Sterling Environmental Engineering, P.C.

FACILITY MANUAL

FOR

SARATOGA BIOCHAR SOLUTIONS, LLC
CARBON FERTILIZER™ MANUFACTURING FACILITY
MOREAU, NY

Prepared For:

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"Serving our clients and the environment since 1993"

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1.0 INTRODUCTION

1.1 General Information

This Facility Manual for the Saratoga Biochar Solutions, LLC (SBS) Carbon Fertilizer™ manufacturing facility (hereinafter the "Facility") has been prepared in accordance with 6 NYCRR Parts 360.16 (Permit Application Requirements and Permit Provisions), 360.19 (Operating Requirements), and 362-1 (Thermal Treatment Facilities). This Facility Manual serves as a guide for the efficient, safe, and environmentally sound operation of the Facility.

Effective operation and maintenance of the Facility is imperative to comply with prevailing environmental rules and regulations and the operational requirements of 6 NYCRR Parts 360 and 362-1. The Facility Manual provides methods and procedures for operation of the Facility under routine and emergency conditions. Also included are personnel roles, responsibilities, and training requirements. Copies of the Facility Manual will be maintained onsite for employees and management and will be modified when necessary to reflect operational or maintenance changes.

1.2 Facility Design and Operation

The Facility is designed to manufacture Carbon Fertilizer™ from biosolids and wood waste feedstock with an annual throughput up to 235,200 wet tons of received biosolids and up to 35,280 tons of wood waste. The Facility is designed to be constructed in three phases with each phase consisting of a process line capable of processing up to 10 wet tons per hour of biosolids and up to 1.5 tons per hour of wood waste. Each process line is capable of manufacturing approximately 1 ton per hour of Exceptional Quality (EQ) Class A biosolids product (i.e., "Carbon Fertilizer™") in accordance with 40 CFR Part 503 and 6 NYCRR 361. The selected location is on 5.89 acres composed of Tax Parcels 50.-4-16 (3.07 acres) and 50.-4-22 (2.82 acres), on Farnan Road within the Moreau Industrial Park in the Town of Moreau, Saratoga County, New York, owned by Moreau Industrial Park, LLC. A Site Location Map on a United States Geological Survey quadrangle map is provided as Figure 1, and a Site Vicinity Map on an aerial image is provided as Figure 2. Site Plan drawings showing the Facility layout are provided in Appendix A.

The Facility is designed to process biosolids and wood waste feedstock through low-temperature drying and pyrolysis to produce a marketable Carbon Fertilizer™ that meets specific end-use requirements. The Facility is subject to a New York State Department of Environmental Conservation (NYSDEC) SWMF permit under 6 NYCRR 362-1 (Thermal Treatment Facilities). There is no incineration or combustion of feedstock involved in the manufacturing process, and the feedstock is limited to biosolids sourced from wastewater treatment plants and wood waste consisting of land clearing debris and/or unadulterated wood, wood chips, or bark from logging operations, pulp and paper production, and wood products manufacturing; unauthorized waste that will not be accepted includes municipal solid waste, construction and demolition debris, friable asbestos-containing material (ACM), mercury-added consumer products, radioactive waste, infectious and regulated medical waste, hazardous wastes, and wood products that are painted, chemically treated (e.g., pressure-treated wood or railroad ties), or manufactured with chemicals such as glues or adhesives (e.g., plywood or particle board).

All manufacturing activities are conducted indoors, and the Facility is maintained under negative pressure to mitigate potential fugitive odor emissions. All exhaust air is treated through engineered air pollution control devices for particulate, ammonia, sulfur dioxide, and odor control. The Facility operates 24 hours per day, 7 days per week with feedstock deliveries limited to between 6:00 AM and 6:00 PM six (6) days per week (i.e., no deliveries on Sundays or holidays). The operational uptime of the process is expected to be 90% (i.e., 7,840 hours per year) with the balance consisting of scheduled downtime for maintenance.

2.0 WASTE CONTROL PLAN

2.1 General

This Waste Control Plan has been developed to ensure that Facility employees properly manage all received biosolids and wood waste. The Facility has contracted with an established regional hauling partner, Casella Organics, for a ten-year term plus two five-year extensions to source and transport biosolids to the Facility. As a private merchant facility, the service area and customer base may change over time. The primary service area for biosolids includes regional wastewater treatment plants within New York State and western New England west of the Connecticut River as sourced and contracted by the Facility's contracted waste hauler. The service area may increase or decrease as negotiated arrangements change over time. The primary service area for wood waste is a 50-mile radius from the Facility.

The Facility has contracted with Casella Organics ("Casella") for an initial 10-year term with two 5-year extensions to supply all biosolids to the Facility on an exclusive basis. Casella Organics manages over 450,000 tons per year of biosolids regionally. Contracting directly with Casella Organics is preferred over securing multiple contracts with publicly owned treatment plants prior to being operational. The supply contract requires Casella Organics to provide the Facility with required analytical data prior to be allowed to deliver to the Facility.

2.2 Materials Handled

Acceptable waste is limited to biosolids sourced from wastewater treatment plants and wood waste consisting of land clearing debris and/or unadulterated wood, wood chips, or bark from logging operations, pulp and paper production, and wood products manufacturing.

6 NYCRR Part 360 Regulations define "*Biosolids"* as: *the accumulated semi-solids or solids resulting from treatment of wastewaters from publicly or privately owned or operated sewage treatment plants. Biosolids does not include grit, screenings, or ash generated from the incineration of biosolids*.

Sourced biosolids will have been treated and tested by the source prior to receipt at the Facility, in accordance with 6 NYCRR 361-3.6. Based on the regional publicly owned treatment works (POTWs), sourced biosolids are anticipated to be approximately 25% anaerobically digested and 75% aerobically digested and otherwise destined for landfill disposal or incineration. Biosolids destined for landfill disposal in New York must meet criteria contained in 6 NYCRR 363-7.1(j); therefore, the composition of received biosolids will be relatively consistent. The anticipated solids content is an average of 23% with a range of 19 to 32%. For each source of biosolids, the Facility will maintain the following information:

- Name of biosolids generator and quantity received at the Facility.
- Description of generator's biosolids treatment method (e.g., aerobic digestion).
- Description of the biosolids quality including information required by 6 NYCRR 361-3.6 and analytical results of the biosolids for the analytes contained in Table 1 of 6 NYCRR 361-3.9.

Sourced biosolids must not exceeds the following pollutant concentrations listed in Table 6 of 6 NYCRR 361-3.9:

Source Biosolids Maximum Pollutant Concentration

Parameter	Maximum Concentration (mg/kg, dry wt)
Arsenic	41
Cadmium	10
Chromium (total)	1,000
Copper	1,500
Lead	300
Mercury	10
Molybdenum	40
Nickel	200
Selenium	100
Zinc	2,500

6 NYCRR Part 360 Regulations define "*Unadulterated Wood"* as *wood products, that are not painted, chemically treated (e.g., pressure-treated wood or treated railroad ties), or manufactured with chemicals such as glues or adhesives (e.g., plywood or particle board).*

Wood waste feedstock is an optional minor feedstock component that is not required for processing biosolids. Wood waste is to be sourced from local municipalities, counties, and wood waste generators, and consists only of land clearing debris and/or unadulterated wood, wood chips, or bark from logging operations, pulp and paper production, and wood products manufacturing.

2.3 Unauthorized Wastes

The Facility only receives biosolids and wood waste that is sourced and delivered by haulers. No unsolicited loads will be accepted. Only loads of biosolids coordinated by the hauling partner will be received at the Facility. Independent haulers attempting to enter the Facility will be rejected. Since the biosolids feedstock is being obtained from a single contracted supplier directly from wastewater treatment plants, the presence of unauthorized waste or oversized debris is expected to be minimal. The contract with the biosolids supplier holds them responsible for any unauthorized waste or debris encountered in received loads.

Non-accepted items are considered unauthorized waste, including includes municipal solid waste, construction and demolition debris, friable asbestos-containing material (ACM), mercury-added consumer products, radioactive waste, infectious and regulated medical waste, hazardous wastes, and wood products that are painted, chemically treated (e.g., pressure-treated wood or railroad ties), or manufactured with chemicals such as glues or adhesives (e.g., plywood or particle board). Any material not permitted for handling at this Facility will be rejected. Facility personnel are trained to recognize, remove, segregate, and report all unauthorized solid waste in accordance with this Plan. Unauthorized waste specifically includes the following:

- MSW
- Source separated recyclables
- Construction and demolition waste
- Bulky goods (appliances, large furniture, white goods)
- Hazardous wastes

- Tires
- Liquid wastes
- Friable asbestos containing material
- Medical wastes
- Dead animals
- Radioactive or special wastes
- Batteries
- Oil
- Paint
- Compressed gas containers
- E-wastes
- Mercury containing products
- Painted Wood
- Chemically Treated Wood

Conspicuous signs at the Facility entrance remind delivery drivers of acceptable waste and that delivery is by contract only.

2.4 Unauthorized Waste Detection

The evaluation of waste begins with the hauling partner sourcing biosolids from regional wastewater treatment plants. Only sources with biosolids meeting specific criteria will be contracted for management at the Facility. Due to acceptance of strictly biosolids and wood waste from only contracted sources, the occurrence of unauthorized waste is expected to be minimal.

