

HUNTERDON COUNTY SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT REQUIRES AN ADVANCED 48-HOUR WRITTEN NOTIFICATION PRIOR TO THE START OF ANY LAND DISTURBANCE. A FAILURE OF THIS NOTIFICATION PRIOR TO THE START OF CONSTRUCTION WILL RESULT IN THE ISSUANCE OF A STOP CONSTRUCTION ORDER AND MAY BE CAUSE FOR LEGAL ACTION. NOTICE MAY BE FAXED TO (908) 788-0795 OR MAILED

> **HUNTERDON COUNTY SOIL CONSERVATION DISTRICT 687 PITTSTOWN ROAD** FRENCHTOWN, NJ 08825

- 2. LAND DISTURBANCE AND CONSTRUCTION WORK START INCLUDES ANY DEMOLITION OR CLEARING THAT TAKES PLACE ON THE PROJECT SITE, APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED AT THE PROPOSED DEMOLITION AREAS.
- 3. THE PROJECT APPLICANT AND CONTRACTOR ARE TO BE AWARE THAT ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE SOIL CONSERVATION DISTRICT OR MUNICIPAL ENGINEER IF FIELD CONDITIONS OR UNFORESEEN SITUATIONS WARRANT THEM.
- 4. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT ENCOURAGES THE INSTALLATION AND STABILIZATION OF PERMANENT DETENTION OR RETENTION FACILITIES FROM THE START OF THE PROJECT. THIS IS PARTICULARLY IMPORTANT ON ACCOUNT OF THE STEEP TOPOGRAPHY AND SOILS OF HUNTERDON COUNTY. PRIORITY SHOULD TO BE SET ON CONSTRUCTION OF ANY THE DETENTION BASIN OR RETENTION BASIN FACILITY PRIOR TO ANY SIGNIFICANT AMOUNT OF LAND DISTURBANCE. SEDIMENT RISERS CAN BE USED ON A DETENTION BASIN AT ANY TIME AS LONG AS THEY MEET THE CRITERIA OF THE STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS. IF A SEDIMENT BASIN IS DESIGNED, AS EITHER WITHIN THE PERMANENT BASIN AREA OR AS A STAND-ALONE BASIN, THEY ARE TO BE DESIGN FULLY IN COMPLIANCE WITH THE STANDARDS AND ARE TO BE PROPERLY MAINTAINED DURING CONSTRUCTION. ALL DETENTION/RETENTION BASINS BE COMPLETED AND PERMANENTLY STABILIZED (ALONG WITH CONDUIT OUTLET PROTECTION AND LOW-FLOW CHANNEL) BEFORE ANY STORM DRAINAGE PIPING IS INSTALLED TO THE BASIN AND SAME PIPING IS FUNCTIONING. NO PAVING IS TO TAKE PLACE ON THE PROJECT SITE UNTIL ALL STORMWATER DETENTION/RETENTION FACILITIES ARE ADEQUATELY STABILIZED AS PER PLAN. FAILURE TO MAINTAIN A DETENTION, RETENTION, OR SEDIMENT FACILITY IN WORKING ORDER DURING CONSTRUCTION MAY BE GROUNDS FOR ISSUANCE OF A STOP CONSTRUCTION ORDER BY THE SOIL CONSERVATION DISTRICT.
- 5. THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT DOES NOT SUPPORT NOR ENDORSE MASS EXCAVATION. THE AMOUNT OF SOIL DISTURBED AT ONE TIME, AND SUBJECT TO EROSION, IS TO BE KEPT TO A MINIMUM. IT IS THE POLICY OF THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT THAT LARGE DISTURBANCES OF SOIL EXPOSED AT ONE TIME ON A PROJECT WILL REQUIRE A DETAILED PLAN AND TIME-LINE FOR GETTING AREAS STABILIZED. THE STANDARD FOR SEDIMENT BARRIERS WILL BE USED FOR LIMITING LARGE AREAS OF EXCAVATION. IF EXCAVATIONS ARE PROPOSED THAT EXCEED THE SEDIMENT BARRIER STANDARD, THEN ADDITIONAL MEASURES ARE TO BE DESIGNED AND DETAILED AND A DETAILED SEQUENCE OF CONSTRUCTION BE SUBMITTED FOR RE-CERTIFICATION AND APPROVAL. AS A MINIMUM, SOILS EXPOSED FOR LONGER THAN 30 DAYS WILL REQUIRE TEMPORARY STABILIZATION FOLLOWING THE AGRONOMIC SPECIFICATIONS ON THE PLAN.
