

**MASHAMOQUET BROOK STATE PARK
NEW TOILET BUILDING
POMFRET, CONNECTICUT
PROJECT: BI- T - 571**

BID OPENING	1:00 P.M.	JULY 27, 2011
ADDENDUM NUMBER ONE	DATE OF ADDENDUM	JULY 20, 2011

The following clarifications are applicable to drawings and specifications for the project referenced above.

Item 1

DELETE :

Specification Section 11300 – Composting Equipment / On Site Recycling Systems Dated : 7-15-08

SUBSTITUTE :

Specification Section 11300 – Composting Equipment / On Site Recycling Systems Dated : 7-14-11

Item 2

SECTION 02200 Page 8 of 44 calls for a base bid of 100 CY of rock excavation.

Item 3

SECTION 02200 Page 8 of 44 states the Unit Prices for Rock Excavation.

Item 4

Drawing SP-2 The empty conduit from the new Bathroom building will be installed to provide a GFI receptacle at the existing Pavillion.

Item 5

Drawing SP-2 The wiring of the Pump chamber will be responsibility of the electrical contractor; please comply with all electrical codes having jurisdiction.

Item 6

Drawing A-2 There will be not garbage canisters installed by the General Contractor.

Item 7

Drawing A-2 Texture 1-11 is running perpendicular to the direction of the rafters.

Item 8

Drawing S-3 The roof design remains as shown.

Item 9

The Basement access doors shall be steel doors by Bilco; the set shall include cover panel and side panels as well. Finish will be painted as per color indicated on the drawings.

Item 10

Blue stone is the only stone used in this project.

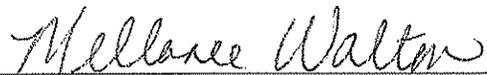
Item 11

The parking shown is existing to remain. The new parking is for HC usage and is located adjacent to the building as a continuation of the gravel existing parking.

Item 12

Signage for handicap parking will be blue stall painted with yellow signs and stripping, in addition standing signs will be located in front of each HC stall; all shall comply with D.O.T. standards.

End of Addendum Number One



Mellahee Walton
Associate Fiscal Administrative Officer
Department of Administrative Services

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COMPOSTING EQUIPMENT/
ON-SITE RECYCLING
SYSTEMS

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SECTION 11300 - COMPOSTING EQUIPMENT/ON-SITE RECYCLING SYSTEMS

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide a recycling, waterless, human waste treatment system, as specified herein and as needed for a complete and proper functioning installation with these specifications intended as the minimum acceptable specifications but not necessarily limited to:
 - 1. Composting equipment, system controller, and monitors and all related equipment to comprise a complete on-site recycling system for the processing of human waste into stable end products for reuse and reapplication to the environment.
 - 2. Toilet and urinal fixtures and related piping, venting, and all related equipment.
 - 3. Provide service, maintenance, monitoring, and education for the proper and continuous functioning of the on-site recycling system during the first year of operation commencing on the day of completed installation and certification.

1.02 SUBMITTALS

- A. Materials list of items proposed to be provided under this section.
- B. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements.
- C. Shop drawings and other data as required indicating method of installing and attaching equipment, except where such details are fully shown on the drawings.
- D. Physical samples of toilet and urinal fixtures for approval.

1.03 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary craft and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

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- B. Proposed system is to have at least 5 year successful continuous performance, contractor is to provide written certification as well as a listing of at least 5 facilities, locations and references that use said system.
- C. Certification and final acceptance of the recycling system will not be considered until the installation has been certified by an authorized representative of the vendor of the system.
- D. Warranty:
 - 1. Five-year warranty against defects in materials and workmanship during the installation process is to be provided on the composter and toilet fixtures. All electronic and electrical equipment provided shall be warranted for one year.
- E. Code and Regulations: In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.01 PERFORMANCE FEATURES

- A. Natural Biological Treatment Process Required:
 - 1. Solid and liquid waste must safely break down in the composter through a natural aerobic decomposition process. The process releases stable gases (carbon and water vapor), transforms solids into re-usable humus, and breaks down liquids into by-products safe for re-use elsewhere on the site or off. The composting process is maintained by the regular addition of a carbonaceous decomposition medium as designated by the vendor and performed by the owner agency or assigned party, to provide for proper aeration and drainage.
 - 2. The composting process is primarily the result of a mesophilic environment provided by the equipment supporting a vast number of organisms to accelerate decomposition and pathogen destruction.
 - 3. During operation, only the gas by-products generated from the mesophilic composting process shall be released into the air through the ventilation system.
 - 4. The liquid end-product (compost tea) shall have a Fecal Coliform Bacteria Count of less than 200 per 100 milliliters and a BOD 5 less than 100 mg/L.

