and 610.0201 will be superseded for all contracts let after the effective date of this instruction.

DESIGN	LANDSCAPE
RECEIVED	
FACILITIES DESIGN DIVISION	
JUN 10 1986	
REC.	FILE

TURF ESTABLISHMENT

SECTION 610 - TURF ESTABLISHMENT

610 - 1 DESCRIPTION. The work covered by this section includes work necessary to establish turf.

610-1.01 Applying Soil Amendments. The work consists of furnishing and placing fertilizer or limestone as specified in locations as shown in the contract documents.

610-1.02 Seeding. The work consists of preparing ground surfaces for seeding, furnishing and installing fertilizer, seed, mulch and mulch anchorage on areas indicated in the contract documents and caring for the work as specified. The work may also include furnishing and applying limestone as specified.

610-2 MATERIALS

610-2.01 Applying Soil Amendments. Fertilizers shall be as specified for 713-03 and as further specified in the contract documents. Limestone shall be as specified for 713-02.

610-2.02 Seeding. Seeds shall be as specified for 713-04 and as further specified in the contract documents. Fertilizers shall be as specified for 713-03 and as further specified in the contract documents. Limestone shall be as specified for 713-02. Mulch materials shall be as specified for 713-18 or 713-19 or as specified in the contract documents. Mulch anchorage shall be as specified for 713-12. Seeding materials not specified in the contract documents shall be as follows:

Fertilizer shall be type No. 3 (10-6-4)
Mulch shall be 713-18 or 713-19
Chemical mulch binder shall be 713-12
Seeds shall be 713-04 and as follows:

Name	Variety	Wt of Pure Live Seed
Red Fescue(Festuca ruba)	Commercial	40
Perennial Ryegrass (Lolium perenne)	Commercial	15
White Clover (Trifolium repens)	Commercial Max 25% hard seed	5
		Total 60 lbs.

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610-3 CONSTRUCTION DETAILS

610-3.01 Applying Soil Amendments. Fertilizer or limestone shall be evenly spread over the surface of the soil in the areas described in the contract documents or as directed. The rates of application shall be as specified. Any method of application that will insure an even distribution will be acceptable. When hydraulic application is used the minimum rate of water shall be 500 gallons per acre unless otherwise specified in the contract documents.

610-3.02 Seeding.

A. RATES. Rates for seeding materials shall be as specified in the contract documents. Where no rates are specified in the contract documents, the following shall apply:

Fertilizer	- 800 pounds per acre
Seed	- 60 pounds pure live seed per acre
Mulch Anchorage-	Manufacturer's recommended rate

B. LIMITATIONS. The contractor shall notify the Engineer at least 48 hours before beginning to seed and shall not begin the work until the Engineer has given permission. When sodding and seeding are to be done on the same general areas, the sodding shall be done first, and equipment used during seeding shall not damage the sodded areas.

C. APPROVAL. Seeds will be approved in accordance with the provisions of Section 713-04 Seeds.

D. INOCULATION. All seeds of leguminous plants shall be inoculated prior to mixing or sowing unless otherwise specified or approved or unless accompanied by a certificate of preinoculation. When seeds requiring inoculation are to be sown dry, the inoculant shall be applied in accordance with the accompanying instructions and the seeds allowed to dry sufficiently for proper handling. Seeds must be sown within thirty hours after this treatment. When seeds requiring inoculation are to be sown by water pressure, the inoculant may be added to the water and seed mixture, together with limestone and/or fertilizer as specified, providing the alkalinity of the solution does not exceed 8pH.

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E. GROUND PREPARATION. Areas to be seeded shall be maintained at approved grades and irregularities that will hold water shall be eliminated. Limestone, fertilizer and seeds in the amounts specified shall be evenly distributed on the areas to be seeded. All mechanical equipment used for soil preparation or seeding shall be as approved and shall pass parallel to the contours unless otherwise approved except that crawler tractors shall pass at right angles to the contours.

When ordered by the Engineer, measured plots shall be established to determine if the specified quantities of seeds, fertilizer, mulch, etc. are being applied.

Method No.1 shall be used unless Method No.2 is specified. Regardless of the method used, the finished surface of any area that is seeded shall not be rougher, more uneven or have more or larger stones, clods, roots, or other foreign materials than the area it adjoins. In built up and residential areas handraking will usually be necessary to produce the required smoothness and uniformity, particularly where grading and seeding is to be adjacent to lawns.

Method No.1 - Areas to be seeded shall be scarified sufficiently to break up the surface crust immediately before seeding except where the ground is already loose and friable as immediately following grading. All stones and other objects over six inches in greatest dimension or other sizes as specified shall be removed and disposed of as approved. Only limestone and fertilizers may be mixed together with the seeds immediately before sowing. Any method of sowing will be acceptable except that the seeds shall not be injured in the process of spreading.

