

SEEDING REQUIREMENTS

SECTION 02921A
SEEDING

PART 1 GENERAL

1.1 REFERENCES

THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. THE PUBLICATIONS ARE REFERRED TO IN THE TEXT BY BASIC DESIGNATION ONLY.

ASTM INTERNATIONAL (ASTM)

ASTM C 602 (1995A; R 2001) AGRICULTURAL LIMING MATERIALS

ASTM D 5268 (1992; R 1997) TOPSOIL USED FOR LANDSCAPING PURPOSES

U.S. DEPARTMENT OF AGRICULTURE (USDA)

AMS SEED ACT (1940; R 1986; R 1998) FEDERAL SEED ACT

1.2 SUBMITTALS

GOVERNMENT APPROVAL IS REQUIRED FOR SUBMITTALS WITH A "G" DESIGNATION; SUBMITTALS NOT HAVING A "G" DESIGNATION ARE FOR INFORMATION ONLY. WHEN USED, A DESIGNATION FOLLOWING THE "G" DESIGNATION IDENTIFIES THE OFFICE THAT WILL REVIEW THE SUBMITTAL FOR THE GOVERNMENT. THE FOLLOWING SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 01330 SUBMITTAL PROCEDURES:

- SD-03 PRODUCT DATA SURFACE EROSION CONTROL MATERIAL
- SD-06 TEST REPORTS EQUIPMENT CALIBRATION CERTIFICATION OF CALIBRATION TESTS CONDUCTED ON THE EQUIPMENT USED IN THE SEEDING OPERATION.

SOIL TEST

CERTIFIED REPORTS OF INSPECTIONS AND LABORATORY TESTS, PREPARED BY AN INDEPENDENT TESTING AGENCY, INCLUDING ANALYSIS AND INTERPRETATION OF TEST RESULTS. EACH REPORT SHALL BE PROPERLY IDENTIFIED, TEST METHODS USED AND COMPLIANCE WITH RECOGNIZED TEST STANDARDS SHALL BE DESCRIBED.

SD-07 CERTIFICATES

SEED, TOPSOIL, PH ADJUSTER, MULCH

PRIOR TO THE DELIVERY OF MATERIALS, CERTIFICATES OF COMPLIANCE ATTESTING THAT MATERIALS MEET THE SPECIFIED REQUIREMENTS. CERTIFIED COPIES OF THE MATERIAL CERTIFICATES SHALL INCLUDE THE FOLLOWING:

- a. SEED, CLASSIFICATION, BOTANICAL NAME, COMMON NAME, PERCENT PURE LIVE SEED, MINIMUM PERCENT GERMINATION AND HARD SEED, MAXIMUM PERCENT WEED SEED CONTENT, AND DATE TESTED.
- b. TOPSOIL PARTICLE SIZE, PH, ORGANIC MATTER CONTENT, TEXTURAL CLASS, SOLUBLE SALTS, CHEMICAL AND MECHANICAL ANALYSES.
- c. PH ADJUSTER, CALCIUM CARBONATE EQUIVALENT AND SIEVE ANALYSIS.
- d. FERTILIZER, CHEMICAL ANALYSIS AND COMPOSITION PERCENT.
- e. MULCH, COMPOSITION AND SOURCE.

1.3 DELIVERY, INSPECTION, STORAGE, AND HANDLING

1.3.1 DELIVERY

A DELIVERY SCHEDULE SHALL BE PROVIDED AT LEAST TO CALENDAR DAYS PRIOR TO THE FIRST DAY OF DELIVERY.

1.3.2 INSPECTION

SEED SHALL BE INSPECTED UPON ARRIVAL AT THE JOB SITE FOR CONFORMITY TO SPECIES AND QUALITY. SEED THAT IS WET, MOLDY, OR BEARS A TEST DATE FIVE MONTHS OR OLDER, SHALL BE REJECTED. OTHER MATERIALS SHALL BE INSPECTED FOR COMPLIANCE WITH SPECIFIED REQUIREMENTS. THE FOLLOWING SHALL BE REJECTED: TOPSOIL THAT CONTAINS SLAG, CONCRETES, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH OR OTHER MATERIAL OVER A MINIMUM 1-1/2 INCH DIAMETER; AND TOPSOIL THAT CONTAINS VIABLE PLANTS AND PLANT PARTS. UNACCEPTABLE MATERIALS SHALL BE REMOVED FROM THE JOB SITE.

