

## EROSION AND SEDIMENT CONTROL PLAN NARRATIVE

**OVERVIEW**  
THE INTENT OF THIS EROSION AND SEDIMENT CONTROL PLAN IS TO MINIMIZE EROSION AND SEDIMENTATION THAT COULD POTENTIALLY IMPACT NEARBY RESOURCE AREAS. THE GREATEST POTENTIAL FOR NEGATIVE IMPACTS WILL OCCUR DURING THE CONSTRUCTION PHASE OF THE PROJECT. THE EROSION AND SEDIMENT CONTROL PLAN MUST BE DILIGENTLY IMPLEMENTED DURING CONSTRUCTION OF THE PROJECT.

**RESPONSIBLE PARTIES**  
THE OWNER OF THE PROJECT IS THE RESPONSIBLE PARTY FOR THIS SITE. THE OWNER MAY HIRE A CONTRACTOR TO PERFORM THE ACTUAL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL ACT AS AN AGENT OF THE OWNER AND BE RESPONSIBLE FOR THE DAY TO DAY CONSTRUCTION ACTIVITIES ON THE SITE.

**TIME LIMITS**  
ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE. SEE GENERAL EROSION AND SEDIMENT CONTROL NOTES FOR DEFINITIONS OF DISTURBED AREAS. TEMPORARY SEEDING AND VEGETATIVE GROWTH IS CRITICAL TO EROSION AND SEDIMENT CONTROL. SCHEDULING THE FRAMES FOR TEMPORARY AND PERMANENT SEEDING ARE SHOWN IN THE SEEDING DETAIL.

**EROSION AND SEDIMENT CONTROLS**  
PRIOR TO AND DURING SITE CONSTRUCTION ACTIVITIES THE FOLLOWING CONTROLS SHALL BE USED: SILT FENCE & TEMPORARY CONSTRUCTION ENTRANCE. THE OWNER/CONTRACTOR MAY USE ADDITIONAL EROSION AND SEDIMENT CONTROLS AS SPECIFIC SITUATIONS MAY ARISE DURING THE SITE CONSTRUCTION ACTIVITIES FOR INFORMATION ON ADDITIONAL EROSION AND SEDIMENT CONTROLS SEE "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOL. 3 - EROSION CONTROL" AND "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOL. 3 - EROSION CONTROL" DECEMBER 2008

**INVASIVE SPECIES**  
THE PROJECT SHALL BE MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800.

**INSPECTIONS**  
OWNER/CONTRACTOR WILL PERFORM ROUTINE INSPECTIONS OF THE ENTIRE SITE, INCLUDING THE EROSION AND SEDIMENT CONTROLS, AT A MINIMUM, INSPECTIONS SHALL BE PERFORMED WEEKLY AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 0.5" WITHIN A 24-HOUR PERIOD. ADDITIONAL INSPECTIONS MAY BE REQUIRED FOR SPECIFIC EROSION AND SEDIMENT CONTROLS REFER TO SPECIFIC REQUIREMENTS SHOWN ON THE DETAIL SHEETS.

