

FSA Cooperative Purchasing Program



FSA23-EQU21.1: Equipment Base Specifications



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Item Groups Summary

All bid items shall be built to FSA base specifications for the item or model number indicated and shall include all standard manufacturer equipment unless otherwise specified. When requested by the purchaser, vendors must submit detailed specifications for the item and options offered.

- All Terrain & Utility Vehicles: All Terrain Vehicles (Quad)
- All Terrain & Utility Vehicles: Utility Vehicles (Side-by-Side)
- All Terrain & Utility Vehicles: Electric Utility Vehicles (Side-by-Side)
- Boat: Aquatic Weed Cutter Workboat
- Bulldozer: 180hp
- Bulldozer: 70hp
- Bulldozer: 90hp
- Chipper: Brush Chipper
- Compactor: 80,000 lbs. Landfill Compactor
- Compressor: Air Compressor - Trailer Mounted
- Dump Truck: Articulating Off Road Dump Truck - 50,000 lbs. Payload
- Excavator: All Terrain Walking Excavator
- Excavator: Hydraulic Excavator - 15,590 lbs. Operating Weight
- Excavator: Hydraulic Excavator - 38,000 lbs. Operating Weight
- Excavator: Hydraulic Excavator - 76,550 lbs. Operating Weight
- Excavator: Mini Hydraulic Excavator - 7,105 lbs. Operating Weight
- Excavator: Telescopic Excavator - 45,000 lbs. Operating Weight - Tracked Type
- Excavator: Telescopic Excavator - 47,000 lbs. Operating Weight - 6x6 Wheeled Type
- Excavator: Vacuum Excavator - Trailer Mounted
- Excavator: Wheeled Hydraulic Excavator - 42,000 lbs. Operating Weight
- Forklift: Cushion Tire - 4,000 lbs. Capacity
- Forklift: Rough Terrain Forklift - 5,000 lbs. Minimum Capacity*
- Forklift: Telescopic Tool Carrier/Telehandler
- Generator: 60kW Stationary*
- Generator: 125kW Stationary
- Generator: 150kW Mobile
- Generator: 500kW Mobile
- Generator: 500kW Stationary
- Horizontal Directional Drill*
- Leaf Collector: Trailer Mounted*
- Lift: Scissor Lift - Self Propelled
- Light Tower: Hybrid Light Tower
- Light Tower: Light Tower - Trailer Mounted



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

- Loader: Loader Backhoe - 4x4
- Loader: Skid Steer - 1,850 lbs. Operating Capacity - Wheeled Type
- Loader: Skid Steer - 2,800 lbs. Operating Capacity - Wheeled Type
- Loader: Skid Steer - 3,100 lbs. Operating Capacity - Tracked Type
- Loader: Wheel Loader - 1.5 cubic yd.
- Loader: Wheel Loader - 3.0 cubic yd.
- Loader: Wheel Loader - 5.75 cubic yd.
- Low Speed Vehicle: Electric Type
- Motor Grader: Large
- Motor Grader: Small
- Mower: 15ft. Flex Wing Rotary Mower
- Mower: Remote Controlled Brush Mower
- Mower: Electric Zero Turn Radius Mower*
- Mower: Zero Turn Radius Mower
- Pallet Jack: Electric 4,500 lbs. Capacity*
- Pipe Inspection: Battery Operated Pipe Crawler Inspection System*
- Pump: Mobile Pump
- Roadway Advisory Board: Mobile Message Board
- Roadway Advisory Board: Mobile Speed Board
- Roadway Advisory Board: Mobile Speed Board/Automatic License Plate Reader*
- Roadway Advisory Board: Mobile Traffic Advisory/Direction Signal Board
- Roller: Compaction Roller 30,000 lbs. - Single Drum
- Roller: Large 22,000 lbs. - Double Drum Roller - 70in. Width
- Roller: Small 5,400 lbs. - Double Drum Roller - 47in. Width
- Sewer Cleaner: Combination Sewer Cleaning/Vacuum Machine Body - 10 cubic yd.
- Sewer Cleaner: Trailer Mounted Sewer Cleaner
- Shop Tools & Equipment*
- Shredder: Mobile Shredder
- Solid Waste Material Handler: Wheeled Type
- Stump Cutter
- Sweeper: 3-Wheel Mechanical or Regenerative Air Sweeper
- Sweeper: Cabover Mechanical Broom Street Sweeper
- Sweeper: Compact Air Sweeper - 2.3 cubic yd.
- Sweeper: Regenerative Air Street Sweeper
- Sweeper: Self-Propelled Hydrostatic Broom
- Tactical Vehicle: Skid Steer Mounted (The Rook)
- Tool Carrier: Hydrostatic Drive
- Tractor: Agriculture Tractor - 4x2



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

- Tractor: Compact Articulating Tractor - AWD
- Tractor: Small Agriculture Tractor - 4x4
- Tractor: Tractor with Boom Mower - 4x4
- Trailer: Deck Over Flatbed Trailer - 16,000 lbs. GVWR
- Trailer: Deck Over Equipment Trailer - 40,000 lbs. GVWR*
- Trailer: Detachable Neck Lowboy Trailer - 100,000 lbs. GVWR*
- Trailer: Enclosed Cargo Trailer - 7,000 lbs. GVWR
- Trailer: Enclosed Utility Body/Trailer Mounted - 9,900 lbs. GVWR*
- Trailer: Fixed Neck Lowboy Trailer - 70,000 lbs. GVWR*
- Trailer: Hydraulic Drop Deck Trailer - 13,500 lbs. GVWR*
- Trailer: Hydraulic Tail Trailer - 70,000 lbs. GVWR
- Trailer: Leachate Tanker - 6,500 gallons*
- Trailer: Livestock Trailer - 7,000 lbs. GVWR*
- Trailer: Pull Behind Dump Trailer - 14,000 lbs. GVWR
- Trailer: Refrigeration/Freezer Trailer - 7,000 lbs. GVWR*
- Trailer: Utility/Equipment Trailer - 7,000 lbs. GVWR*
- Trailer: Waste Trailer with Walking Floor
- Transfer Switch: 600 Amp Automatic Transfer Switch
- Trencher: Walk Behind Trencher
- Underground Locating Equipment: Ground Penetrating Radar*
- Underground Locating Equipment: Utility Locator*
- Vehicle Lift: Mobile - 2 Column, Cabled
- Vehicle Lift: Mobile - 2 Column, Wireless
- Vehicle Lift: Mobile - 4 Column, Cabled
- Vehicle Lift: Mobile - 4 Column, Wireless
- Vehicle Lift: Mobile - 6 Column, Cabled
- Vehicle Lift: Mobile - 6 Column, Wireless
- Vehicle Lift: Mobile - 8 Column, Cabled
- Vehicle Lift: Mobile - 8 Column, Wireless
- Vehicle Lift: Stationary - 2 Post Asymmetric Stationary Vehicle Lift 10k
- Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 12k
- Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 15k
- Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 18k
- Vehicle Lift: Stationary - 2 Post Versymmetric Stationary Vehicle Lift 10k
- Vehicle Lift: Stationary - 4 Column, Alignment Lift with Front/Rear Jacks and Integrated Turntables and Slip Plates 14k



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

**Indicates new item group for FSA23-EQU21.0*



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

All Terrain & Utility Vehicles: All Terrain Vehicles (Quad)

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Manufacturer's gas or diesel engine, air cooled, overhead valve, keyed electronic ignition, 20 hp minimum
- Transmission: Manufacturer's standard automatic transmission
- Chassis: Standard front bumper
- Tires and Wheels: Front and rear all terrain tires, must match drive train



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

All Terrain & Utility Vehicles: Utility Vehicles (Side-by-Side)

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following

FSA Base Specification

- Engine: Manufacturer's gas or diesel engine, air cooled, overhead valve, keyed electronic ignition, 20 hp minimum
- Transmission: Manufacturer's standard automatic transmission
- Chassis: Standard front bumper
- Tires and Wheels: Front and rear all terrain tires, must match drive train



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

All Terrain & Utility Vehicles: Electric Utility Vehicles (Side-by-Side)

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- FSA Base Vehicle Requirements: 2 programmed keys and fobs if available, full-size spare tire if available
- Dimensions (Approximate): Length- 115", height- 51", width- 56", wheel base- 79", curb weight- 1,500 lbs., GVW- 2,900 lbs.
- Power: 7 hp electric motor, 8-6 volt heavy duty batteries, 48 volt
- Transmission/Axle: Enclosed internally lubricated differential/transaxle, 2-wheel drive
- Chassis/Steering/Suspension: 1,250 lbs. towing capacity, 2,900 lbs. GVW, frame type chassis, suspension matched for GVW of vehicle
- Tires And Wheels: Off/on road type tires, wheels rated for GVW of vehicle, tires to be traction type rated for GVW of vehicle
- Performance: 45 mile range, 19 mph minimum
- Brakes: Manual parking brake, disc or drum type, 2 or 4 wheel breaks
- Body: Rear mounted hitch for towing 2", pick-up type box with sides and tailgate, 2 passenger seating



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Boat: Aquatic Weed Cutter Workboat

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- General Dimensions: Height- 8', width- 7'3", length- 15', height from waterline- 48", boat draft- 4" to 6", weight- 2,285 lbs.
- Engine: 3-cylinder diesel engine, liquid cooled electric start, and charging system
- Hydraulics: Triple pump design, 27 gpm, eco-friendly hydraulic fluid
- Propulsion: Twin hydraulic outdrives, weed and mud design propellers
- Vessel Hull: Fiberglass/kevlar design, deck mounted cutter and loader
- Boom Cutter: Hydraulic drive, full articulation to cut 5' below waterline
- Front End Loader: Marine-type vegetation bucket
- Operator Station: All hydraulic function/propulsion function controls
- Trailer: Trailer to be designed specifically for this workboat. Must meet all federal, state, and local laws for a trailer operated on the highway.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Bulldozer: 180hp

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 6-cylinder 180 hp diesel engine
- Transmission: Power shift (3 forward, 1 reverse minimum) or hydrostatic drive (variable)
- Undercarriage: 7 rollers each side minimum, top roller each side minimum, manufacturer's standard length track, manufacturer's standard track width, 24" grouser width
- Dozer Blade: Width- 128", height- 48", 2.5 cubic yd. blade capacity, PAT type blade, power angle and tilt, hydraulically controlled
- Weight: Minimum operating weight- 43,000 lbs.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Bulldozer: 70hp

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 4-cylinder 70 net hp
- Transmission: Hydrostatic, infinitely variable speed, constantly variable
- Undercarriage: Minimum 5 rollers, standard grouser minimum of 16", top roller each side
- Dozer: Minimum width- 96", minimum height- 32", minimum 1.88 cubic yd. blade capacity, power angle tilt (PAT) type blade



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Bulldozer: 90hp

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 4-cylinder 90 net hp
- Transmission: Hydrostatic, infinitely variable speed, constantly variable
- Undercarriage: Minimum 6 rollers, standard grouser minimum of 18", top roller each side
- Dozer: Minimum width- 104", minimum height- 36", minimum 2.5 cubic yd. blade capacity, power angle tilt (PAT) type blade



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Chipper: Brush Chipper

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions: Weight- 6,800 lbs., width- 72", height- 100"; length- 176", 15" chipping capacity
- Engine: 122 hp diesel engine, over center type clutch, heavy duty air cleaner, spin on type filters
- Chassis: Main frame constructed of rectangular tubing or in.zin. section, 7,000 lbs. axle torsion type, electric brakes with breakaway switch, ST 235/80R16 tires load range E, steel wheels, drop leg jack, 2 1/2" diameter lunette or 2 5/16" ball hitch, adjustable height hitch, safety chains, 6-way light connector, all wiring in conduit to lights, four function rear lights
- Feed System: Infeed throat opening- 20" x 15", serrated infeed rollers, feed rollers hydraulically driven, feed table height- 27", feed table length- 30", safety control bar around infeed opening for emergency stop
- Chipper Drum Or Disc: Drum type- 22" diameter x 22" width, 2 knife pockets 180 degrees apart, dual edge reversible knives, extreme duty bearings, adjustable bedknife (reversible), disc type: 37" x 2" diameter disc, 4 knives reversible
- Chipper Housing: Easy access door for knife changes, drop down door for anvil adjustment or clean out, chipper housing to be constructed for maximum safety and operator protection
- Discharge Chute: Rotation of 360 degrees, adjustable chip deflector locking pin for chute rotation
- Miscellaneous: 26 gal fuel tank, nngine shutdown system, locking tool box, vandalism protection



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Compactor: 80,000 lbs. Landfill Compactor

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 80,000 lbs.
- Engine: Turbocharged diesel engine 400 hp minimum, spin on type filters
- Transmission/Hydraulic System: Mechanical or hydrostatic drive will be acceptable (2 speeds forward and 2 speeds reverse minimum), spin on type hydraulic filters
- Operating Station: Enclosed sound suppressed cab, air filtration system, air conditioned, heater and defroster, gauges and engine monitoring shutdown system, adjustable suspension seat, outside mirrors, work lights, windshield wipers and washer
- Electrical System: 24 Volt
- Wheels: Compaction wheels- 48" width minimum, wheel diameter- 58" width minimum, chevron chopper blades, weld-on or pin-on teeth type wheels acceptable, anti-wire wrapping device if applicable, cleaner bar if applicable
- Blade: Straight or U type trash blade acceptable, 14' blade minimum, 6' blade height minimum, full width trash screen on top of blade, bolt on cutting edges
- Miscellaneous: Fully shielded engine compartment, removable belly pan, landfill shielding package if applicable



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Compressor: Air Compressor - Trailer Mounted