- 6. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN IS TO BE KEPT ON THE PROJECT SITE DURING CONSTRUCTION AND AVAILABLE FOR REVIEW BY THE CONTRACTOR AND SOIL CONSERVATION DISTRICT INSPECTORS.
- 7. THE LAND DISTURBANCE IS TO PROCEED IN ACCORDANCE WITH THE APPROVED SEQUENCE OF CONSTRUCTION AND THE CERTIFIED PLAN. ALL REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED AS OUTLINED IN THE PLAN
- 8. THE SOIL CONSERVATION DISTRICT IS TO BE NOTIFIED AND REPRESENTED AT A PRECONSTRUCTION CONFERENCE PRIOR TO THE START OF CONSTRUCTION OR ANY LAND DISTURBANCE.
- 9. ALL DISTURBED AREAS THAT ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED TO BE PERMANENTLY SEEDED WITHIN 30 DAYS MUST BE TEMPORARILY STABILIZED AS PER SPECIFICATIONS BELOW.
- 10. ALL EXPOSED AREAS WHICH ARE TO BE PERMANENTLY VEGETATED, ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF FINAL GRADING.
- 11. STRAW MULCH (HAY MULCH MAY BE SUBSTITUTED IF APPROVED BY THE DISTRICT) IS TO BE APPLIED TO ALL SEEDINGS AT A RATE OF 1-1/2 TO 2 TONS PER ACRE (APPROX. 100 TO 130 BALES PER ACRE).
- 12. MULCH ANCHORING IS REQUIRED AFTER MULCHING TO MINIMIZE LOSS BY WIND OR WATER. THIS IS TO BE DONE USING ONE OF THE METHODS (CRIMPING, LIQUID MULCH BINDERS, NETTINGS, ETC.) IN THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".
- 13. EXISTING WEEDY AND POORLY-VEGETATED AREAS WITH LESS THAN 80 PERCENT PERENNIAL GRASS COVER MUST RECEIVE PERMANENT STABILIZATION AS PER THESE SPECIFICATIONS
- 14. ALL BAGS NEED TO BE SAVED FOR LIME, FERTILIZER, SEED, AND LIQUID MULCH BINDER (IF MULCH ANCHORING METHOD). SUCH PROOFS NEED TO BE SUBMITTED TO THE DISTRICT INSPECTOR FOR VERIFICATION OF MATERIALS AND QUANTITIES USED FOR ALL SEEDINGS.
- 15. AN ADDITIONAL FEE PER INSPECTION (AS PER THE CURRENT HUNTERDON COUNTY SOIL CONSERVATION DISTRICT FEE SCHEDULE AT THE TIME OF INSPECTION) WILL BE ASSESSED ON THOSE SITES WHERE ADDITIONAL INSPECTIONS ARE NECESSITATED AS A RESULT OF NON-COMPLIANCE WITH THE APPROVED PLAN. THIS INCLUDES ADDITIONAL INSPECTIONS PERFORMED AFTER THE FAILURE OF AN INITIAL REPORT OF COMPLIANCE INSPECTION. THE ENTIRE PROJECT SITE IS INSPECTED AT THE TIME OF A REQUEST FOR REPORT OF COMPLIANCE.
- 16. SOILS IN HUNTERDON COUNTY REQUIRE THAT ALL STONE TRACKING PADS (STABILIZED CONSTRUCTION ENTRANCE) BE INSTALLED AT A MINIMUM OF 100 FT. IN LENGTH FOR ROADWAY GRADES OF 0% TO 2% AND 200 FT. FOR ACCESS GRADES GREATER THAN 2%. THIS REQUIREMENT IS THE SAME, REGARDLESS IF MAIN PROJECT ENTRANCE OR INDIVIDUAL DWELLING LOT. STONE TRACKING PADS OR OTHER MEASURES APPROVED BY THE SOIL CONSERVATION DISTRICT ARE TO BE INSTALLED AT ALL CONSTRUCTION ACCESSES TO PAVEMENT.

THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.

WHERE ACCUMULATING OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS, WHICH ARE NOT STABILIZED, SHALL BE ADEQUATELY BLOCKED OFF

- 17. IF EXCESS FILL OR ANY OTHER MATERIAL IS TO BE REMOVED FROM THE SITE, THE PROJECT OWNER/APPLICANT SHALL BE RESPONSIBLE FOR ITS PROPER DISPOSAL AND WILL NOTIFY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT AS TO THE PLANNED DISPOSAL SITE LOCATION. IF APPLICABLE, A SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO, REVIEWED AND CERTIFIED BY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT PRIOR TO ANY MATERIAL REMOVAL FROM THE PROJECT SITE. REMOVAL OF ANY SOIL MATERIAL FROM THE PROJECT SITE WITHOUT WRITTEN AUTHORIZATION FROM THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT IS A VIOLATION OF THE STATE SOIL EROSION AND SEDIMENT CONTROL ACT.
- 18. STOCKPILING OF FINES (SAND, QUARRY-PROCESS-BLEND, ETC.) IS NOT ALLOWED ON PAVED SURFACES OF THE PROJECT SITE.
- 19. THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS ARE NOT TO BE EXCEEDED UNLESS AUTHORIZED BY THE HUNTERDON COUNTY SOIL CONSERVATION DISTRICT AND A REVISED PLAN SUBMITTED FOR CERTIFICATION.
- 20. ALL DEVELOPMENT ROADWAYS ARE TO BE KEPT SCRAPED/SWEPT TO REMOVE SEDIMENT ACCUMULATIONS ALONG CURBS AND AROUND STORMWATER INLETS.
- 21. IT IS THE OWNER/APPLICANTS RESPONSIBILITY TO NOTIFY THE DISTRICT OF ALL PROPERTY CONVEYANCES AND SALE OF INDIVIDUAL LOTS ON A PROJECT. SOIL EROSION AND SEDIMENT CONTROL PLAN APPLICATIONS ARE TO BE FILED BY ANY NEW OWNERS ON PROJECTS/LOTS WHERE CONSTRUCTION ACTIVITIES ARE TO STILL TAKE PLACE.
- 22. ALL REVISIONS AND MUNICIPAL RENEWALS OF THIS PROJECT WILL REQUIRE RESUBMISSION AND APPROVAL BY THE SOIL CONSERVATION DISTRICT.
- 23. REPORT OF COMPLIANCE: A REPORT OF COMPLIANCE APPROVING PERMANENT STABILIZATION MEASURES (OR A SOIL EROSION AND SEDIMENT CONTROL COMPLETION BOND AGREEMENT WITH TEMPORARY STABILIZATION FOR THE WINTER SEASON) IS TO BE ISSUED BY THE SOIL CONSERVATION DISTRICT ON ALL PROJECTS AT THEIR COMPLETION. BEFORE ANY CERTIFICATE OF OCCUPANCY (PERMANENT OR TEMPORARY) CAN BE GRANTED BY THE MUNICIPALITY OR STATE, A WRITTEN REPORT OF COMPLIANCE MUST BE ISSUED BY THE SOIL CONSERVATION DISTRICT.
- 24. SOIL COMPACTION: AREAS OF TRAVEL WITHIN A PROJECT SITE AND/OR STAGING AND PARKING AREAS MAY HAVE SOILS COMPACTED DURING THE COURSE OF PROJECT CONSTRUCTION. ALL SOIL COMPACTION IS TO BE CORRECTED PRIOR TO ANY PERMANENT STABILIZATION AND COMPLETION OF PROJECT. THE TOPSOILING STANDARD (NJ SE&SC STANDARDS PAGE 8-2) STATES THAT WHERE THERE IS COMPACTION, THE SURFACE IS TO BE SCARIFIED 6" TO 12" PRIOR TO APPLYING TOPSOIL FOR PERMANENT STABILIZATION. THE SOIL CONSERVATION DISTRICT WILL BE INSPECTING FOR THIS TO BE EMPLOYED PRIOR TO ANY PERMANENT STABILIZATION AND PRIOR TO ISSUE OF ANY REPORT OF COMPLIANCE. WHERE TOPSOIL IS NOT BEING STRIPPED DURING CONSTRUCTION. PRE AND POST COMPACTION TEST MAY BE USED TO VERIFY THAT CONSTRUCTION TRAFFIC HAS NOT CAUSED A SOIL COMPACTION PROBLEM TO THE SITE.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION SPECIFICATIONS:

