

**Morris County Soil Conservation District
Soil Erosion and Sediment Control Notes**

- All Soil Erosion and Sediment Control Practices will be installed in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, and will be in place prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is established.
- Any disturbed area that will be left exposed for more than thirty (30) days and not subject to construction traffic shall immediately receive a temporary seeding. If the season prohibits temporary seeding, the disturbed areas will be mulched with straw or hay and tacked in accordance with the New Jersey Standards. See Note 21 below.
- Permanent vegetation is to be established on exposed areas within ten (10) days after final grading. Mulch is to be used for protection until vegetation is established. See Note 22 below.
- Immediately following initial disturbance or rough grading, All critical areas (steep slopes, sandy soils, wet conditions) subject to erosion will receive a temporary seeding in accordance with Note 21 below.
- Temporary Diversion Basins are to be installed on all cleared roadways and easement areas. See the Diversion Detail.
- Permanent Seeding and stabilization to be in accordance with the "Standards for Permanent Vegetative Cover for Soil Stabilization Cover". Specified rates and locations shall be on the approved Soil Erosion and Sediment Control Plan.
- The site shall at all times be graded and maintained so that all stormwater runoff is diverted to Soil Erosion and Sediment Control facilities.
- All sedimentation structures (silt fence, inlet filters, and sediment basins) will be inspected and maintained daily.
- Stockpiles shall not be located within 50' of a floodplain, slope, drainage facility, or roadway. All stockpiles bases shall have a silt fence properly entrenched at the toe of slope.
- A Stabilized Construction Access will be installed, whenever an earthen road intersects with a paved road. See the Stabilized Construction Access detail and chart for dimensions.
- All new roadways will be treated with suitable subbase upon establishment of final grade elevations.
- Paved roadways must be kept clean at all times.
- Before discharge points become operational, all storm drainage outlets will be stabilized as required.
- All dewatering operations must be discharged directly into a sediment filter area. The filter should be composed of a fabric or approved material. See the Dewatering detail.
- All sediment basins will be cleaned when the capacity has been reduced by 50%. A clean out elevation will be identified on the plan and a marker installed on the site.

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

- 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.
- Areas of the site which are subject to compaction testing and/or mitigation are **graphically denoted** on the certified soil erosion control plan.
- 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.
- 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. Handheld 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/tilage (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/tilage (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 may be substituted subject to District Approval.

- During and after construction, the applicant will be responsible for the maintenance and upkeep of the drainage structures, vegetation cover, and any other measures deemed appropriate by the District. Said responsibility will end when completed work is approved by the Morris County Soil Conservation District.
- All trees outside the disturbance limit indicated on the subject plan or those trees within the disturbance area which are designated to remain after construction are to be protected with tree protection devices. See the Tree Protection detail.
- The Morris County Soil Conservation District may request additional measures to minimize on site or off site erosion problems during construction.
- The Morris County Soil Conservation District must be notified, in writing, at least 72 hours prior to any land disturbance, and a pre-construction meeting held.
- Contractor to set up a meeting with the inspector for periodic inspections of the Temporary Sediment Basin prior to and during its construction.

21. Topsoil Stockpile Protection

- a) Apply Ground Limestone at a rate of 50 lbs per 1000 sq. ft.
- b) Apply Fertilizer (10-20-10) at a rate of 11 lbs per 1000 sq. ft.
- c) Apply Resealment Rygrass seed at 1 lb. per 1000 sq. ft. and Annual Rygrass at 1 lb. per 1000 sq. ft.
- d) Mulch stockpile with straw or hay at a rate of 90 lbs. per 1000 sq. ft.
- e) Apply a liquid mulch binder or tack to straw or hay mulch.
- f) Properly entrench a silt fence at the bottom of the stockpile.

22. Temporary Stabilization Specifications

- a) Apply Ground Limestone at a rate of 50 lbs per 1000 sq. ft.
- b) Apply Fertilizer (10-20-10) at a rate of 11 lbs per 1000 sq. ft.
- c) Apply Resealment Rygrass seed at 1 lb. per 1000 sq. ft. and Annual Rygrass at 1 lb. per 1000 sq. ft.
- d) Mulch stockpile with straw or hay at a rate of 90 lbs. per 1000 sq. ft.
- e) Apply a liquid mulch binder or tack to straw or hay mulch.

23. Permanent Stabilization Specifications

- a) Apply topsoil to a depth of 3 inches (unseeded).
- b) Apply Ground Limestone at a rate of 50 lbs per 1000 sq. ft. and work four inches into soil.
- c) Apply Fertilizer (10-20-10) at a rate of 11 lbs. per 1000 sq. ft.
- d) Apply Hand Resealment seed at 2.7 lbs. per 1000 sq. ft. and Curing Red Resealment at 0.7 lbs per 1000 sq. ft. and Perennial Rygrass seed at 0.25 lbs per 1000 sq. ft.
- e) Mulch stockpile with straw or hay at a rate of 90 lbs. per 1000 sq. ft.
- f) Apply a liquid mulch binder or tack to straw or hay mulch.