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Approximate Dimensions: Weight- 1,950 lbs., length- 79", width- 40", height- 47"
- Engine: 49 hp Tier 4 Engine, 12 Volt electrical system, engine protection system, gauge package
- Compressor: 185 cfm @ 100 psi, rotary or reciprocating style compressor, 2 service valves
- Trailer: 3,700 GVW axle rating, manufacturer rated tires, fold up tongue jack
- Enclosure: Fixed weather enclosure over entire engine/compressor, 2 full size tool boxes



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Dump Truck: Articulating Off Road Dump Truck - 50,000 lbs. Payload

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 40,000 lbs., minimum gross weight (with payload)- 91,000 lbs.
- Engine: Turbocharged diesel engine 265 hp, 549 cubic in. minimum, spin on type filters, two stage air cleaner
- Transmission: 6 speeds forward, 1 speed reverse, top speed of 31 mph, hydraulic retarder
- Brakes: Disc type service brakes, disc type parking brake
- Axles & Differentials: Differential locks, planetary gear reduction final drives, inter axle differential lock
- Tires: Tubeless, radial off road hauler tires, 23.5 R 25 tire size
- Steering: 45 degree left or right articulation angle, secondary electric steering system for emergency steering, double acting steering cylinders
- Operating Station: Cab to be pressurized, heated, air conditioned and filtered, built in ROPS/FOPS protection, suspension type operators seat with seat belt, cab instrumentation or engine monitoring system with audible alarms, tinted glass windows, sun visor, front and rear intermittent windshield wipers, work lights, headlights, stop, tail and turn signal lights, left and right mirrors
- Body: Dump body tipping angle 70 degrees, mud flaps, two single stage double acting body hoist cylinders, 18 yd. heaped capacity, body rise time maximum 12 seconds
- Miscellaneous: 95 gal fuel tank minimum, guard or shielding package



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Excavator: All Terrain Walking Excavator

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: 15,873 lbs. 2x4, 17,196 lbs. 4x4 Option
- Engine/Cab: Diesel engine, minimum 95 net hp, roll over enclosed cab air conditioned and heated, hinged quick release side window for emergency exit (operational at all boom positions), hinged front window opening outward for safety (not inward reducing operator head room), gauges or warning indicators for fuel level, engine oil, hydraulic oil and coolant, mirrors, air suspension operators ft. seat, full size cab (width of machine)
- Travel System: Minimum high-speed travel- 5 mph, minimum grade-ability 70%, four tires
- Hydraulic System: Digging depth- 15'4", auxiliary hydraulic circuit and controls plumbed to the end of stick with disconnect to allow the use of hydro-mechanical work tools, hydraulic swing system, stabilizers to be individually controlled in the vertical and horizontal positions
- Electrical System: Work lights
- Bucket: 4' wide grading bucket



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Excavator: Hydraulic Excavator - 15,590 lbs. Operating Weight

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 15,590 lbs.
- Engine: 53 hp diesel engine, fuel capacity 26 gal
- Travel System: Minimum high-speed travel of 3.0 mph
- Undercarriage: Overall track length 9' 1", overall track width 11' minimum 7' 6", shoe width 17.7" minimum
- Operating Station: ROPS Cab to be air conditioned, heated and pressurized filtration system, opening front windshield, adjustable suspension type seat with safety belt, tinted safety glass, engine monitoring system with audible alarms, work lights
- Stick, Boom, Bucket: Boom and stick combination to allow minimum reach at ground level of 20' 11", bucket to be general purpose bucket, appropriately sized for machine and included
- Swing System: Swing radius 5' approximate, swing speed 9.0 rpm



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Excavator: Hydraulic Excavator - 38,000 lbs. Operating Weight

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 38,000 lbs.
- Engine: Turbocharged diesel engine 113 hp
- Travel System: Travel speed of 3.2 mph
- Hydraulic System: Standard auxiliary hydraulic valve, main hydraulic system flow 72 gpm minimum
- Undercarriage: Overall track length 12' 10" minimum, overall track width 8' 5" minimum, shoe width 24"
- Operating Station: ROPS Cab to be air conditioned, heated and pressurized filtration system, intermittent windshield wipers, opening front windshield, adjustable suspension type operator seat with safety belt, work lights



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Excavator: Hydraulic Excavator - 76,550 lbs. Operating Weight

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 76,550 lbs.
- Engine: Turbocharged diesel engine 257 hp, fuel capacity 145 gal
- Travel System: Travel speed of 2.9 mph
- Hydraulic System: Standard auxiliary hydraulic valve, main hydraulic system flow 144 gpm minimum
- Undercarriage: Overall track length 16' 2", overall track width 10' 6", shoe width 24"
- Operating Station: ROPS cab to be air conditioned, heated and pressurized filtration system, intermittent windshield wipers, opening front windshield, adjustable suspension type operator seat with safety belt, tinted safety glass, engine monitoring system with audible alarm, work lights
- Stick, Boom, Bucket: Boom and stick combination to allow minimum reach at ground level of 35' 6", bucket to be a general-purpose bucket, appropriately sized for machine and include
- Swing System: Swing radius 12, Swing speed 9.2 rpm



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Excavator: Mini Hydraulic Excavator - 7,105 lbs. Operating Weight

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: 7,105 lbs. minimum
- Engine/Cab: Diesel engine, minimum 23 hp, ROPS canopy, gauges or warning indicators for fuel level, engine oil, hydraulic oil and coolant
- Travel System: Minimum high-speed travel 2.3 mph, minimum gradeability, 20 degrees, 11" wide rubber belt tracks
- Hydraulic System: Digging depth 9' minimum, auxiliary hydraulic circuit and controls plumbed to the end of stick with disconnect to allow the use of hydro-mechanical work tools, backfill blade, hydraulic swing system.
- Electrical System: Work lights



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Excavator: Telescopic Excavator - 45,000 lbs. Operating Weight - Tracked Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight 45,000 lbs.
- Engine: 4-cylinder turbocharged diesel, 170 hp at 2200 rpm, spin on type filters, two stage air cleaner, 12 volt 100 amp alternator, 90 gal fuel capacity
- Track Drive: 2-speed automatic with manual override, high torque piston motors each track, planetary drives, travel speed high 3.4 mph, low 1.9 mph, automatic parking brake, individual track control
- Tracks: 23.6 pad size
- Operator Station: Acoustical lined, adjustable seat, tinted safety glass, filtered fresh air, heater, air conditioned, and defroster, wipers and washers, skylight, work lights
- Operator Station Controls: Electric engine monitoring system, auto idle, electronic joysticks on adjustable pedestals, pedals for travel and steering, low/high travel switch, engine speed control
- Safety Items: Electric horn, movement alarm, fire extinguisher, mirrors, right and left side
- Hydraulic System: Hydraulic oil cooler, 120 hp track drive motors (each), 64 hp swing motor, electronic hydraulic system monitor, spin on hydraulic filters, swing speed 7.0 rpm, automatic swing brake
- Boom: Telescopic boom, 180 degree boom rotation, 30' reach at ground level from center pivot to buck cutting edge
- Bucket: 60" ditching bucket provided with machine, quick attach type 1
- Weight: Minimum operating weight- 47,000 lbs.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Excavator: Telescopic Excavator - 47,000 lbs. Operating Weight - 6x6 Wheeled Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight 47,000 lbs.
- Carrier: 6-cylinder turbocharged diesel engine, 250 hp at 2200 rpm, spin on type filters, two stage air cleaner, 24 volt 70 amp alternator, 6-speed automatic transmission, 1 to 1 transfer case with front axle disconnect, one person carrier cab, air ride seat, heater, air condition, and defroster, 2-speed windshield wipers, tinted glass, isolated and acoustic lined, gauges to monitor engine functions, frame sized for GVW and stress of mounted upper structure, bolt on front bumper, desiccant type, spin on type, air dryer, fuel tank 50 gal minimum,
- Safety: Electric horn, west coast mirrors with convex spot mirrors, tow hooks, fire extinguisher, backup alarm
- Front Axle: 16,000 front drive axle, leaf spring suspension, 16.5"x5" "S" cam brakes, automatic slack adjuster, integral power steering, hydraulic axle lockouts, 425/65R22.5 on/off road tires
- Rear Axle: Tandem axles 40,000 lbs. rated, Hendrickson rear suspension, 16.5"x7" "S" cam brakes, automatic slack adjusters, 11R 24.5 traction type tires
- Upper Structure: Hydraulic system- 80 hp drive motor, 44 hp swing motor, automatic swing park brake, 50 gal oil reservoir, spin on hydraulic filters, swing speed 8 rpm, hydraulic remote control- travel and steering controls in upper structure cab, automatic brakes and axle lockouts, movement alarm, upper structure cab- isolated and acoustic lined, tinted safety glass, adjustable operators seat, heater, air condition, and defroster, work lights, wipers and washers, mirrors on left and right, skylight upper structure control-electronic joysticks on adjustable pedestals, engine monitoring lights or gauge with audible warning or automatic shutdown, pedals for steering and travel, low/high travel switch, electric horn, engine speed control bucket- quick attach type, 60" ditching bucket provided with machine, boom- telescopic boom, 180 degree boom rotation, 30' reach at round level from upper structure pivot to bucket cutting edge



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Excavator: Vacuum Excavator - Trailer Mounted

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: 14,000 lbs. GVWR
- Engine: 36 hp diesel engine, water cooled, fully enclosed sound attenuated engine enclosure (including vacuum pump and high-pressure water pump), 15 gal fuel tank
- Vacuum Pump: 580 cfm at 15" of mercury, mounted inside engine enclosure, washable filtration cylinders, reverse pressure (to clear hose and offload liquids)
- High Pressure Water System: 400 psi at 4 gpm water pump, low water automatic shutdown, two 100 gal poly water tanks, 50' high pressure water hose on hose reel, 5' and 3' wand and control handle
- Controls: Lockable and waterproof, curbside located, oil pressure, water temperature, fuel and vacuum gauge, electronic throttle
- Tank: Full open rear door, door hydraulically opened, twin dump cylinders, 6" stainless steel portal shutoff, 800 gal debris tank capacity
- Boom: 4" pickup hose, hydraulically powered in/out and up/down, boom cradle, 360 degree movement, 2 dielectric 3" suction wands, 33' rubber suction hose
- Trailer: 7,000 lbs. dexter torsion axles, 14,000 lbs. GVWR, 10,000 lbs. jack stand, I beam construction, Pintle hitch, electric brakes with safety breakaway, LT235/85R16 tires, Stop/tail/turn lights



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Excavator: Wheeled Hydraulic Excavator - 42,000 lbs. Operating Weight

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight- 42,000 lbs.
- Engine: Turbocharged diesel engine 140 hp, spin on type filters, two stage air cleaner
- Travel System: Travel speed of 21 mph
- Hydraulic System: Standard auxiliary hydraulic valve, hydraulic system flow 99 gpm minimum
- Wheel Drive: Wheelbase 8' minimum, tire size 10:00x20, ground clearance 13" minimum, gradeability 61 percent
- Operating Station: Cab to be air conditioned, heated, and pressurized filtration system, intermittent windshield wipers, opening front windshield, vibration dampening cab mounts, adjustable suspension type operator seat with safety belt, tinted safety glass, engine monitoring system with audible alarms, work lights, stop/tail/turn and emergency flashers
- Stick, Boom, Bucket: Boom and stick combination to allow minimum reach at ground level of 30' minimum, bucket to be a general purpose bucket, appropriately sized for machine and included
- Swing System: Swing radius 7' approximate, swing speed 9.5 rpm minimum
- Miscellaneous: Fuel capacity of 77 gal minimum
- Blade/Outriggers: Front blade with 8' minimum, rear outriggers FLO



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Forklift: Cushion Tire - 4,000 lbs. Capacity

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 50 hp LP gas engine
- Transmission: Powershift type, inching pedal, 1 speed forward, 1 speed reverse
- Hydraulic System: 19.0 gpm at 2250 psi
- Chassis: Wheelbase- 46", tread width- 33" (with standard tires), ground clearance at lowest point- 3"
- Tire size: Front- 18.0 x 7 x 12 cushion tire, rear- 14.0 x 5 x 10 cushion tire, steering radius- 72"
- Brakes: Hydraulic service brakes, mechanical parking brake
- Lift: Two stage lift mast, Lift height minimum - 130", Lift capacity- 4,000 lbs., fork spacing- 7" to 32" minimum, tilt- 5 degrees forward, 10 degrees backward
- Miscellaneous: FOPS protection, work lights, seat belts



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Forklift: Rough Terrain Forklift - 5,000 lbs. Minimum Capacity

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Lift Capacity: 5,000 lbs. minimum capacity
- Lift Height: Minimum of 14'
- Weight: 12,800 lbs.
- Front Tire Track Width: 80"
- Turning Radius: 13'
- Engine: 70 hp diesel, 24 gal fuel tank
- Transmission: Fwd/rev shuttle shift, 4WD
- Tires: Front 16.9-24, rear 12-16.5 lug type tires
- Mast: 3 stage, side shift, fwd/backward tilt, load cushioning
- Operator Station: Adjustable seat, seat belt, FOP overhead guard, b/u alarm , ANSI safety compliant



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Forklift: Telescopic Tool Carrier/Telehandler

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Approximate Dimensions: Length- 196", width- 90", height w/cab- 93", wheelbase- 113", weight: 17,155 lbs.
- Engine: Diesel Tier 4 100 hp, Turbocharged, heavy duty cooling system
- Powertrain: Hydrostatic drive, 2 travel speeds low speed 3.0 mph, high speed 18 mph, all wheel drive, 3 steering modes- all wheel, crab, and front wheel, industrial lug type tires
- Comfort, Convenience And Safety: Certified ROPS cab with air conditioning and heat, suspension seat w/ seat belt, work lights, safety lights, and warning beacon, attachment controls in cab, engine gauge instrumentation
- Hydraulic System: Lift capacity 7,700 lbs., max lift 22', boom breakout force- 8,000 lbs.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Generator: 60kW Stationary