- A) GRADE ALL SEEDBED AREAS AS NEEDED TO FACILITATE STABILIZATION. ANY AREAS OF SOIL
- COMPACTION WILL BE SCARIFIED. B) APPLY TOPSOIL AT A UNIFORM DEPTH OF 5 INCHES (UNSETTLED)
- C) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQUARE FEET. D) LIME SHALL CONSIST OF DOLOMITIC LIMESTONE AND BE APPLIED AT A RATE OF 50 POUNDS PER
- 1,000 SQUARE FEET, OR BASED ON THE pH OF THE SOIL
- E) APPLY SEED MIXTURE AS SHOWN IN "PERMANENT SEEDING SCHEDULE". F) MULCH IS REQUIRED ON ALL SEEDING. STRAW MULCH SHALL BE APPLIED AT A RATE OF 70-90 LBS.
- PER 1000 SQUARE FEET AND ANCHORED IN A PLACE. G) IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE CONFIRMATION OF LIME. FERTILIZER AND SEED APPLICATION AT THE REQUEST OF THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT.

PERMANENT SEEDING SCHEDULE

SEED SELECTION	SEEDING RATE (POUNDS)		OPTIMUM SEEDING	ACCEPTABLE SEEDING	
	PER ACRE	PER 1,000 S.F.	DATE	DATE	
COOL SEASON MIX #13					
1. HARD FESCUE	175	4.0			
2. PERENNIAL RYEGRASS	45	1.0	8/15-10/1	3/1-4/30 & 5/1-8/14	
3. KENTUCKY BLUEGRASS (BLEND)	45	1.0			

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION SPECIFICATIONS:

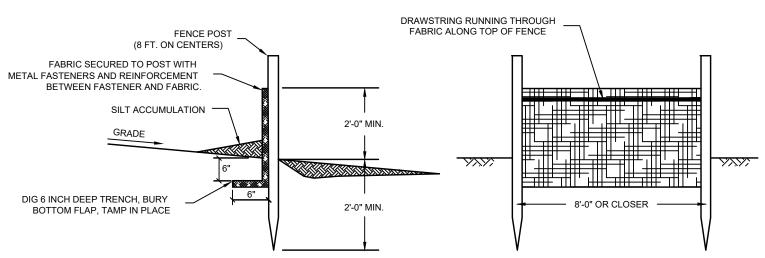
- A) GRADE ALL SEEDBED AREAS AS NEEDED TO FACILITATE STABILIZATION. ANY AREAS OF SOIL COMPACTION WILL BE SCARIFIED.
- C) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQUARE FEET
- D) LIME SHALL CONSIST OF DOLOITIC LIMESTONE AND BE APPLIED AT A RATE OF 50 POUNDS PER 1,000 SQUARE FEET, OR AS BASED ON THE pH OF THE SOIL.
- E) SELECT SEED FROM RECOMMENDATIONS IN "TEMPORARY SEEDING SCHEDULE" AND APPLY AT
- F) MULCHING IS REQUIRED ON ALL SEEDING. STRAW MULCH SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS. PER 1000 SQUARE FEET AND ANCHORED IN PLACE