1.3.3 STORAGE

MATERIALS SHALL BE STORED IN DESIGNATED AREAS. SEED, LIME, AND FERTILIZER SHALL BE STORED IN COOL, DRY LOCATIONS AWAY FROM CONTAMINANTS. CHEMICAL TREATMENT MATERIAL SHALL BE STORED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND NOT WITH SEEDING OPERATION MATERIALS.

1.3.4 HANDLING

EXCEPT FOR BULK DELIVERIES, MATERIALS SHALL NOT BE DROPPED OR DUMPED FROM VEHICLES.

1.3.5 TIME LIMITATION

HYDRO SEEDING TIME LIMITATION FOR HOLDING SEED IN THE SLURRY SHALL BE A MAXIMUM 24 HOURS.

PART 2 PRODUCTS

2.1 SEED

2.1.1 SEED CLASSIFICATION

STATE - APPROVED SEED OF THE LATEST SEASON'S CROP SHALL BE PROVIDED IN ORIGINAL SEALED PACKAGES BEARING THE PRODUCER'S GUARANTEED ANALYSIS FOR PERCENTAGES OF MIXTURE, PURITY, GERMINATION, HARD SEED, WEED SEED CONTENT, AND INERT MATERIAL. LABELS SHALL BE IN CONFORMANCE WITH THE STATE ACT AND APPLICABLE STATE SEED LAWS.

2.1.2 PERMANENT SEED SPECIES AND MIXTURE

PERMANENT SEED SPECIES AND MIXTURES SHALL BE PROPORTIONED BY WEIGHT AS FOLLOWS:

SEED MIXTURE	SEED TYPE	SEED APPLICATION	SEEDING DATES	FERTILIZER RECOMMENDED	LIMESTONE RECOMMENDED
COMMON (UNHULLED)		12LBS/PER ACRE	1-14	13-13-13 @ 1,400 LBS/ACRE	DOLOMITE LIME @ 4,000 LBS/ACRE
BERMUDA GRASS		60LBS/PER ACRE			
RYE GRASS		60LBS/PER ACRE			
NO. 2 COMMON BERMUDA GRASS	(HULLED)	15LBS/PER ACRE	MAR. 15- SEPT. 30	13-13-13 @ 1,400 LBS/ACRE	DOLOMITE LIME @ 4,000 LBS/ACRE
BROWNTOP MILLET		10LBS/PER ACRE			

2.1.3 TEMPORARY SEED SPECIES

TEMPORARY SEED SPECIES FOR SURFACE EROSION CONTROL OR OVERSEEDING SHALL BE AS FOLLOWS:

BOTANICAL NAME	COMMON NAME	PERCENT PURE LIVE SEED	PLANTING DATES
RYE GRAIN		60 LBS/ACRE	OCT 1 - MAR 14
BROWNTOP MILLET		40 LBS/ACRE	MAR 15 - SEP 30

2.1.4 QUALITY

WEED SEED SHALL BE A MAXIMUM 1 PERCENT BY WEIGHT OF THE TOTAL MIXTURE.

2.1.5 SEED MIXING

THE MIXING OF SEED MAY BE DONE BY THE SEED SUPPLIER PRIOR TO DELIVERY, OR ON SITE AS DIRECTED.

2.1.6 SUBSTITUTIONS

SUBSTITUTIONS WILL NOT BE ALLOWED WITHOUT WRITTEN REQUEST AND APPROVAL FROM THE CONTRACTING OFFICER.

2.2 TOPSOIL

TOPSOIL SHALL BE AS DEFINED IN ASTM D 5268. WHEN AVAILABLE, THE TOPSOIL SHALL BE THE EXISTING SURFACE SOIL STRIPPED AND STOCKPILED ON SITE IN ACCORDANCE WITH SECTION 02300A EARTHWORK FOR ROADWAYS, TRAILS, TARGETS, AND BERMS. WHEN ADDITIONAL TOPSOIL IS REQUIRED BEYOND THE AVAILABLE TOPSOIL FROM THE STRIPPING OPERATION, EXISTING SHALL BE AMENDED AS RECOMMENDED BY THE SOIL TEST FOR THE SEED SPECIFIED. TOPSOIL SHALL BE FREE FROM SLAG, CONCRETES, STONES, LUMPS OF SOIL, STICKS, ROOTS, TRASH, OR OTHER MATERIAL OVER A MINIMUM 1-1/2 INCH DIAMETER. TOPSOIL SHALL BE FREE FROM VIABLE PLANTS AND PLANT PARTS.