Method No.2 - Areas to be seeded shall be harrowed, disked, or otherwise completely pulverized to a depth of six inches and to a state of tillage acceptable to the Engineer. All stones and other undesirable material over one inch in greatest dimension or other sizes as specified shall be removed and disposed of as approved. Fertilizer and/or limestone as specified shall be uniformly distributed on the area to be seeded. Seeds shall be distributed uniformly by any approved method. Following distribution, seeds shall be incorporated in the soil to a depth not exceeding one-quarter inch by raking, brush or chain harrowing, or any other approved method.

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F. **MULCHING.** Mulch shall be spread uniformly in a continuous blanket of sufficient thickness to reasonably hide the soil from view, taking care not to over apply. Mulch may be spread by hand or by machinery. Mulch may be spread before or not later than 72 hours after seeding unless otherwise approved or directed. Anchorage is required unless otherwise specified in the contract documents. Mulch and mulch anchorage shall be applied separately from seeds.

G. **LIABILITY.** When the Engineer decides that any seeded area has failed for any reason to produce a satisfactory growth of grass after a suitable period of time has elapsed, the Contractor shall reseed such areas in the same manner as specified in the Contract until a satisfactory growth of grass has been established. Any work to be corrected shall be at the Contractor's expense. The contract will not be accepted until a satisfactory growth of grass has been produced.

H. **CARE DURING CONSTRUCTION.** The contractor shall care for the seeded areas until final acceptance of the contract. Care shall consist of providing protection against traffic by approved warning signs or barricades, and repairing of any areas damaged following the seeding operations due to wind, water, fire, traffic or other causes. Damaged areas shall be repaired to re-establish the condition and grade of the area prior to seeding and shall then be refertilized, reseeded and remulched as specified herein. The contractor shall mow all seeded 1 on 3 or flatter slopes and all areas seeded under Method No.2 unless otherwise specified or directed by the Engineer. Cutting shall be to a height of three inches when growth reaches six inches or when growth tends to smother seedlings.

610-4 METHOD OF MEASUREMENT

610-4.01 **Applying Soil Amendments.** Applying soil amendments shall be measured to the nearest tenth of a ton of fertilizer or limestone that has been acceptably applied.

610-4.02 **Seeding.** Seeding shall be measured in acres of surface area computed to the nearest tenth thereof that have been acceptably seeded.

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610-5 BASIS OF PAYMENT

610-5.01 Applying Soil Amendments. The payment for applying soil amendments will be the unit price bid per ton, which payment shall constitute full compensation for furnishing all labor, materials, equipment and incidentals necessary to complete the work as specified.

610-5.02 Seeding. Seeding will be paid for at the unit price bid per acre, which payment shall constitute full compensation for furnishing all labor, materials, equipment and incidentals necessary to complete the work as specified.

Payment will be made under:

Item No.	Item	Pay Unit
610.0101	Applying Soil Amendments	Ton
610.0202	Seeding	Acre

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Also, on page 7-105, make the following changes:

Under Section 713-04 SEEDS, delete the paragraph titled PACKAGING, and add the following:

"PACKAGING. Seeds shall be furnished and delivered in labeled containers or bags that are acceptably sealed or sewn tight. When seeds are to be accepted by certification, they may be mixed prior to delivery. Mixed seeds shall be delivered in one acre lots. When sampling and testing is specified, seeds shall not be sown until written approval is issued. Approved seeds may be mixed prior to delivery, and mixed seeds shall be delivered in one acre lots."

and under LABELING, insert the following after the word Regulations

", including Article 9 Section 137 of the Agriculture and Markets Law, "

and after LABELING, add the following:

"SAMPLING AND TESTING

1. CERTIFICATION. Seeds will be accepted on the basis of certification unless otherwise specified in the contract documents. The certification shall consist of the label that must be attached to each container of seed in accordance with the provisions of the New York State Agriculture and Markets Law. Seeds will not be accepted by certification unless the test dates shown on the seed container labels are within the same calendar year that the seeds are sown.

Seeds will not be accepted if seed container labels are removed prior to the time of sowing nor will seeds be accepted if container labels have been altered, are obliterated or are otherwise illegible.

2. SAMPLING AND TESTING. Seeds will be subject to sampling and testing when specified in the contract documents and/or whenever the Engineer determines that seed damage or deterioration may have occurred as a result of handling, transit or storage.

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Seeds specified for sampling and testing, and other seeds to be sampled and tested as determined by the Engineer, shall not be sown until test results are received and written approval is issued.

Sampling shall be done by a representative of the New York State Department of Transportation. Testing shall be done by the Department of Seed investigations, New York State Agricultural Experiment Station, Geneva, New York, and the test results obtained will be considered final.

Tolerances established by the Agricultural Experiment Station will be used to determine if the seeds conform to the specifications.