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Generator Requirements: Standby duty rated equal to the kW rating of the item group bid, 60kW, 75 kVA, 0.8 power factor, 480 volts 3 phase, 60 Hz, 1,800 rpm, directly connected to the engine flywheel housing with flex coupling, generator shall meet performance class G3 of IEC, unit shall be in compliance with and be UL 2200 labeled
- Engine: Water cooled diesel engine, sized for generator set, emission compliant engine
- Controls: Solid state, microprocessor-based generator controls, controls shall provide all operating, monitoring and control functions for generator set
- Enclosure/Silencer: Complete diesel engine generator set including control panel, engine starting batteries shall be enclosed in a factory assembled water protective, sound attenuated enclosure, critical grade silencer, companion flanges, flexible stainless-steel exhaust
- Fuel Tank: Double wall sub-base tank integral to enclosure, 24-hour capacity at 100% at full load, rupture basin with 110% capacity, locking fuel caps, mechanical fuel level gauge, low fuel level alarm contact, fuel tank rupture alarm contact, must meet UL 142, must meet FDEP standards as applicable
- Battery Charger: Current limiting battery charger to automatically charge batteries, charger shall be dual charge rate with automatic switching to boost rate when required, charger shall be mounted on genset package
- Startup And Testing: Vendor must coordinate all startup and testing activities with the engineer and owner, after installation is completed by others and normal power is available, the vendor must perform a one (1) day startup including the use of building load, the startup technician will instruct all necessary personnel how to operate and maintain the equipment in accordance to the manufacturer`s requirements
- Conditions: In addition to equipment specified, each generator shall be equipped with all standard equipment as specified by the manufacture for this model and shall include but not be limited to the following necessary items- initial filling of oil and antifreeze (fuel provided by others), shrink wrap applied to the product to ensure a clean finish, during the startup, the technician shall record the following information and provide to the owner for his records- record Operating Voltage, Hz, Ph, and connected load (Amperage), package information consisting of make of generator, model, serial number of complete package, and startup date, record engine and generator serial numbers, one complete set of operation and maintenance manuals, two (2) year or 1500-hour standard standby generator warranty, labor, materials, and travel for the warranty period repair will be paid by manufacturer during normal business hours



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Generator: 125kW Stationary

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Generator Requirements: Standby duty rated at 125.0 kW, 156.3 kVA, 8 power factor, 480 volts, 3 phase, 60 Hz, 1,800 rpm, directly connected to the engine flywheel housing with flex coupling, generator shall meet performance class G3 of IEC, unit shall be in compliance with and be UL 2200 labeled
- Engine: Water cooled diesel engine, sized for generator set, emission compliant engine
- Controls: Solid state, microprocessor-based generator controls, controls shall provide all operating, monitoring and control functions for generator set
- Enclosure/Silencer: Complete diesel engine generator set including control panel, engine starting batteries and fuel oil tank shall be enclosed in a factory assembled water protective, sound attenuated enclosure, critical grade silencer, companion flanges, flexible stainless-steel exhaust
- Fuel Tank: Double wall sub-base tank integral to enclosure, 24-hour capacity at 100% at full load, rupture basin with 110% capacity, locking fuel caps, mechanical fuel level gauge, low fuel level alarm contact, fuel tank rupture alarm contact, must meet UL 142 and FDEP standards
- Battery Charger: Current limiting battery charger to automatically charge batteries, charger shall be dual charge rate with automatic switching to boost rate when required, charger shall be mounted on genset package
- Startup And Testing: Vendor must coordinate all startup and testing activities with the engineer and owner, after installation is completed by others and normal power is available, the vendor must perform a one (1) day startup including the use of building load, the startup technician will instruct all necessary personnel how to operate and maintain the equipment in accordance to the manufacturer's requirements
- Conditions: In addition to equipment specified, each generator shall be equipped with all standard equipment as specified by the manufacture for this model and shall include but not be limited to the following necessary items- initial filling of oil and antifreeze (fuel provided by others), shrink wrap applied to the product to ensure a clean finish, during the startup, the technician shall record the following information and provide to the owner for his records- record Operating Voltage, Hz, Ph, and connected load (Amperage), package information consisting of make of generator, model, serial number of complete package, and startup date, record engine and generator serial numbers, one complete set of operation and maintenance manuals, two (2) year or 1,500-hour standard standby generator warranty, labor, materials, and travel for the warranty period repair will be paid by manufacturer during normal business hours



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Generator: 150kW Mobile

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Generator Requirements: Standby duty rated at 150 kWe, 187 kVA, 8 power factor, prime power duty rating 135 kWe, 168 kVA, 0.8 power factor, main breaker shall be equipped with shunt trip, generator end shall be direct coupled to the engine flywheel with a flexible coupling, generator shall meet performance class G3 of IEC, jacket water heater
- Engine: 6-cylinder, water cooled, 1,800 rpm, diesel engine, current emission compliant diesel engine, spin on fuel and oil filters
- Voltage Change Over Switch & Distribution: Manual 3-position voltage change over switch to select each voltage as specified when the unit is not running, 1 Ph 120/240, 3 Ph 120/240, 3 Ph 120/208, and 3 Ph 277/480, a five-point connection shall be provided for ease of connection of load leads, one 50 amp, 120/240 vac, 1 Ph, twist lock receptacle, one 30 amp, 120/240 vac, 1 Ph, RV type receptacle, two 20 amp, 120/240vac, 1 Ph, duplex receptacle, two 20 amp, 120/240 vac, 1Ph, duplex GFI receptacle, each receptacle shall be protected by a individual circuit breaker, a receptacle shall be provided to power both the jacket water heater and on-board battery charger, two thumb screw type connection points shall be provided for remote auto start.
- Controls: Solid state, microprocessor-based generator controls, controls shall provide all operating, monitoring and control functions for the generator set, controls shall provide for auto start/stop functions, a emergency stop push button will be installed, a voltage adjustment shall be provided in the panel to adjust voltage in all voltage positions, a switch shall be provided in the panel to turn all power off in the panel if not being used
- Enclosure: Complete diesel engine generator set including control panel, engine starting batteries and fuel tank shall be enclosed in a factory assembled weather protective, sound attenuated enclosure, the sound attenuated enclosure noise level is not to exceed 73-75 dba @ 21', oil and water drain lines shall be provided and extend to the enclosure wall with valves for easy service, critical grade silencer, companion flanges, flexible exhaust-flex, keyed alike lockable doors
- Startup & Commissioning: One (1) day startup including operational test of equipment showing proper connection of cables with safety issues performed by a factory trained technician, the startup technician will instruct personnel how to operate and maintain the equipment in accordance with the manufacturer's requirements
- Conditions: In addition to equipment specified, each generator shall be equipped with all standard equipment as specified by the manufacturer for this model and shall include but not be limited to the following items- all product shall be new and of current design, initial filling of oil and antifreeze (diesel fuel by others), during startup, the technician shall record the



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

following information and provide to owner for his records- Operating Voltage, Hz, Ph, and connected load (Amperage) [if any], package information consisting of make of generator, model, serial number of complete package, and startup date, written information consisting of make, model, serial number, and startup date, record engine and generator serial numbers, one complete set of operation and maintenance manuals, two (2) year or 1500-hour standard mobile generator warranty will apply, generator to be transported to authorized servicing dealer for warranty repair during normal business hours

- Trailer: The trailer must have a VIN and a certificate of origin



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Generator: 500kW Mobile

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Generator Requirements: Standby duty rated at 500 kW, 625 kVA, 0.8 power factor, prime power duty rating 450 kW, 563 kVA, 0.8 power factor, main breaker shall be equipped with shunt trip, generator end shall be direct coupled to the engine flywheel with a flexible coupling, generator shall meet performance class G3 of IEC, jacket water heater with service valves to ensure coolant does not need to be drained if heater needs service
- Engine: 6-cylinder, water cooled, 1800 rpm, diesel engine, current emission compliant diesel engine, spin on fuel and oil filters, 120 vac, 1 Ph, 60 Hz input 10 amp, 24 vdc, output automatic battery charger, standard 4D lead acid batteries with battery rack and cables
- Voltage Change Over Switch And Distribution: Manual 2 position voltage change over switch to select each voltage as specified when the unit is not running 3 Ph 120/208, and 3 Ph 277/480, load leads shall be attached to the generator using two (2) forms and shall be rated for 2000 amps, generator will be equipped with both, five (5) compression lugs per phase rated for 400 amps each, 20 amp, 120 vac, 1 Ph, male receptacle shall be provided to power the jacket water heater, a 20 amp, 120 vac, 1 Ph, male receptacle shall be provided to power the battery charger, two thumb screw type connection points shall be provided for remote auto start
- Controls: Solid state, microprocessor-based generator controls, controls shall provide all operating, monitoring and control functions for the generator set, controls shall provide for auto start/stop functions, an emergency stop push button will be installed, a voltage adjustment shall be provided in the panel to adjust voltage in all voltage positions, a switch shall be provided in the panel to turn all power off in the panel if not being used, a front face mounted circuit breaker shall be provided to protect the panel from any D.C. spikes
- Enclosure: Complete diesel engine generator set including control panel, engine starting batteries and fuel tank shall be enclosed in a factory assembled weather protective, sound attenuated enclosure, the sound attenuated enclosure noise level is not to exceed 80 dba @ 21', enclosure shall be constructed from aluminum, preferably out of .125 thickness and 5,058 marine grade aluminum, oil and water drain lines shall be provided and extend to the enclosure wall with brass ball valves for easy service, critical grade silencer (25 db reduction), companion flanges, flexible exhaust-flex, keyed-alike lockable doors
- In Base Fuel Tank Trailer: Trailer shall be DOT approved with proper serial number data plate indicating weight capacity minimum of 20,000 lbs., trailer will have dual axles with torque springs to reduce overall height of package, standard 7 pin vehicle wiring connector to be supplied, trailer will have two rear level jacks with sand shoes and front leveling jack, trailer will have hydraulic brakes, trailer will have all necessary safety equipment to include, but not



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

be limited to, an adjustable and removable pintle hitch, 36" safety chains, fenders, lights per DOT, and break away cable, tires will be minimum load range type "D" (8 ply rating) with matching steel rims, rims are to be finish painted, minimum 8-hour capacity at 75% load rating to determine single wall tank size, a mechanical fuel gauge will be provided, locking fuel cap, low fuel level alarm, all necessary vents and caps will be provided along with suction, return, and drain points

- **Battery Charger:** Battery will be installed in holding container with battery cables, current limiting battery charger to automatically charge batteries, charger shall be dual charge rate with automatic switching to boost rate when required, charger mounted inside generator set package, fully charged battery will be provided at time of delivery and startup, 120-volt shore power connector for battery charger
- **Startup And Commissioning:** One (1) day startup including operational test of equipment showing proper connection of cables with safety issues performed by a factory trained technician, the startup technician will instruct personnel how to operate and maintain the equipment in accordance with the manufacturer's requirements
- **Conditions:** In addition to equipment specified, each generator shall be equipped with all standard equipment as specified by the manufacturer for this model and shall include, but not be limited to, the following items- all product shall be new and of current design, initial filling of oil and antifreeze (diesel fuel by others), during startup, the technician shall record the following information and provide to owner for his records- Operating Voltage, Hz, Ph, and connected load (Amperage-if any), written information consisting of make, model, serial number, and startup date, record engine and generator serial numbers, one complete set of operation and maintenance manuals, two (2) years or 1,000 hours standard mobile generator warranty will apply, whichever occurs first, generator to be transported to authorized servicing dealer for warranty repair during normal business hours
- **Trailer:** The trailer must have a VIN and a certificate of origin



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Generator: 500kW Stationary

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Generator Requirements: Standby duty rated at 500 kW, 625 kVA, 0.8 power factor, 480 volts, voltage options are- 120/240, 120/208 or 277/480 3 Ph, directly connected to the engine flywheel housing with a flex coupling, generator shall meet performance class G3 of IEC, unit shall be compliance with UL 2200 specifications
- Engine: 6-cylinder, water cooled, 1800rpm, diesel engine, emission compliant engine to stationary standby regulations.
- Controls: Solid state, microprocessor-based generator controls, controls shall provide all operating, monitoring and control functions for the generator set, control panel is NFPA110 compliant
- Enclosure/Silencer: Complete diesel engine generator set including control panel, engine starting batteries and fuel oil tank shall be enclosed in a factory assembled weather protective, sound attenuated enclosure with oil and water drain lines, enclosure shall be constructed from aluminum, preferably out of .125 thickness and 5,058 marine grade aluminum, critical grade silencer (25DB Reduction), companion flanges, flexible stainless-steel exhausts flex
- Fuel Tanks: Double wall sub-base diesel fuel tank shall be integral to the enclosure, 24-hour capacity at 75% load rating, rupture basin will be of 110% capacity, locking fuel caps, all necessary vents and caps will be provided, mechanical fuel level gauge, low fuel level alarm contact, fuel tank rupture basin alarm contact, must meet UL 142 and FDEP standards
- Battery Charger: Current limiting battery charger to automatically charge batteries, charger shall be dual charge rate with automatic switching to boost rate when required, charger shall be mounted on genset package.
- Startup And Commissioning: Vendor must coordinate all startup and testing activities with the engineer and owner, after installation has been completed, approved by the local electrical inspector, and normal power is available, the vendor will perform a one (1) day startup including the use of building load, the startup technician will instruct all necessary personnel how to operate and maintain the equipment in accordance to the manufacturer's requirements
- Conditions: In addition to equipment specified, each generator shall be equipped with all standard equipment as specified by the manufacture for this model and shall include but not be limited to the following necessary items- initial filling of oil and antifreeze, shrink wrap applied to the product to ensure a clean finish, during the startup, the technician shall record the following information and provide to the owner for his records- record operating voltage, Hz, Ph, and connected load (Amperage), package information consisting of make, model, serial number, and startup date, record engine and generator serial numbers, one complete set of



