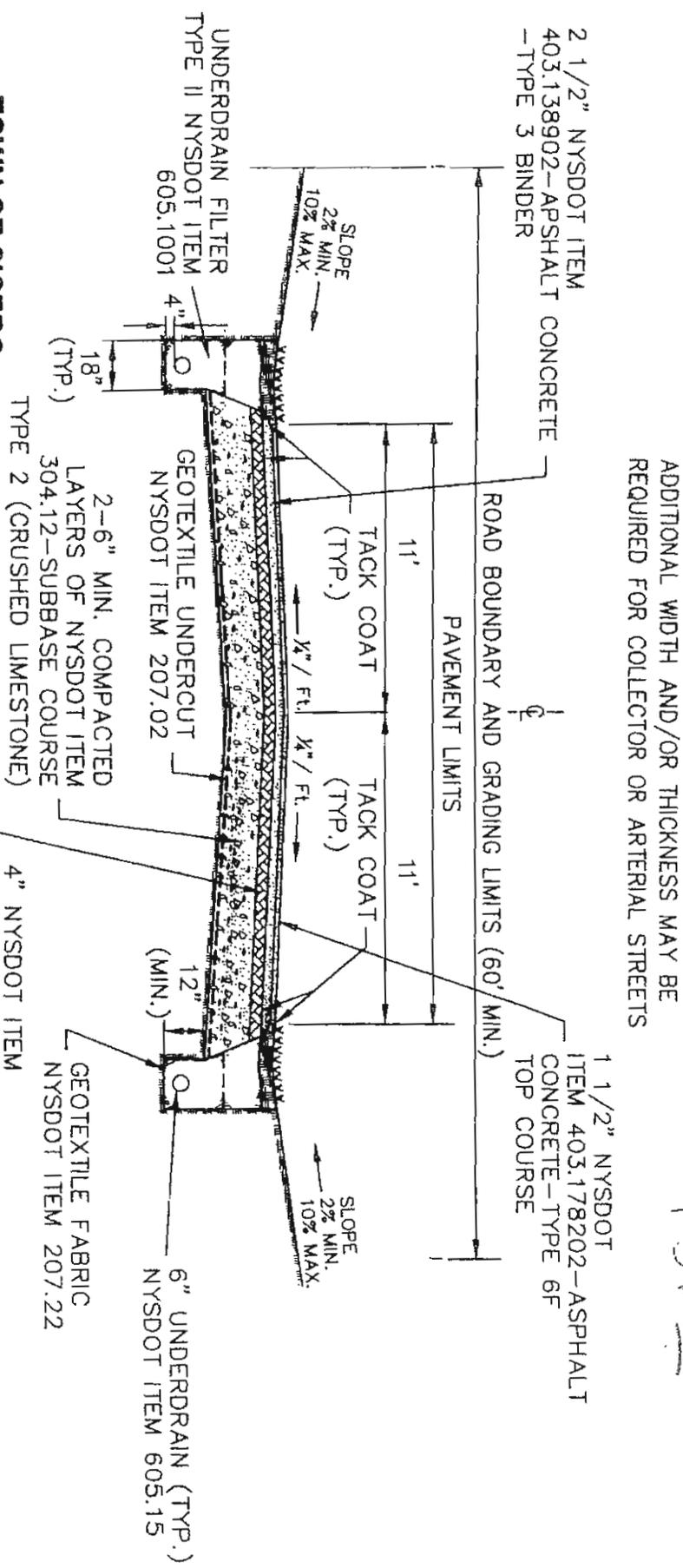




**TOWN OF CICERO  
 HIGHWAY SPECIFICATIONS  