Biosolids are unloaded in the biosolids receiving area, and each load passes through a scalping grate to separate and remove any oversized material. If oversized debris is captured on the scalping screens, the first method of removal is manually by personnel with an extension hook. This method of removal is suitable for light debris (e.g., plastics). If large and potentially heavy oversized debris is encountered, a piece of equipment (e.g., excavator or similar) will remove the debris. All removed debris will be washed clean of biosolids using the truck wash and placed in a roll-off container for offsite disposal.

Wood waste is unloaded on the concrete surface of the wood waste receiving, storage, and processing area for visual inspection before being moved into storage bunkers with a wheeled bucket loader or similar piece of mobile equipment. The unloading process of all material is visually inspected by personnel with necessary training and experience to identify unauthorized waste. Facility personnel are trained in the recognition, management, and reporting procedures for prohibited wastes. At least one employee is onsite at all times that has the knowledge and ability to recognize different forms of unauthorized waste that may be received and is able to execute proper procedures for managing each hazard if encountered.

If unauthorized waste is observed within the received load, the Facility Manager will be notified, and the waste will be removed to a designated area for temporary storage and management. Segregated unauthorized waste will be stored in a dumpster or roll-off container for weekly disposal to a properly permitted facility. In no event will hazardous waste be retained onsite for more than 90 days.

2.4.1 Scale House Inspection

To discourage unacceptable loads from entering the Facility, signs posted at the entrance clearly inform drivers of acceptable waste, that only contracted haulers are accepted, and that all vehicles are subject to random search. All inspections of biosolids loads will occur inside the biosolids receiving area to minimize odor potential. Results of random load inspections is documented on the Random Load Inspection Form provided in Appendix B, kept in a logbook, and the records stored onsite. At least one random inspection will be performed each day material is received.

All vehicles entering the Facility are weighed at the scale to determine the weight of delivered feedstock. Upon entering the scale, a visual inspection is performed to identify suspicious loads and confirm the load is being delivered by a contracted hauler. Historical composition data, specifically moisture content, are

reviewed for the load's source. The scale operator may test the moisture content in several areas of the truck bed to determine an average. Based on the moisture content of the load (as determined by source data or onsite testing), the scale operator directs the truck to one of the two receiving pits. This initial screening step aids in moisture control of the feedstock by controlling which receiving pit is used.

The scale house computer system will record the following information for each received load:

- Truck number
- Date and time of arrival
- Origin of material
- Weight

Loads that are identified containing unacceptable material or being delivered by a non-contracted hauler will be rejected at the scale and not permitted to proceed to unload.

2.4.2 Radioactive Waste Detection Plan

As required pursuant to 6 NYCRR 362-1.4, a fixed radiation detection unit must be installed at the scale to monitor each incoming load. Only loads with a concentration of radium-226 less than 25 pCi/g can be accepted. Loads with concentrations exceeding the acceptance limit will be rejected and not allowed to proceed to the thermal treatment building. The NYSDEC Regional Materials Management Engineer must be notified within 24 hours of all documented radiation exceedances, including the date, time, customer name, and truck number. Records must be kept of each instance in which the radiation detector is triggered. Recorded information will include the date of the incident, transporter name, origin of the waste, truck number, detection reading, disposition of the waste, and date of disposition.

The radiation detection unit setpoint will be between two and five times the background radiation level, and the background site radiation will be determined by daily readings. The detection unit will be calibrated at least annually, or more frequently according to manufacturer recommendations. During normal use, the radiation unit will be field checked weekly with a known radiation source. All Facility personnel involved in scale house operations will be properly trained in the operation of the detection unit as recommended by the manufacturer and as required by applicable State and Federal laws.

2.5 Unauthorized Waste Handling

Due to acceptance of strictly biosolids from contracted sources, the occurrence of unauthorized waste is expected to be minimal. In the event that unauthorized waste is detected after being unloaded, the following procedures will be followed:

2.5.1 MSW, Tires, Industrial Waste, C&D, etc.

1. Safely remove unauthorized item from current operations according to approved training.
2. Direct the hauler, if still onsite, to reload the unauthorized item.
3. If hauler is no longer onsite, notify hauler to return and remove the unauthorized item. If hauler declines, handling and disposal charges will be assessed.
4. Complete an Unauthorized Waste Incident Form (Appendix C).
5. Submit completed form to the Facility Manager and retain in the Facility office.

2.5.2 Asbestos

1. Halt operations in the current work area. Safely remove unauthorized item from current operations according to approved training.
2. Contact the Site Supervisor.
3. Direct the hauler, if still onsite to reload the unauthorized item.
4. If hauler is no longer onsite, notify hauler to return and remove the unauthorized item. If hauler declines, handling and disposal charges will be assessed.
5. Place unauthorized waste in a safe container for proper disposal by an appropriately licensed company.
6. Fill out an Unauthorized Waste Incident Form (Appendix C).
7. Submit complete form to the Facility Manager and retain in the Facility office.

2.5.3 Hazardous or Unknown Waste

1. Halt operations in the current work area.
2. Contact the Site Supervisor. If unauthorized waste poses an immediate threat to health and safety, evacuate the area and call 911.
3. Direct the hauler, if still onsite and safe to do so, to reload the unauthorized item.
4. If hauler is no longer onsite, notify hauler to return and remove the unauthorized item. If hauler declines, handling and disposal charges will be assessed.
5. Contact NYSDEC hotline (1-800-457-7362) to determine corrective actions. The container must be kept closed, and must be labeled with the words, "Hazardous Waste," the type of waste, the hazardous waste ID number, and the date accumulated onsite.
6. Notify the hauler of the offense and inform of corrective actions to be taken.
7. Contact an appropriately licensed company for proper response and disposal.
8. Fill out an Unauthorized Waste Incident Form (Appendix C).
9. Submit complete form to the Facility Manager and retain in the Facility office.

Records of each incident of unauthorized waste detection will be documented with the following information on an Unauthorized Waste Incident Form (Appendix C):

- Date and time
- Description of the waste
- Contact and vehicle information for the transporter that delivered the waste.
- Contact information for the generator of the waste, if known.
- Description of the response action and final disposition of the waste.

Incidents of unauthorized waste must be summarized in the Facility Annual Report to the NYSDEC.

2.6 On-Call Response

If unauthorized waste is received that requires special handling (e.g., petroleum, hazardous waste), a qualified on-call response contractor will be retained, such as the following:

On-Call Response Contractors	
Organization	**Contact Information**
Heritage Environmental	877-436-8778
Clean Harbors	518-434-0149
Miller Environmental Group	518-465-4000

3.0 OPERATIONS AND MAINTENANCE PLAN

Upon Facility startup, equipment vendors are contracted to provide onsite operator training and supply full operating manuals for the process equipment. The equipment maintenance manuals must be maintained for all process equipment and are a part of this Facility Manual by reference.

Whenever the Facility is in operation, the following must be on site and available for review:

- The current NYSDEC Solid Waste Management Facility Permit. (insert in Appendix D)
- The current NYSDEC State Facility Air Permit (insert in Appendix D)
- The most recent Facility Annual Report (insert in Appendix E).
- The current Engineering Report and this Facility Manual.

3.1 Control Measures

Control measures are implemented as necessary precautions for Facility operations to occur in a safe, environmentally sound manner. Specific control measures for identified areas of concern set forth in 6 NYCRR Part 360 are addressed in the following sections.

3.1.1 Facility Inspections

Routine daily inspections are performed each morning prior to opening the Facility for acceptance of feedstock deliveries. Critical operations and safety devices are checked and documented on the Daily Facility Inspection Form (Appendix F). Daily inspections verify operations are in conformance with the applicable sections of 6 NYCRR Parts 360 and 362-1, and the provisions of this Operations and Maintenance Plan (O&M Plan). The following areas are reviewed during the daily inspections:

- Carbon Manufacturing Building
    - Condition of working areas (i.e., biosolids receiving area, process input and storage area, carbon manufacturing area, carbon storage and loadout area).
    - Operation of truck doors and truck wash area.
    - Condition of and access to emergency equipment.
- Wood Reception, Storage, and Processing Area
    - Condition of working areas.
    - Condition of dedicated equipment.

- Exterior Grounds
    - Presence of litter, dust, odors, vectors, noise, or biosolids tracking.
    - Condition of truck scale.
    - Condition of stormwater management system.
- Safety Equipment
    - Mobile equipment mirrors, backup alarms, and maintenance records.
    - Employee compliance with required personal protective equipment.
    - Communication systems.

A copy of the Facility's Inspection Form is included as Appendix F. Completed Inspection Forms will be available for review upon request. In the event of community complaints related to Facility operations (e.g., noise, traffic, odor), the Facility Manager will investigate and complete the Complaint Action Form included as Appendix F. The form will document the complaint, results of any investigation, and corrective actions implemented. The NYSDEC Regional Materials Management Engineer will be notified of all received complaints.