2.3 SOIL AMENDMENTS

SOIL AMENDMENTS SHALL CONSIST OF PH ADJUSTER, FERTILIZER, ORGANIC MATERIAL, AND SOIL CONDITIONERS MEETING THE FOLLOWING REQUIREMENTS. VERMICULITE SHALL NOT BE USED.

2.3.1 PH ADJUSTER

THE PH ADJUSTER SHALL BE AN AGRICULTURAL LIMING MATERIAL IN ACCORDANCE WITH ASTM C 602. THESE MATERIALS MAY BE HYDRATED LIME OR GROUND LIMESTONE. THE PH ADJUSTER SHALL BE USED TO CREATE A FAVORABLE SOIL PH FOR THE PLANT MATERIAL SPECIFIED.

2.3.1.1 LIMESTONE

LIMESTONE MATERIAL SHALL CONTAIN A MINIMUM CALCIUM CARBONATE EQUIVALENT OF 80 PERCENT. GRADATION: A MINIMUM 95 PERCENT SHALL PASS THROUGH A NO. 8 SIEVE AND A MINIMUM 55 PERCENT SHALL PASS THROUGH A NO. 5 SIEVE. TO RAISE SOIL PH, GROUND LIMESTONE SHALL BE USED.

2.3.1.2 HYDRATED LIME

HYDRATED LIME SHALL CONTAIN A MINIMUM CALCIUM CARBONATE EQUIVALENT OF 110 PERCENT. GRADATION: A MINIMUM 95 PERCENT SHALL PASS THROUGH A NO. 8 SIEVE AND A MINIMUM 97 PERCENT SHALL PASS THROUGH A NO. 60 SIEVE.

2.3.2 FERTILIZER

THE NUTRIENTS RATIO SHALL BE 19 PERCENT NITROGEN, 13 PERCENT PHOSPHORUS, AND 13 PERCENT POTASSIUM. FERTILIZER SHALL BE CONTROLLED RELEASE COMMERCIAL GRADE, FREE FLOWING, UNIFORM IN COMPOSITION, AND CONSIST OF A NITROGEN - PHOSPHORUS - POTASSIUM RATIO. THE FERTILIZER SHALL BE DERIVED FROM SULPHUR COATED UREA, UREA, UREA FORMALDEHYDE, PLASTIC OR POLYMER COATED PILLS, OR ISOBUTYLENEUREA (IBDU). FERTILIZER SHALL BE BALANCED WITH THE INCLUSION OF TRACE MINERALS AND MICRO-NUTRIENTS.

2.3.3 NITROGEN CARRIER FERTILIZER

THE NUTRIENTS RATIO SHALL BE AS SPECIFIED IN 2.3.2. NITROGEN CARRIER FERTILIZER SHALL BE COMMERCIAL GRADE, FREE FLOWING, AND UNIFORM IN COMPOSITION. THE FERTILIZER MAY BE A LIQUID NITROGEN SOLUTION.

2.4 MULCH

MULCH SHALL BE FREE FROM WEEDS, MOLD, AND OTHER DELETERIOUS MATERIALS. MULCH MATERIALS SHALL BE NATIVE TO THE REGION.

2.4.1 STRAW

STRAW SHALL BE STALKS FROM OATS, WHEAT, RYE, BARLEY, OR RICE, FURNISHED IN AN AIR DRY CONDITION AND WITH A CONSISTENCY FOR PLACING WITH COMMERCIAL MULCH-BLOWING EQUIPMENT.

2.4.2 HAY

HAY SHALL BE NATIVE HAY SUDAN GRASS HAY, BROODSEDGE HAY, OR OTHER NON-BACCIOUS MOWINGS, FURNISHED IN AN AIR DRY CONDITION SUITABLE FOR PLACING WITH COMMERCIAL MULCH-BLOWING EQUIPMENT.