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

operation and maintenance manuals, two (2) years or 1,500 hours standard standby generator warranty, whichever occurs first, labor, materials, and travel for the warranty period repair will be paid by manufacturer during normal business hours



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Horizontal Directional Drill

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Width: 89"
- Height: 76"
- Weight: 20,700 lbs.
- Length: 20'
- Engine: 125 hp, liquid cooled diesel, meeting current emission level, 44 gal fuel capacity
- Operational: Thrust/pullback 28,000 lbs., carriage speed 240 fpm, spindle torque 4200' lbs., rotational speed 270 rpm, bore diameter 4", ground speed 3.0 mph, drill rack angle 14-21 degrees
- Controls: Touchscreen guidance display
- Drill System: Hydraulic vise, stakedown system , strike alert, remote lockout, work lights
- Drill Pipe: Rod diameter- 2.38", length- 10', weight- 73 lbs., bend radius- 108'
- Color: Manufacturers standard color
- Fluid System: Mixing



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Leaf Collector: Trailer Mounted

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Motor: 74 hp diesel engine, liquid cooled, current level emission compliant, 50 gal fuel capacity
- Fan: 27" fan, direct drive
- Pickup Hose: 16" diameter, 3 function hydraulically controlled arm, safety interlock
- Collection Body: 30 cubic yd. capacity w/ tailgate, scissor hoist, hydraulic dump
- Ride On Operator Station: All machine controls to be located at operator station, seat belt, emergency shutdown
- Dust Control: Dust control system, pump, 3 nozzles, 90 gal water tank
- Trailer: Frame, axles, tires, electric brakes will be sized for GVWR of unit, DOT compliant marking and lighting, pintle hitch, yellow flashers, tongue jack
- Color: Manufacturers standard color



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Lift: Scissor Lift - Self Propelled

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions (approximate): 64" x 29" platform, 36" extension deck, 25' working height (raised), 18' platform height (raised), lift capacity 500 lbs.
- Power: 24 volt, 4-6 volt batteries, on board charging system, dual front wheel drive
- Brakes: 2 or 4 wheel brakes
- Platform: Fixed rails, 36" extension deck, AC power to platform, lanyard attachment points
- Safety: Manual platform lowering, emergency stop on platform and ground control, descent alarm, hour meter, horn, pothole guards, on board diagnostic system, tilt lever sensor with alarm, scissor maintenance prop



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Light Tower: Hybrid Light Tower

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions (approximate): length- 174", width- solar panels retracted 69", height- 72", mast deployed height- 30', weight- 1,850 lbs.
- Generator: Perkins 403.F.11-10 kW Tier 4, 2 20A/120 v receptacles, electric start 12-30 gal fuel tank, auto mode- automatic start for low battery hybrid systems automatically switches between solar battery, generator, or standard household current
- Trailer: Axle 2000 lbs., 13in" wheels, hitch 3 position adjustable ball, stabilizers- 2 extendable outriggers, 1 trailer jack, top mounted fork pockets and single lifting eye, powder coated DOT rated trailer with lights, trailer weight- 1,850 lbs.
- Mast: 30' extendable mast in 3 stages wind stability to 40 mph rotates 90 degrees
- Lights: 4 quick connect 320 watt each, LED lights, dimmer control, instant on/off, 365 day programmable timer for lights, on/off, lens patten spread of 150 degrees, meets DOT anti-glare regulations
- Solar Panels: 5 100 watt panels, operating temperature- 40c to 46c 7
- Batteries: 4 deep cycle batteries, optional lithium cells, 12 volt, 220 amp hours



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Light Tower: Light Tower - Trailer Mounted

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions (Approximate): Length- 170", width- 51", height- 74", mast deployed height- 30', weight- 1,610 lbs.
- Engine: 3-cylinder diesel engine, 12 hp at 1800 rpm, engine protection shutdown system
- Generator: Wattage output 7,000 watt max, 6000 watt continuous, brushless type, 120/240 volts at 60 hz +/- 6% regulated, amps at 120/240v 50/25, insulation class
- FUEL TANK: 30 gal capacity, run time (approx.) 64 hours
- Trailer: Axle 1,800 lbs., 13" tire size, hitch 2" ball, leaf spring suspension, tongue jack, 4 outrigger jacks
- Control Panel: Individual breakers for lights, hour meter, cabinet lights, external receptacles- 1-30 amp 120/240 volt, twist lock, 1 GFCI, 15 amp 120 volt
- Mast: 32' extendable mast, 4 each metal halide light heads, 440,000 lumens, 360-degree mast rotation, fold down for transport, winch for mast extension



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Loader: Loader Backhoe - 4x4

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 87 hp diesel engine, dry type, radial seal air cleaner and pre-cleaner unit, spin on type engine oil filter
- Transmission: 4-speed power shift or power shuttle transmission
- Operator Environment: OSHA approved ROPS canopy shall be integral, two front and two rear work and driving lights Stop and turn signals with flashing hazard lamps Instrument panel with a complete set of gauges or an electronic monitoring device Standard horn and audible back-up alarm
- Brakes: Brakes shall be oil immersed, hydraulically actuated, multiple disc on final drive input shaft Brakes shall be completely enclosed and sealed, fully self-adjusting
- Loader (Single Tilt Cylinder): Loader shall be equipped with a return to dig mechanism, loader shall have positive down pressure sufficient to lift the tractor front end off level ground, loader bucket SAE heaped capacity of minimum 1.3 yd. with replaceable bolt on edge
- Backhoe: Fixed length dipper stick digging depth approximately 14', reach from swing center, approximately 18', dump height, approximately 11' 3", digging force approximately 8,000 lbs., bucket dig force, approximately 11,990 lbs., 24" general purpose bucket with replaceable teeth



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Skid Steer - 1,850 lbs. Operating Capacity - Wheeled Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 3-cylinder 56 hp diesel
- Transmission: Hydrostatic drive forward, reverse, travel speed controlled by two hand levers
- Engine Equipment: Spin on type filters, dry type air filter
- Operator Environment: OSHA approved ROPS canopy shall be integral, front and rear work lights, hazard lights, engine monitoring system or gauges, with audible alarm, tires 10x16.5 extra walls, horn and backup alarm
- Brakes: Parking brake, hydrostatic main braking
- Loader: Front auxiliary hydraulics, foot or hand controls for bucket, minimum 62" wide construction bucket, operating capacity 1,800 lbs. minimum



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Skid Steer - 2,800 lbs. Operating Capacity - Wheeled Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 3-cylinder 83 hp diesel
- Transmission: Hydrostatic drive forward, reverse, travel speed controlled by two hand levers
- Engine Equipment: Spin on type filters, dry type air filters
- Operator Environment: OSHA approved ROPS canopy shall be integral, front and rear work lights, hazard lights, engine monitoring system or gauges, with audible alarm, horn and backup alarm, tires 14x17.5 extra wall
- Brakes: Parking brake, hydrostatic braking
- Loader: Front auxiliary hydraulics, foot or hand controls for bucket, minimum 84" wide construction bucket



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Skid Steer - 3,100 lbs. Operating Capacity - Tracked Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Minimum 3-cylinder 74 hp diesel, spin on type filters, dry type air filters
- Transmission: Hydrostatic drive, forward, reverse, travel speed controlled by two hand levers
- Operator Environment: OSHA approved ROPS canopy shall be integral, front and rear work lights, hazard lights, engine monitoring system or gauges, with audible alarm, horn and backup alarm
- Brakes: Parking brake, hydrostatic braking
- Bucket: Minimum 66" construction bucket, bolt on, replaceable cutting edge for bucket, operating capacity 3,100 lbs. minimum



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Wheel Loader - 1.5 cubic yd.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine/Cab:, 6-cylinder diesel engine, liquid cooled, minimum 77 hp, ROPS cab with air conditioning and heat
- Transmission: Power shift transmission with torque converter or hydrostatic drive, minimum of 4 forward and 3 reverse speeds
- Drivetrain: Four wheel drive, 15.5-25 bias ply tires mounted on multi piece rims
- Loader: 1.5 cubic yd. general purpose bucket with bolt on cutting edge, bucket position indicator, automatic return to dig, rear drawbar, gauges and indicators- visual hydraulic oil level indicator, electronic monitor display of all fluid levels and temperatures, deluxe suspension seat with foam padding and backrest, articulated steering, clearance circle 34' .02", wheelbase of at least 7', minimum operating weight of 12,727 lbs.
- Electrical: Manual battery disconnect switch, driving lights, front and rear work lights, stop lights, warning lights and taillights



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Wheel Loader - 3.0 cubic yd.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine/Cab: 6-cylinder diesel engine, liquid cooled, minimum 140 hp, ROPS cab with air conditioning and heat
- Transmission: Power shift transmission with torque converter or hydrostatic drive, minimum of 4 forward and 3 reverse speeds
- Drivetrain: Four wheel drive, 20.5-25 radial tires mounted on multi piece rims
- Loader: 3.0 cubic yd. general purpose bucket with bolt on cutting edge, bucket position indicator, automatic return to dig, rear drawbar, gauges and indicators- visual hydraulic oil level indicator, electronic monitor display of all fluid levels and temperatures; deluxe suspension seat with foam padding and backrest, articulated steering, 40 degrees minimum each direction, wheelbase of at 9' 4" minimum, minimum operating weight of 26,000 lbs.
- Electrical: Manual battery disconnect switch, driving lights, front and rear work lights, stop lights, warning lights and taillights



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Loader: Wheel Loader - 5.75 cubic yd.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine/Cab: 6-cylinder diesel engine, liquid cooled, minimum 280 hp, ROPS Cab with air conditioning and heat
- Transmission: Power shift transmission with torque converter or hydrostatic drive, minimum of 4 forward and 3 reverse speeds
- Drivetrain: Four wheel drive, manufacturer's standard axle, 26.5-R25 radial tires mounted on multi piece rims
- Loader: 5.75 cubic yd. general purpose bucket with bolt on cutting edge, bucket position indicator, automatic return to dig, rear drawbar, gauges and indicators- visual hydraulic oil level indicator, electronic monitor display of all fluid levels and temperatures, deluxe suspension seat with foam padding and backrest, articulated steering, 40 degrees minimum each direction, wheelbase of 11' 4" minimum, minimum operating weight of 53,674 lbs.
- Electrical: Manual battery disconnect switch, driving lights, front and rear work lights, stop lights, warning lights and tail lights



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Low Speed Vehicle: Electric Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Classification: These vehicles are primarily used to transport people and limited cargo in the State of Florida on typical federal, state, county and city highways and roads that are posted for 35 mph or less and shall be designed to operate under typical environmental conditions, vehicles must conform to Federal Motor Vehicle Safety Standards, State of Florida Vehicle Safety Laws, regulations, specifications, standards, and requirements in effect as of the date of manufacture
- Engine: 5.5 hp 4 kW electric motor, 48 volt lead acid batteries (8 batteries x 6v), 110v eagle on board charger, 50 miles per charge, max forward speed 25mph, digital speedometer and dashboard
- Dimensions (approximate): Length- 96", height- 76", width- 48", wheel base- 66.9", ground clearance- 5", body- plastic body and fiberglass roof, DOT windshield with wiper
- Comfort Items: 4 person seating with flip rear seat for cargo
- Chassis/Steering/Suspension: 10' turning radius, steel frame type chassis, 500lbs. GVW capacity
- Tires And Wheels: 205/50-10 tires, 10" aluminum rims
- Brakes: 4 wheel hydraulic, hand brake
- Safety Items: 100% Electric with zero emissions, 12v headlights and indicators, voltmeter, turn signals, side and rear-view mirrors, reverse alarm, non-slip flooring, neutral switch when vehicle is standing still, horn



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Motor Grader: Large

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Liquid cooled 6-cylinder diesel with minimum of 140 net hp @ 1900 rpm
- Transmission: Power shift with direct drive, minimum 8 forward and 4 reverse speeds Brakes: Wet multiple disc
- Steering & Articulation: Front steer plus articulated, minimum articulation 20 degrees
- Moldboard: Minimum 12' long
- Operator Environment: Low profile cab, cloth adjustable seats, gauges including hour meter, fuel, articulation, engine coolant temperature
- Tires: Minimum 13.0-24 10 PR 9" single piece rim



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Motor Grader: Small

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions (approximate): Length- 21', width- 7', height with cab- 10' 4", weight- 15,200 lbs.
- Engine: Diesel, turbocharged 110 hp, 39 gal fuel tank
- Drive Train: Hydrostatic drive or power shift, 2-speed gear box
- Brakes: Fail safe brake system
- Steering/Articulation: 18 degree articulation left or right, front wheel lean
- Moldboard/Blade: 10' sliding/tilting moldboard, 10' blade, circle side shift, scarifier- center mount, front mount or rear mount acceptable, adjustable turn table, blade float control
- Operators Station: Enclosed cab, front and rear windshield wipers, suspension seat, air conditioned and heated cab, gauge package work lights



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Mower: 15ft. Flex Wing Rotary Mower