 FOR RESIDENTIAL ROADS**

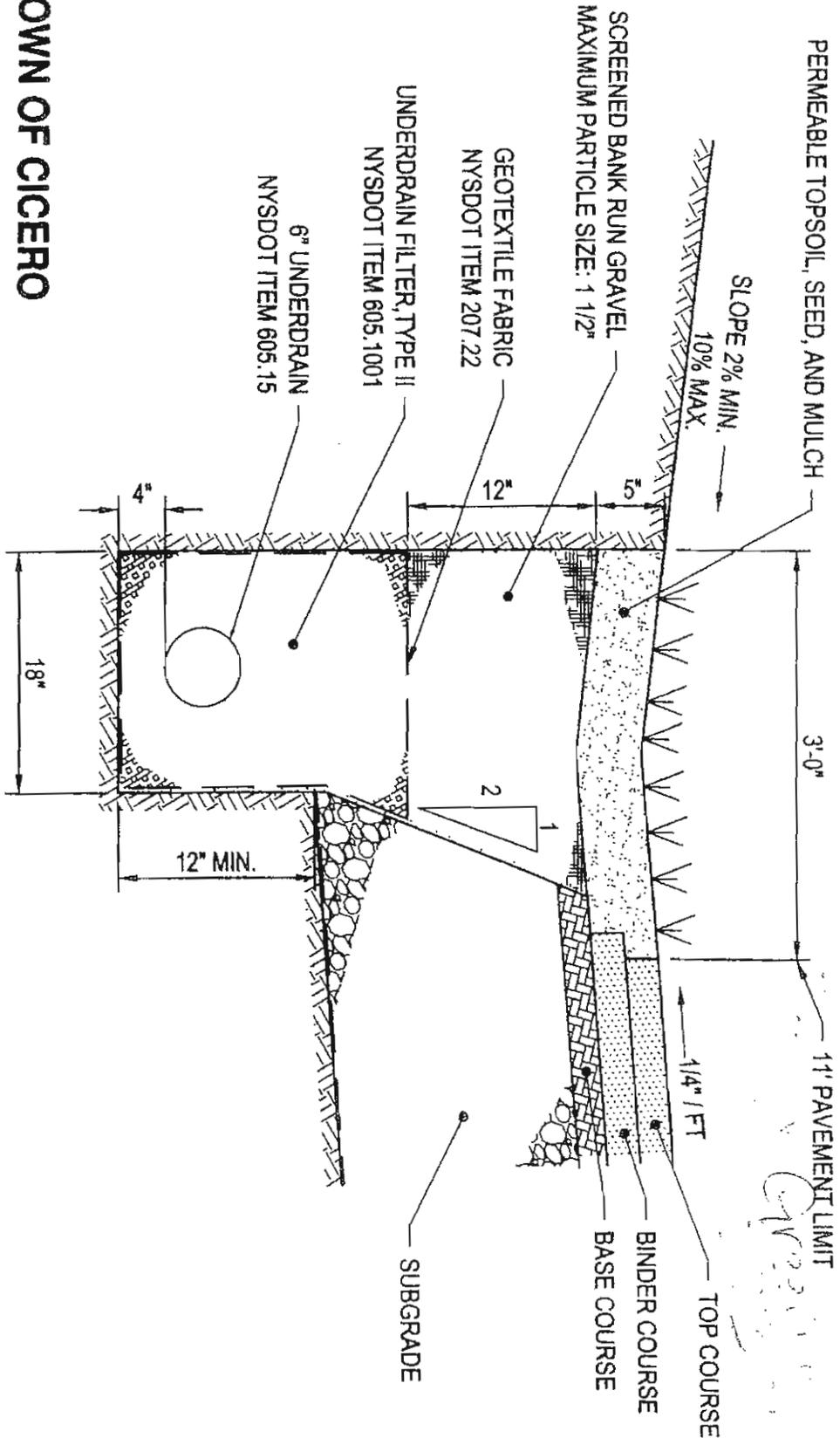
N.T.S.