2.4.3 WOOD CELLULOSE FIBER

WOOD CELLULOSE FIBER SHALL NOT CONTAIN ANY GROWTH OR GERMINATION - INHIBITING FACTORS AND SHALL BE DYED AN APPROPRIATE COLOR TO FACILITATE PLACEMENT DURING APPLICATION. COMPOSITION ON AIR-DRY WEIGHT BASIS: 9 TO 15 PERCENT MOISTURE WITH RANGE FROM 10 TO 6.0.

2.5 ASPHALT ADHESIVE

ASPHALT ADHESIVES ARE NOT ALLOWED.

2.6 WATER

WATER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED. WATER SHALL NOT CONTAIN CHEMICALS TOXIC TO PLANT LIFE.

PART 3 EXECUTION

3.1 INSTALLING SEED TIME AND CONDITIONS

3.1.1 SEEDING TIME

SEE SECTION 2.1.2 FOR SEEDING TIMES.

3.1.2 SEEDING CONDITIONS

SEEDING OPERATIONS SHALL BE PERFORMED ONLY DURING PERIODS WHEN BENEFICIAL RESULTS CAN BE OBTAINED. WHEN DROUGHT, EXCESSIVE MOISTURE, OR OTHER UNSATISFACTORY CONDITIONS PREVAIL, THE WORK SHALL BE STOPPED WHEN DIRECTED. WHEN SPECIAL CONDITIONS WARRANT A VARIANCE TO THE SEEDING OPERATIONS, PROPOSED ALTERNATE TIME SHALL BE SUBMITTED FOR APPROVAL.

3.2 SITE PREPERATION

3.2.1 FINISHED GRADE AND TOPSOIL

THE CONTRACTOR SHALL VERIFY THAT FINISHED GRADES ARE AS INDICATED ON DRAWINGS, AND THE PLACING OF TOPSOIL, SMOOTH GRADING, AND COMPACTION REQUIREMENTS HAVE BEEN COMPLETED IN ACCORDANCE WITH SECTION 02200 - EARTHMOVING (LOCATED WITHIN THE ARCHITECT'S PROJECT SPECIFICATION BOOK), PRIOR TO THE COMMENCEMENT OF THE SEEDING OPERATION.

3.2.2 APPLICATION OF SOIL AMENDMENTS

3.2.2.1 APPLYING PH ADJUSTER

THE PH ADJUSTER SHALL BE APPLIED AS SPECIFIED. THE APPLICATION RATE SHALL BE 4,000 POUNDS PER ACRE. THE PH ADJUSTER SHALL BE INCORPORATED INTO THE SOIL TO A MAXIMUM 4 INCH DEPTH OR MAY BE INCORPORATED AS PART OF THE TILLAGE OPERATION.

3.2.2.2 APPLYING FERTILIZER

THE FERTILIZER SHALL BE APPLIED AS SPECIFIED. THE APPLICATION RATE SHALL BE 1,400 POUNDS PER ACRE. FERTILIZER SHALL BE INCORPORATED INTO THE SOIL TO A MAXIMUM 4 INCH DEPTH OR MAY BE INCORPORATED AS PART OF THE TILLAGE OR HYDROSEEDING OPERATION.

3.2.3 TILLAGE

TOPSOIL (4-INCH MINIMUM DEPTH) SHALL BE PLACED ON SLOPES. DO NOT TILL COMPACTED SLOPE. DRAINAGE PATTERNS SHALL BE MAINTAINED AS INDICATED ON DRAWINGS. AREAS COMPACTED BY CONSTRUCTION OPERATIONS SHALL BE COMPLETELY PULVERIZED BY TILLAGE. SOIL USED FOR REPAIR OF SURFACE EROSION OR GRADE DEFICIENCIES SHALL CONFORM TO TOPSOIL REQUIREMENTS. THE PH ADJUSTER, FERTILIZER, AND SOIL CONDITIONER MAY BE APPLIED DURING THIS PROCEDURE.

3.2.4 PREPARED SURFACE

3.2.4.1 PREPARATION

THE PREPARED SURFACE SHALL BE A MAXIMUM 1 INCH BELOW THE ADJOINING GRADE OF ANY SURFACED AREA. NEW SURFACES SHALL BE BLENDED TO EXISTING AREAS. THE PREPARED SURFACE SHALL BE COMPLETED WITH A LIGHT RAKING TO REMOVE DEBRIS.