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Deck: Mower shall be rotary, flex wing style, 10 gauge steel minimum, replaceable full-length skid shoes, shall be easy clean style
- Blade Carrier & Blades: 7 gauge steel minimum, 1" thick cross bar weldment, "Stump Jumper" pan design, 2 free swinging updraft cutting blades ½" thick, heat treated alloy steel minimum, blades shall overlap a minimum of 6" for uniform cut, blade spindles shall be 1 ¼" diameter minimum
- Wheels/Tires: 6 replaceable puncture resistant foam filled airplane tailwheels
- Power Distribution: Main driveline shall be CAT 5, slip clutch protection shall be featured, gears shall be straight bevel with tapered roller bearings, a power divider shall have a rating of 190 hp minimum, center and wing gearboxes shall have a minimum rating of 190 hp
- General Features: Mower shall attach to the rear of the tractor using a self-level-lift hitch, front and rear chain deflectors, tongue shall have a jack stand



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Mower: Remote Controlled Brush Mower

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Approximate Dimensions: Length- 57", width- 59", height- 33", weight- 990 lbs.
- Engine: 24 hp 2-cylinder gas, pressurized oiling system, electric start w/ 16v, 16 a alternator 5 gal fuel capacity
- Track Drive System: Two 48v electric motors, infinitely variable gear reduction transmissions, multi lug type tracks, neoprene rollers
- Mower Deck: Twin spindle deck, 10 gage mower deck, blade bar 2x22" with 4 free swinging blades, electric clutch assembly w/ integral safety brake, mowing height range- 2 to 7"
- Remote Control: Remote control to control mower functions- travel speed, cutting height, hours, radio signal strengt state of charge of remote control battery, and mower on/off, remote control working range 328', max range 984', auto stop feature for loss of radio signal, rechargeable lithium ion batteries
- Safety: One touch emergency shut off switch



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Mower: Electric Zero Turn Radius Mower

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Electric Power: 36 hp gas equivalent, electric power
- Battery: 22 kWh battery w/ charger, 7 hours of mowing time
- Deck: 60" deck, 1.5-5.5" height adjustment, side discharge
- Wheels: 24x12 drive wheels, solid deck wheels
- Operator Station: Suspension seat, all controls, ROPS bar
- Mowing Speed: 11mph (approximate)



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Mower: Zero Turn Radius Mower

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 25 hp gas engine, positive feed oil system with spin on filter, electric start
- Drive Train/Axles: Spin on hydraulic filters
- Deck: 60" heavy duty mower deck, 3 blade spindles, manual deck lift, 1" to 5" cutting height, deck engagement electric clutch
- Wheels: Front wheels- 13x6-6 ribbed, minimum, Rear wheels- 24x11.5-12 turf
- Comfort & Convenience: High back full suspension seat, ROPS bar
- Approximate Machine Dimensions: Length- 82", height- 72" with ROPS, width- 63" without chute



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Pallet Jack: Electric 4,500 lbs. Capacity

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: 900 lbs.
- Wheelbase: 51"
- Turning Radius: 58"
- Lift Capacity: 4,500 lbs.
- Travel Speed: 3.7 mph
- Turning Radius: 59"
- Gradeability: 8% (loaded)
- Drive: 1.3 kW drive AC motor, polyurethane drive wheels, electric brake, lift motor 1.2 kW
- Battery System: 150 Ah battery, integrated on board charger
- Controls: Tiller type control, multi-function control on tiller handle



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Pipe Inspection: Battery Operated Pipe Crawler Inspection System

Note: Due to the complexity of this type of equipment, it is suggested that the purchaser contact the vendor to ensure the item ordered is a complete, ready to work unit and is compatible with the end user's software/hardware requirements and performance expectations.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Width: 6"
- Height: 5.5"
- Length: 28"
- Weight: 65 lbs.
- Depth Rating: 160'
- Pipe Range: 8" to 12"
- Speed: 12m/min maximum
- Pull Force: 130 lbs.
- Sensors: Incline, roll, leak, pan/tilt, distance
- Tether Reel: Motorized reel, 1,000' tether capacity, 1,600 lbs. break strength
- Battery Power: 19.2 VDC, 5 hour battery life, capable of optional hybrid power
- Lighting: 900 LM
- Controller: Weatherproof, splashproof, joystick type controls, battery powered
- Camera: 360 degree pan, 1080p/2mp resolution, tilt 280 degrees, zoom 10x optical 120x digital, focus auto or manual, exposure auto or manual



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Pump: Mobile Pump

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Design Requirements: Discharge size- 6", suction size- 6", capable of 1,750 gpm minimum, capable of 160' Total Dynamic Head (TDH) minimum, Duty Point, maximum- 1,000 gpm minimum at 120' Total Dynamic Head (TDH), solids handling capability size, minimum size- 3"
- Engine: Diesel engine, appropriate to pump size at continuous duty, emission compliant engine, industrial grade exhaust muffler and rain cap, oil and coolant drain lines with ball valves, low water level shutdown switch, 12 VDC system with battery rack and cables, 50 gal minimum fuel tank with low fuel level alarm and shutdown
- Pump: Check valve, self-priming system
- Controls: Solid state, microprocessor-based pump controls, controls shall provide all operating, monitoring and control functions for the pump set, controller will also provide 2 fully programmable contacts for input and output signals accordingly, controller will provide remote start stop control with adjustable ramp (speed) time control, UL 508 R and CSA C22.2 No. 14 approved
- Trailer: The manufacturer shall mount the diesel engine and pump unit with the above 50 gal subbase tank on a street legal DOT approved trailer, this trailer will be able to be rated for a safe travel at speeds of 60 mph and not be limited to the following specifications- trailer design shall be such that the county/city may easily remove the entire engine, fuel tank and pump from the trailer, 12 VDC electric system, lunette or military type towing ring with safety chains, single point lifting bar, license plate bracket, sand shoe type support stands front and rear, torque spring axles to meet load of trailer, the trailer must have a VIN and a certificate of origin
- Startup And Commissioning: Vendor must coordinate all startup and testing activities with the engineer/owner, after field delivery of the pump and trailer, an authorized factory representative shall perform the initial startup and field testing of the pump and trailer, if conditions permit, a site will be determined where connection will be made by the county/city to test the pump package, if a site cannot be prepared a standard operational test will be performed, at the same time the startup test is performed, the factory representative will provide all necessary operation, field maintenance and minor repair training as necessary, this will also include safety procedures and hazard assessment



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roadway Advisory Board: Mobile Message Board

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Display Panel: Minimum panel size 72"x48"
- Expected Power: Solar and battery with battery charger, meets manufacturer requirements
- Trailer: 2" minimum ball coupler, meets manufacturer and highway safety requirements



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roadway Advisory Board: Mobile Speed Board

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Display Panel: Amber or red LED, 12” minimum speed limit sign
- Radar Speed Unit: Miles per hour, directional radar
- Data Collection: Data and analysis software included
- Expected Power: Solar and battery with battery charger, meets manufacturer requirements
- Trailer: 2” minimum ball coupler, meets manufacturer and highway safety requirements



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roadway Advisory Board: Mobile Speed Board/Automatic Licence Plate Reader

Note: Due to the complexity of this type of equipment, purchaser should research and verify the unit bid will meet their desired performance expectations and is compatible with their hardware/software requirements. It is recommended the vendor be contacted to assist with determining these factors prior to purchase.

Unit bid will be ready to work with batteries, carrying cases, technical manuals, etc.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Power System: 3 AGM type batteries, integral 120v charger, 5 to 7 day runtime, solar panel
- License Plate Reader: 2 cameras, tablet processor, software, automated hotlist alerting, plate search and vehicle filtering
- Digital Speed Display: 12" digital display, configurable, flashing excessive speed message capability
- Radar: Radar included
- Posted Speed Limit Sign: Metal sign included
- Connectivity: Cellular connectivity
- Trailer: DOT approved trailer, all weather protection, maximum vandal protection



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roadway Advisory Board: Mobile Traffic Advisory/Directional Signal Board

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Display: 15 lamps minimum, 48"x96" panel size
- Expected Power: Solar and battery with battery charger, meets manufacturer requirements
- Trailer: 2" minimum ball coupler, meets manufacturer and highway safety requirements



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roller: Compaction Roller 30,000 lbs. - Single Drum

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight with open rops 15,200 lbs.
- Drum/Vibratory System: Maximum compaction shall not be less than 30,000 lbs., drum shall have a compaction width of not less than 66", drum shall be smooth and not be less than 48" in diameter, vibratory system shall be hydraulically driven and have two amplitude settings, drum shall be equipped with an adjustable cleaning device, drum and vibratory pack shall be isolated from the machine during normal operation
- Engine/Cab: Turbocharged diesel engine, minimum 74 hp operator station shall be mounted to the frame with rubber mounts to further isolate the operation and controls from machine vibration during operation, gauges or warning indicators for fuel level, engine oil, hydraulic oil and coolant temperature with an alert sounding device activated whenever a warning indicator is illuminated, a backup alarm shall emit an audible alarm whenever the propel lever is moved into reverse
- Travel System: A machine must be hydrostatic driven for the rear axle and the drum drive motor
- Electrical System: 12 or 24 volt electric system, maintenance free battery supplying 750 cold cranking amps, wiring harness protected with nylon-braided wrap



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roller: Large 22,000 lbs. - Double Drum Roller - 70in. Width

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight 22,000 lbs.
- Drum/Vibratory System: Drum compaction width on both drums no less than 70", drum shall be smooth and not less than 48" in diameter, vibratory system shall be hydraulically driven, drum shall be equipped with scrapers both front and rear of both drums, drum shall be hydraulically driven and have two (2) amplitude settings
- Engine: Diesel engine of not less than 100 hp, reverse alarm for reverse operations
- Travel System: The machine shall be hydrostatically driven, steering shall be center articulated and oscillated
- Miscellaneous: Unit shall be equipped with pressurized water for both drums, electrical system shall be 12 or 24 volt



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Roller: Small 5,400 lbs. - Double Drum Roller - 47in. Width

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight 5,423 lbs.
- Drum/Vibratory System: Drum compactor width on both drums no less than 47", drum shall be smooth and not less than 27.5" in diameter, vibratory system shall be hydraulically driven, drum shall be equipped with scrapers both front and rear of both drums, drum shall be hydraulically driven and have two amplitude settings
- Engine: Diesel engine of not less than 25 hp, reverse alarm for reverse operations
- Travel System: The machine shall be hydrostatically driven, steering shall be centered articulated and oscillated
- Miscellaneous: Unit shall be equipped with a pressurized water system for both drums, electrical system shall be 12 or 24 Volt



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Sewer Cleaner: Combination Sewer Cleaning/Vacuum Machine Body - 10 cubic yd.

Note: Incomplete unit. This is a bid award on a combination sewer cleaning/vacuum unit to be mounted on an appropriately sized cab & chassis truck. Agencies purchasing this unit will need to provide a cab & chassis truck of appropriate size, GVW, and options necessary to have the selected combination sewer cleaner/vacuumping unit mounted on or have the truck provider assist in ordering the correctly outfitted truck. All items factory installed unless otherwise noted.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Air/Vacuum System: Positive displacement vacuum pump or centrifugal compressor, 3,500 CFM @ 14.5" of mercury minimum, muffler, vacuum relief valves, centrifugal separator with clean out, PTO or hydrostatic drive
- Debris Tank: 10 cubic yd. capacity, 45 degree hydraulic dump, top hinged, hydraulic door locks, sight glass or indicator, drain valve with hose, check ball system or vacuum breaker
- Boom Assembly: 270 degree boom working area, hydraulic up/down, clean out port, transport cradle, 8" boom hose, pendant control
- Water Pump: 2,500 psi, 80 gpm, pressure relief valve, wash down gun with relief valve
- Water Tank: 1,000 gal capacity, curb side fill, level indicators
- Hose Reel: 800' of 1" hose capacity, 400' of 1", 2,500 psi hose supplied, power in/out, reel speed control system, position lock system, engine and hose reel controls, level wind
- Drive System: Hydrostatic transfer case, split PTO, or auxiliary engine or transfer case



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Sewer Cleaner: Trailer Mounted Sewer Cleaner

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 60 hp diesel engine, water cooled, engine enclosure, 15 gal fuel tank
- High Pressure Water Pump: 4,000 psi at 18 gpm, pressure relief valve, triplex type pump, low water shutdown, multi-flow type system (pressure change without changes to engine rpm)
- Controls: Located next to hose reel, ignition, throttle, gauge package (tachometer, hour meter, oil pressure, volts, and low oil/high temp shutdown), water control valve
- Water Tank: 700 gal capacity, high density polyethylene with baffles, sight gauge 2 ½" overhead tank fill, anti siphon, air gap type, strainer, tank drain
- Hose Reel: 800' capacity of ½" high pressure sewer hose, hydraulic power in and out
- Hose Reel Drive Hydraulic System: Hydraulic pump 8 gpm, 15 gal hydraulic reservoir, spin on type hydraulic filter
- Trailer: 12,000 lbs. GVW, 6"x3/16" frame, tandem axle 2 5/16" hitch, tongue jack, 235/80 r 16" tires, fenders, breakaway switch, lighting as required by Federal and State laws, reflective striping, toolbox with locking system, LED directional arrowstick, warning beacon (tank mounted)
- Equipment Furnished: 500' of ½" high pressure sewer hose, 100' of ¼" hose and nozzle for small pipe, washdown gun and 25' of hose with quick disconnects, tiger tail hose protector, nozzles to be furnished, 15 degree, 35 degree, chisel point, grenade flushing type, skid assembly, and rotator nozzle



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Shop Tools & Equipment

Due to the complexity of this type of equipment, there are no base unit specifications. Purchaser should research and verify the model offered will meet their desired performance expectations. It is recommended the vendor be contacted to assist with determining needs, prior to purchase.