NOTE:  
 ADDITIONAL WIDTH AND/OR THICKNESS MAY BE REQUIRED FOR COLLECTOR OR ARTERIAL STREETS

Green  
 10/2/12

# TOWN OF CICERO HIGHWAY SPECIFICATIONS FOR RESIDENTIAL ROADS





4-24-12

## TOWN OF CICERO

### SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

1. Scope

These specifications represent the minimum requirements of the Town of Cicero regarding the construction of highways within the Town.

2. Plans

No construction shall be started until the Final Plan and the Final Grading Plan for the subdivision have been approved by the Town of Cicero, and all applicable fees and deposits have been paid. Detailed drawings and specifications for the highway and storm water drainage system must be submitted and approved in accordance with the Town's Land Subdivision Regulations. Copies of the approved drawings and specifications for the highway and storm water drainage systems must be provided to the Town Highway Superintendent and the designated Town Representative prior to starting construction.

No construction shall be started until a Stormwater Pollution Prevention Plan (SWPPP) has been submitted to and accepted in writing by the Town of Cicero.

3. Construction Procedures:

All work, materials, and methods of construction shall be in conformance with the specifications in the most current edition of the New York State Department of Transportation (NYSDOT) Standard Specifications, including any Addenda, unless otherwise indicated on the approved drawings and specifications.

4. Rough Grading of Roads:

a. General

Prior to the beginning of excavation, grading or embankment operations within the highway boundary, all necessary clearing and grubbing, as specified in Paragraph 4.b. of these specifications, within that area shall have been completed.

All slopes in cut and embankment sections, ditches and waterways, whether old or newly constructed, shall be satisfactorily cleaned and cleared of obstructions and left in a neat and trim condition. Excavation and embankment shall be made in reasonably close conformity with the lines, grades, and requirements indicated in the approved plans.

During construction, the roadway shall be maintained so that it will be drained at all times. Where traffic is maintained, care shall be exercised to keep the portion open to traffic in a satisfactory condition.

All material, meeting the requirements of Paragraph 4.c. of these specifications, that is removed from excavation may be used in the formation of embankments. Any excavation that cannot be incorporated in embankments shall be properly disposed of outside the highway boundary.

The Developer shall be responsible for the stability of all constructed embankments and shall replace, at his own expense, any portions which have become displaced or are deemed unacceptable.

b. Clearing and Grubbing

Clearing: Cut and dispose of all trees, down timber, stubs, brush, bushes, and debris within the road bed limit, or to the toe of the embankment. Dispose of this material outside the highway boundary.

Grubbing: Remove and dispose of all stumps, roots, duff, grass, turf, debris, or other objectionable material within the road bed limit, or to the toe of the embankment. Dispose of this material outside the highway boundary.

c. Materials to be Used

All trenching within the confines of the roadway shall be backfilled with suitable on-site material, or material conforming to NYSDOT Item 304.12 Type 2 Granular Material.

Construct embankments of suitable material according to the requirements of Section 203 of the NYSDOT Standard Specifications. Embankment material shall be obtained from approved sources.

If there is not sufficient excavated material of a suitable quality at the site, the Developer may obtain borrow at approved off-site sources. The source and acceptability of the borrow material shall be subject to the approval of the designated Town Representative at all times.

The Developer shall request and receive the designated Town Representative's approval of proposed borrow areas prior to removal of any material from such areas. All test pits, explorations, and laboratory test results required by the designated Town Representative to evaluate the acceptability of borrow shall be furnished a minimum of

five (5) days prior to removal of any material and shall be done by the Developer at his own expense.

d. Placing

Place embankment materials for each layer in horizontal layers of uniform thickness across the entire width of the embankment. Do not exceed eight inches in thickness, as measured after compaction, and thoroughly compact as required by Paragraph 4.e., Compaction Control. Compaction in confined areas shall be limited to a maximum of six inches compacted thickness. Begin at the deepest part of the embankment. Keep each layer crowned to shed water to the outside edges of the embankment. Prepare adequate drainage facilities to convey surface runoff away from the embankment. Continuous leveling and manipulating may be required to assure uniform density. Route construction equipment uniformly over the entire surface of each layer.

