APPROVED
By CERS-FMB at 7:14 am, Mar 12, 2026

Project 26Z1AY2 – FSA Horticulture and Composting Program
Greenhouse Equipment Specification Summary
Location: FPC Alderson
Purpose: Support sustainability initiatives and inmate rehabilitation through horticulture and composting training under the First Step Act (FSA).

1.0 Overview
This project provides for the procurement and delivery of all necessary equipment to support a 16′ x 30′ greenhouse structure as part of the Horticulture and Composting Program. The program will provide vocational training, sustainability benefits, and the opportunity for inmates to earn FSA credits.

2.0 Technical Requirements
2.1 Greenhouse Structure
Type: Gable, standalone greenhouse

Dimensions: 16′ wide x 30′ long

Height: 6′ under-gutter clearance

Engineering: Designed for 105 mph wind load and 30 lb/ft^2 ground snow load (per IBC)

Construction:

Heavy-duty 4″ OD galvanized steel round columns on 10' centers

Roll-formed upper chords (30% stronger than 2x2 tubing)

Built-in condensate control channels

Hanging basket rails included

Aluminum trim (corner, ridge bar, gutter)

Tube lock base and gable end flashing

All necessary brackets, fasteners, base angles, and ground-set columns

Documentation: Stamped engineered prints & structural calculations included

2.2 Covering
Material: 8MM Twin wall polycarbonate (clear)

Accessories: Aluminum extrusions, perforated/non-perforated tape, fasteners, closure strips

Warranty: 10-year manufacturer warranty on polycarbonate

2.3 Access / Doors
One (1) Steel Swing Door: 42" wide x 80" tall, ADA compliant, complete with frame and hardware

2.4 Mechanical Ventilation
Exhaust Fans (2):

Quietaire or approved equal

24” box wall, 115V, .33HP, single speed

Includes shutters, guards, belt tightener, galvanized frame kits

2.5 Fresh Air Inlet Vents
Rack and Pinion Vents:

One (1) end wall vent, approx. 3’ tall x 10’ long

Includes hinges, size bars (6’ centers), vent bottom, slam rails, end closures

Rack and pinion assembly with 1-3/8” drive pipe, 24V DC motor and control

All mounting and sealing hardware, silicone sealants included

2.6 Evaporative Cooling System
Size: 3’ x 10’ with 6” pads

Components:

Aluminum gutters, downspout, end caps, drip pan

Plumbing kits, 115V pump, polyethylene reservoir

Metal flashing for sealing pad to vent

Includes framing/girts for structural support

2.7 Heating
Heater:

Modine PTP60A, natural gas-fired unit

Aluminized heat exchanger

Intermittent pilot ignition with safety shutoff

Includes heater hanger and heat stack kit

2.8 Exterior Shade Cloth
Material: White knitted

Shade Factor: 51%

Construction: Taped and grommeted every 3 feet

2.9 Rolling Benches
Qty: 4 portable benches

Size: 4’ x 6’, 30” high

Surface: Expanded metal tops

2.10 Environmental Control System
Controller: 1 Bartlett system (or approved equal)

Function: Automates control of ventilation, heat, cooling, and irrigation systems

2.11 Irrigation System
System Type: Overhead with misters + hanging basket drip line

Includes: Fertilizer injector and all required plumbing/hardware

2.12 Safety Features
Emergency Exit Sign: Illuminated, battery backup

Fire Extinguisher: 1 UL-listed extinguisher

2.13 Includes shipping/delivery to FPC Alderson, Glen Ray Road, Alderson, WV 24910