Units bid must be ready to work, with all necessary components and user manuals.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Shredder: Mobile Shredder

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Approximate Dimensions: Weight- 27,000 kg, length-15 740mm, width- 2 520mm, material feeding height- 3 395mm, belt discharge height- 4 030mm
- Engine: Diesel, 540 hp @ 2100 rpm, Turbocharged w/ intercooler, 750 li fuel tank
- Powertrain: Hydro-static drive w/ auto speed control, variable displacement drive motors, axial piston pumps, variable displacement
- Rotor: Rotor diameter 920mm, rotor 30 max rpm, rotor shredding length 3,000 mm, rotor knives 33, reversible type, counter knives 23, adjustable rotor screen
- Controls: Gauge package, w/ engine protection shutdown, shredder control unit to protect from overloading, overheating and damage of the powertrain
- Conveyor: Hydraulic driven conveyor, raised and lowered by hydraulics
- Trailer: Trailer to be constructed and sized for the installed unit, and will meet all local, state, and federal laws for use on highway, hydraulic support legs



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Solid Waste Material Handler: Wheeled Type

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Tier IV final diesel engine, 132 hp, spin on filters, two stage air cleaner
- Weight: Minimum operating weight 48,000 lbs.
- Travel System: 2 speeds- 0-3.0 mph/0-12.0 mph
- Hydraulic System: Main hydraulic system flow 80 gpm
- Undercarriage: Two axles with all wheel drive, 8- 10:00x20 solid tires
- Operating Station: Cab to be climate controlled with pressurized filtration, hydraulic elevating cab, sliding door window and tilt out front window, tinted windows with safety glass, adjustable suspension seat with safety belt and seat heater, catwalk with handrail, fire extinguisher, rear view and right view camera system, halogen work lights on roof cap
- Working Equipment: Purpose built material handling boom and stick, safety check valves on boom and stick cylinders



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Stump Cutter

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 35 hp gasoline engine, 6 gal fuel tank, positive feed oil system with spin on filter, heavy duty air filter, 12 volt starting/charging system
- Ground Drive: Hydraulic ground drive, 2-speed travel, hydraulic brake system, hydraulic steering system, hydraulic system spin on filter, 4 gal hydraulic reservoir
- Cutter Drive: Electric drive clutch, adjustable V belt drive
- Cutter Wheel: 17" diameter, 16 dual cutting edge teeth, teeth pocket mounted, cutter wheel guard
- Controls: Hour meter, low-oil shutdown, boom swing left and right, boom up and down, travel forward and reverse, steering, operator presence shutdown
- Approximate Dimensions: Weight- 1,320 lbs., length- 110", width- 49", height- 53"
- Cutting Dimensions: Above ground- 24", below ground- 15"



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Sweeper: 3-Wheel Mechanical or Regenerative Air Sweeper

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 4-cylinder diesel engine, 74 hp minimum, 120 amp alternator, fuel water separator, 30 gal fuel tank capacity
- Transmission: Hydrostatic drive type, 35 gal reservoir, capable of 20 mph minimum
- Cab: Sealed type cab with filtered intake, tilt and telescoping steering column, tinted glass, sound suppressed, intermittent windshield wipers with washer, full gauge and warning lights for engine monitoring, climate controlled cab, heater, defroster and air conditioned, if cab is not center mounted, it must have dual controls for operating on either right or left hand side
- Frame: 116" wheelbase, rail type channel frame
- Safety Items: Dual west coast mirrors with spot mirrors, headlights, turn, brake and hazard lights, worklights for gutter brooms, cab mounted warning strobe light with protective cage, backup alarm, rearview backup camera
- Brakes/Steering: Hydraulic power assisted service brakes, parking brake, turning radius 15' maximum
- Debris Hopper: 3.5 yd. capacity minimum, 9' 6" minimum dump height
- Conveyor: Rubber belt type with flights, hydraulic drive
- Main Broom: 32" diameter minimum, 56" width tube type, hydraulic drive
- Gutter Brooms: Right & left side brooms to have adjustable down pressure located in cab, 36" diameter minimum, segmented type broom, hydraulic drive
- Water Spray System: 220 gal water tank, run dry type water pump, 15' hydrant fill hose, water spray jets adjacent to all brooms, water filter
- Pick Up Head: The following requirements are for the regenerative air system type sweeper, all other requirements are the same for either machine, 72" outside dimension, 12" pressure hose, 12" suction hose, spring type suspension
- Blower: The following requirements are for the regenerative air system type sweeper, all other requirements are the same for either machine, direct hydraulic drive, cast aluminum with abrasion resistant coating, blower housing rubber lined



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Sweeper: Cabover Mechanical Broom Street Sweeper

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Cab Chassis: Engine- 6-cylinder diesel, 200 hp minimum, transmission- automatic transmission to meet the correct engine size and GVW of vehicle, hydrostatic drive is acceptable, engine equipment- alternator- 12V/130 amp, fuel water separator, 50 gal fuel tank, cab- dual operating position type cab to include- steering, controls, etc. for sweeping from either side, rubber floor mats, air ride seating, pressurized cab with heat and air conditioning, instrumentation for truck- oil pressure, water temperatures, voltmeter gauges, instrumentation for sweeper-tachometer, hour meter, oil pressure, coolant temperature gauges, frame- rail type 80,000 psi, size- 10.9" x 3.5" x .34", frame overhang, wheelbase 130" minimum, front steel bumper, safety- Dual West Coast bright finish heated mirrors with LH & RH remote, intermittent windshield wipers, daytime running lights, backup alarm, auto shutdown, axles- front axle- 11,900 lbs. GVW, rear axle- 21,000 lbs. GVW, single speed rear axle, 22.5 x 8.25 steel wheels- disc type, 11R x 22.5 14-ply radial tires, brakes- antilock brakes, front air brakes- 15 x 4 drum, rear air brakes 16.5 x 7 drum, automatic slack adjusters- front and rear, air dryer- frame mounted
- Mounted Sweeper Body (Standard Equipment): Engine- 4 cylinder diesel, 47 hp, governed at 2,800 rpm, spin-on oil filter, alternator- 12V/60 amp, side brooms- right & left side gutter brooms (tilt control in cab), hydraulically raised & lowered , 42" diameter- segment type adjustable down pressure (Manual)- optional down pressure pump, main broom: length- 58" minimum, diameter- 35" minimum, hydraulic motor- direct or chain drive and reversible, full floating trailing arms w/shocks, lift control inside cab, sweeper body- overall height- 10' with strobe, lift capacity- 11,000 lbs. minimum, 4.5 cubic yd. hopper, dump height- 10' minimum. lift design- hydraulic 2-stage scissors, hopper inspection door, work lights- 1 on each gutter broom and one in rear, hydraulic system- hydraulic pump capacity minimum- 24 gpm @ 2,600 rpm, pump- dual tandem gear, reservoir - 21 gal, spin-on 10 micron hydraulic pump, externally mounted reservoir level indicator, water spray system- water tank construction- polyethylene and removable, water tank capacity- 280 gal minimum, fill hose 2 ½" x 16' with NST coupler, diaphragm pump type with run dry capability, pump capacity- 3.0 gpm minimum, minimum of 9 spray nozzles- 2 min per gutter broom, 3 min for main broom, water filter- 80 micron mesh cleanable, conveyor/elevator system- minimum of 9 flights- replaceable, belt material- rubber reinforced fabric, belt speed- variable with auxiliary engine rpm, drive- reversible with direct drive, elevator jam warning light & buzzer in cab, conveyor flush- built in



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Sweeper: Compact Air Sweeper - 2.3 cubic yd.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Operating Weight: 8,800 lbs. GVWR, empty weight- 5,900 lbs.
- Engine/Transmission: 78 hp, hydrostatic drive
- Brakes/Tires: Drum type brakes (power assist), front tire size 6.50 R10, Radial, rear tire size 225/75 R10 Radial
- Sweeper Dimensions: Height- 72", width- 52", length- 162"
- Hopper: 2.3 cubic yd. capacity
- Gutter Brooms: Equipped with left and right side gutter brooms, front mounted 33.5" diameter, overall sweeping width 122"
- Water System: 66 gal recirculation water system capacity, 40 gal clean water system capacity
- Lighting/Safety: Lighting package to enable vehicle to operate on the road, work lights for operation of vehicle at night, amber warning beacon, intermittent wipers
- Comfort Items: Cab to be air conditioned and heated, suspension type operator seat
- Instrumentation: Full instrumentation to monitor operation of vehicle
- Fan Unit: Centrifugal type fan, wear resistant blades



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Sweeper: Regenerative Air Street Sweeper

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Cab & Chassis: Engine- 6-cylinder diesel, 200 hp minimum, transmission- Allison 2000 series, 5-speed automatic, engine equipment- alternator: 12 volt 100 amp, fuel water separator, cab- cab over, with rust preventative coating, dual operating position type cab to include- steering, controls, etc., for sweeping from either side, rubber floor mats, air ride suspension seats, both sides, pressurized cab with heat and air conditioning, instrumentation for truck- oil pressure, water temperature, voltmeter gauges, instrumentation for sweeper- tachometer, hour meter, oil pressure, coolant temperature gauges, frame- wheelbase- 152" minimum, front steel bumper, fuel tank- 50 gal, safety- west coast mirrors with lower mounted convex mirrors, intermittent windshield wipers, daytime running lights, backup alarm, auto shutdown system for sweeper power plant, axles- front axle- 11,900 lbs. GVW, rear axle- 21,000 lbs. GVW, single- speed rear axle, 22.5 x 8.25 steel wheels- disc type, brakes- air dryer
- Mounted Sweeper Body: Engine- 4-cylinder turbocharged diesel, 99 hp minimum, blower- direct belt drive, blower rating- 20,000 cfm, blower housing, pickup head- 90" OD, hose size- 14" pressure, 12" suction, hydraulically raised and lowered, side brooms- right and left side gutter brooms, hydraulically raised and lowered, 42" diameter- segment type, adjustable downward pressure, sweeper body- 7 yd. volume metric capacity, 50 degree dump angle or raker bar, centrifugal dust separator, hopper dump door to hydraulically open/close, lock and unlock, hopper screen- hinged, quick release, hydraulic system- direct drive hydraulic pump, water spray dust control system- water tank construction- polyethylene, 220 gal capacity, fill hose- 16' long, diaphragm pump type with run dry capability, pump capacity- 5 gpm pump pressure- 25 psi, 7 spray nozzles, 4" pickup head, 1" suction tube- 2 on each side of broom, filter- 80 mesh cleanable



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Sweeper: Self-Propelled Hydrostatic Broom

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Weight: Minimum operating weight 5,500 lbs.
- Engine: Diesel engine 74 hp at 2,200 rpm, pre-cleaner 54 clone or equivalent, 27 gal fuel tank
- Travel System: 2-speed hydrostatic drive, high speed travel, 20 mph, 225/75R15 tire size, joystick direction controls, or foot pedal, front or rear wheel steering
- Cab: Roll over and falling object protective structures, enclosed cab with air conditioner, heater and defroster fan, front windshield wiper, gauges or warning indicators for fuel level, engine oil, hydraulic oil and coolant, right and left side doors, right and left side mirrors, shall have safety lighting package and night operating lighting package
- Broom: Minimum 7' 6" poly or poly-steel brush, brush shall have quick charge core system, minimum 150 gal brush watering attachment, shall have variable brush down-pressure control, brush shall be hydraulically driven



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Tactical Vehicle: Skid Steer Mounted (The Rook)

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Vehicle Platform: CAT multi-terrain loader, 84 hp diesel engine, 2-speed powertrain, operating weight 13,000 lbs., fuel tank 26 gal, hydraulic quick coupler, enclosed ROPS cab with air conditioner and heater, dual level suspension undercarriage with self level, advanced machine information and control system
- Cab Armored Protection: Bullet proof glass, NIJ Level IV armor cab reinforcement fabrication
- Armored Deployment Platform: integrated video system, breaching ram, vehicle extraction tool, grapple claw



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Tool Carrier: Hydrostatic Drive

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 90 hp turbo diesel, heavy duty radiator with high flow fan with reversing, clean out valve, canister style air cleaner with pre-cleaner, electric start with engine pre-heat, full engine gauge package, 30 gal fuel tank
- Power Train: Hydrostatic, variable displacement piston transmission pump, two, heavy-duty, 4 wheel drive, steerable axles with parking and service brake, 3 steering modes- 4-wheel round, front wheel and 4-wheel crab, approximately 9,000 lbs. GVW (without attachments)
- Travel Speed: Work mode- variable 0-5 mph, travel mode- variable 0-20 mph
- Comfort, Convenience & Safety: Full air ride, suspension seat, certified ROPS canopy with AC, heat, am/fm radio with Bluetooth, tilt steering column with horn, seat belt with safety switch, turn signals and brake lights, flashing safety lights as well as dot reflector tape
- Attachment Options: Front lift arms with universal skid steer mounting plate for 10 skid steer attachments- broom/sweeper, 90" rotary mower, 88" flail mower, dozier blade, stump grinder, pallet forks, cold planer, big roll sod installer, landscape rake, rotary tiller, right side rotary mower, right side flail mower, right side boom/reach mower, 15' belly mower
- Conditions: In addition to equipment specified, mower will be equipped with all standard equipment as specified by the manufacturer for this model and shall comply with all EPA emission standards and all motor vehicle standards as established by the US DOT regarding the manufacturer of motor vehicles



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Tractor: Agriculture Tractor - 4x2

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Liquid cooled diesel with minimum of 75 PTO hp @ 2,200 rpm
- Transmission: Synchroshuttle type with a minimum of 8 forward and 3 reverse speeds
- Fuel Tank: Minimum 23 gal capacity
- Brakes: Oil cooled hydraulic
- Power Take Off: Speeds rpm- 540/1,000
- Hydraulic System: Open center system with standard remotes, standard output @ remote gpm- 10, main pump flow 17 gpm
- 3-Point Hitch: Electronic or mechanical 3-point hitch control, Category II, telescopic stabilizers, SAE lift capacity @ 24" standard lbs.- 3,600, lower draft arm link ends- extendable
- Tires: Not less than 18.4R-28 R1 radials, not less than 7.5L-15, 6-Ply F2



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Tractor: Compact Articulating Tractor - AWD

Note: Incomplete equipment. Unit bid is for the prime mover only, without attachments. Buyer should select attachments needed from the option list to complete the machine. Examples of attachments available are: bucket, grapple and/or forks. This will affect the final price.