If, during the construction of the embankments, bulging, cracking or unstable movement occurs, the placing of the embankment material shall be stopped, and corrected to allow the material to stabilize to the satisfaction of the designated Town Representative.

Thoroughly tamp or roll each layer of embankment material to the required degree of compaction by the use of suitable equipment specifically intended for soil compaction. Successive layers shall not be placed until the layer under construction has been thoroughly compacted.

The Developer shall provide adequate support and protection to underground facilities during the course of construction. Any facilities which are damaged during

construction and prior to the end of the guarantee period shall be repaired or replaced at the Developer's expense.

e. Compaction Control

Compact each embankment layer to a minimum of 95 percent of maximum dry density in pounds per cubic foot as determined by Method C of ASTM D-1557, Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using Modified Effort. The field density determination may be made in accordance with either ASTM D-1556, Standard Test Method for Density of Soil in Place by the Sand-Cone Method, or ASTM D-2922, Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth). When the Nuclear Method is used, the instrument must be field calibrated in accordance with ASTM-D-2922 each day the instrument is used.

All tests shall be done by an approved testing laboratory at the Developer's expense. Field density tests on subgrade embankments shall be performed for every 50 cubic yards of fill, or portion thereof, placed within the embankment. Field density tests for the subbase shall be performed on each layer within the subbase, in areas indicated by the designated Town Representative.

All field density tests shall be performed in areas designated by the designated Town Representative. The designated Town Representative must be present during all on-site testing.

When the test results indicate that insufficient density has been obtained in any layer, the Developer shall take such action as the designated Town Representative may

direct to modify or alter the moisture content of the soil, to provide additional compaction or otherwise to increase the in-place soil density.

All fill material shall be compacted at a moisture content suitable for obtaining the required density. In no case, shall the moisture content in each layer under construction vary more than 3 percent from the optimum moisture content, and shall be less than that quantity that will cause the embankment to become unstable during compaction. Sponginess, shoving or other displacement under heavy equipment shall be considered prima facie evidence for an engineering determination of lack of stability under this requirement. Prior to proceeding with subsequent lifts, all unstable areas shall be satisfactorily stabilized.

When the moisture content of the material in the layer under construction is less than the amount necessary to obtain satisfactory density by mechanical compaction methods, clean water shall be added by gravity distributors or other suitable equipment; water may also be added in excavation or borrow pits. The water shall be uniformly and thoroughly incorporated into the soil by disking, harrowing, blading or by other approved methods. When the moisture content of the material is in excess of 3 percent above the optimum moisture content, the compaction of the layer of wet material shall be deferred until the material is at the required moisture content.

5. Preparation of Subgrade:

Prepare the subgrade to receive the pavement structure in conformity with the lines and grades shown on the approved plans. Before the subbase material is placed upon the subgrade,

shape the subgrade to line and grade and compact with an approved self-propelled roller weighing not less than 10 tons.

Fill all hollows and depressions which develop under rolling with acceptable material similar in kind to the subgrade soils and re-roll. This process of shaping, rolling, and filling shall be repeated until no depressions develop. The subgrade shall not be muddy or otherwise unsatisfactory when the subbase material is placed upon it. If soft spots develop during the rolling, the material shall be removed and replaced with acceptable material as above.

Immediately prior to final trimming of the subgrade surface and placement of subbase materials, all areas of the subgrade surface within the roadway limits shall be proof rolled with a 10-wheel dump truck loaded with a minimum of 20 tons of material. The proof rolling shall be witnessed by the designated Town Representative.

Place a layer of geotextile directly upon the prepared subgrade to the width of the proposed roadbed limits. Install the geotextile according to the requirements of Section 207 of the NYSDOT Standard Specifications. Use only those geotextiles approved for use in separation applications as listed in the latest NYSDOT Materials and Equipment Approved List for Geosynthetics for Highway Construction.

