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 remediation 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 approval.

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.

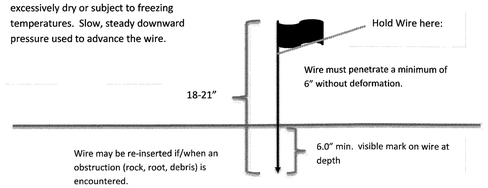
Procedures for Soil Compaction Mitigation

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.

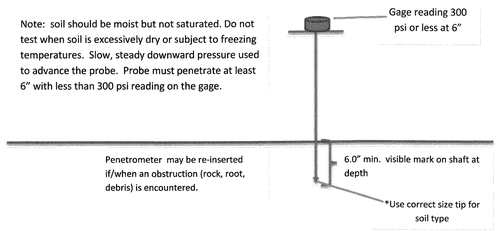
Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.



NOTES:

1. THIS PROJECT IS EXEMPT FROM THE SOIL COMPACTION MITIGATION MEASURES FOR: "URBAN REDEVELOPMENT" (SESC NJ STANDARDS, PAGE 19-2). AREA LOCATED WITHIN THE METROPOLITAN PLANNING AREA 1 AND HAS BEEN PREVIOUSLY DEVELOPED.

STANDARD
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, reduced on-site and off-site damage and health hazards and improve traffic safety.

Condition Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on-site and off-site damage is likely without treatment. Consult with local municipal ordinances on any restrictions.

Water Quality Enhancement

Sediments deposited as "dust" are often fine colloidal material which is extremely difficult to remove from water once it becomes suspended Use of this standard will help to control the generation of dust from construction sites and subsequent blowing and deposition into local surface water resources.

Planning Criteria

The following methods should be considered for controlling dust:

Mulches - See Standard of Stabilization with Mulches Only, pg. 5-1

Vegetative Cover - See Standard for: Temporary Vegetative Cover, pg. 7-1, Permanent Vegetative Cover for Soil Stabilization pg. 4-1 and Permanent Stabilization with Sod, pg. 6-1

Spray-On Adhesives - On mineral soils (not effective on muck soils). Keep traffic off these areas.

Table 16-1 Dust Control Materials

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
Anionic asphalt emulsion	7:1	Coarse Spray	1200
Latex emulsion	12.5:1	Fine Spray	235
Resin in water	4:1	Fine Spray	300
Polyacrylamide (PAM) - spray on 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	1200

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.

Sprinkling - Site is sprinkled until the surface is wet.

Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing.

Calcium Chloride - Shall be in the form of loose, dry granules or flakes fine enough to feed through commonly used spreaders at a rate that will keep surface moist but not cause pollution or plant damage. If used on steeper slopes, then use other practices to prevent washing into streams or accumulation around plants.

Stone - Cover surface with crushed stone or coarse gravel.

Jarmel Kizel
ARCHITECTS AND ENGINEERS INC.
42 OKNER PARKWAY
LIVINGSTON, NEW JERSEY 07039
TEL: 973-994-9669
FAX: 973-994-4069
www.jarmelkizel.com

Architecture
Engineering
Interior Design
Implementation Services

ISSUE

NO.	DATE	DESCRIPTION	INT.
1	1.17.19	FOR COMPLETENESS REVIEW	GPG
2	4.16.19	FOR MAY 6TH HEARING	GPG
3	5.17.19	FOR 6.3.19 PLANNING BOARD	GPG

REVISION

NO.	DATE	DESCRIPTION	INT.

PRINCIPALS
MATTHEW B. JARMEL, AIA, MBA AZ LIC 48159; CO LIC ARC.401483; CT LIC ARC.0011415; DC LIC AIC101849; DE LIC S5-0007256; FL LIC AR98965; GA LIC RA011484; IA LIC 05577; IL LIC 001.020069; MA LIC AR10986; MD LIC 12662; MI LIC 1301002189; NJ LIC AI0-12787; MN LIC 46404; NC LIC 10120; NH LIC 3801; NY LIC 024673; OH LIC A-99-12444; PA LIC RA-014851-8; RI LIC ARC.0004765; SC LIC #6,913-63; TN LIC 103850; TX LIC 20992; VA LIC 0401 014089; VT LIC 3453
IRWIN H. KIZEL, AIA, PP CT LIC 08522; NJ LIC 21A000794700; NJ PP LIC 33US00243100
RICHARD A. JARMEL, PE CT LIC PEN0027735; FL LIC 83149; MI LIC 6201003339; DE LIC 18754; VT LIC 88498; NJ LIC 37491; MN LIC 47482; NY LIC 073899-1; PA LIC PE075600; MA LIC 50445; TX LIC 123822
ASSOCIATES
RONALD A. BROKENSHIRE, PE CT LIC PEN.0032811; NJ LIC.GE45511; PA LIC PE065517
DAVID L. LEESNE, RA CT LIC.ARI.0011748; NJ LIC.AI 13531; NY LIC 026711; PA LIC RA-014425
MICHAEL J. VOELAND, RA NY LIC.026905
GERARD P. GESARIO, PE NJ LIC GE038255
FREDERICK KINCAID, RA NJ LIC 21AI01B294
JEROME LESLIE EBEN, FAIA, PP PA LIC 016500-R; VA LIC 0401 017073; NJ LIC AI 8883; NY LIC 019151
CHERYL SCHWEIKER, AIA NJ LIC 21AI02069000; PA LIC 064027927
NJ State Board Of Architects Authorization No. 163
NJ State Board Of Engineers & Land Surveyors Authorization No. 24GA28053000

Project: **THE LEARNING EXPERIENCE**
109 & 115 SOUTH ORANGE AVENUE WEST
TOWNSHIP OF SOUTH ORANGE VILLAGE
ESSEX COUNTY, NJ
BLOCK 1904, LOTS 16&17

Project No:	Scale:
TLENJ-5-17-264	AS NOTED
Drawn By: LB	Approved By: GPG

Drawing Name:

SOIL EROSION AND SEDIMENT CONTROL NOTES

Drawing Number: **C-601**

Sheet No: 7 of: 13

Initial Date: **JANUARY 3, 2019**

GERARD P. GESARIO
PROFESSIONAL ENGINEER
N.J. LIC. #GE038255

S:\PROJECTS\TLENJ-S-17-264 TLE SOUTH ORANGE NJ\CAD\17-264 C-601 SESC NOTES.DWG APROTOPAPAS PLOTTED: 05/17/2019