EROSION CONTROL NOTES

GENERAL:

THE DRAWINGS DEPICT THE REQUIRED SOIL EROSION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION SITE IN SUCH A MANNER THAT:

1. SOIL EROSION IS KEPT TO A MINIMUM.

- 2. NO SEDIMENT LEAVES THE CONSTRUCTION SITE PROPER. 3. ALL POSSIBLE MEASURES ARE EMPLOYED TO PREVENT SEDIMENT FROM ENTERING DRAINAGE COURSES AND WETLANDS EVEN BEYOND THE DETAILS SHOWN ON THIS PLAN IF NECESSARY.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT 2. MATERIAL CONTROL BMPS PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATERBODIES, OR WETLAND AS A RESULT OF THIS
- 3. LOAM AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER DISTURBANCE, BUT NO LONGER THAN I DAYS, LOAM AND SEED ANY DISTURBED AREA WITHIN 15' OF WETLANDS OR WATERBODEIS WITHIN 48 HOURS OR PRIOR TO AND STORM EVENT. USE WINTER SEED RATES AND SPECIFICATIONS IF APPROPRIATE.
- 4. INSPECT SOIL EROSION MEASURES WEEKLY AND AFTER SIGNIFICANT STORM EVENTS. MAKE ALL NECESSARY REPAIRS TO FACILITIES AS 500N AS POSSIBLE, BUT NO LONGER THAN 2 DAYS. CLEAN AND RESET SILT FENCES AND STONE CHECK DAMS WHICH ACCUMULATE SEDIMENT AND DEBRIS.
- 5. PROTECT AND STABILIZE ALL AREAS NOT SCHEDULED FOR EROSION PREVENTION OR STABILIZATION BUT THAT SHOW SIGNS OF EROSION. NOTIFY OWNER OF ANY SIGNIFICANT EROSION PROBLEM.
- 6. APPLY MULCH TO BARE SOILS WITHIN I DAYS OF INITIAL DISTURBANCE OF SOILS, WITHIN 48 HOURS IF WITHIN 75' OF WETLAND OR WATERBODY PRIOR TO ANY RAIN EVENT, OR PRIOR TO ANY WORK SHUTDOWN LASTING MORE THAN ONE DAY.
- 1. TEMPORARILY SEED WITHIN 1 DAYS ANY AREA WHICH WILL BE LEFT DISTURBED AND UNWORKED FOR MORE THAN 14 DAYS WITH THE TEMPORARY SEED MIX LISTED BELOW. IF AREA IS WITHIN 75' OF A WETLAND OR WATERBODY, SEED WITHIN 48 HOURS. PERMANENTLY SEED ANY AREA WHICH CAN BE LOAMED AS SOON AS POSSIBLE WITH THE PERMANENT SEED MIX LISTED BELOW. DO NOT USE PERMANENT SEED MIX AFTER SEPTEMBER 15.
- 8. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. DURING THE GROWING SEASON (APRIL 15 - SEPT. 30) USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - -THE BASE OF GRASSED WATERWAYS
 - -SLOPES STEEPER THAN 15% -WITHIN 100 ft. OF STREAMS AND WETLANDS
- BETWEEN OCT. I AND APRIL 14 USE EROSION CONTROL MESH (OR MULCH AND NETTING) ON:
 - -SIDE SLOPES OF GRASSED WATERWAYS -SLOPES STEEPER THAN 8%
- 9. INSTALL EROSION CONTROL MESH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. MESH TO BE EQUAL TO NORTH AMERICAN GREEN PRODUCT CI25BN.
- 10. FOLLOW SILT FENCE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION OF SILT FENCE. SECURE ENTIRE BOTTOM OF FENCE EITHER BY BURYING BOTTOM OF FENCE IN A TRENCH OR BERMING WITH SOIL OR CHIPPED GRUBBINGS. REFER TO SILT FENCE DETAILS.
- 11. PLACE AND GRADE LOAM IN A REASONABLY UNIFORM MANNER, WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEED BED IS PREPARED. REMOVE FROM SURFACE ALL STONES LARGER THAN 2" AND ALL OTHER UNSUITABLE MATERIAL. LIME AND FERTILIZER SHOULD BE MIXED INTO SOIL PRIOR TO ROLLING EXCEPT IF INCLUDED IN HYDROSEED MIXTURE. PERMANENT STABLILIZATION OF REVEGETATED AREAS IS CONSIDERED AS 90% CATCH.
- 12. ALL CULVERT OR PIPE OUTFALL PROTECTION MUST BE INSTALLED WITHIN 5. BEGIN EARTHWORK FOR ROAD, PARKING AND BUILDING FOUNDATIONS. 48 HOURS OF INSTALLING NEW PIPE OR CULVERT.
- 13. DITCHES AND CHANNELS DESIGNATED TO BE LINED WITH RIPRAP AND/OR EROSION CONTROL MESH MUST BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR CHANNEL.
- 14. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED BY INSTALLING AND MAINTAINING SILT SACKS DURING CONSTRUCTION.
- 15. WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