3.2.4.2 PROTECTION

AREAS WITH THE PREPARED SURFACE SHALL BE PROTECTED FROM COMPACTION OR DAMAGE BY VEHICULAR OR PEDESTRIAN TRAFFIC AND SURFACE EROSION.

3.3 INSTALLATION

PRIOR TO INSTALLING SEED, ANY PREVIOUSLY PREPARED SURFACE COMPACTED OR DAMAGED SHALL BE REWORKED TO MEET THE REQUIREMENTS OF SITE PREPARATION. SEEDING OPERATIONS SHALL NOT TAKE PLACE WHEN THE WIND VELOCITY WILL PREVENT UNIFORM SEED DISTRIBUTION.

3.3.1 INSTALLING SEED

SEEDING METHOD SHALL BE BROADCAST SEEDING, DRILL SEEDING OR HYDROSEEDING. SEEDING PROCEDURE SHALL ENSURE EVEN COVERAGE. GRAVITY FEED APPLICATIONS, WHICH DROP SEED DIRECTLY FROM A HOPPER ONTO PREPARED SOIL, SHALL NOT BE USED BECAUSE OF THE DIFFICULTY IN ACHIEVING EVEN COVERAGE, UNLESS OTHERWISE APPROVED. ABSORBENT POLYMER POWDER SHALL BE MIXED WITH THE DRY SEED AT THE RATE RECOMMENDED BY THE MANUFACTURER.

3.3.1.1 BROADCAST SEEDING

SEED SHALL BE UNIFORMLY BROADCAST AT THE RATE SPECIFIED IN 2.1.2, USING BROADCAST SEEDER. HALF THE TOTAL RATE OF SEED APPLICATION SHALL BE BROADCAST IN 1 DIRECTION WITH THE REMAINDER OF SEED BROADCAST AT 90 DEGREES FROM THE FIRST DIRECTION. SEED SHALL BE COVERED TO A MAXIMUM 1/2 INCH DEPTH BY DISK HARROW, STEEL MAT DRAG, CULTIPACKER, OR OTHER APPROVED DEVICE.

3.3.1.2 ROLLING

THE ENTIRE AREA SHALL BE FIRMED WITH A ROLLER NOT EXCEEDING 200 POUNDS PER FOOT ROLLER WIDTH. SLOPES OVER A MAXIMUM 3-HORIZONTAL-TO-1-VERTICAL SHALL NOT BE ROLLED. AREAS SEEDING WITH SEED DRILLS EQUIPPED WITH ROLLERS SHALL NOT BE ROLLED.

3.3.2 HYDROSEEDING

SEED SHALL BE MIXED TO FORM BROADCAST AT THE RATE SPECIFIED IN 2.1.2. SEED AND FERTILIZER SHALL BE ADDED TO WATER AND THOROUGHLY MIXED AT THE RATES SPECIFIED. THE TIME PERIOD FOR THE SEED TO BE HELD IN THE SLURRY SHALL BE A MAXIMUM 24 HOURS. WOOD CELLULOSE FIBER MULCH AND TACKIFIER SHALL BE ADDED AT THE RATES RECOMMENDED BY THE MANUFACTURER AFTER THE SEED, FERTILIZER, AND WATER HAVE BEEN THOROUGHLY MIXED TO PRODUCE A HOMOGENEOUS SLURRY. SLURRY SHALL BE UNIFORMLY APPLIED UNDER PRESSURE TO THE ENTIRE AREA. THE INSTALLED SEEDING AREA SHALL NOT BE ROLLED.

3.3 MULCHING

3.3.1 HAY OR STRAW MULCH

HAY OR STRAW MULCH SHALL BE SPREAD UNIFORMLY AT THE RATE OF 1.5 TONS PER ACRE. MULCH SHALL BE SPREAD BY HAND BLOWER-TYPE MULCH SPREADER, OR OTHER APPROVED METHOD. MULCHING SHALL BE STARTED ON THE WINDWARD SIDE OF RELATIVELY FLAT AREAS OR ON THE UPPER PART OF STEEP SLOPES AND CONTINUED UNIFORMLY UNTIL THE AREA IS COVERED. THE MULCH SHALL NOT BE BUNCHED OR CLUMPED. SUNLIGHT SHALL NOT BE COMPLETELY EXCLUDED FROM PENETRATING TO THE GROUND SURFACE. ALL AREAS INSTALLED WITH SEED SHALL BE MULCHED ON THE SAME DAY AS THE SEEDING. MULCH SHALL BE ANCHORED IMMEDIATELY FOLLOWING SPREADING.