3.1.2 Dust and Tracking Control

Dust and tracking of biosolids is controlled by good housekeeping procedures and proper material handling. Loaded trucks entering or leaving the Facility are covered in accordance with applicable laws. Material receiving, handling, and manufacturing activities occur within the enclosed Carbon Manufacturing Building or within the covered wood receiving, storage, and processing area. A high-pressure water source is available at the biosolids unloading area to wash the wheels and tailgate of delivery trucks if needed. Wash water is collected through a trench drain for discharge to the sanitary sewer. Dust and biosolids tracking observed on asphalt surfaces on the Facility property or on the roadway will be promptly cleaned up. In the event that complaints of dust or tracking are received, the complaint will be investigated, and appropriate corrective actions implemented.

3.1.3 Insect and Vector Control

Biosolids are received, handled, and processed entirely within the enclosed Carbon Manufacturing Building to prevent infestation by insects, rodents, or other vectors. Delivery trucks enter the building through fast opening and closing garage doors to minimize the amount of time that there is a direct opening into the building. The manufacturing process complies with the pathogen and vector attraction criteria outlined in 6 NYCRR 361-3.7 for the production of an EQ Class A biosolids product. The Facility will achieve pathogen and vector attraction reduction through Class A – Alternative 1 (6 NYCRR 361-3.7(a)(1)(i)(b)) by heat drying the feedstock of biosolids and wood waste at a temperature above 80°C to achieve a moisture content less than 10 percent. Product testing must verify that either the density of fecal coliform is less than 1,000 most probable number per gram total solids (dry weight basis) or the density of salmonella bacteria is less than 3 most probable number per 4 grams of total solids (dry weight basis). In the unlikely event of an insect or vector control problem, a qualified exterminator will be retained.

3.1.4 Odor Control

The Facility is maintained at a negative air pressure at all times to prevent fugitive odor emissions. Interior air is continuously extracted through the air pollution control devices even if carbon manufacturing is not occurring. Truck doors into the Carbon Manufacturing Building are fast opening/closing and only open

during biosolids delivery. A natural gas-powered backup generator provides emergency power in the event of a power service failure to continue operating the manufacturing process and air pollution/odor control equipment.

Process air emissions from the Carbon Fertilizer™ manufacturing process, containing particulates, ammonia, sulfur dioxide, and odors, are treated through air pollution control systems prior to exhaust to the atmosphere. The receiving area, reception pits, and process area are all maintained under negative pressure to mitigate potential for fugitive emissions. The biosolids receiving area and reception pits are ducted directly into the combustion air intake of the thermal oxidizer. Auxiliary air input into the dryer is ducted directly from the process area. Therefore, all air inside the Carbon Manufacturing Building is maintained under negative pressure induced by the air treatment system fans. When the manufacturing equipment is not operating, air is continuously pulled through the equipment and the air treatment system to ensure proper odor management at all times.

Air treatment begins with high efficiency dry cyclones that recover most of the particulates from the air stream. After the dry cyclones, fine particulates are removed through multiple venturi heads that cool the air stream to the dew point. The cooled air stream passes through a packed bed wet scrubber where caustic or sodium bicarbonate is introduced to remove sulfur dioxide (SO_2) and other odorous compounds. The effluent from the SO_2 scrubber is discharged as wastewater effluent. After SO_2 removal, the air stream passes through a second packed bed wet scrubber that uses sulfuric acid for ammonia removal. The effluent from the ammonia scrubber contains ammonium sulfate, which is either discharged as wastewater effluent or recycled into the Carbon Fertilizer™ to improve nutrient value. The final component of the air treatment system is a bio-scrubber that consists of two packed beds in series packed with microbes to polish the air by removing residual odors and SO_2 prior to release to the atmosphere.

Process water from the air treatment system that is not recycled is discharged through a direct sewer connection for treatment at the City of Glens Falls publicly owned treatment works (POTW). The air treatment system and associated process emissions are subject to a State Facility Air Permit. Additional details regarding emissions and air treatment are provided in the Air Permit Application narrative.

During daily operations, the Facility is monitored for odors by the operating staff. If odors are detected outside of the Carbon Manufacturing Building that may migrate offsite, the following information will be recorded: Date, time of day, estimated wind speed and direction, type of odor, strength of odor, and duration. If a complaint is received regarding site odor, the following steps will be taken:

1. The complaint and site information will be reviewed to determine if the Facility is the cause of the odor or if the odor is from a different source.
2. If the Facility is determined to be the source, corrective actions will be implemented to eliminate the odor source through process modifications or other controls.
3. The NYSDEC Regional Materials Management Engineer will be notified of all received complaints.

The Facility must be operated in accordance with a State Facility Air Permit issued by the NYSDEC for process emissions to the atmosphere. A copy of the current permit must be maintained onsite in Appendix D.

3.1.5 Stormwater Management

All industrial activities associated with carbon manufacturing are performed indoors or under cover with no exposure to precipitation. Therefore, coverage is not required under the Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity. A No Exposure Certification must be filed with NYSDEC every five years certifying that industrial activity is not exposed to precipitation. If Facility operations change such that a No Exposure Certification no longer applies, the Facility must apply for MSGP coverage. A copy of the current No Exposure Certification must be maintained onsite in Appendix D.

3.1.6 Leachate Control

Biosolids are received with solids content of 19 to 32% (average 23% solids content). Trucks permitted to carry biosolids are required to prevent leakage onto driving surfaces. All liquid associated with the biosolids is evaporated in the carbon manufacturing process and does not require separate management. The floor and walls of the biosolids reception pit and storage area are solid concrete to prevent leakage or release of liquids as required by 6 NYCRR 361-2 for storage facilities. The receiving and storage area is fully enclosed, not located within a floodplain, and is designed to prevent stormwater runoff from entering the area. No leachate is generated that requires collection and management.

3.1.7 Wastewater Control

Approximately 29,456 gallons per day (gpd) of wastewater will be generated from sanitary wastewater, the truck wash, and processing wastewater. Industrial wastewater is discharged directly to the City of Glens Falls publicly owned treatment works (POTW). Testing of process wastewater, if required, will be performed in accordance with the Facility permit for industrial discharge. A copy of the wastewater discharge permit must be maintained on site in Appendix D.

3.1.8 Biosolids Handling

Biosolids are delivered by licensed haulers using standard hauling trucks with covers that will not require modifications. Delivered biosolids are received inside the Carbon Manufacturing Building, which minimizes fugitive noise and odor emissions. The receiving area is isolated from the process area and is serviced by the air treatment system. Trucks back into the building through quick opening and closing garage doors and tip the biosolids into a recessed reception pit. The reception pit is equipped with a scalping grate to separate and remove any oversized material that may be in a load (e.g., unauthorized waste). The receiving area is slightly pitched to ensure that any spillage is contained within the enclosed building. A high-pressure water source is available to wash the wheels and tailgate of delivery trucks if needed. Wash water is collected through a trench drain and for disposal to the sanitary sewer.

Following biosolids reception, screw conveyors located at the bottom of the reception pit transfer the biosolids across the receiving pit into the Process Input Feed Pit. The receiving pits are sized to provide a combined three-day storage capacity in accordance with NYSDEC regulations (6 NYCRR 362-1.5(b)(3)). Indoor storage of biosolids is necessary to provide sufficient material for continuous operation of the manufacturing process 24 hours per day while only receiving biosolids between 6:00 AM and 6:00 PM Monday through Saturday.

At least once per year, the entire concrete surface of the receiving area and the process input and storage area must be cleaned and inspected for structural deficiencies (e.g., cracks) that may require repair.

3.1.9 Wood Handling

Adjacent to the Biosolids Receiving Area is a covered outdoor receiving and storage area for wood waste feedstock. Wood is used as an optional blending agent with biosolids to control moisture content and to boost both energy and carbon content. Received wood waste will include land clearing debris and/or unadulterated wood, wood chips, or bark from logging operations, pulp and paper production, and wood products manufacturing material. Unauthorized wood waste includes wood products that are painted, chemically treated (e.g., pressure-treated wood or railroad ties), or manufactured with chemicals such as glues or adhesives (e.g., plywood or particle board). Received wood will be stored in bunkers and loaded into the Process Input Feed Pit using a bucket loader or similar piece of mobile equipment. To ensure consistent particle size, all wood waste material is passed through an electric grinder to reduce oversized material. A dust hood is located above the grinder to collect any particulate emissions, and the grinder is locally shielded for noise control. The grinder will only operate during daytime hours.

3.1.10 Residue Management Plan

The Facility implements a specific process to manufacture a marketable Exceptional Quality (EQ) Class A biosolids product in accordance with 40 CFR Part 503 and 6 NYCRR 361. Each process line will produce up to approximately 7,840 dry tons of Carbon Fertilizer™ annually as agglomerated pellets with a solids content of 95 to 98%. At full buildout, the Facility will produce up to approximately 23,500 tons of Carbon Fertilizer™ per year. Carbon Fertilizer™ will be loaded directly into delivery trucks or into approximately 1 to 2 cubic yard super sacks.

The Facility will be licensed as a commercial fertilizer distributer in accordance with Article 10, Section 146 of the New York State Agriculture and Markets (AGM) Law. The Facility has submitted a Petition for a Case-Specific BUD for designation by the NYSDEC as a beneficial use product.

The consistency of biosolids feedstock ensures a "guaranteed analysis" of the minimum percentage of plant nutrients claimed can be consistently achieved, which is a requirement for registering Carbon Fertilizer™ in many states including New York. Testing of the manufactured Carbon Fertilizer™ will be in accordance with 40 CFR Par 503 and 6 NYCRR 361-3.9. Each sample for analysis must be a composite of a least five discrete grab samples.