*NOTE: 72 HOURS PRIOR TO ANY SOIL DISTURBANCE, NOTICE IN WRITING, SHALL BE GIVEN TO THE MORRIS COUNTY SOIL CONSERVATION DISTRICT AND A PRE-CONSTRUCTION MEETING HELD.

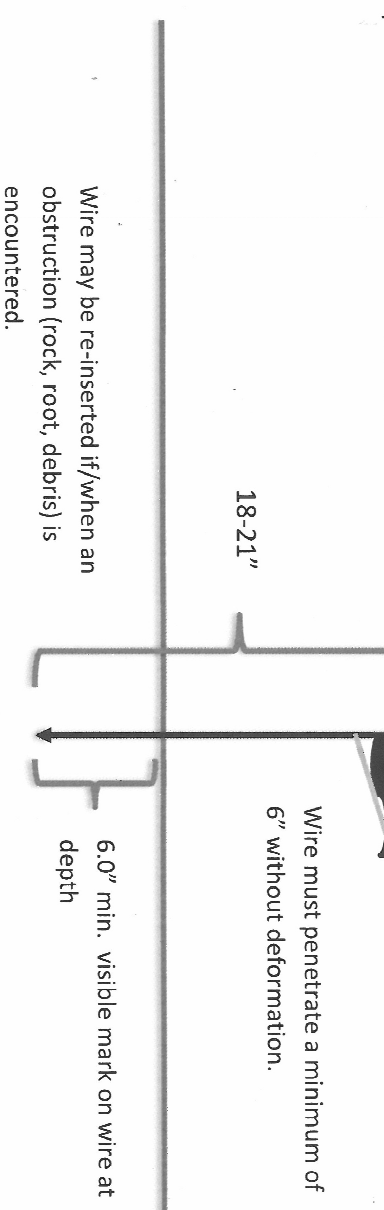
SEQUENCE OF CONSTRUCTION

- INSTALL SILT FENCE ALONG LIMITS OF DISTURBANCE
- STRIP TOPSOIL AND STOCKPILE. INSTALL SILT FENCE ON LOW SIDE AND TEMPORARY SEED
- BEGIN BUILDING DRIVEWAY (IF REQUIRED)
- INSTALL TEMPORARY DRIVEWAY (IF REQUIRED)
- INSTALL SEPTIC SYSTEM
- INSTALL SEPTIC SYSTEM AND DRYWELL SYSTEM (IF REQUIRED)
- FINISH GRADE SITE
- REMOVE SILT FENCE AND ANY REMAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES
- TOPSOIL AND SEED SITE

Simplified Testing Methods

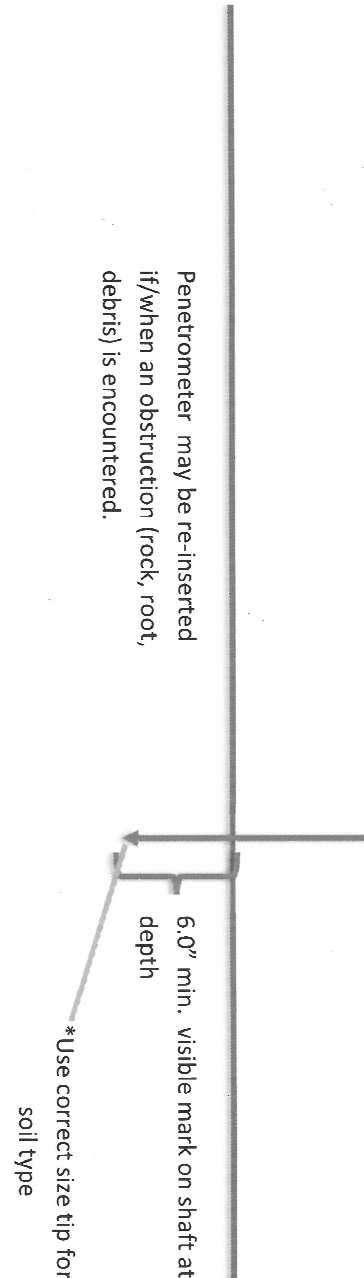
Probing Wire Test- 15.5 ga steel wire (survey flag)

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 gauge.



Soil Management and Preparation

Subgrade soil prior to the application of topsoil shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.

This section of this Standard addresses the potential for excessive soil compaction in light of the intended land use, testing for excessive soil compaction where permanent vegetation is to be established and mitigation of excessive soil compaction when appropriate.

