

Prel.	Final	
Design	Lettings	

TO: _____



SUPERSEDED BY EI 95-045
EFFECTIVE 10/23/95

ERING INSTRUCTION

THE DEPARTMENT OF TRANSPORTATION

SUBBASE COURSE, TYPE 1011
 REGIONS 10 AND 11

Subject Code: 7.27-1-304

Distribution:	<input checked="checked" type="checkbox"/> Main Office	Reg. 's 10 & 11 <input type="checkbox"/> Regions	Lists 34 <input type="checkbox"/> Special	Code: <u>EI 88-40</u>
APPROVED:	 			Date: <u>11/10/88</u>
Dir., Fac. Design Div., Dir. Technical Services Div.				Supersedes:

The current standard specification for subbase construction in Regions 10 and 11 is Item 15304.0107. Subbase Course, Type MM. In the recent years recycled Portland cement concrete aggregate has been substituted for the standard. This substitution has been made by order-on-contract to insert Item 17304.0521 Subbase Course, Recycled Cement Concrete Aggregate, Type 4 in lieu of Item 15304.0107 Subbase Course, Type MM on a job-by-job basis.

This EI transmits Item - 17304.1011 Subbase Course, Type 1011 to be the standard subbase specification for Regions 10 and 11 on projects advertised for lettings after and including 3 / 30 / 89.

This new specification combines and replaces Item 15304.0107 and Item 17304.0521. It consists of 4 types of material:

Material A consists of recycled Portland cement concrete aggregate or a blend of natural material and Portland cement concrete aggregate. This material conforms to the existing Item 17304.0521 Subbase Course, Recycled Cement Concrete Aggregate, Type 4.

Material B consists of crushed stone meeting the requirements of Material B of Item 15304.0107.

Material C is limited to natural sources located in Region 10 and the southern counties of Region 11. The material conforms to Material C of Item 15304.0107.

Material D conforms to Section 304 of the standard specifications. However, this option excludes material from natural sources on Long Island and the southern counties of Region 11. Material from these sources may not be stable at the gradation specified under subsection 304-2.

Note that, subject to the location of the natural source of the material, the choice of option is up to the contractor. However, only one type of material may be used on any roadway segment. For instance, Material A may be used on the mainline of a project and Material B may be used as a subbase for ramps or cross roads, etc.

ITEM 17304.1011 - SUBBASE COURSE, TYPE 1011

DESCRIPTION

Under this item, the Contractor shall furnish, place and compact Subbase Course, Type 1011. The thicknesses and locations of the Subbase Course will be as shown on the plans, or as determined by field conditions and ordered in writing by the Engineer.

Unless modified by this specification, the work shall be performed in accordance with Section 304 of the Standard Specification. The Contractor shall, at his option, furnish and place material conforming to any of the following: Material A, Material B, Material C or Material D. Only one type of material may be used for this Item on any roadway segment.

MATERIALS

General

All material acceptable for this item shall be stockpiled and shall be sound, hard, durable, and well graded from coarse to fine. Unless otherwise stated in this specification, material tests and quality control methods pertaining to the work of this section will be performed in conformance with the procedures contained in the appropriate Departmental publications in effect on the advertising date of the project. These publications are available upon request to the Regional Director or the Director, Soil Mechanics Bureau.

Options

MATERIAL A

Material furnished for Material A shall be well graded from coarse to fine and free from organic or other deleterious material. At least 95 percent of the material, by weight, shall consist of:

1. Recycled Portland Cement Concrete Aggregate (RPCCA).
- or
2. Recycled Portland Cement Concrete Aggregate mixed with Stone, Sand, Gravel or Blast Furnace Slag.

The requirements stated under General shall apply with the following modifications:

- A. The stockpile shall be no larger than the contract quantity plus thirty (30) percent of that quantity. The stockpile shall be no smaller than 1000 cu. yds. or the contract quantity, whichever is less.

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- B. A minimum of four samples will be obtained, as directed by the Soils Engineering Laboratory Supervisor from the Soil Mechanics Bureau or his representatives, in the presence of:
1. The Engineer in Charge, or his representative, and;
 2. The Soils Engineering Laboratory Supervisor, or his representative, and;
 3. The Regional Soils Engineer, or his representative.
- C. The Soils Engineering Laboratory Supervisor may reject the stockpile, without sampling, based on an on-site inspection of the stockpile.
- D. Transfer of the stockpile material for use on other projects will not be allowed.
- E. The State reserves the right to modify existing Departmental testing methods to evaluate the RPCCA.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent By Weight</u>
2 inch	100
$\frac{1}{2}$ inch	30-65
No. 40	5-40
No. 200	0-10

The Plasticity Index of the material passing the 40 mesh sieve shall not exceed 5.0

The Magnesium Sulfate Soundness loss after 4 cycles shall be 20 percent or less.

MATERIAL B

All of this material shall be sound, hard, durable and consist solely of Stone which is the product of crushing ledge rock.

This material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent by Weight</u>
$\frac{1}{2}$ "	100
$\frac{3}{4}$ "	70-100
No. 10	40-75
No. 40	15-40
No. 200	5-15

The Plasticity Index of the material passing the 40 mesh sieve shall not exceed 5.0.

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The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL C

Material C shall be acquired from natural sources located in Richmond, Kings, Queens, Nassau or Suffolk Counties. The material shall consist of Stone, Sand and Gravel or blends of these materials.

The material shall conform to the following gradation:

<u>Passing Sieve</u>	<u>Percent by Weight</u>
2"	100
1"	80-100
$\frac{1}{2}$ "	50-85
No. 10	30-70
No. 40	15-40
No. 200	6-12

The Plasticity Index of the Material passing the 40 mesh sieve shall not exceed 5.0

The Magnesium Sulfate Soundness Loss after 4 cycles shall be 20 percent or less.

MATERIAL D

Material D shall be acquired from sources other than natural sources located in Richmond, Kings, Queens, Nassau or Suffolk Counties and shall meet all of the requirements of Subsection 304-2.

CONSTRUCTION DETAILS

All of the requirements of Subsection 304-3 shall apply. After compaction, the top surface shall not extend more than $\frac{1}{4}$ inch above nor $\frac{1}{4}$ inch below true grade for the course at any location.

METHOD OF MEASUREMENT

The quantity shall be the number of cubic yards of material, computed from payment lines shown on the plans or, where changes have been ordered, from payment lines established by the Engineer.

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BASIS OF PAYMENT

The unit price bid for this work shall include the cost of furnishing all labor, material and equipment necessary to complete the work. The cost of adding water shall be included in the price bid unless the items for furnishing and applying water are included in the contract. No direct payment will be made for losses of material resulting from compaction, foundation settlement, erosion or any other cause. The cost of such losses shall be included in the price bid for this item. No deductions shall be made for the volumes occupied by manholes, catch basins and other such objects.

Progress payments will be made after the subbase course has been properly placed and compacted. Payment will be made at the unit price bid for seventy-five (75%) percent of the quantity. The balance of the quantity will be paid for after the final finishing to the required tolerance and just prior to the placing of the next course.