In the event the Facility cannot produce or sell Carbon Fertilizer™ that meets the guaranteed analysis, the feedstock agreement with the hauling partner ensures the hauling partner will remove the Carbon Fertilizer™ at no charge other than transport. The hauling partner owns composting operations and landfills that can beneficially incorporate the produced Carbon Fertilizer™ into their operations.

3.1.11 Roadways and Traffic Control

All truck traffic for biosolids delivery, wood waste delivery, and Carbon Fertilizer™ distribution will access the Facility from Farnan Road within the Moreau Industrial Park and will be restricted to delivery hours of 6:00 AM to 6:00 PM Monday through Saturday. Truck traffic will follow the truck route established in the GEIS for the Moreau Industrial Park, as described below and shown on Figure 3:

- From the north, south, and west: Exit Interstate 87 via Exit 17N onto Route 9 north. Turn right onto Route 197. Turn left onto Fort Edward Road north. Turn right onto Bluebird Road east. Turn right onto Farnan at the Moreau Industrial Park entrance. Turn right into the Facility entrance.

Access into the Facility is through the constructed entrances from Farnan Road as shown on the Site Plan Drawings included in Appendix A. Delivery vehicles enter the Facility and are directed to the weigh-in scale before being directed to the rear of the Carbon Manufacturing Building to the receiving area. Biosolids delivery trucks back into the Carbon Manufacturing Building through fast opening and closing garage doors to unload biosolids into the reception pit that is isolated from the process area and serviced by the air treatment system. A wash station in the unloading area is available to wash any biosolids from the truck and tires as necessary before exiting the building. Wash water is collected in a trench drain for discharge to the sanitary sewer.

Wood waste delivery trucks are received in the covered outdoor wood waste receiving, storage, and processing area. Trucks are tipped onto the concrete floor and visually inspected. Received wood waste is stored in bunkers and loaded into the process input grinder using a wheeled bucket loader or similar piece of mobile equipment. The grinder is locally shielded for noise control and is serviced by an air treatment system for particulate control. After unloading material, empty trucks exit the building and return to the scale to weigh-out. The scale is equipped with a computer system to provide ticket printing and automated recordkeeping.

All deliveries are made by commercial haulers with rear dump trailers. Produced Carbon Fertilizer™ is removed by commercial dump trailers (in bulk) or flatbed trucks (in sacks). Access driveways and onsite driving surfaces are designed to accommodate truck traffic and are maintained in a safe and passable condition. During winter months, snowplowing and ice removal are conducted as needed.

3.1.12 Lighting

The Facility is equipped with pole-mounted and building-mounted lights that are configured so light is not projecting offsite in a manner that could pose a nuisance or deleterious effect (see Appendix A). Lights will be replaced as needed to maintain adequate lighting.

3.1.13 Security

Facility access is restricted to the posted hours of operation. Unauthorized access is prevented by fencing, lockable gates, and lockable building doors. The gates to the Facility are locked during non-receiving periods to prevent unauthorized access. All visitors are required to check in at the administrative office and sign the visitor log so an accurate count is maintained of all persons onsite. A conspicuous sign is posted at the site entrance that reads “VISITORS AND UNAUTHORIZED PERSONNEL MUST FIRST REPORT TO THE OFFICE”.

3.2 Startup, Shutdown, and Operational Monitoring

Upon Facility startup, equipment vendors are contracted to provide onsite operator training and supply full operating manuals for the process equipment. The equipment maintenance manuals must be maintained for all process equipment and are a part of this Facility Manual by reference. Onsite training will include procedures for normal startup, normal shutdown, and operational monitoring.

The process equipment is controlled by an integrated control and instrumentation system. The system includes a Programmable Logic Controller (PLC), electrical controls, indicator lights, alarm horn, and an emergency stop.

3.2.1 Normal Startup

The following describes normal startup sequence of the Facility process equipment:

1. The PLC receives a permissive signal from the air treatment equipment to start.
2. The calciner is started and brought to the target operating temperature. The internal shell, breechings, and piping connection to the thermal oxidizer are purged with nitrogen.
3. The rotary dryer and recycle system are started. Existing dried material within the system (if any) recirculates.
4. The thermal oxidizer is started on natural gas. The dilution air fan is also started. Hot air enters the rotary dryer.
5. The PLC sends a permissive signal to the wet feed system in the reception pit, and wet feed is introduced at the process input feed pit (pugmill) and the dryer.
6. Dried product feed to the calciner is started.
7. As material starts to enter the calciner, syngas will be produced. This syngas is pulled into the thermal oxidizer and combusted. As the calciner comes up to full operating rate, the syngas rate will increase. The thermal oxidizer system will turn down natural gas feed as necessary to compensate for the increased syngas production.
8. As Carbon Fertilizer™ exits the reactor, the material enters a cooling conveyor and is conveyed to the storage and loading area.

3.2.2 Normal Shutdown

The following describes normal shutdown sequence of the Facility process equipment:

1. Wet feed to the process input feed pit (pugmill) is turned off.
2. Feed to the calciner is turned off. Material within the rotary dryer system will now simply recycle as the system is shut down.
3. As the calciner empties, syngas production will decrease. The thermal oxidizer will compensate, if necessary, by adjusting the natural gas feed to maintain necessary inlet dryer temperature.
4. After the calciner is emptied, the calciner furnace is turned off. The calciner will continue to rotate until cooled down.
5. When syngas production stops, the thermal oxidizer is cooled down and turned off.
6. The rotary dryer system is shut down.

3.2.3 Unscheduled Shutdown

The following describes unscheduled shutdown sequence of the Facility process equipment under certain scenarios:

Lack of Feedstock:

Shutdown is not necessary if lack of feedstock will not be prolonged. If interruption in feedstock supply will be resolved shortly, follow the procedure below to enter "Hot Standby" mode. If interruption in feedstock supply will not be resolved in a short timeframe, follow the normal shutdown procedure.

1. Stop feed material into the calciner.
2. Put the calciner and thermal oxidizer into "Hot Standby" mode.
3. Put the dryer system into continuous recycle loop.
4. When feed supply is restored, exit "Hot Standby" mode and resume feed to calciner.

Calciner Offline:

The following procedure should be followed if the calciner fails unexpectedly:

1. Upon a failure of the calciner system, feed to the calciner is immediately shut off.
2. The calciner furnace is shut down and calciner shell RPM is increased to maximum. The calciner continues to rotate as it cools down.
3. An emergency nitrogen purge of the reactor is initiated.
4. Wet feed to the process input feed pit (pugmill) is turned off.
5. As syngas production from the reactor decreases, the thermal oxidizer system will increase natural gas feed to its combustion system to maintain temperature.
6. When syngas production stops, the thermal oxidizer is cooled down and turned off.
7. The rotary dryer system is shut down.

Thermal Oxidizer Offline:

The following procedure should be followed if the thermal oxidizer fails unexpectedly:

1. Upon a failure/emergency in the thermal oxidizer, the calciner furnace immediately turns off.
2. Calciner shell RPM is increased to maximum. The calciner continues to rotate as it cools.
3. An emergency nitrogen purge of the calciner is initiated.
4. Syngas flow to the thermal oxidizer is stopped. Syngas from the calciner is diverted to an emergency vent.
5. Wet feed to the process input feed pit (pugmill) is turned off.
6. The rotary dryer system is shut down.

3.2.4 Operational Monitoring

During normal operations, process operations are monitored through an integrated control and instrumentation system. The system includes a PLC, electrical controls, indicator lights, alarm horn, and an emergency stop. The facility Operator controls the feed proportions in the mixer (i.e., wet biosolids, wood, and dried recirculation) to maintain a consistent moisture content into the dryer. The mixing adjustments are performed using the PLC and temperature and moisture data from the dryer. Similarly, if the feed mix becomes too dry, the operator will apply moisture with a target of maintaining a consistent 5% moisture content out of the dryer and into the calciner.

The following parameters will govern the operation of the carbon manufacturing equipment:

- Moisture Content of feedstock exiting process input feed pit into the dryer: 23% target
- Moisture Content of dried feedstock entering the rotary calciner: 5%
- Dryer Inlet Temperature: 1,100°F
- Dryer Exhaust Temperature: 240°F
- Pressure Drop Across Dry Cyclone: 6 in. WC
- Shell Temperature of Rotary Calciner: 1,200 to 1,300°F
- Oxygen Content in Rotary Calciner: <3% O_2 by volume
- Temperature of Thermal Oxidizer: 1,600 to 1,800°F
- Moisture content of the manufactured Carbon Fertilizer™: 10%

3.3 Equipment Maintenance

Facility equipment undergoes routine maintenance according to manufacturer recommendations. Routine maintenance includes:

- Heavy Equipment (e.g., front-end loader): Lubrication, oil changes, fluid levels, hoses and belts. Maintenance will be performed in accordance with manufacturer recommendations and schedule.
- Carbon Manufacturing Equipment: lubrication and maintenance in accordance with manufacturer recommendations and schedule.
- Air Pollution Control Equipment: lubrication and maintenance in accordance with manufacturer recommendations and schedule.
- Administrative Office: cleaning, replace lighting, HVAC system, general repairs.
- Site Exterior: Litter removal, sweeping and washing paved areas, lawn maintenance, stormwater system cleaning.