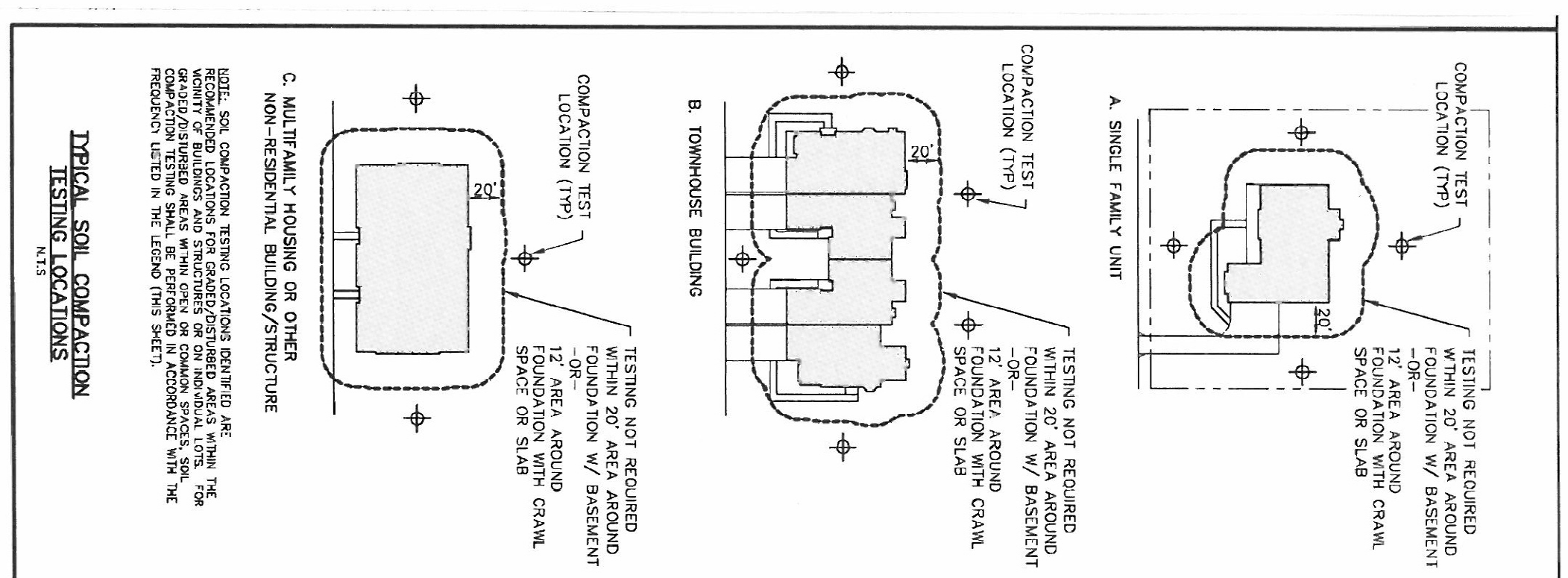
Due to use or setting, certain disturbed areas will not require compaction remediation including, but not limited to the following:

- Within 20 feet of building foundations with basements, 12 feet from slab or crawl space construction.
- Where soils or gravel surfaces will be required to support post-construction vehicular traffic loads such as roads, parking lots and driveways (including gravel surfaces), bicycle paths or pedestrian walkways (sidewalks etc)
- Airports, railways or other transportation facilities
- Areas requiring industry or government specified soil designs, including golf courses, landfills, wetland restoration, septic disposal pits, wetland ponds, Federal regulations which dictate soil conditions
- Areas graded or regulated by other local, state or Federal regulations which dictate soil conditions
- Boys fields (capped areas), urban redevelopment areas, fire-fill areas, recycling yards, junk yards, quarries and
- Slopes determined to be inappropriate for site operation of equipment
- Portions of a site where no heavy equipment travel or other disturbance has taken place
- Areas receiving temporary vegetative stabilization in accordance with the Standard
- Where the area available for remediation practices is 500 square feet or less in size.
- Locations containing shallow (close to the surface) bedrock conditions.

Areas of the site which are subject to compaction testing and/or mitigation shall be graphically denoted on the certified soil erosion control plan.

Soil compaction remediation or testing to prove remediation is not necessary will be required in areas where permanent vegetation is to be established that are not otherwise exempted above. Testing method shall be selected, and soil compaction testing shall be performed by the contractor or other project owner's representative (e.g. engineer). A minimum of two (2) tests shall be performed for projects with an overall limit of disturbance of up to one (1) acre and at a rate of two (2) tests per acre of the overall limit of disturbance for larger areas which shall be evenly distributed over the area of disturbance subject to testing. Tests shall be performed in areas representative of the construction activity prevailing in the area. In the event this testing indicates compaction in excess of the maximum thresholds indicated for the testing method, the contractor/owner shall have the option to perform compaction mitigation over the entire disturbed area (excluding exempt areas) or to perform additional testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tilage (6" minimum depth) or similar) is proposed as part of the sequence of construction.



TYPICAL SOIL COMPACTION TESTING LOCATIONS

DRAWN BY: SP
CHECKED BY: WGH

JOB NO. 19-111

BOOK

SCALE N.T.S.



GRAPHIC SCALE

DATE MARCH 23, 2020

REVISIONS OCTOBER 19, 2020

CERTIFICATE OF AUTHORIZATION
No. 240627959700

NOTES

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CONSTRUCTION DETAILS

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1979-2016

William G. Hollows
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