PROCEDURE FOR CONTROL OF STONE FILLING & RIP RAP ITEMS

GEOTECHNICAL CONTROL PROCEDURE
GCP-14
Revision #3

GEOTECHNICAL ENGINEERING BUREAU

APRIL 2007

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
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1. INTRODUCTION

1.1 General
This manual describes the procedure to be followed for the control of the gradation and soundness requirements of the following items:

- Stone Filling – Fine
- Stone Filling – Light
- Stone Filling – Medium
- Stone Filling – Heavy
- Gabion - (Stone Fill portion)
- Dry Rip-Rap
- Grouted Rip-Rap

Only material from stockpiles accepted by the procedure contained in this manual may be used on Departmental projects.

1.2 Item Type

1.2.1 Definition of Item Type
An item will be designated Type A or Type B based on the source from which it is obtained.

1.2.1.1 Item Type A - Obtained from a source which historically produces material of acceptable soundness for that item. No geologic evaluation field inspection required for project soundness approval.

1.2.1.2 Item Type B - Obtained from a source necessitating a geologic evaluation field inspection for project soundness approval.

1.2.2 Assignment of Item Type
The Departmental Geotechnical Engineer will submit to the Geotechnical Engineering Bureau, at the beginning of each calendar year, a list of anticipated sources for those items listed in 1.1. New sources may be submitted at any time during the calendar year. A Departmental Engineering Geologist will review records of the source, make a site inspection, if deemed necessary, and recommend to the Director of the Geotechnical Engineering Bureau the Item Type for each item listed in 1.1 General for each source which should be assigned for that calendar year. The Director of the Geotechnical Engineering Bureau will be responsible for the assignment of Item Type.
2. STOCKPILE CONSTRUCTION

These provisions apply to all stockpiled stone filling and rip-rap items.

2.1 Construction of Stockpiles

A. Stockpiles shall be constructed so that all sides of the stockpile are accessible for inspection. Adjacent stockpiles shall not merge and shall have a space (minimum 5 ft. (1.5 m)) separating the toe of each pile.

B. Where the contract estimated quantity is 1,000 yd$^3$ (800 m$^3$) or less for an item, the stockpile construction for that item shall contain a maximum of 1,000 yd$^3$ (800 m$^3$). On contracts where the estimated quantity for an item is over 1,000 yd$^3$ (800 m$^3$), the maximum size of the stockpile for that item shall be the contract quantity plus ten (10) percent. More material in a stockpile than allowed will result in rejection of that stockpile.

Stockpiles shall be identified with a durable, legible sign placed in a readily visible location. The sign shall specify the following:
1. Project contract number,
2. Item number, and
3. Stockpile number. Subsequent stockpile(s) from the same source shall be numbered consecutively.

The Contractor shall notify the Engineer when a stockpile is completed and ready for evaluation. The Engineer will then proceed with the evaluation process.

The Contractor shall be notified by the Engineer of the scheduled time(s) for the evaluation. The Contractor or his agent (supplier) shall provide the manpower and equipment necessary to sample or inspect the stockpile under the direction of the Engineer and/or a Departmental Engineering Geologist or his designated representative.
3. MATERIAL EVALUATION AND TESTING

3.1 Course of Action

3.1.1 Gradation
Gradation evaluation will not apply to Item Type.

3.1.1.1 Gradation Evaluation
The gradation evaluation shall be made on the basis of a visual inspection by the Engineer or his designated representative.

The Engineer shall furnish, in writing, to the Departmental Geotechnical Engineer, gradation approval and an estimated quantity of material in the stockpile.

3.1.2 Soundness

3.1.2.1 Item Type A
After receipt of the memorandum from the Director of the Geotechnical Engineering Bureau assigning Item Type A to an item, the Departmental Geotechnical Engineer shall utilize that memorandum as verification for Departmental soundness acceptance for any project request for that particular item from that source for that calendar year.

3.1.2.2 Item Type B
The Departmental Geotechnical Engineer will request, in writing, a geologic evaluation by a Departmental Engineering Geologist of the stockpiled material and will indicate that the material has been stockpiled and that the gradation of the stockpiled material has been approved. Included shall be an estimate of the quantity of material inspected and approved for gradation. The Departmental Geotechnical Engineer may request that a designated representative be allowed to perform the soundness evaluation.

The following criteria must be met before an Engineering Geologist's designated representative can perform a soundness evaluation:
1. Material is obtained from an established source,
2. Stockpile contains less than 00 yd$^3$ (400 m$^3$), and
3. Approval to do the soundness evaluation is given by a Departmental Engineering Geologist of the Geotechnical Engineering Bureau

3.1.2.3 Soundness Evaluation

Item Type A
See 3.1.2.1

Item Type B
The soundness evaluation will be made on the basis of a visual inspection by a Departmental Engineering Geologist or his designated representative.
If the Contractor disagrees with the results of the visual inspection for soundness, he shall, within 1 work day of the inspection, express in writing his disagreement, including reasons, to the Engineer, who will refer the letter to the Director of the Geotechnical Engineering Bureau for resolution. The State may elect to conduct laboratory tests for soundness. If the State elects to perform these tests for soundness, they shall be as specified in the Standard Specifications. These test results shall then be the basis for acceptance or rejection.