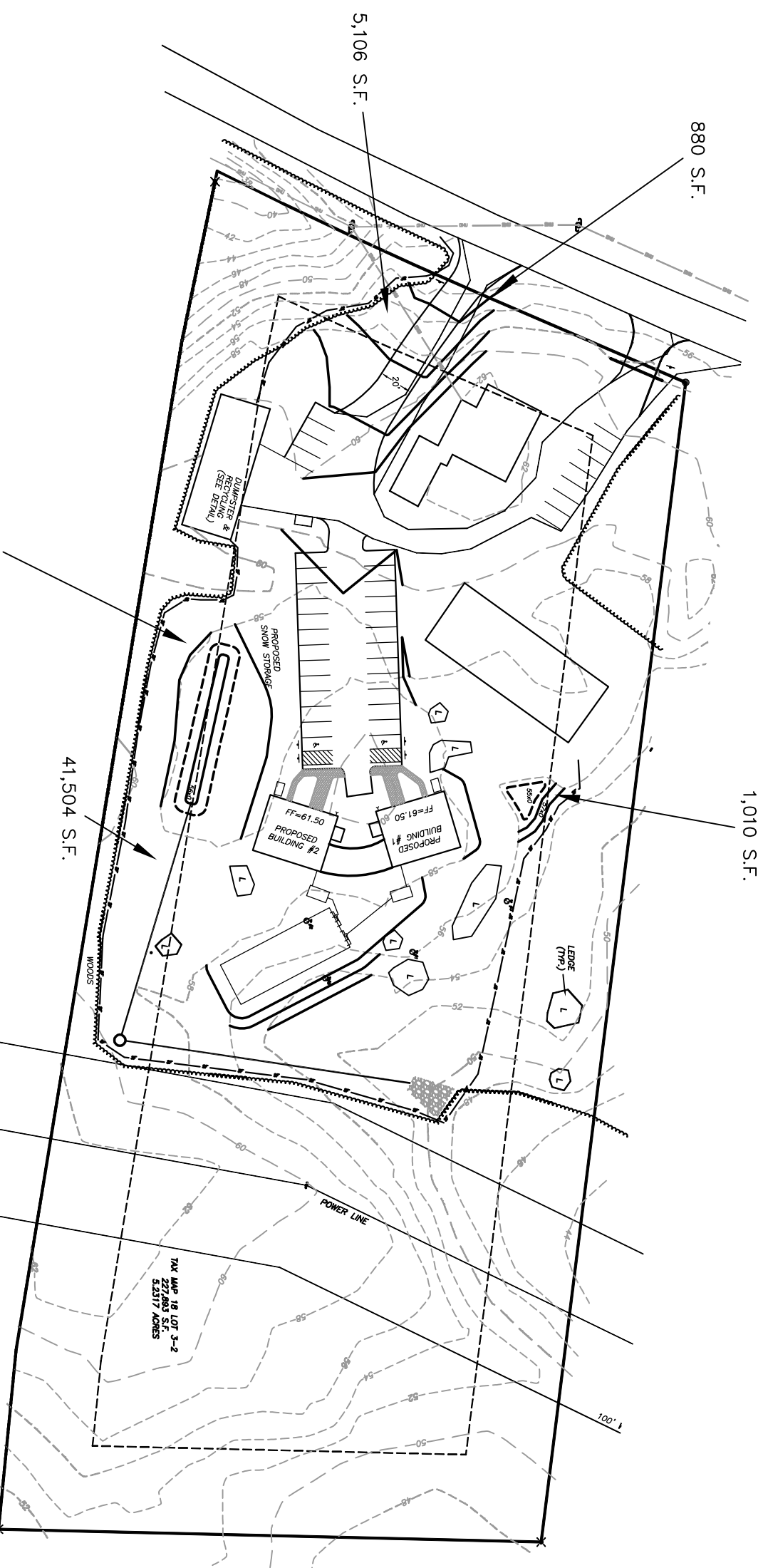
**MAINTENANCE AND REMOVAL OF EROSION AND SEDIMENT CONTROLS**  
OWNER/CONTRACTOR SHALL FOLLOW THE SPECIFIC REQUIREMENTS SHOWN ON THE DETAIL SHEETS FOR EACH EROSION AND SEDIMENT CONTROL.

## GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ALL CONSTRUCTION ACTIVITY SHALL COMPLY WITH: LOCAL, STATE AND FEDERAL - REGULATIONS, ORDINANCES, PERMITS AND CONDITIONS.
  - ALL CONSTRUCTION ACTIVITY SHALL FOLLOW INFORMATION PRESENTED ON THIS PLAN SET. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPARENT FIELD CONDITIONS ARE TO BE REPORTED TO DESIGN ENGINEER PRIOR TO ALTERATION OF THAT AREA. DESIGN ENGINEER WILL PROVIDE ANY NEEDED RESOLUTION.
  - THE UNSTABILIZED DISTURBED AREA WILL BE LIMITED TO THE SMALLEST PRACTICAL AREA. UNSTABILIZED DISTURBED AREAS WILL ALWAYS BE LIMITED TO AN AREA THAT THE OWNER/CONTRACTOR CAN EASILY MANAGE AND SHALL NEVER EXCEED 5 ACRES.
  - ALL CONSTRUCTION ACTIVITY NEAR IDENTIFIED NATURAL RESOURCE AREAS SHALL BE CONDUCTED WITH SPECIAL CARE. CONSTRUCTION ACTIVITY IN THESE AREAS SHALL BE SCHEDULING TO OCCUR WHEN THE AVAILABILITY OF MATERIALS, EQUIPMENT, LABOR AND THE WEATHER WILL FACILITATE THE SMALLEST TIME OF DISTURBANCE.
  - ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WILL BE REGRADED LATER DURING CONSTRUCTION, SHALL BE TEMPORARILY STABILIZED BY SEEDING OR MULCHING. SEE TEMPORARY SEEDING OR TEMPORARY MULCHING DETAIL FOR SPECIFIC INFORMATION.
  - ALL FILL USED FOR THE COMPLETION OF STABILIZATION ACTIVITIES SHALL BE CLEAN SOLID SOIL MATERIAL, FREE FROM STUMPS, ROOTS, WOOD, TRASH ETC. FILL SHALL BE PLACED IN MAXIMUM 12" LIFTS, COMPACTED BY ROLLETS OR ROLLING OTHER CONSTRUCTION VEHICLES TO ALL AREAS OF EACH LAYER.
  - ALL DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINISH GRADE WITH NO FURTHER DISTURBANCE TO TAKE PLACE, SHALL BE STABILIZED AS SOON AS POSSIBLE, BUT IN NO CASE LONGER THAN 72-HOURS. AREAS TO BE PAVED SHALL HAVE BASE COURSE OF GRAVELS INSTALLED. AREAS PROPOSED TO BE VEGETATED SHALL BE LOAMED AND SEEDED. SEE SEEDING AREA PREPARATION AND SEEDING DETAIL FOR SPECIFIC INFORMATION.
  - DISTURBED AREAS SHALL BE CONSERVED STABLE IF ONE OF THE FOLLOWING HAS OCCURED:
    - A MINIMUM OF 85% VEGETATIVE GROWTH HAS BEEN ESTABLISHED.
    - A MINIMUM OF 3" OF NON-EROSION MATERIAL (STONE OR RIP-RAP) HAS BEEN INSTALLED.
    - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- GENERAL CONSIDERATIONS:**
- \*STOCKPILE PRACTICES APPLY TO TOPSOIL, EXCAVATED MATERIALS, BORROW MATERIALS IMPORTED TO THE SITE, AND CONSTRUCTION AGGREGATES AND PAVING MATERIALS THAT ARE STOCKPILED ON THE SITE PRIOR TO USE IN THE CONSTRUCTION WORK.
  - \*STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS, TO PREVENT EROSION CONDITIONS GOVERNING SETBACKS FROM ADJACENT PROPERTY LINES AND WATER RESOURCES (INCLUDING WETLANDS).
  - \*SOIL AND EROSION CONTROL PRACTICES AT STOCKPILES SHOULD BE REGULARLY INSPECTED AND SHOULD BE ADJUSTED IMMEDIATELY TO RESPOND TO ONGOING CONSTRUCTION OPERATIONS, AS THE DELIVERY OF NEW MATERIALS OR THE REMOVAL OF MATERIALS FOR INCORPORATION INTO THE WORK MAY REQUIRE MODIFICATION AND UPDATING OF THE PROTECTIVE MEASURES TO KEEP THEM EFFECTIVE.
- INSTALLATION NOTES:**
- \*LOAME STOCKPILES: A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF WATER.
  - \*PROTECT STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS, OR OTHER APPROPRIATE PRACTICE.
  - \*STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS, TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.
  - \*PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILES.
  - \*MACHINE SOIL STOCKPILES SHOULD BE COVERED WITH ANCHORED TARS, OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY VEGETATION, MULCH OR OTHER TEMPORARY STABILIZATION PRACTICE)
- MAINTENANCE NOTES:**
- \*ACTIVE STOCKPILES SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
  - \*AT A MINIMUM, INSPECT ALL STOCKPILES WEEKLY AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 0.5" WITHIN A 24-HOUR PERIOD TO VERIFY THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND FUNCTIONING PROPERLY.
  - \*REPAIR AND/OR REPLACE PERIMETER CONTROLS AND STOCKPILE COVERINGS AS NEEDED TO KEEP THEM FUNCTIONING PROPERLY.

## MATERIAL STOCKPILE DETAIL

N.T.S.