Copies of equipment manuals and maintenance records must be maintained onsite in the Facility office.

4.0 TRAINING PLAN

4.1 General

Training is essential to the safe operation and maintenance of the Facility. All employees are trained to perform in a manner that will safeguard human health and the environment and be compliant with applicable regulations established by the Occupational Safety and Health Administration (OSHA). The program is also designed to minimize to the greatest extent possible the potential for receiving unacceptable waste. Employee training will be documented on the training form included in Appendix G.

New employees receive orientation training to familiarize the employee with Facility operations and each employee's specific job role. Additional on-the-job training is implemented whenever a job role is changed or when performance improvements are needed. The Facility Manager is responsible for the instruction and observation of a new employee. At no time will any employee be asked or required to perform any task they lack the required skill or knowledge of proper safety precautions. Employees are trained to recognize potential hazards that exist in the workplace, follow standard safety procedures, and respond effectively to emergencies.

4.2 Facility Staffing

The following positions are assigned to the Facility:

Facility Manager: Responsible for daily operations, scheduling, permit compliance, recordkeeping, supervision of staff and direction of training programs. There will be a Facility Manager on duty during receiving hours.

Site Supervisor: Responsible for personnel supervision and coordination of safety procedures. There will be a Site Supervisor on duty during receiving hours.

Facility Operator: Responsible for operation and inspection of carbon manufacturing equipment, air pollution control equipment, and mobile machinery (e.g., front loader). Fully trained in the safe operation and inspection procedures of assigned equipment, and identification and handing of unauthorized waste. At least two Facility Operators will be on duty during operating hours.

Administrative Support: Responsible for operation of the truck scale and preparation and maintenance of facility records. Administrative Support will be on duty during receiving hours.

The number of Facility Operators on site will vary with workload. The anticipated regular Facility staffing is between two and four employees per shift and up to three shifts per day. The Facility will not remain in operation without sufficient staffing for safe operation.

4.3 Personal Protection and Safety

Employees will be instructed in the use of protective clothing, hard hats, safety vests, and eye and ear protection. Training will be hands-on whenever possible and will review basic safety rules and the function and limitations of equipment.

4.4 Training Sequence

Employees receive initial and ongoing training according to the following sequence:

1. Initial training will review Facility operations with a focus on each employee's assigned job function. Basic safety and emergency procedures will be emphasized. The training will be conducted by the Facility Manager or designee.
2. Newly hired employees will work closely with the Site Supervisor or designee during the initial week of employment to develop a full understanding of the Facility operations and each newly hired employee's assigned role. Workers will be tutored by a superior on each task or piece of equipment prior to unsupervised work. All employees will receive safety training required by OSHA. Training will review emergency response in the event of a fire, use of communication equipment in the event of an emergency, and Facility shutdown procedures. No employee will work unsupervised in a specific job until all related training programs are satisfactorily completed.
3. All employees will be continually trained in general procedures of their job function. Regular training will emphasize procedures to identify and manage unauthorized waste. Employees will be instructed to immediately report any unacceptable waste to the on-duty Site Supervisor. Training will primarily be on-the-job and will be supervised by the Facility Manager. Personnel not performing in conformance with this Facility Manual will receive additional training, disciplinary measures, or be terminated.

4.5 Safety Training

There are employee-related safety mandates established pursuant to New York State Labor Law and Federal OSHA rules and regulations that extend beyond the scope of this Facility Manual. This section clarifies only the Facility policy specifically regarding health and safety issues regarding the operation of the solid waste management facility.

GENERAL SAFETY RULES

Employees are required to maintain a professional demeanor. Running, jumping, shoving, etc. is not allowed.

SAFETY EQUIPMENT/PRECAUTIONS

Employees will be trained in the proper use of the following safety equipment:

- Gloves
- Safety Shoes
- Eye Protection
- Ear Protection
- Hard Hats
- Safety Vests

EMERGENCY EQUIPMENT

Employees are trained in the proper use and location of the following emergency equipment:

- Fire Extinguishers
- Electrical Main Shut Off
- Gas Main Shut Off

EVACUATION ROUTES

Employees are trained in the evacuation routes to safely exit the Facility during emergency conditions. Facility exits are clearly marked. During an evacuation, employees will move to the closest exit and meet at a designated safe location for a head count and further instruction.

SMOKING POLICY

Smoking is strictly prohibited on the entire premise and is not allowed at the Facility.

5.0 EMERGENCY RESPONSE PLAN

5.1 General

This Facility Manual will be made available to emergency response groups such as the local police and fire department, New York State Police, and Saratoga County Office of Emergency Services. The Site Plan in Appendix A provides a general layout of the Facility for quick access and orientation. A list of emergency coordinators and contact information is posted at the Facility.

At least annually, an onsite familiarization session will be held with first responders to review the Facility layout, equipment, materials stored, and operations.

5.2 Spill Control

In the event of a spill of a petroleum product or hazardous substance, employees are instructed to immediately contact the Facility Manager, or most senior person on the site at the time. The person notified will determine the extent and nature of the spill, and direct remedial efforts, as appropriate. Spill cleanup will not be undertaken unless adequate personal protective equipment and safety measures are implemented. All such equipment will be maintained onsite at a readily accessible location. Spill cleanup activities will be with proper notification to the NYSDEC and will be in accordance with NYSDEC requirements. If necessary, an on-call response contractor will be retained to perform the cleanup.

When a discharge/spill is discovered, contained, and cleaned up, the material and supplies used for cleanup must be disposed. For small spills, onsite spill equipment may be used for cleanup. Once the spill cleanup is complete, a professional spill contractor or waste management company will be contacted to remove and dispose of the spill materials.

For large spills, a spill response contractor will be contacted to respond to the spill emergency. The spill contractor will clean up the spill, remove the waste from the site, and dispose of the waste materials in the proper manner required by law.

Should a spill occur, the circumstance will be evaluated to determine the cause of the spill and to review the corrective or preventive measures taken to ensure that these actions are adequate to prevent the incident from being repeated.

Immediately after a spill has been detected, proper notifications will be made. All petroleum spills will be reported to the NYSDEC Spill Hotline (1-800-457-7362) within two hours of discovery, except spills which meet each of the following criteria:

1. The quantity is known to be less than five gallons.
2. The spill is contained and under the control of the spiller.
3. The spill has not and will not reach the State's water or any land. Spills on dirt or gravel are considered to have reached land. Spills occurring on asphalt or concrete have not reached land.
4. The spill is cleaned up within two hours of discovery.

5.3 Equipment Breakdown

In the event of equipment breakdown, equipment will either be repaired or replaced. Breakdown of mobile equipment can be mitigated through temporary equipment rental or lease, if needed. Service contracts are in place for all mechanical and safety equipment that are not maintained by Facility personnel. During extensive breakdown and any other emergency, receipt of incoming material will cease. The Facility storage area is sufficiently sized to continue receiving material throughout the remainder of a receiving day in the event of a breakdown to the carbon manufacturing equipment while repairs are made.

5.4 Fire and Emergency Services

Facility personnel are trained in emergency shutdown procedures, evacuation routes, and the location and use of first aid and firefighting devices (e.g., fire extinguishers). In the case of an emergency, material receipt and handling will cease immediately, and personnel will follow established evacuation routes to a designated safe assembly location. The Facility Manager or Site Supervisor will perform a head count with the employee attendance sheet and the visitor's log to confirm all persons are accounted for. Re-entry to Facility buildings will be authorized by the Facility Manager only after a determination has been made that the conditions are safe.

There is combustion potential associated with the storage of produced Carbon Fertilizer™. The Carbon Fertilizer™ will be hydrated to 10% moisture after the jacketed cooling conveyor and prior to storage to eliminate combustible dust throughout. In addition, a dust chute will be used at the end of the bulk loading conveyor for dust control when loading trucks. To mitigate combustion risks from combustible dusts, the process and conveyance equipment include dust ports for dust removal as well as nitrogen purging to eliminate a combustible atmosphere. Recovered dust is fed into the dryer exhaust prior to the dry cyclone for reclamation into the Carbon Fertilizer™ manufacturing process. The entire process area is outfitted with sprinkler systems as a secondary form of fire control in accordance with fire protection requirements.

5.5 Natural Disasters

In the event of formal warnings during non-receiving hours issued by weather monitoring services (e.g., tornado warning by National Weather Service), the Facility will remain closed to receiving until such warning is terminated. If a warning is issued during Facility receiving hours, material receipt will cease immediately. In both instances, material handling and carbon manufacturing will cease immediately and personnel will evacuate to an interior meeting location where the Facility Manager will perform a head count with the employee attendance sheet and the visitor's log to confirm all persons are accounted for.

In the event of a natural or manmade disaster that requires increased solid waste management services, the Facility will work within the permitted operating capacity to accommodate the need in addition to regular customers. As described in 6 NYCRR 360.16(c)(4)(iv)(b), the Facility will request to temporarily increase capacity, as authorized by NYSDEC, to assist in emergency response/cleanup efforts.