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 4,500K- Briggs & Stratton 31 hp Vanguard M54
- Transmission: Manufacturer's standard hydrostatic
- Performance Items: SDLA controls for complete one-handed control of speed, direction, lift & auxiliary functions, weight transfer- transfers weight to front axle for added stability (optional 4,500K)
- Safety Items: Automatic PTO shut-off when weight is removed from seat, standard seatbelt, standard ROPS system, neutral assist
- Tires and Wheels: Manufacturer's standard tires and wheels (optional turf or bar tires)
- Attachment and Accessories: 30 commercial grade attachments for a variety of applications (sold individually, not factory installed), uses Ventrac quick hitch system for quick transition between applications



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Tractor: Small Agriculture Tractor - 4x4

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Liquid cooled diesel with minimum of 29 PTO hp @ 2,200 rpm
- Transmission: Hydrostatic drive or mechanical type transmission, 4WD front axle
- Fuel Tank: Minimum 7 gal capacity
- Brakes: Oil cooled hydraulic wet disc
- Power Take Off: Speeds rpm- 540
- Hydraulic System: Open center system with standard remotes, maximum main pump flow-6.3 gpm
- 3-Point Hitch: Category I, SAE lift capacity @ 24" standard lbs.- 1,435
- Tires: Not less than 11.2 x 24 rear, not less than 5-15 6-ply front



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Tractor: Tractor with Boom Mower - 4x4

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: Liquid cooled diesel with minimum of 95 PTO hp @ 2,200 rpm
- Transmission: Synchroshuttle type with a minimum of 16 forward and 16 reverse speeds, 4WD front axle
- Fuel Tank: Minimum 38 gal capacity
- Brakes: Oil cooled hydraulic
- Power Take Off: Speeds rpm- 540/1000
- Hydraulic System: Closed center system with standard remotes, maximum pressure psi- 2,900, standard output @ remote 17 gpm, total of 29 gpm combined flow
- Point Hitch: Category II, telescopic stabilizers, SAE lift capacity @ 24" standard lbs.- 5,000, lower draft arm link ends- extendable
- Tires: Not less than 13.6R24 R1 rear radials, not less than 18.4R30 6-Ply F2
- Mounted Boom Mower: Minimum 23' boom reach, forward and reverse swing break away, integral frame, separate hydraulic circuit for mower head, 5' rotary cutter head, disc or bar type blade holder



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Deck Over Flatbed Trailer - 16,000 lbs. GVWR

All trailers must In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions: Deck width- 8' 6", overall deck length- 25', dovetail length- 5', GVWR- 16,000 lbs.
- Frame: 5" channel side rails, 3" channel cross members on 16" centers, 4" channel undercarriage, 2" x 3/8" rub rail with stake pockets, pintle hitch
- Deck: 2 x 8 pressure treated deck, Galvanized deck screws, 5' dovetail, spring assist stand up ramps
- Axles: Tandem 8,000 lbs. Dexter oil bath axles (2), electric brakes, breakaway brake system with well cell battery
- Lighting System: Protected turn/stop/tail lights, wiring run in conduit, heavy duty trailer plug
- Miscellaneous: Spare tire and rack, lockable tool box, primed and painted- choice of color, tongue jack rated for GVWR of trailer



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Deck Over Equipment - 40,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Deck: 24' overall, 19' w/ 60" dovetail, 96" width
- Decking: 2" hardwood
- Ramps: 60" fold up ramps, 22" width
- Tiedowns: Heavy duty tiedowns
- Axles: (2) 22,500 lbs. axles, oil lubricated
- Brakes: Air brakes, w/ ABS
- Suspension: Multi-leaf, sized for GVWR of unit
- Tires: (8) 215/75R x 17.5 16 ply Radial
- Lighting: LED, DOT compliant stop, tail, turn and clearance
- Coupler: Adjustable pintle eye
- Jack: 2-speed jack, sized for trailer



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Detachable Neck Lowboy Trailer 100,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Deck: 50' overall, 24' clear deck length, 14' rear over axles, 8'6" deck width, swing out outriggers
- Decking: 1 ½" hardwood decking
- Ramps: Front folding ramps
- Tiedowns: 5 pair heavy duty tiedowns
- Flagholders: 2 pair
- Axles: 3, sized to meet GVWR of unit, oil lubricated
- Brakes: Air brakes, w/ ABS, automatic slack adjusters
- Suspension: Air ride type, sized for GVWR of unit
- Tires: 235/70R 22.5 Radial tires
- Lighting: LED DOT compliant stop/tail/turn, clearance, and mid turn
- Detachable Gooseneck: 48" kingpin height, fixed neck, 96" swing radius, hydraulic lift, hydraulic support, toolbox on neck



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Enclosed Cargo Trailer - 7,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions: Width- 7', length- 16', 7,000 lbs. GVWR
- Frame: Formed angle top and bottom sills, all exposed steel primed and painted, positive lock ball coupler, tongue jack, safety chains- DOT rated
- Floor/Walls/Roof: ¾" exterior grade plywood floor, ¼" plywood interior liner, .030" prefinished aluminum exterior, state colors, smooth galvanized steel or one-piece aluminum roof, fiberglass front cap, extruded aluminum bottom trim, extruded aluminum roof cove with drip rail, double locking door on rear
- Axles: Tandem 3,500 lbs. torflex axles, 15" wheels, 205 x 15 trailer rated tires, electric brakes with breakaway switch
- Lighting System: Protected turn/stop/tail lights, clearance lights, wiring run in conduit, heavy duty trailer plug
- Miscellaneous: Spare wheel and tire



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Enclosed Utility Body/Trailer Mounted - 9,900 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Length: 205"
- Width: 89"
- Weight: 4,600 lbs.
- GVWR: 9,900 lbs.
- Frame Construction: I beam type frame, specifically engineered to mount Knapheide KUVCC Body on
- Front Jack: Manual
- Rear Leg Stabilizers: 2 rear leg stabilizers
- Axle: 10,000 lbs. Torflex axle, oil hubs
- Brakes: Electric brakes
- Wheels and Tires: Dual rear wheels, tires sized for GVWR of unit
- Lighting: LED type, stop/turn/tail, backup
- Utility Body: Knaphiede KUVCC body
- Doors: Continuous hinges, rotary latches, adjustable strikers, double panel, duel seals, master lock, hold open springs
- Roof: Cross braced, rotary latches, adjustable strikers
- Rear Cargo Doors: Double panel, hold open shocks, door seals, rotary latches, adjustable strikers
- Interior Lights: LED lighting
- Shelving: 250 lbs. rating, hemmed dividers
- Floor: 1/8" treadplate w/cross sills
- Undercoating: Entire unit to be undercoated
-



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Fixed Neck Lowboy Trailer - 70,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Deck: 43' overall, 27' clear deck length, 4' dovetail
- Decking: 1 ½" hardwood decking
- Ramps: 8' x 3', fold up ramps, hydraulically raised
- Tiedowns: 8 pair heavy duty tiedowns
- Flagholders: 2 pair
- Axles: 2 sized to meet GVWR of unit, oil lubricated
- Brakes: Air brakes, w/ ABS, automatic slack adjusters
- Suspension: Spring type, sized for GVWR of unit
- Tires: 235/75R 17.5 Radial tires
- Lighting: LED DOT compliant stop/tail/turn, clearance, and mid turn
- Gooseneck: 48" kingpin height, fixed neck, 84" swing radius, toolbox on neck
- Landing Gear: 2 speed, 50,000 lbs. capacity



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Hydraulic Drop Deck Trailer - 13,500 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- GVWR: 13,500 lbs.
- Deck: 75" x 14', ground flat loading
- Lift Mechanism: Hydraulic
- Suspension: Rubber or air
- Deck: Steel treadplate
- Brakes: Electric on all axles
- Tires: 235/80R16 LRE Radial
- Lighting: All LED DOT compliant, stop/tail/turn, clearance
- Coupler: A-frame adjustable
- Tie Downs: Heavy duty D-Ring



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Hydraulic Tail Trailer - 70,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions: Deck width- 8' 6", overall length- 48', deck length- 25', hydraulic tail- 12' (8' with 4' fold under)
- GVWR: 70,000 lbs.
- Frame: Cambered "I" beam main frame, 49" kingpin height, 16" kingpin setting, 82" swing clearance, 8' upper deck length
- Deck: 1 ½" apitone or oak decking, 1 ½", floor plate over wheels, traction plate on hydraulic tail
- Hydraulic Tail: 8' main tail, 4' fold under tail, hydraulic actuated with tail lock, 14 degree load angle
- Landing Gear: Pin drop type or 2 speed type
- Axles/Suspension/Tires: 2- 22,500 lbs. axles, oil seal hubs, 6.5 x 17.5 steel wheels, 235/75R x 17.5 radial tires, air brakes with automatic slack adjustors, ABS brake system, air ride suspension with auto and manual controls
- Lighting: LED lighting, wiring in conduit, mid turn signals, lighting as per DOT regulations
- Miscellaneous Equipment: 12,000 lbs. hydraulic winch mounted on upper deck over kingpin, wireless control, toolbox on upper deck, hydraulic tail controls both sides, air ride controls with dump valve



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Leachate Tanker - 6,500 gallons

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Approximate Dimensions: Length: 42', fifth wheel height- 49", capacity- 6,500 gal, operating pressure- 15 psi w/ vacuum relief
- Tank Construction: Stainless steel, external ring, one compartment, 6,500 gal, straight round w/ slope to rear, two baffles , three manways (lug) one located center and one in each baffled section, two manway cleanouts (4 lug) located in front head and rear head at bottom
- Top Walkway: Gripstrut 12" width, extending from rear to front manway, with handrail, and ladder to access walkway
- Discharges, Valves, and Plumbing: Pressure/vacuum relief valve 15 psi in manhole cover, 6" discharge w/ sliding gate valve at rear of tank drain pump, 4" discharge to pump w/ valve, manufacturer's plumbing to allow gravity discharge or pump discharge or filling, gravity discharge at rear of tank to utilize cam lock fittings and caps
- Pump: Hydraulically driven, bi-directional pump, controls at rear, stainless piping for pump hydraulics from pump to front curbside for truck attachment
- Hose Carriers: Located on fenders
- Cabinets: Two cabinets mounted curbside and roadside ahead of suspension
- Trailer Constuction: Stainless steel frame
- Axles: Two axles sized for GVWR of unit, oil lubricated hubs
- Brakes: Air brakes w/ ABS and rollover protection, aluminum air tanks, automatic slack adjusters
- Tires: Radial tires sized for GVWR of unit, aluminum wheels w/ mudflaps
- Landing Gear: Sized for GVWR of unit
- Lights: LED clearance, stop/turn/tail, all wiring run in protective conduit, worklight, w/ switch at rear, all wiring run to junction box at front of trailer
- Color: Stainless Steel



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Livestock Trailer - 7,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- GVWR: 7,000 lbs.
- Stall Size: 76" x 16'
- Interior Height: 6' 6"
- Doors: Side escape door and full swing rear, center cut gate
- Deck: Treated pine
- Axles: (2) 3,500 lbs., quick lubricating
- Brakes: Electric on all axles
- Suspension: Multi-leaf
- Tires: 205/75R15 Radial
- Lighting: All LED DOT compliant, stop/tail/turn, clearance
- Coupler: A-frame ball style
- Jack: 2,000 lbs. heavy duty



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Pull Behind Dump Trailer - 14,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- GVWR: 14,000 lbs.
- Bed: Grease fittings on all hinges, D-ring tie downs
- Bed Size & Frame: Width- 6' 8", length- 14', deck height- 24", tube steel box, 10GA bed floor, rear stabilizers, 12,000 lbs. tongue jack, 20" high sides and tailgate minimum
- Bed Lift: Scissor type hydraulic lift, 12 volt power unit with battery, 15' pendant control
- Axles: Dexter easy lube or equivalent, sized for GVWR of trailer, 4-wheel electric brakes with breakaway
- Miscellaneous: Conspicuity type on sides, tail/stop/turn lights, 7-way trailer plug, tarp system, spare tire, pintle type hitch or ball (customer selected)



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Refrigeration/Freezer Trailer - 7,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- GVWR: 7,000 lbs.
- Cooler Box Size: 72" x 12'
- Interior Height: 6' 5"
- Temperature Range: 0 to 50 degrees F
- Input Voltage: 120V 15A
- Insulation: R-25
- Food Safety: Anti-microbial gel or stainless interior coating
- Doors: 48" rear door with freezer strips
- Floor: ¾" keg duty floor
- Axles: (2) 3,500 lbs., quick lubricating
- Brakes: electric on all axles
- Tires: 205/75R15 Radial tires
- Lighting: All LED DOT compliant, stop/tail/turn, clearance
- Jack: 2,000 lbs. heavy duty
- Coupler: A frame ball type



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Utility/Equipment Trailer - 7,000 lbs. GVWR