## PROPOSED LIMIT OF DISTURBANCE (TYP.)

NOTE: ALL DISTURBED AREAS WILL BE LOAMED AND SEEDED

## CONSTRUCTION SEQUENCE

THIS CONSTRUCTION SEQUENCE PROVIDES THE OWNER/CONTRACTOR WITH A GENERAL GUIDE OF THE MAJOR CONSTRUCTION ACTIVITIES FOR THIS SITE. THE ACTIVITIES ARE PRESENTED IN THE RECOMMENDED ORDER OF CONSTRUCTION, BUT IS NOT INTENDED TO PRESCRIBE EXACT TIMELINE. CONSTRUCTION SEQUENCE MODIFICATIONS TO THE SEQUENCE MAY BE NECESSARY DUE TO SITE CONSTRAINTS OR WEATHER CONDITIONS. THE OVERALL INTENT IS TO MINIMIZE THE ENVIRONMENTAL IMPACT OF THE CONSTRUCTION PROCESS.

THE OWNER/CONTRACTOR SHALL:

- REVIEW ALL PLANS, REPORTS, DOCUMENTS AND PERMITS ASSOCIATED WITH THE PROJECT.
- OBTAIN ANY ADDITIONAL REQUIRED PERMITS.
- COORDINATE ON-SITE STAKEOUT OF PROPOSED IMPROVEMENTS, AS NECESSARY. (EXAMPLES: CENTERLINE OF ROADWAY, DRAINAGE AREAS, DRAINAGE STRUCTURES, LIMITS OF CLEARING, AND LOCATION OF SILTATION CONTROL MEASURES).
- SCHEDULE PRE-CONSTRUCTION MEETING.
- TYPICALLY, CONDUCTED ON-SITE WITH THE OWNER, CONTRACTOR, DESIGN ENGINEER, AND LOCAL APPROVING REPRESENTATIVE. THE INTENT IS TO ESTABLISH A WORKING UNDERSTANDING AMONG THE PARTIES AS TO THE PROPOSED CONSTRUCTION ACTIVITIES, INSPECTIONS, SCHEDULE OF EVENTS AND RESPONSIBILITIES OF EACH PARTY.

ON-SITE CONSTRUCTION ACTIVITIES SHALL BEGIN:

- HAVE PROPERTY LINES IDENTIFIED ON THE SITE BY THE PROJECT ENGINEER OR OTHER QUALIFIED PROFESSIONAL.
- ESTABLISH PERIMETER EROSION AND SEDIMENT CONTROLS AS SHOWN ON PLANS, INCLUDING TEMPORARY CONSTRUCTION EXIT.
- REMOVE TREES, VEGETATION AND STUMPS WITHIN THE PROPOSED AREA OF DISTURBANCE.
- STRIP TOPSOIL AND STOCK PILED ON-SITE. SEE MATERIAL STOCK PILE DETAIL FOR SPECIFIC REQUIREMENTS. CAREFUL SELECTION OF STOCK PILE LOCATIONS WILL FACILITATE THE EASE OF CONSTRUCTION ACTIVITIES.
- ERTHWORX OPERATIONS SHALL CONSTRUCT PROPOSED PERMANENT DRAINAGE FACILITIES IN THE INITIAL STAGES OF DEVELOPMENT. DRAINAGE FACILITIES MUST BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- ERTHWORX OPERATIONS SHALL CONTINUE TO BRING SURFACES TO PROPOSED GRADE AS SHOWN PLANS.
- UNSTABILIZED DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE.
- AVOID OVER EXCAVATING WHICH CAN LEAD TO PRODUCTION OF EXCESS MATERIAL.
- STORMWATER RUNOFF FROM DISTURBED AREAS SHALL BE CONTROLLED BY TEMPORARY SEDIMENT CONTROLS.
- ALL DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO GRADE WITH NO FURTHER DISTURBANCE TO TAKE PLACE SHALL BE STABILIZED AS SOON AS POSSIBLE, BUT IN NO CASE LONGER THAN 72-HOURS. AREAS TO BE PAVED SHALL HAVE BASE COURSE OF GRAVELS INSTALLED. AREAS PROPOSED TO BE VEGETATED SHALL BE LOAMED AND SEEDED. SEE PERMANENT LOAM AND SEEDING DETAIL FOR SPECIFIC INFORMATION.
- AREAS TO BE PAVED SHALL BE BROUGHT TO FINAL GRADE, COMPACTED AND PAVED.