3.3.2 MECHANICAL ANCHOR

MECHANICAL ANCHOR SHALL BE A V-TYPE-WHEEL LAND PACKER, A SCALLOPED-DISK LAND PACKER DESIGNED TO FORCE MULCH INTO THE SOIL SURFACE, OR OTHER SUITABLE EQUIPMENT.

3.3.3 ASPHALT ADHESIVE TACKIFIER

ASPHALT ADHESIVE TACKIFIER IS NOT ALLOWED.

3.3.4 NON-ASPHALTIC TACKIFIER

HYDROPHILIC COLLOID SHALL BE APPLIED AT THE RATE RECOMMENDED BY THE MANUFACTURER, USING HYDRAULIC EQUIPMENT SUITABLE FOR THOROUGHLY MIXING WITH WATER. A UNIFORM MIXTURE SHALL BE APPLIED OVER THE AREA.

3.3.5 ASPHALT ADHESIVE COATED MULCH

ASPHALT ADHESIVE COATED MULCH IS NOT ALLOWED.

3.3.6 WOOD CELLULOSE FIBER, PAPER FIBER, AND RECYCLED PAPER

WOOD CELLULOSE FIBER, PAPER FIBER, OR RECYCLED PAPER SHALL BE APPLIED AS PART OF THE HYDROSEEDING OPERATION. THE MULCH SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

3.3.4 WATERING SEED

WATERING SHALL BE STARTED IMMEDIATELY AFTER COMPLETING THE SEEDING OF THE AREA. WATER SHALL BE APPLIED TO SUPPLEMENT RAINFALL AT A RATE SUFFICIENT TO ENSURE MOIST SOIL CONDITIONS TO A MINIMUM 1 INCH DEPTH. RUN-OFF AND PUDDLING SHALL BE PREVENTED. WATERING OF OTHER ADJACENT AREAS OR PLANT MATERIAL SHALL BE PREVENTED.

3.4 SURFACE EROSION CONTROL

3.4.1 SURFACE EROSION CONTROL MATERIAL

WHERE INDICATED OR AS DIRECTED, SURFACE EROSION CONTROL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PLACEMENT OF THE MATERIAL SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO INSTALLED MATERIAL OR WITHOUT DEVIATION TO FINISHED GRADE.

3.4.2 TEMPORARY SEEDING

WHEN DIRECTED DURING CONTRACT DELAYS AFFECTING THE SEEDING OPERATION OR WHEN A QUICK COVER IS REQUIRED TO PREVENT SURFACE EROSION, THE AREAS DESIGNATED SHALL BE SEEDING IN ACCORDANCE WITH TEMPORARY SEED SPECIES LISTED UNDER PARAGRAPH 2.1.3.

3.4.2.1 SOIL AMENDMENTS

WHEN SOIL AMENDMENTS HAVE NOT BEEN APPLIED TO THE AREA, THE QUANTITY OF 1/2 OF THE REQUIRED SOIL AMENDMENTS SHALL BE APPLIED AND THE AREA FILLED IN ACCORDANCE WITH SITE PREPARATION. THE AREA SHALL BE WATERED IN ACCORDANCE WITH WATERING SEED.

3.4.2.2 REMAINING SOIL AMENDMENTS

THE REMAINING SOIL AMENDMENTS SHALL BE APPLIED IN ACCORDANCE WITH THE TILLAGE WHEN THE SURFACE IS PREPARED FOR INSTALLING SEED.

3.5 QUANTITY CHECK

FOR MATERIALS PROVIDED IN BAGS, THE EMPTY BAGS SHALL BE RETAINED FOR RECORDING THE AMOUNT USED. FOR MATERIALS PROVIDED IN BULK, THE WEIGHT CERTIFICATES SHALL BE COMPARED WITH THE TOTAL AREA COVERED TO DETERMINE THE RATE OF APPLICATION USED. DIFFERENCES BETWEEN THE QUANTITY APPLIED AND THE QUANTITY SPECIFIED SHALL BE ADJUSTED AS DIRECTED.