TEMPORARY SEEDING SCHEDULE

SEED SELECTION		SEEDING RATE		OPTIMUM	OPTIMUM
		(POUNDS)		SEEDING	SEEDING DEPTH ³
		PER ACRE	PER 1,000 S.F.	DATE 2	(INCHES)
co	OL SEASON GRASSES				
1.	PERENNIAL RYEGRASS	100	1.0	3/1-5/15 8/15-10/1	0.5
2.	SPRING OATS	86	2.0	3/1-5/15 8/15-10/1	1.0
3.	WINTER BARLEY	96	2.2	8/15-10/1	1.0
5.	WINTER CEREAL RYE	112	2.8	8/1-11/15	1.0
WA	ARM SEASON GRASSES				
6.	PEARL MILLET	20	0.5	5/15-8/15	1.0
7.	MILLET (GERMAN OR HUNGARIAN)	30	0.7	5/15-8/15	1.0

1. SEEDING RATE FOR WARM SEASON GRASS, SELECTIONS 6 -7 SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENTS REQUIRED FOR COOL SEASON GRASSES. 2. MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED

AREA CAN BE IRRIGATED. 3. TWICE THE DEPTH FOR SANDY SOIL.



REQUIREMENTS FOR SILT FENCE:

- FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1-1/2 INCHES.
- 2. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
- 3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS, ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE DETAIL

RESTORATION OF GRASSED AND CULTIVATED AREAS

WHERE THE WORK CROSSES GRASSED OR CULTIVATED AREAS SUCH SURFACES SHALL BE REPLACED TO A CONDITION EQUIVALENT TO THAT EXISTING BEFORE THE START OF THE WORK.

FOLLOWING COMPACTION OF THE BACKFILL, ALL SETTLED AREAS SHALL BE REFILLED WITH CLEAN SUBSOIL AND THE WORKING AREAS BROUGHT TO A SUBGRADE LEVEL AT THE GRADE OF THE ORIGINAL SUBSOIL BUT NOT LESS THAN FOUR (4) INCHES BELOW ORIGINAL GRADE.

IMMEDIATELY PRIOR TO TOPSOILING, THE SURFACE SHOULD BE SCARIFIED TO A MINIMUM OF 6" WHERE THERE HAS BEEN SOIL COMPACTION. BEFORE REPLACING TOPSOIL, ALL LUMPS, STONES AND FOREIGN MATERIALS REMOVED, AND THE SURFACE RAKED TO A UNIFORM GRADE. TOPSOIL SHALL THEN BE SPREAD, RAKED AND ROLLED TO FORM AN EVEN SURFACE WITH EXISTING GRADE. APPLY TOPSOIL IN A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE AS REQUIRED. IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE. IF SUFFICIENT TOPSOIL IS NOT OBTAINED FROM STRIPPING THE ORIGINAL AREAS DISTURBED, THE CONTRACTOR SHALL FURNISH ADDITIONAL MATERIAL AT NO ADDITIONAL COST.

THE CONTRACTOR SHALL PROTECT ALL SEEDED SURFACES BY MULCHING AS REQUIRED. MULCH SHALL BE HAY SPREAD AT 70 TO 90 POUNDS PER 1000 SQUARE FEET. SPREAD MULCH UNIFORMLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. ALL MULCH SHALL BE LEFT IN PLACE TO DISINTEGRATE. EXCEPT THE CONTRACTOR SHALL REMOVE EXCESSIVE AMOUNTS OF HAY WHEN SO DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL TEND AND WATER ALL SEEDED AREAS UNTIL A SATISFACTORY GROWTH HAS BEEN ESTABLISHED. AREAS WHICH FAIL TO SHOW A SATISFACTORY GROWTH SHALL BE RESEEDED. FERTILIZED AND MULCHED UNTIL A FULLY SATISFACTORY GROWTH IS ACHIEVED.

MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY THE FOLLOWING METHODS:

1. PEG AND TWINE: DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS. 2. MULCH NETTINGS: STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO BE MOWED.

PETROLEUM PRODUCTS ARE NOT TO BE USED TO ANCHOR MULCHING.

ALL EXISTING PLANTING SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF THE ENGINEER.