TOPSOIL:

SUITABLE TOPSOIL SALVAGED FROM SITE OR SCREENED, LOOSE AND FRIABLE SANDY LOAM OR LOAM AS DEFINED BY THE USDA SOIL CONSERVATION SERVICE CLASSIFICATION SYSTEM, FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS, ROOTS, WEEDS RHIZOMES OR OTHER UNDESIREABLE FOREIGN MATTER AS DETERMINED BY THE INSPECTING AUTHORITY, CONTRACTOR SHALL SUBMIT REPORTS OF LOAM TEST RESULTS PERFORMED BY AN INDEPENDENT TESTING LABORATORY FOR TOPSOIL FROM DIFFERENT SOURCES PRIOR TO PLACING. THE COST OF TESTING SHALL BE INCIDENTAL TO THE COST OF TOPSOIL. TOPSOIL SHALL MEET THE FOLLOWING SPECIFICATIONS:

SAND - 0.08 IN. TO 0.002 IN. DIAMETER (% BY YOLUME)..... 45 - 75 SILT - 0.002 IN. TO 0.00008 IN. DIAMETER (% BY YOLUME)... 20 - 40 CLAY - LESS THAN 0.00008 IN. DIAMETER (% BY VOLUME).... 5 - 15

ORGANICS (SHALL MEET THE REQUIREMENTS OF MOOT STANDARD SPECIFICATION 117.09 PEAT HUMUS) (% BY VOLUME). 10 - 20

NUTRIENTS:

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CALCIUM (CA) (% SATURATION)60	- <i>80</i>
MAGNESIUM (MG) (% SATURATION) 10 -	- 25
POTASSIUM (K) (% SATURATION) 2.1 -	- 3 <i>.</i> Ø
PHOSPHORUS (P) (POUNDS/ACRE) 10 -	- 40
PH 60	

PERMEABILITY (INCHES PER HOUR)....3 - 10

MAXIMUM STONE SIZE (INCHES)...........3/4

SEEDING:

USE PERMANENT SEED MIXES AND RATES BETWEEN 5/15 AND 9/30. USE TEMPORARY SEED MIXES FOR PERIODS LESS THAN 12 MONTHS. IF USING TEMPORARY SEED MIXES AND RATES BETWEEN 10/1 AND 5/14, RE-SEED WITH PERMANENT SEED MIX AFTER 5/15.

PERMANENT SEED:

MDOT 111.03(a) METHOD NUMBER 3

TEMPORARY SEED:

OATS	<i>80.00</i> LBS/ACRE	4/01 - 5/14
ANNUAL RYEGRASS	40.00 LBS/ACRE	
SUDANGRASS	40.00 LBS/ACRE	5/15 - 8/14
ANNUAL RYEGRASS	80.00 LBS/ACRE	5/15 - 9/14
WINTER RYE	. 112.00 LBS/ACRE	9/15 - 9/30
WINTER RYE (W/ MULCH COVER)	. 112.00 LBS/ACRE	10/01 - 3/31

LIME AND FERTILIZER:

LIMING AND FERTILIZER RATES WILL BE BASED ON FIELD SOIL TESTING OF ON-SITE TOPSOILS BY A CERTIFIED LABORATORY. SUBMIT TEST RESULTS TO THE ENGINEER.