3.6 RESTORATION AND CLEAN UP

3.6.1 RESTORATION

EXISTING TURF AREAS, PAVEMENTS, AND FACILITIES THAT HAVE BEEN DAMAGED FROM THE SEEDING OPERATION SHALL BE RESTORED TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

3.6.2 CLEAN UP

EXCESS AND WASTE MATERIAL SHALL BE REMOVED FROM THE SEEDING AREAS AND NOT BE DISPOSED OFF SITE. ADJACENT PAVED AREAS SHALL BE CLEANED.

3.7 SEED ESTABLISHMENT PERIOD

3.7.1 COMMENCEMENT

THE SEED ESTABLISHMENT PERIOD TO OBTAIN A HEALTHY STAND OF GRASS PLANTS SHALL BEGIN ON THE FIRST DAY OF SEEDING WORK UNDER THIS CONTRACT AND END 12 MONTHS AFTER THE LAST DAY OF THE SEEDING OPERATION REQUIRED BY THIS CONTRACT. WRITTEN CALENDAR TIME PERIOD SHALL BE FURNISHED FOR THE SEED ESTABLISHMENT PERIOD. WHEN THERE IS MORE THAN 1 SEED ESTABLISHMENT PERIOD, THE BOUNDARIES OF THE SEEDING AREA COVERED FOR EACH PERIOD SHALL BE DESCRIBED. THE SEED ESTABLISHMENT PERIOD SHALL BE MODIFIED FOR UNCLEMANT WEATHER, SHUT DOWN PERIODS, OR FOR SPECIAL COMPLETION DATES OF AREAS.

3.7.2 SATISFACTORY STAND OF GRASS PLANTS

GRASS PLANTS SHALL BE ESTABLISHED FOR SPECIES AND HEALTH WHEN THE GRASS PLANTS ARE A MINIMUM 1 INCH HIGH.

3.7.2.1 FIELD AREA

A SATISFACTORY STAND OF GRASS PLANTS FROM THE SEEDING OPERATION FOR A FIELD AREA SHALL BE A MINIMUM 100 GRASS PLANTS PER SQUARE FOOT. THE TOTAL BARE SPOTS SHALL NOT EXCEED 2 PERCENT OF THE TOTAL SEEDING AREA.

3.7.3 MAINTENANCE DURING ESTABLISHMENT PERIOD

MAINTENANCE OF THE SEEDING AREAS SHALL INCLUDE ERADICATING WEEDS, INSECTS, AND DISEASES; PROTECTING BERMANKMENTS AND DITCHES FROM SURFACE EROSION; MAINTAINING EROSION CONTROL MATERIALS AND MULCH; PROTECTING INSTALLED AREAS FROM TRAFFIC; MOWING; WATERING; AND POST-FERTILIZATION.

3.7.3.1 MOWING

FIELD AREAS: FIELD AREAS SHALL BE MOWED ONCE DURING THE SEASON TO A MINIMUM 3 INCH HEIGHT. CLIPPINGS SHALL BE REMOVED WHEN THE AMOUNT CUT PREVENTS SUNLIGHT FROM REACHING THE GROUND SURFACE.

3.7.3.2 POST-FERTILIZATION

THE FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY THE SOIL TEST. A MAXIMUM 1/2 POUND PER 1,000 SQUARE FEET OF ACTUAL AVAILABLE NITROGEN SHALL BE PROVIDED TO THE GRASS PLANTS. THE APPLICATION SHALL BE TIMED PRIOR TO THE ADVENT OF WINTER DORMANCY AND SHALL BE MADE WITHOUT BURNING THE INSTALLED GRASS PLANTS.

3.7.3.3 REPAIR OR REINSTALL

UNSATISFACTORY STAND OF GRASS PLANTS AND MULCH SHALL BE REPAIRED OR REINSTALLED, AND ERODED AREAS SHALL BE REPAIRED IN ACCORDANCE WITH SITE PREPARATION.

3.7.3.4 MAINTENANCE RECORD

A RECORD OF EACH SITE VISIT SHALL BE FURNISHED, DESCRIBING THE MAINTENANCE WORK PERFORMED; AREAS REPAIRED OR REINSTALLED; AND DIAGNOSIS FOR UNSATISFACTORY STAND OF GRASS PLANTS.

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CENTRAL HIGH SCHOOL CTE ANNEX
PHENIX CITY, ALABAMA

REVISION	DATE

SHEET TITLE	
EC GRASSING NOTES	
DATE	SHEET
4/3/20	19-0133