STABILIZATION WITH MULCH ONLY (NON-GROWING SEASON) STABILIZATION WITH MULCH ONLY TO BE PROVIDED THROUGH USE OF ONE OF THE FOLLOWING PROTECTIVE MATERIALS:

- 1. UNROTTED SMALL-GRAIN STRAW, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
- 2. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER AND WHERE APPROVED BY THE OWNER OR ENGINEER.

WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG

- 3. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
- MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED. 5. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS
- 6. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS

STANDARDS FOR DUST CONTROL

DEFINITION - THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE - TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON- AND OFF-SITE DAMAGE AND HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

WHERE APPLICABLE - THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON- AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

PLANNING CRITERIA - THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

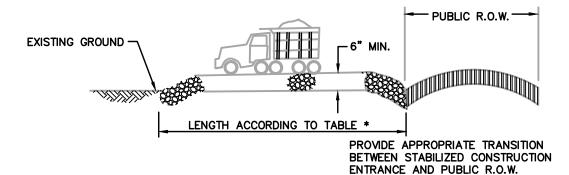
MULCHES - SEE STANDARDS FOR STABILIZATION WITH MULCHES ONLY (P. 5-1)

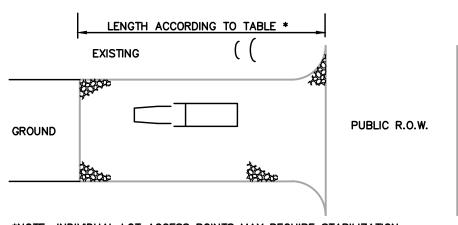
VEGETATIVE COVER - SEE STANDARD FOR: TEMPORARY VEGETATIVE COVER (P. 7-1), PERMANENT VEGETATIVE COVER (P. 4-1), AND PERMANENT STABILIZATION WITH SOD (P. 6-1)

SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF

	WATER DILUTION	TYPE OF NOZZLE	APPLY (GAL/ACRE)
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM)-DRY SPREAD	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD, P.26-1.		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1,200

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY. MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.





*NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY (TYP.).

	LENGTH OF STONE REQUIRED			
OF ROADWAY	COARSE GRAINED SOILS	FINE GRAINED SOILS		
0 TO 2%	50 FT.	100 FT.		
2 TO 5%	100 FT.	200 FT.		
>5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE 1			

1. AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

CONSTRUCTION SEQUENCE	DURATION
1. INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES.	2 DAYS
2. CONSTRUCT GRAVEL PARKING LOT AND CONCRETE PAD FOR HANDICAP PARKING LOTS AND ACCESS AISLE AND OVERALL GRADING.	2 WEEKS
3. INSTALL CONCRETE SIDEWALK AND ADA CURB RAMPS.	1 DAY
4. INSTALL WOOD FIBER MULCH FOR PLAYGROUND.	1 WEEK
5. INSTALL STRIPING AND SIGNAGE.	1 DAY
6. INSTALL SITE FURNISHINGS (PARK BENCH, TRASH/RECYCLING BIN, SHADE TREE).	1 DAY
7. SEED AND MULCH DISTURBED AREAS OR INSTALL GRASS SOD.	1 DAY
8. REMOVE ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES.	1 DAY

or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties. IVI

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TOWNSHIP OF CLINTON **HUNTERDON COUNTY, NEW JERSEY** 1225 ROUTE 31 SOUTH LEBANON, NJ 08833

Rev Date

Drawn Description

LAWRENCE PLEVIER NJ PROFESSIONAL ENGINEER LIC. No. 24GE04748500 Project Number

Ch'k'd App'd

RECOMMENDED.