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Deck Size: 77" x 16'
- Sidewall Frame Height: 15" minimum
- Ramps: 48" rear folding tailgate
- Tie Downs: Heavy duty tie rings
- Deck: Treated pine
- Axles: (2) 3,500 lbs., quick lubricating
- Brakes: Electric on all axles
- Suspension: Multi-leaf
- Tires: 205/75R15 Radial tires
- Lighting: All LED DOT compliant, stop/tail/turn, clearance
- Coupler: A-frame 2 5/16" ball adjustable 4 hole
- Jack: 2,000 lbs. heavy duty



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trailer: Waste Trailer with Walking Floor

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Dimensions: Length- 48', aluminum width- 102", side height- 100"
- Floor: Keith or Hallco running floor, extreme duty slats with center rib
- Crossmembers: 14" spacing
- Crosstubes: Center and rear crosstubes, bolt in style
- Lights: LED lights, mid turn lights.
- Tarp: Manual roll type- side to side, mesh type tarp
- Tailgate: Side swing- left or right, CAM locking system with safety chain, extreme duty hinges
- Landing Gear: Holland Mark V
- Axles: TP axles or equivalent, same inner and outer bearings, outboard mount hubs
- Suspension: Cast hangers, leaf springs
- Tires and Wheels: Steel disc 22.5 x 8.25, 11R22.5 Radial tires
- Miscellaneous: Tow hooks on rear, air deflector in front



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Transfer Switch: 600 Amp Automatic Transfer Switch

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Automatic Transfer Switch: Maximum voltage rating of 600 VAC, 60 Hz, 1Ph or 3Ph, open transition (break-before-make) transfer logic, transfer switch must meet the related industry standards: UL 1008- automatic transfer switches for use in emergency systems, CSA- automatic transfer switches, NEMA- industrial control and systems AC transfer switch equipment, IEC- automatic transfer switching equipment
- Rating: 600 amp, 3 pole, 277/480 VAC, 60Hz, enclosure type- NEMA 3r
- Functional: The automatic transfer switch shall automatically transfer the load to the generator supply in the event of a utility supply failure and return the load to the utility supply upon restoration. The automatic transfer switch power switching devices shall be mechanically and electrically interlocked to prevent the utility and generator supplies from being interconnected. All timers should be field adjustable to ensure proper field site compatibility.
- Automatic Sequence Of Operation: When the voltage on any phase of the utility supply is below present levels of rated voltage for a preset time delay, a contact shall close to initiate start of the standby generator. The load shall transfer to the generator supply when the generator voltage and frequency have reached acceptable present levels and the warm up time delay has expired. When the utility supply is restored to the above present levels of rated voltage on all phases, load transfer from generator to utility supply shall be initiated following expiry of the utility return timer. Once the transfer mechanism operates and opens the generator power switching device, the transfer mechanism shall stop in the neutral position (with the both power switching devices open) for the duration of the neutral delay timer setting to allow load voltage to decay prior to reconnecting the utility supply. The load shall be re-connected to the utility supply once the neutral delay timer expires and the transfer mechanism continues operation and closes the utility power switching device. The load shall immediately re-transfer to the utility supply (if within acceptable limits) should the generator supply fail prior to the expiry of the utility transfer delay. The generator set shall continue to operate following a load transfer for a cool down delay period, and then a contact shall open to stop the generator set. An "on load" test mode may be initiated which shall cause a simulated utility failure condition and transfer the load to the generator set. The transfer sequence shall be the same as for a utility power failure except a neutral delay sequence shall occur when transferring from utility to a generator source. The load shall immediately retransfer to the utility supply (if within acceptable limits) should the generator supply fail during an "on load" test mode.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

- **Factory Testing:** A certified factory test report shall be shipped with each switch at time of shipment. The automatic transfer switch shall be factory tested prior to delivery to the purchaser. The following test shall be conducted by qualified factory personnel: visual inspection, mechanical tests, electrical tests, final inspection.
- **Field Testing and Commissioning:** The automatic transfer switch shall be field tested once installed at the project site to confirm proper operation of the system. Schedule and witness testing activities shall be coordinated with the project engineer, site contractor, and owner as required in advance of the testing date. A qualified local factory-trained field representative shall conduct the necessary test to ensure proper operation of the switch. Visual inspection-electrical and mechanical inspection to verify the installation is correct as recommended by the transfer switch manufacturer and as per National Electric Code (NEC) requirements. Mechanical tests- as a minimum, the following mechanical tests shall be performed on the transfer switch: power conductor torque verification, verification of mechanical interlock, manual ATS mechanism operation, all mechanical fasteners/wire connections tight, confirmations of correct transfer switch voltage, current and withstand ratings as is required for the application, Meggar testing the power cabling to the transfer switch, verification of correct power cabling phasing and phase rotation prior to energization, confirmation of settings for all timers & voltages sensors, full function test-normal operation- 3 complete cycles of failing the utility supply and transfer load to/from the generator set, verification of all test modes operates correctly.
- **Conditions:** In addition to equipment specified, each automatic transfer switch shall be equipped with all necessary equipment as specified by the manufacturer for this model and shall include but not be limited to the following necessary items: shrink wrap applied to the product to ensure a clean finish, one complete set of operation and maintenance manuals, a two (2) year or 1,500 hour from date of standard standby warranty will apply from date of successful startup, labor, materials, and travel for the warranty period repair will be paid by manufacturer during normal business hours.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Trencher: Walk Behind Trencher

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Engine: 25 hp gasoline engine, 7 gal fuel tank, positive feed oil system with spin on filter, 12 volt starting/charging system
- Ground Drive: Hydrostatic, rubber ground tracks, 7" track width, 31" track length on ground
- Trencher Drive: Hydraulic drive, 8 gal hydraulic reservoir, hydraulic system spin on filter
- Trencher Boom: Digging depth- 48", Auger diameter- 18", cutting width minimum- 4"
- Controls: Operator presence safety system, low-oil shutdown system, steering control, trencher controls, travel control, boom controls
- Approximate Dimensions: Weight- 1,550 lbs., length- 79", width- 34", height- 48"



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Underground Locating Equipment: Ground Penetrating Radar

Due to the complexity of this type of equipment, there are no base unit specifications. Purchasers should research and verify the unit bid will meet their desired performance expectations and is compatible with their hardware/software, if required. It is recommended the vendor be contacted to assist with determining performance and compatibility needs prior to purchase.

Unit bid must be ready to work with batteries, carrying cases, and technical manuals.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Underground Locating Equipment: Utility Locator

Due to the complexity of this type of equipment, there are no base unit specifications. Purchasers should research and verify the unit bid will meet their desired performance expectations and is compatible with their hardware/software, if required. It is recommended the vendor be contacted to assist with determining performance and compatibility needs prior to purchase.

Unit bid must be ready to work with batteries, carrying cases, and technical manuals.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Mobile - 2 Column, Cabled

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 36,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45” minimum, length- 48” minimum, minimum rise- 67”
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds, fits tire sizes 9”-24”
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards
- Power: Cabled base, voltage 208-230 3-phase
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Mobile - 2 Column, Wireless

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 36,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45" minimum, length- 48" minimum, minimum rise- 67"
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds, fits tire sizes 9"-24"
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards, training included with purchase
- Power: Wireless
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Mobile - 4 Column, Cabled

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 72,000 lb. ; 18,000 lb. per column minimum.
- Dimension: Width- 45” minimum, length- 48” minimum, minimum rise- 67”
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds, fits tire sizes 9”-24”
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards
- Power: Cabled base
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Mobile - 4 Column, Wireless

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 72,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45” minimum, length- 48” minimum, minimum rise- 67”
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds, fits tire sizes 9”-24”
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards, training included with purchase
- Power: Wireless
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Mobile - 6 Column, Cabled

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 108,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45" minimum, length- 48" minimum, rise minimum- 67", fits tire sizes 9"-24"
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards
- Power: Cabled base
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Vehicle Lift: Mobile - 6 Column, Wireless

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 108,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45" minimum, length- 48" minimum, rise minimum- 67", fits tire sizes 9"-24"
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards: training included with purchase
- Power: Wireless
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Vehicle Lift: Mobile - 8 Column, Cabled

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 144,000 lb. ; 18,000 lb. per column minimum.
- Dimension: Width- 45", length- 48" minimum, rise minimum- 67", fits tire sizes 9"-24"
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards
- Power: Cabled base
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



FSA23-EQU21.0: Heavy Equipment Item Group Specifications

Vehicle Lift: Mobile - 8 Column, Wireless

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: Combined lift capacity of 144,000 lbs., 18,000 lbs. per column minimum
- Dimension: Width- 45" minimum, length- 48" minimum, rise minimum- 67", fits tire sizes 9"-24"
- Operation: Weight gage for each column, operating LCD screen, speed- fully lowered to raised not to exceed 80 seconds
- Safety: Mechanical safety locks, override to manual operation in the event of power loss, meets all applicable safety standards, training included with purchase
- Power: Wireless
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Stationary - 2 Post Asymmetric Stationary Vehicle Lift 10k

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: 10,000 lbs.
- Dimension: minimum width- 125", minimum width between posts- 110", minimum extended cylinder height- 142.5", minimum full rise height- 72", minimum ceiling height required- 12'
- Operation: Speed of rise- fully lowered to fully raised in 50 seconds
- Safety: Manual or automatic lock release, meets all applicable safety standards
- Motor: 2.0 hp 208-230 V minimum
- Accessories: Power upgrades options, air/electric workstation w/ filter/lubricator/regulator, tire tool, manager workstation w/ filter/lubricator/regulator, column height extensions, door protection
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 12k

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: 12,000 lbs.
- Dimension: Minimum width- 139", minimum width between posts- 114 7/8", minimum extended cylinder height- 160", minimum full rise height- 72", maximum ceiling height required- 16'
- Operation: Speed of rise- fully lowered to fully raised in 90 seconds
- Safety: Manual or automatic lock release, meets all applicable safety standards
- Motor: 2.0 hp 208-230 V minimum
- Accessories: Power upgrades options, air/electric workstation, w/ filter/lubricator/regulator, tire tool manager workstation w/ filter/lubricator/regulator, column height extensions, door protection
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 15k

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: 15,000 lbs.
- Dimension: Minimum width- 125", minimum width between posts- 120", minimum extended cylinder height- 160", minimum full rise height- 72", maximum ceiling height required- 17'
- Operation: Speed of rise- fully lowered to fully raised in 90 seconds
- Safety: Manual or automatic lock release, meets all applicable safety standards
- Motor: 2.0 hp 208-230 V minimum
- Accessories: Power upgrades options, air/electric workstation, w/ filter/lubricator/regulator, tire tool manager workstation w/ filter/lubricator/regulator, column height extensions, door protection.
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Stationary - 2 Post Symmetric Stationary Vehicle Lift 18k

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Minimum Lift Capacity: 18,000 lbs.
- Dimension: Minimum width- 125", minimum width between posts- 118", minimum extended cylinder height- 142.5", minimum full rise height- 85", maximum ceiling height required- 17'
- Operation: Speed of rise- fully lowered to fully raised in 60 seconds
- Safety: Manual or automatic lock release, meets all applicable safety standards
- Motor: 3.0 hp 208-230 V minimum
- Accessories: Power upgrades options, air/electric workstation, w/ filter/lubricator/regulator, tire tool manager workstation w/ filter/lubricator/regulator, column height extensions, door protection
- Equipment must comply with all applicable federal, state, and local regulations and meet OSHA, UL-201, NEC, and the latest ANSI standard, ANSI/ALI -ALCTV 2006 and IBC 2003, IBC 2006 Chapter 30 section 3001.2. Equipment must be structurally and safety tested, and certified to ANSI/ALI -ALCTV 2006 automotive lift standard. A copy of listing certification shall be supplied as part of the acceptance of the bid. Equipment must be supplied with all ANSI, ALI/ETL safety booklet, ANSI operations, installation, and maintenance booklets, ANSI/ALI aloim-2008 standard and lifting point guides. Equipment must be supplied with all ANSI, ALI/ETL safety decals. Decals must be permanently placed on the lift in clear view for the operator.



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

Vehicle Lift: Stationary - 2 Post Versymmetric Stationary Vehicle Lift 10k

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Lifting Capacity: 10,000 lbs.
- Lifting Configuration: Versymmetric (symmetric & asymmetric) arms 3-stage front/3-stage rear, rise height- 74.125", overall height- 134"/140", overall height (cylinder extended)- 143", 2' height extension available, 3' height extension available, overall width- 138.5"/ 143", drive-thru clearance- 100"/104.5", floor to overhead switch- 128.5"/134.5", front arm reach- 20"-42", rear arm reach- 37.625"-60", screw pad height- 3.875"-6.125", inside columns- 110"/114.5", motor/voltage- 2 hp, 208V-230V, 60 Hz, 1 Ph, speed of rise- 38 seconds, ceiling height required 12', ALI/ETL certified



**FSA23-EQU21.0: Heavy Equipment
Item Group Specifications**

**Vehicle Lift: Stationary - 4 Column, Alignment Lift with Front/Rear Jacks and Integrated
Turntables and Slip Plates 14k**

In addition to the manufacturer base specification for the item or model number indicated, items in this group must meet the following FSA base specification:

FSA Base Specification

- Lifting Capacity: 15,000 lbs.
- Lifting Configuration: Open or closed- front open max, wheelbase- 210", rise height- 78", overall length- 277.25", overall width- 142" front/134.5" rear, inside columns- 120", between columns- 222.5", height of columns- 99.5"/93.5", width of runways- 20", height of runways- 7", width between runways- 43" max, 2-wheel alignment- 194", 4-wheel alignment- 88"-158", air supply required- 90-120 psi, motor/voltage- 2 hp, 208V-230V, 60 Hz, speed or rise- 85 seconds, minimum recommended bay size- 12' x 26', ALI/ETL certified, colors available- red, blue, black