

ITEM 554.0401XX08 – MECHANICALLY STABILIZED EARTH SYSTEM (MODIFIED) – NO COLOR
ITEM 554.0402XX08 – MECHANICALLY STABILIZED EARTH SYSTEM (MODIFIED) – INTEGRAL COLOR

All of the requirements of Section 554 Mechanically Stabilized Earth System shall apply except as herein modified or supplemented:

MATERIALS

554-2.09 Backfill.

B. Backfill Material. Stockpile the backfill material in accordance with the latest “Geotechnical Control Procedures for the Control of Granular Materials”, and provide a material gradation in accordance with TABLE 554-1.

TABLE 554-1 BACKFILL GRADATION	
Sieve Size Designation	Percentage Passing by Weight
100 mm	100
6.3 mm	30-100
425 µm	0-60
75 µm	0-10

MSES backfill material from approved stockpiles will be accepted on the jobsite by delivery ticket. Each delivery ticket shall identify the Supplier’s name, date, NYSDOT contract number, quantity, and stockpile number.

C. Backfill Quality Assurance. When the MSES system will utilize metal components within the backfill, the backfill material will be subject to an additional quality assurance process. Under this process, the Department will sample and test backfill material taken from within a wall under construction in accordance with Section 554-3.03 - Structure Erection, Parts A. and D, and current Departmental sample testing guidelines. If any of the tested samples are found to not meet specification requirements related to metal corrosion potential, the in-place backfill will be rejected and subsequently removed and replaced by the contractor to the limits given by the Department. This work shall be done at no additional cost to the State.

Clean, stone aggregate or gravel material placed within or adjacent to the MSES backfill shall be obtained from the same single source as the backfill material, but will not be subject to metal corrosion potential testing.

CONSTRUCTION DETAILS

554-3.03 Structure Erection

A. Methods and Equipment. At least 20 days before the anticipated start of wall installation, furnish the Engineer with detailed information concerning the proposed construction method, as well as the specific construction equipment planned for use. After receipt of all pertinent information, a Pre-Operation Meeting will be held between the Engineer, Contractor, Regional Geotechnical Engineer, Geotechnical Engineering Bureau and other appropriate Departmental representatives to discuss the Contractors proposed construction methods, construction inspection requirements, and (if applicable) the Department’s backfill quality assurance procedures, including the number and

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location (elevation and plan) of backfill QA samples. Begin work only after receiving the Engineer's written approval of the proposed construction methods and D.C.E.S. written approval of the MSES design package submittal. Install units in accordance with the designer-supplier's working drawings and Installation Manual, unless otherwise modified by the Contract Documents, or the Engineer.

554-3.03 Structure Erection

D. Backfill:

1. Place backfill material, except for any stone aggregate or gravel drains, at a moisture content less than, or equal to, the Optimum Moisture Content. Departmental representatives shall check the moisture content during backfill placement of every 500 cubic meters, unless otherwise modified by the Engineer. For every 2500 cubic meters placed, the Regional Geotechnical Engineer shall obtain a backfill sample to verify the Optimum Moisture Content and the Standard Proctor Maximum Dry Density values.

2. Departmental representatives shall check the compacted field density once per backfill lift or at least for every 400cm placed, unless otherwise directed by the Engineer.

4. Provide and maintain positive control and discharge of all surface water that may affect backfill placement during construction of the wall, including, but not limited to, elements such as vertical drains, weeps, ditches, pipes, or conduits shown on the contract plans. Repair damage caused by surface water flow or infiltration at no additional cost.

5. Following any significant wetting event, additional backfill shall not be placed until the moisture content of the upper 450mm of the in-place backfill has been tested and found to be within acceptable limits, as determined by the Engineer. In-place backfill that is not within acceptable moisture limits may be dried, reworked, or replaced at no additional cost to the State, or the contractor may temporarily utilize an alternate construction method acceptable to the Geotechnical Engineering Bureau.

6. Quality assurance (QA) samples of the in-place backfill will be obtained by a Departmental representative as each designated sampling location is being constructed by the contractor. The sample(s) obtained by the Thursday of each week shall be delivered by the Regional Geotechnical Engineer (RGE) for start of laboratory testing at the beginning of the next work week. Test results can be expected within 2 weeks of sample delivery by the RGE.

554-5 BASIS OF PAYMENT

554-5.06 Backfill Drainage. Excavation and backfill of stone aggregate or gravel drainage weeps and ditches, or placement of other drainage control materials shown on the contract plans, or as ordered by the Engineer, will be paid for under a separate pay item.

Payment will be made under:

Item No.	Item	Pay Unit
554.0401XX08	Mechanically Stabilized Earth System, No Color	Square Meter
554.0402XX08	Mechanically Stabilized Earth System, Integral Color	Square Meter
XX	Surface	
01	Plain Concrete Surface	

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| 02 | <i>Textured Surface (hand tooled, raked, etc.)</i> |
| 03 | <i>Exposed Aggregate Surface</i> |
| 04 | <i>Architectural Pattern (form liner or stamped)</i> |
| 05 | <i>As Shown on Plans</i> |

DISAPPROVED BY EI 10-031