5.6 Communication

Facility personnel communication is verbal with the assistance of two-way radio devices and cellular phones. When appropriate, hand signals are used such as when equipment operating noise prohibits the use of verbal communication.

6.0 EMERGENCY RESPONSE CONTACTS

The following emergency contact and telephone numbers will be posted at the site.

Emergency Directory

Emergencies (Fire, Medical, Safety)	911
NYSDEC Spill Notification:	(800) 457-7362
NYSDEC Region 5 Materials Management:	(518) 623-1200
On-Call Response Contractors	
Heritage Environmental	877-436-8778
Clean Harbors	518-434-0149
Miller Environmental Group	518-465-4000

7.0 NOISE MONITORING AND CONTROL PLAN

Operating requirements for noise are subject to the following noise standards contained in 6 NYCRR Part 360.19(j):

> *The owner or operator of a facility must ensure that noise resulting from equipment or operations at the facility does not exceed the following energy equivalent sound levels beyond the property line owned or controlled by the owner or operator of the facility at locations authorized for residential purposes:*

Character of Community (within 1 mile radius)	***Leq Energy Equivalent Sound Levels***	
	7 a.m.-10 p.m.	*10 p.m.-7 a.m.*
Rural	*57 decibels (A)*	*47 decibels (A)*
Suburban	*62 decibels (A)*	*52 decibels (A)*
Urban	*67 decibels (A)*	*57 decibels(A)*

Based on the population density of the Town within a 1-mile radius of the Facility, suburban noise restrictions apply, which limit the maximum sound level to 62 decibels (dBA) from 7:00 AM to 10:00 PM

and 52 dBA from 10:00 PM to 7:00 AM as measured beyond the Facility property line at the closest location authorized for residential purposes (i.e., closest potential receptor). The Facility property and immediate surroundings is zoned "General Manufacturing & Industrial" and the closest residential zoned property is approximately 750 feet southwest of the southwestern property line (See Figure 2).

A Noise Assessment included in the Facility Engineering Report demonstrates expected compliance with operating requirements in 6 NYCRR 360.19(j); therefore, a Noise Monitoring and Control Plan is not required. If a noise complaint is received, the Facility Manager will investigate the complaint, notify the NYSDEC Regional Materials Management Engineer, and implement corrective actions, if necessary. At least annually, a noise survey will be performed to demonstrate compliance with operating standards unless a waiver is obtained from NYSDEC.

8.0 CLOSURE PLAN

When the Facility ceases operation, any remaining feedstock will be processed into Carbon Fertilizer™ and the product shipped to end users. Salvageable equipment will be resold or scrapped and the Facility will be cleaned.

Notice will be sent to the NYSDEC 30 days prior to the anticipated final date that the Facility will receive biosolids and wood waste for Carbon Fertilizer™ manufacturing. Within 30 days after receiving the final material, an annual report will be submitted to NYSDEC. Within 60 days after receiving the final material, any remaining biosolids and wood waste that are processed will be removed from the Facility for offsite management at a permitted Facility. All closure activities will be completed within 90 days after receiving the final material.

NYSDEC must be notified within 7 days of the completion of closure activities that closure is complete. The NYSDEC or an acceptable agent may arrange to inspect the site to determine if closure is complete of if additional work is required.

8.1 Financial Assurance

In accordance with 6 NYCRR 362-1.5, the Facility must maintain financial assurance in an amount sufficient to cover the cost of closure. The provided closure cost estimate is for the full buildout of the Facility. Based on the phased construction approach, the closure cost and corresponding financial assurance should be pro-rated for the number of phases constructed and operating. The estimated closure cost is as follows:

8.2 Closure Cost Estimate

A closure cost estimate for the Facility is estimated in the following table based on a single phase of construction and a corresponding total cost at full buildout of all three phases:

Item	Description	Quantity	Unit Price	Cost
Per Phase				
1	Wet Biosolids removal	720 tons	$105	$75,600
2	Dry Biosolids removal	10 tons	$105	$1,050
3	Wood Feedstock Removal	6.7 tons	$105	$703.50
4	Carbon Fertilizer™ removal	168 tons	$30	$5,040
5	Equipment Disconnection and Removal	1 Lump Sum	$33,750	$35,750
6	Facility Cleaning	1 Lump Sum	$5,360	$5,360
			Subtotal Per Phase	$123,503.50
			Contingency @ 10%	$12,350.35
			Total Per Phase	**$135,853.90**
			Total at Full Buildout	**$407,561.60**

Notes (by Item Number):

1 Assumes three days of stored wet biosolids. Unit price includes loading, transportation, and landfill disposal. Under planned closure, all biosolids will be processed through normal facility operations such that no unprocessed wet biosolids will require management for disposal. Unit rate for transportation and disposal is based on range of quotes obtained from contractors for non-hazardous waste disposal ranging from $93 to $105 per ton.

2 Assumes process lines are shut down with full capacity of biosolids requiring disposal. Unit price includes loading, transportation, and landfill disposal. Under planned closure, all biosolids will be processed through normal facility operations such that no unprocessed wet biosolids will require management for disposal. Unit rate for transportation and disposal is based on range of quotes obtained from contractors for non-hazardous waste disposal ranging from $93 to $105 per ton.

3 Allowance for wood feedstock removal. Unit price includes loading, transportation, and disposal. Under planned closure, all wood waste will be processed through normal facility operations such that no unprocessed wood will require management for disposal. Unit rate for transportation and disposal is based on range of quotes obtained from contractors for non-hazardous waste disposal ranging from $93 to $105 per ton.

4 Assumes maximum seven days of stored Carbon Fertilizer™. Unit price includes loading and transportation. Management cost includes transportation only due to Carbon Fertilizer™ offtake agreement with biosolids supplier.

5 Cost based on representative estimate for equipment delivery and installation assuming similar effort for disconnection and removal.

6 Allowance for dry sweep cleaning of Facility interior and exterior. Unite rate based on 1 day of street sweeper (Costworks Line #015433503450) and 15,000 sf interior cleaning (Costworks Line 017413200100).

9.0 REPORTING AND RECORDKEEPING

9.1 Daily Operational Records

The following records must be maintained:

- Daily operating record of the quantity of biosolids received. Records are generated by the scale record system and include time, gross and net weights (in tons), source of feedstock, name and number of delivery truck, results of load inspections, identification of unauthorized waste, and any rejected loads.
- Daily operating record of the quantity of biosolids and wood waste that is processed and the quantity of Carbon Fertilizer™ produced.
- Routine inspection logs that include the date and time of inspection, name of inspector, description of inspected areas, observations, and required remedial actions.
- Results of material tests, including feedstock moisture content and manufactured product samples.
- Personnel training records.