MULCH:

STRAW OR HAY (ANCHORED)	70 - 90 LBS	PROTECTED AREAS
STRAW OR HAY (ANCHORED)		WINDY AREAS
SHREDDED OR CHOPPED		
JUTE MESH	AS REQUIRED	MODERATE TO HIGH
		VELOCITY AREAS \$
EXCELSIOR MAT	AS REQUIRED	STEEP SLOPES

MILICH ANCHORING

MOLOIT AITOITOITITO	
PEG AND TWINE	LIQUID ASPHALT
MULCH NETTING	WOOD CELLULOSE FIBER
ASPHALT EMULSION	CHEMICAL TACK

SUGGESTED SEQUENCE OF CONSTRUCTION TO CONTROL **EROSION:**

- THIS SEQUENCE OF CONSTRUCTION IS A GENERAL GUIDE TO THE CONTRACTOR. ACTUAL CONSTRUCTION PRACTICES WILL DICTATE VARIATIONS IN THE ORDER OF MAJOR EVENTS.
- INSTALL ALL PERIMETER SILT FENCE AND CATCH BASIN PROTECTION. 2. INSTALL SILTATION BASINS. (PRIOR TO ANY STRIPPING OF TOPSOIL OR OTHER EARTHWORK)
- 3. CLEAR AND GRUB WORK AREAS. TEMPORARILY SEED AREAS NOT TO BE WORKED ON WITHIN 14 DAYS.
- 4. STRIP AND STOCKPILE ON-SITE TOPSOIL. SEED STOCKPILES WITH TEMPORARY SEED MIX.
- 6. STABILIZE AREAS DRAINING TO STORMWATER TREATMENT AREA. J. CONSTRUCT STORMWATER TREATMENT AREA FILTER AND STORM DRAIN
- 8. INSTALL AND PROTECT STORM DRAINAGE SYSTEM.
- 9. BEGIN BUILDING CONSTRUCTION. 10. ROUGH GRADE ROAD, PARKING AREAS, AND ROADWAY SIDE SLOPES.
- 11. FINE GRADE ALL PARKING LOTS AND DRIVEWAY SIDE SLOPES AND ROUGH GRADE REMAINDER OF SITE. 12. RESEED OR TEMPORARILY SEED ANY AREA WHICH WILL BE LEFT
- UNDISTURBED FOR MORE THAN 14 DAYS.
- 13. COMPLETE FINE GRADING AND PAYING OF ROADS, WALKS AND PARKING
- 14. CLEAN SILTATION BASINS, LEVEL SPREADERS AND STORM DRAIN SYSTEM OF
- CONSTRUCTION SEDIMENTATION. 15. FINE GRADE, LOAM SEED AND FERTILIZE REMAINDER OF SITE.

16. REMOVE TEMPORARY SOIL EROSION MEASURES

WINTER CONSTRUCTION:

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER I THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 15% MATURE VEGETATION COVER OR RIP RAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT VEGETATION, MULCHING, EROSION CONTROL MATS, RIP RAP OR GRAVEL BASE ON A ROAD. WINTER EXCAYATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN I ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING IS DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.

CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER-WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS/ACRE) OR WITH A FOUR INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND WILL BE REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EYEN COYERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

DURING THE SPRING THAW AND RAINS.

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 15% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER I AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH

HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF EROSION CONTROL MIX SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LBS/1,000 S.F. OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 15 LBS/1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN

MULCHED WITH STRAW OR HAY AT A RATE OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER I AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG

LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL TACK, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH THEN COVER IS SUFFICIENT. AFTER NOVEMBER I, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULL MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 S.F. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAT 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPE GREATER THAN 8%.

EROSION CONTROL MIX CAN BE USED AS A SUBSTITUTE FOR EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

BETWEEN THE DATES OF OCTOBER IS AND APRIL I, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. AFTER NOVEMBER 1 IF THE EXPOSED AREA HAS BEEN LOAMED AND FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND

BE SEEDED AT AN APPLICATION RATE OF 5 LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 15 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL AREAS DISTURBED IN THE WINTER SHALL BE YEGETATED IN THE SPRING.

1. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE OR EROSION CONTROL MIX LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

8. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGED AND/OR UNESTABLISHED SPOTS. ESTABLISHED YEGETATIVE COYER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

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