If the evaluation is performed by a member of the Geotechnical Engineering Bureau, the Director of that Bureau will transmit to the Departmental Geotechnical Engineer the approval or rejection for soundness.
4. DISTRIBUTION OF STOCKPILE EVALUATION

The Departmental Geotechnical Engineer will notify the Engineer in writing, as to whether the stockpile is approved or rejected. The following information shall be attached:

A. Item Type A
   1. Assignment of Item Type A memorandum from the Geotechnical Engineering Bureau,
   2. Result of the Gradation Evaluation memorandum (if applicable).

B. Item Type B
   1. Soundness evaluation memorandum from the Director of Geotechnical Engineering Bureau or soundness evaluation memorandum from his designated representative,
   2. Result of the Gradation Evaluation memorandum (if applicable).

A copy of the notification shall be submitted to the Geotechnical Engineering Bureau for:

   1. Item Type A, or
   2. Item Type B when Geologic Evaluation is performed by Departmental Engineering Geologist's designated representative.
5. USE AND DISPOSAL OF STOCKPILES

5.1 Use of Stockpiles
Stockpiles evaluated as being of acceptable gradation and soundness may be used as the specified item on the project for which the evaluation was made. No further testing of the material is required. Approval of a stockpile shall not relieve, in any degree, the full responsibility of the Contractor to place, in its final position, a material conforming to all the specification requirements for that item.

Material shall not be added to an accepted stockpile. If material is added after a stockpile has been accepted, or the stockpile is otherwise tampered with, either the Engineer or the Departmental Geotechnical Engineer will declare the stockpile unacceptable and it shall be disposed of in accordance with Subsection 5.4.

The acceptance of a stockpile will expire two years from the date of acceptance or upon completion of the project for which it was built, whichever is later. After the expiration date, the stockpile may be disposed of in accordance with Subsection 5.4.

5.2 Transfer of Approved Stockpiles
It shall be the practice of the Geotechnical Engineering Bureau to allow the transfer of material from an approved stockpile to another project subject to the following procedure:

A. The Contractor shall submit a written request to the Engineer containing the following information:
   1. The location and number of the stockpile.
   2. The project for which the stockpile was originally approved.
   3. The present owner of the material, including the owner's address and telephone number.
   4. The estimated quantity of material in the stockpile.
   5. The quantity of material to be utilized from the stockpile on the applicant's project.
   6. The item for which the material will be used.

B. If the original contract under which approval was granted is still under construction, the Engineer of that project shall be notified by the Engineer requesting transfer.

C. The requesting Engineer shall inspect the stockpile to determine the feasibility of its use on his project and shall then submit his recommendation to the Departmental Geotechnical Engineer who will make the final determination on the request.

D. The Departmental Geotechnical Engineer shall review his records of the stockpile including evaluations and material quantity estimated. He shall satisfy himself that the stockpile has not been enlarged or in any way tampered with since its initial approval. If he has any reservations concerning the condition of the stockpile, the request for transfer of approval shall be denied. The recommendations of both Engineers shall be fully considered.
E. The Departmental Geotechnical Engineer shall provide a written notification to the requesting Engineer stating final determination of the stockpile transfer request. If the request is approved, the transfer approval shall include the location and number of the stockpile, a copy of the original approval (including evaluations), a list of the previous project(s) using the stockpile and all appropriate restrictions. A copy of the transfer approval will be included for transmittal to the Contractor by the requesting Engineer. A copy of the approval shall also be sent to the Geotechnical Engineering Bureau and to the Engineer for which the stockpile was originally approved.

F. Upon completion of stone filling or rip-rap placement, the requesting Engineer shall furnish the Departmental Geotechnical Engineer, in writing, his estimate of the quantity of material actually utilized from the stockpile and the quantity remaining.

5.3 Temporary Use of Stone Filling and Rip-Rap Items
Stone Filling or Rip-Rap Items placed for temporary use (less than one year duration) shall be stockpiled in accordance with this Manual. Approval or rejection of soundness and gradation may be made based on a visual inspection by the Engineer.

If it is desired to incorporate temporary material into the final project as a Stone Filling or Rip-Rap Item, it must be accepted in accordance with the procedures contained in Sections 2, 3 and 4 of this Manual.

5.4 Disposal of Unacceptable Stockpiles
Material from a rejected stockpile or a stockpile whose approval has expired may be:
   a) re-worked as required to correct deficiencies,
   b) disposed of, or
   c) re-evaluated in the case of an expired approval.