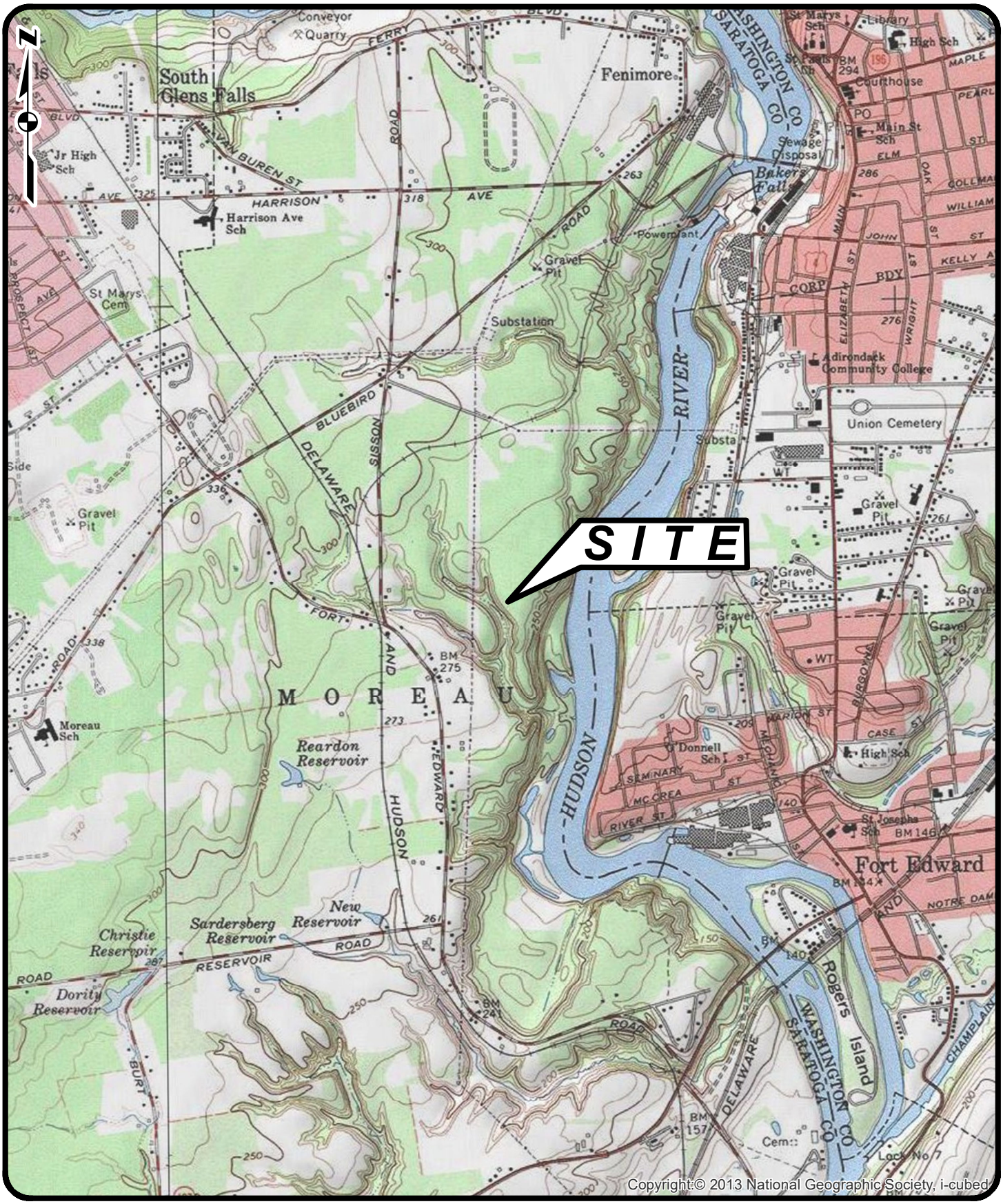
9.2 Annual Reports

Annual reports are prepared and filed in accordance with 6 NYCRR 360.19(k)(3) by March 1st of each year for the previous calendar year. A blank annual report form is included in Appendix E.

9.3 Tracking Documents

Tracking documents are used for all materials being shipped to and from the Facility. The document will record the material source, type, quantity, name of hauler, shipment date, and the final destination. The hauler and receiving facility operator sign the tracking document upon arrival at the destination.

FIGURES



S:\Sterling\Projects\2020 Projects\Saratoga Biochar Solutions - 2020-20\Drawings-Maps-Figures\GIS\2020-20001G- FIG 1 SITE LOC MAP.mxd\

STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road • Latham, New York 12110

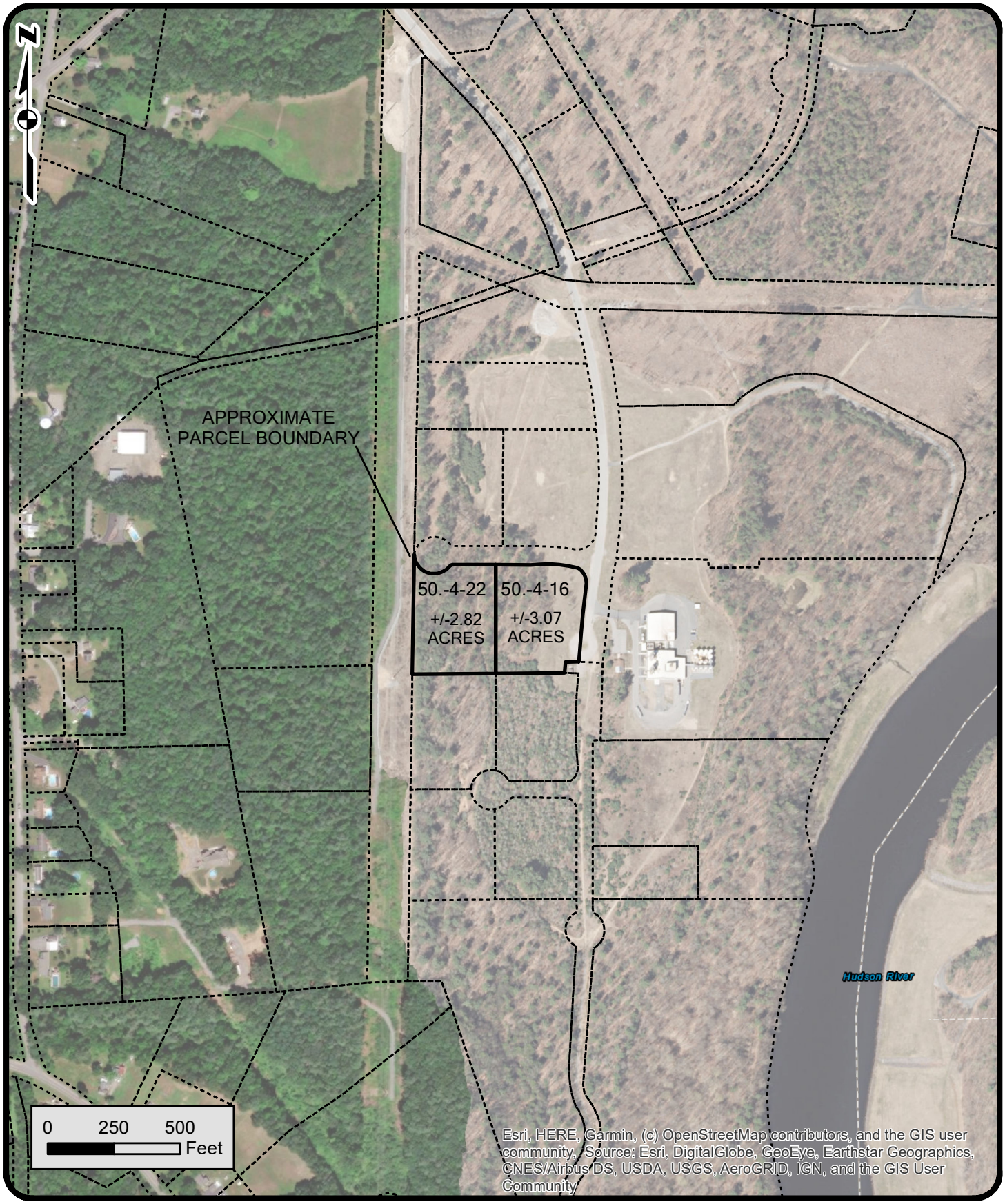
SITE LOCATION MAP

SARATOGA BIOCHAR SOLUTIONS, LLC

CARBON FERTILIZER MANUFACTURING FACILITY

TOWN OF MOREAU — SARATOGA CO., NY

PROJ.NO. 2020-20	DATE: 10/25/2021	SCALE: 1 " = 2,000 '	DWG.NO. 2020-20001G	FIGURE 1



S:\Sterling\Projects\2020 Projects\Saratoga Biochar Solutions - 2020-20\Drawings-Maps-Figures\GIS\2020-20003G- FIG 2 SITE LAYOUT.mxd\

STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road • Latham, New York 12110