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108079-001

DE/LP Eng check Designed Coordination Drawn Approved Dwg check Scale at ANSI D Status Security STD **Drawing Number**

C103

RUNKLE DRIVE PARK CONCEPT PLAN SOIL EROSION AND SEDIMENT **CONTROL DETAILS & NOTES**

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

SOIL COMPACTION TESTING REQUIREMENTS

- 1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
- 2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
- 3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION MITIGATION VERIFICATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- 4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C .TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT

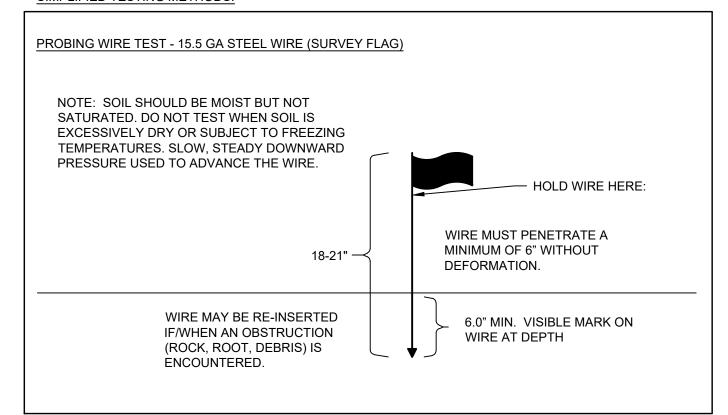
SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

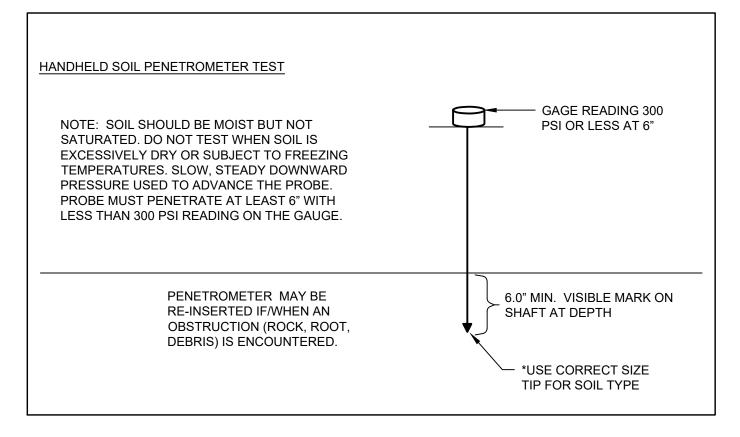
PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

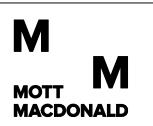
SIMPLIFIED TESTING METHODS:





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3 Paragon Way
Freehold, NJ 07728
United States of America
Certificate No. 24GA28016600

T +1 (732) 780 6565 F +1 (732) 755 0551 www.mottmacamericas.com TOWNSHIP OF CLINTON
HUNTERDON COUNTY, NEW JERSEY
1225 ROUTE 31 SOUTH
LEBANON, NJ 08833

Drawn Description

Rev Date

PROTECTED

ROOT ZONE

(PRZ)

LAWRENCE PLEVIER

NJ PROFESSIONAL ENGINEER LIC. No. 24GE04748500

Date ______

Project Number B/O Total

108079-001

Ch'k'd App'd

Designed DE/LP Eng check LP

Drawn DE Coordination

Dwg check LP Approved LP

Scale at ANSI D Status Rev Security STD

Drawing Number

C104

RUNKLE DRIVE PARK
CONCEPT PLAN
SOIL EROSION AND SEDIMENT
CONTROL DETAILS & NOTES

 ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).

MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF TREE) IN INCHES.

MULTIPLY THE MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

DBH x 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY OR SENSITIVE SPECIES.

DBH x 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES

2. ALL SPECIMEN TREES AS SHOWN ON THE PLANS TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL SNOW FENCING AT THE DRIP LINE OF EACH SPECIMEN TREE BEFORE WORKING IN THE VICINITY OF THE TREE, AS DIRECTED BY THE ENGINEER.

3. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRR. TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE.

4. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PRZ.

DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR LICENSED TREE EXPERT.

TREE PROTECTION DURING CONSTRUCTION

ROOT RADIUS

(CCR)

NTS

(SEE PAGES 9-1 THROUGH 9-9 FOR COMPLETE STANDARD FOR TREE PROTECTION DURING CONSTRUCTION)