AFTER ENTIRE SITE IS STABLE:

TEMPORARY EROSION AND SEDIMENT CONTROLS MAY BE REMOVED.

## WINTER CONSTRUCTION NOTES

- \*ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4 TO 1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE. SECURED WITH PERMANENT STABILIZATION MEASURES FOR OVERWINTER PROTECTION. MULCH SHALL BE PLACED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- \*ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- \*ALL DITCHES OR SWALS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- \*AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER WHOLE ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

SEEDING MIXTURES FOR TEMPORARY VEGETATION		REMARKS
SPECIES	PER 1,000 S.F.	
WINTER RYE	2.5 lbs.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 TO A DEPTH OF 1 INCH.
OATS	2.0 lbs.	BEST FOR SPRING SEEDING. SEED NUMBER PROTECTION SEED TO A DEPTH OF 1 INCH.
ANNUAL REGRASS	1.0 lbs.	GROWS QUICKLY, BUT IS IF A SHORT DURATION. USE WHERE APPEARANCES SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL REGRASS	0.7 lbs.	GOOD COVER WHICH IS LONGER LASTING THAN ANNUAL REGRASS. SEED BETWEEN APRIL 1 AND JUNE 1 AND/OR AUGUST 15 AND SEPTEMBER 15. THROUGHOUT THE GROWING SEASON. SEED TO A DEPTH OF 0.5 INCH.

SEED MIXTURES FOR PERMANENT VEGETATION		REMARKS
SPECIES	LBS. PER 1,000 S.F.	
TALL FESCUE	0.45	
ORCHARD GRASS	0.45	
BRODSFOOT TREFOLI	0.20	
TOTAL	1.10	

- INSTALLATION NOTES:**
- \*AREA TO BE SEEDED SHALL BE PREPARED ACCORDING TO THE SEEDING AREA PREPARATION DETAIL.
  - \*SEED SHALL BE AS SPECIFIED IN SEEDING MIXTURE TABLES ABOVE.
  - \*APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CUTLIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING OPERATIONS SHOULD BE ON THE MULCH.
  - \*WHERE FEASIBLE, EXCEPT WHERE EITHER A CUTLIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS.
  - \*SPRING SEEDING USUALLY YIELDS THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST. WHEN CROWN WETCH IS SEEDING IN LATER SUMMER, AT LEAST 35% OF THE SEED SHOULD BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY MULCHING DETAIL," AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
  - \*SEEDING RATES SHOULD TYPICALLY OCCUR PRIOR TO SEPTEMBER 15TH.
  - \*SEEDS SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHOULD BE COVERED WITH HAY OR STRAW MULCH. ACCORDING TO THE "TEMPORARY MULCHING DETAIL."
  - \*VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION, AND COMPLETE PERMANENT SEED STABILIZATION DURING THE NEXT GROWING SEASON.
  - \*SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
- MAINTENANCE NOTES:**
- \*DISTURBED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION, INSPECTIONS, MAINTENANCE, AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
  - \*SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION, WITH MOWING HEIGHT AND FREQUENCY DEPENDENT ON TYPE OF GRASS COVER.
  - \*ON INSPECTION, AREAS SHOULD BE RESEDED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
  - \*AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.
  - \*IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS SHOULD BE RESEDED, WITH OTHER TEMPORARY MEASURES (E.G., MULCH) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

## SEEDING DETAIL

N.T.S.

FINAL APPROVAL BY DURHAM PLANNING BOARD  
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER

DATE

## EROSION AND SEDIMENTATION PLAN

TAX MAP 18 - LOT 3-2  
257 NEWMARKET ROAD  
DURHAM, NH

OWNER/APPLICANT: SEACOAST OJM REALTY, LLC  
P.O. BOX 1733  
DOVER, NH 03821

DESIGN BY:

Civil Construction Management Inc.  
8 Merrimack Road, Box 475  
Newtown, NH 03858  
Tel (603) 382-7650

DRAWN BY: D. MALY, ASSE. CHK BY: D. QUINTAL, PE.  
DESIGNED BY: D. MALY, ASSE. DATE: 1-8-15

Sheet:  
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