5. The compost solid end-product shall have a Fecal Coliform Bacteria Count of less than 200 per one gram sample.

2.02 PRODUCT FEATURES

- A. The composting element shall have the capacity to hold and store three years of continuous designated usage for proper retention time to complete the composting process.
- B. The composter shall have the ability to withstand ambient temperatures year-round by including unibody construction molded of 3/8" thick, high-density, polyethylene which is durable, corrosion-resistant, and leak-proof.
- C. A controller which monitors the operation of the composter shall have the ability to monitor the liquid level in the compost liquid storage tank and air flow in the ventilation system. In addition, the controller shall automatically wet the compost pile by programmed command.
- D. Fixtures shall be sturdy, impact-resistant, white, sanitary gel coat over fiberglass with durable sanitary finish for easy cleaning with contours that maintain sanitary conditions. Toilet liners shall be made of rotationally molded polyethylene for ease of maintenance.
- E. Start-up organic composting material and bacteria
- F. Specifications and Materials
1. Capacity

Volume	234 cubic feet	1747 US gallons
Average capacity for use at average temp. \geq 65°F:		
Daily	180 visits*	Annually 65,000 visits*
*Based on recommended maintenance being performed		
 2. Dimensions

Length: 103"	Width: 70.5"	Height: 89"
Working Area on Top of Composter:		
Maintenance Door:	10"x30" on composter front wall	
Compost Chamber Lid:	34.5"x70.5" on composter front at bottom.	
Polyethylene Wall Thickness: 3/8" nominal	Weight 800 lbs.	
 3. Material

The M35 Composter and its internal components shall be rotationally molded using high density polyethylene Resin that conforms with the following specifications:

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Density (ASTM TEST D 1505):	0.941 g/cu. Cm
Tensile Strength at Yield (ASTM D 638):	2,600 psi
Impact Brittleness Temperature (ASTM D 746):	<- 180°F
Dart Impact (-40°C, 250 mils thickness):	190 ft-lbs.
Envt. Stress Crack Resistance (D 1693)	>1,000 hr

4. Ventilation

AC: 115v, 93W, 60 Hz, .8 amp fan with 243 cfm at free air. Fan made of GE Noryl plastic, totally enclosed, ball-bearing motor, in-line, direct drive. UL and CSA approved. Diameter: 11.75", Inlet/Outlet Diameter: 5.87", Length: 7.757".

5. Liquid Removal Pump

AC: Submersible, 115V, 5 amp, with 18', 3-conductor, oil-resistant cord. UL and CSA approved. 1" NPT liquid discharge outlet. Capacity is 20.4 gallons per minute at 1' with a maximum pumping height of 26.3'.

6. Automatic Controller

Allows for easy operation to monitor and/or control composter functions including liquid level, air flow, liquid removal pump, solenoid valve, smoke detector, moistening system and lights to indicate when service is required or system is operation properly. It allows the operator to program automatic functions for site-specific conditions and automatic daily compost mass moistening. 115VAC surface mounted receptacles for supplying power to the liquid removal pump, solenoid valve and ventilation fan are regulated by the controller.

7. Liquid Separator

Separates the liquid from the compost to enhance decomposition and to facilitate the removal of the liquid end-product by the automatic pump.

2.03 PRODUCT REQUIREMENTS

A. Toilet Buildings:

1. Three composters with controllers each having a capacity of 65,000 uses annually, as shown on the building plans. Regular and handicapped toilets and urinals, as shown on the building plans.

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

07-14-11

BI-T-571

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A. General:

1. Installation and start-up shall be in strict accordance with the manufacturer's instructions.
2. The general contractor shall be liable for but not limited to any leaks, cracks, voids, and separations of any system components during the first five years of operation commencing from the first day the facility is open for use, unless the vendor is also the installer of the system and therefore responsible.
3. Adjust the system at start-up for optimum standards of operation.

B. Certification:

1. The system shall remain odor-free during operation.
2. The general contractor shall provide certification documentation necessary to commence the warranty by the manufacturer.

C. Operation and Maintenance Manuals

1. The general contractor shall provide the number of requested copies of an operation and maintenance manual prepared specifically for the conditions of this project. The manual shall include:
 - a. Start-up procedure.
 - b. Recreational season use maintenance and operation.
 - c. Off-season shut-down procedure.
 - d. Winter maintenance and operation.
 - e. Restart of system for the next season's use.
 - f. Any other pertinent information needed to properly operate the system.

END OF SECTION