## 6. Subbase Courses

The subbase course shall conform to NYSDOT, Item 304.12, Subbase Course, Type 2, of the NYSDOT Standard Specifications consisting solely of crushed limestone from an approved source. Subbase course placement will not be allowed over frozen material. Contaminated areas of the subbase course shall be removed and replaced before placement of the successive course.

Install the subbase course according to the requirements of Section 304 of the NYSDOT Standard Specifications.

7. Underdrains

Install underdrains at the locations shown on the Typical Road Section and in accordance with Section 605 of the NYSDOT Standard Specifications. Underdrain pipe shall conform to NYSDOT Item 605.15, Perforated Corrugated Polyethylene Underdrain Tubing, 6 Inch Diameter, while the underdrain filter material shall conform to NYSDOT Item 605.1001, Underdrain Filter, Type II, of the NYSDOT Standard Specifications. All underdrains shall terminate at a drainage structure, or shall be daylighted through the side slope. Geotextile shall conform to NYSDOT Item 207.22, Geotextile Underdrain, of the NYSDOT Standard Specifications. Use only geotextiles approved for use with underdrains in the latest NYSDOT Approved List for Geosynthetics for Highway Construction as listed within Materials and Equipment for use on New York State Department of Transportation Projects. Geotextile underdrain shall be installed according to the requirements of Section 207 of the NYSDOT Standard Specifications.

8. Surface Courses:

Construct the surface courses in two layers in accordance with the Typical Road Section, The binder course shall conform to NYSDOT Item 403.8902, Asphalt Concrete-Type 3 Binder Course, while the top course shall conform to NYSDOT Item 403.8202, Asphalt Concrete-Type 6F, Top Course (High Friction) Marshall Design, of the NYSDOT Standard Specifications. All

asphalt concrete shall be manufactured and placed in accordance with Section 400 – Hot Asphalt of the NYSDOT Standard Specifications.

Core samples shall be taken from the completed pavement to determine the final compacted thickness and density and submitted to the designated Town Representative for approval.

All core samples shall be taken by an approved testing laboratory in areas indicated by the designated Town Representative. The minimum interval between cores shall be 500 feet. When the highway is less 500 length, a minimum of two tests shall be taken. All sampling shall be done at the Developers expense.

9. Special Conditions:

- a. The developer shall submit certificates or shop drawings to the designated Town Representative verifying that all materials comply with applicable NYSDOT Standard Specifications.
- b. Rough Grading must be completed before the construction of any utilities is commenced. All utility trenches within the roadway limits should be completed prior to placing the binder course. Backfill trenches with suitable material. The backfill shall be placed and compacted in accordance with Paragraphs 4.d. and 4.e. respectively of these specifications.

deposit with the Town by the Developer with the filing of the Highway Construction and Utility Agreements.

- g. Upon completion of the warranty period and before final inspection by the designated Town Representative and Town Highway Superintendent, the Developer shall clean the pavements, gutters and catch basins of all dirt, stones, etc.

#### Erosion Control

Submit to the Town Highway Superintendent and to the designated Town Representative plans and schedules for the placement of temporary erosion and sediment control procedures prior to construction. No work may begin until the schedules have been accepted in writing by the Town Highway Superintendent and the designated Town Representative.

Additional temporary erosion and sediment control procedures shall also be used to correct unforeseen conditions that occur during construction.

All necessary erosion and sediment control procedures shall be acceptably maintained by the Developer until completion of the warranty period. The Developers failure to effectively prevent and control erosion and pollution shall constitute authorization by the Town to take whatever steps are necessary to control and eliminate such erosion and pollution. All costs incurred by the Town for this work will be deducted from the security placed on deposit with the Town by the Developer with the filing of the Highway Construction and Utility Agreements.