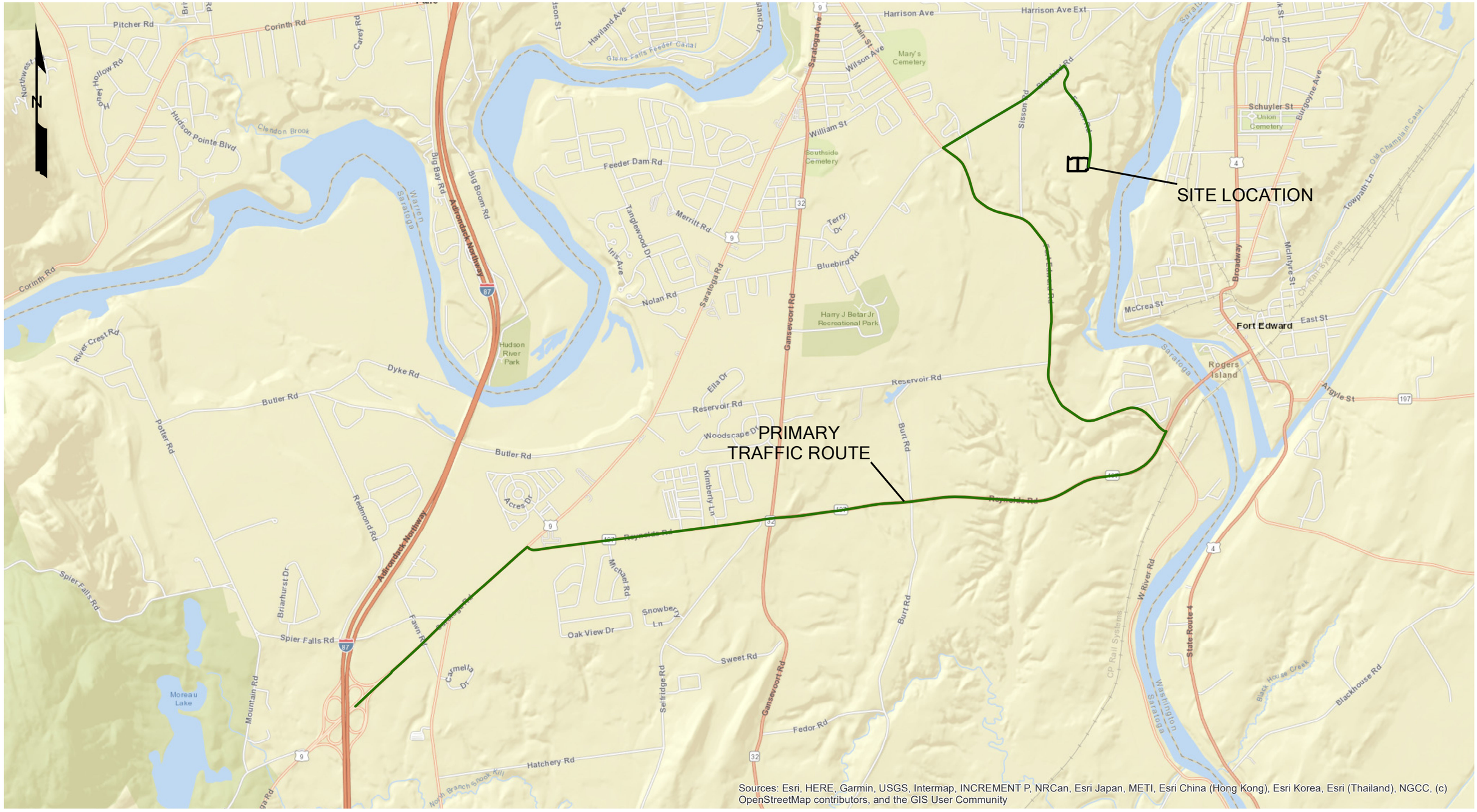
SITE VICINITY MAP

SARATOGA BIOCHAR SOLUTIONS, LLC

CARBON FERTILIZER MANUFACTURING FACILITY

TOWN OF MOREAU SARATOGA CO., NY

PROJ.NO. 2020-20	DATE: 10/14/2021	SCALE: 1 " = 500 '	DWG.NO. 2020-20003G	FIGURE 2



LEGEND

PRIMARY TRAFFIC ROUTE

0 4,000 8,000 FEET

1 inch = 4,000 feet

STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road • Latham, New York 12110

TRAFFIC ROUTE MAP

SARATOGA BIOCHAR SOLUTIONS, LLC

CARBON FERTILIZER MANUFACTURING FACILITY

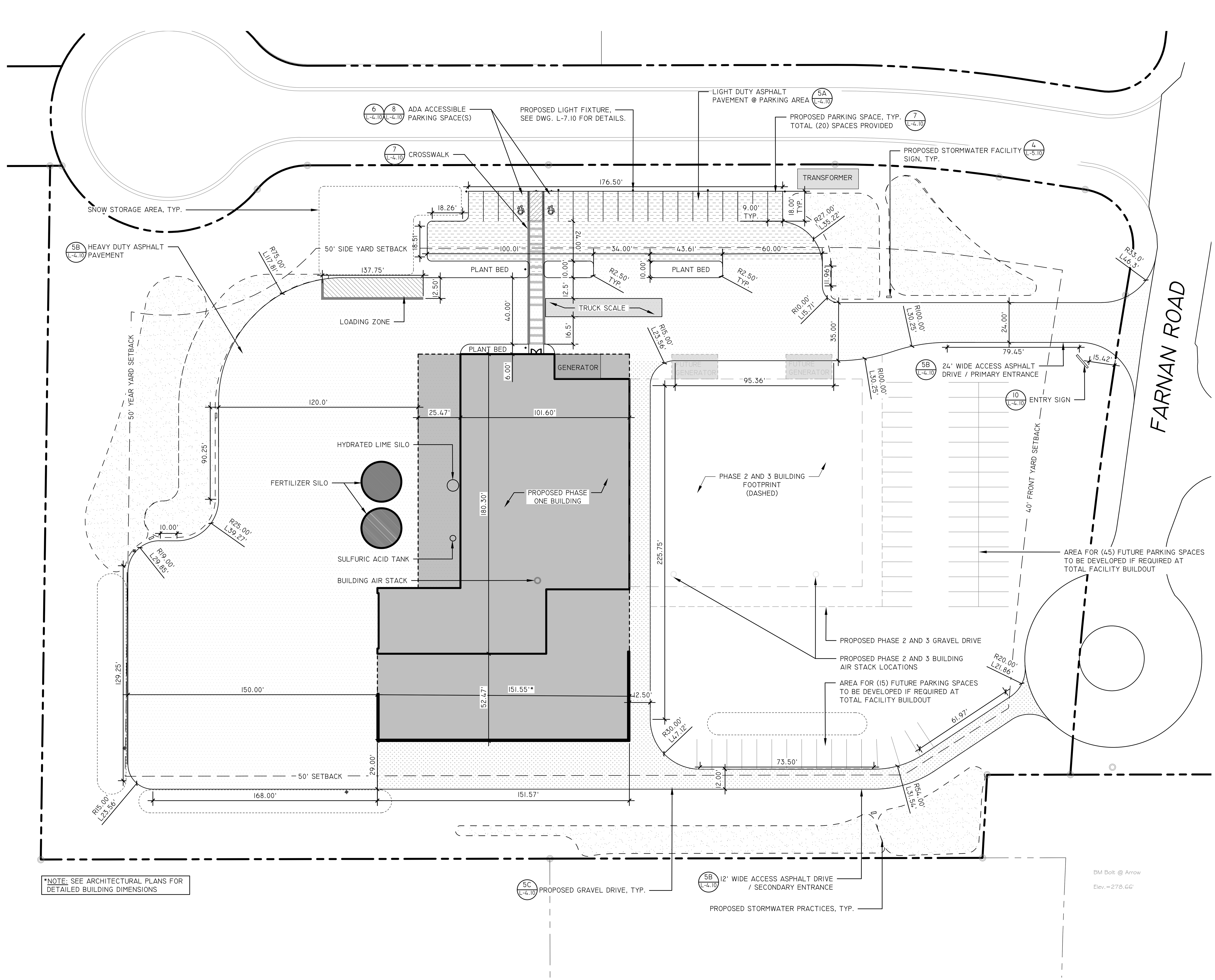
TOWN OF MOREAU SARATOGA CO., NY

PROJ.NO.	DATE:	SCALE:	DWG.NO.	FIGURE
2020-20	10/14/2021	1"=4,000'	2020-20004G	3

S:\Sterling\Projects\2020 Projects\Saratoga Biochar Solutions - 2020-20\Drawings-Maps-Figures\GIS\2020-20004G- FIG 3 Traffic Route Map.mxd

FACILITY MANUAL
APPENDIX A

SITE PLAN



LAYOUT NOTES:

1. VERIFY LOCATION OF ALL BUILDINGS, WALLS, ROADS AND CURBS AFFECTING SCOPE OF WORK.
2. VERIFY LOCATION OF ALL VAULTS, ELECTRICAL DUCT BANKS, MANHOLES, CONDUIT AND PIPING, DRAINAGE STRUCTURES AND OTHER UTILITIES WITH THE APPROPRIATE ENGINEERING DRAWINGS. NOTIFY ENGINEER OF ANY CONFLICTS WITH ENGINEER SCOPE.
3. TAKE ALL DIMENSIONS FROM FACE OF GRAVEL PARKING AREA OR BUILDING TO CENTERLINE OF DRIVE OR TREES UNLESS OTHERWISE NOTED.
4. ALL ANGLES TO BE 90 DEGREES AND ALL LINES OF PAVING AND FENCING TO BE PARALLEL UNLESS NOTED OTHERWISE. MAINTAIN HORIZONTAL ALIGNMENT OF ADJACENT ELEMENTS AS NOTED ON THE DRAWINGS.
5. REFERENCE TO NORTH REFERS TO PLAN NORTH, REFERENCE TO SCALE IS FOR FULL-SIZED DRAWINGS ONLY. DO NOT SCALE FROM REDUCED DRAWINGS.

LEGEND:

- PROPERTY LINE
- PROPERTY LINE SETBACK
- LIMITS OF DISTURBANCE
- PROPOSED HEAVY DUTY ASPHALT SURFACE
- PROPOSED LIGHT DUTY ASPHALT SURFACE
- PROPOSED GRAVEL SURFACE
- PROPOSED STORMWATER PRACTICES
- PROPOSED LIGHT FIXTURES
- PROPOSED SNOW STORAGE AREA

GRAPHIC SCALE
30 0 15 30 60
1 INCH = 30 FEET
ON 24" X 36" SHEET

N

MAP REFERENCE:
BASE MAP INFORMATION OBTAINED FROM "MAP OF TOPOGRAPHIC SURVEY MADE FOR NORTHEAST BIOCHAR SOLUTIONS, INC., TOWN OF MOREAU, SARATOGA COUNTY, NEW YORK" PREPARED BY VAN DUSEN & STEVES SURVEYORS, DATED JULY 28, 2021.

DIG SAFE NOTE:
THIS PLAN SET WAS DRAFTED WITHOUT THE BENEFIT OF "DIG SAFE" MARKINGS. UTILITIES SHOWN ARE NOT WARRANTED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT "DIG SAFE" AT 811 BEFORE COMMENCING ANY WORK AND SHALL PRESERVE EXISTING UTILITIES WHICH ARE NOT SPECIFIED TO BE REMOVED IN THIS PLAN SET.

studioA
Landscape Architecture + Engineering, DPC
STUDIO A
LANDSCAPE ARCHITECTURE + ENGINEERING, DPC
MAILING:
PO BOX 272
SARATOGA SPRINGS, NY 12866
OFFICE LOCATION:
38 HIGH ROCK AVE, SUITE 3
SARATOGA SPRINGS, NY 12866
(518) 450-4030

DRAWINGS NOT FOR CONSTRUCTION

REVISIONS		
DATE	DESCRIPTION	

northeastern BIOCHAR SOLUTIONS — WASTE NOT

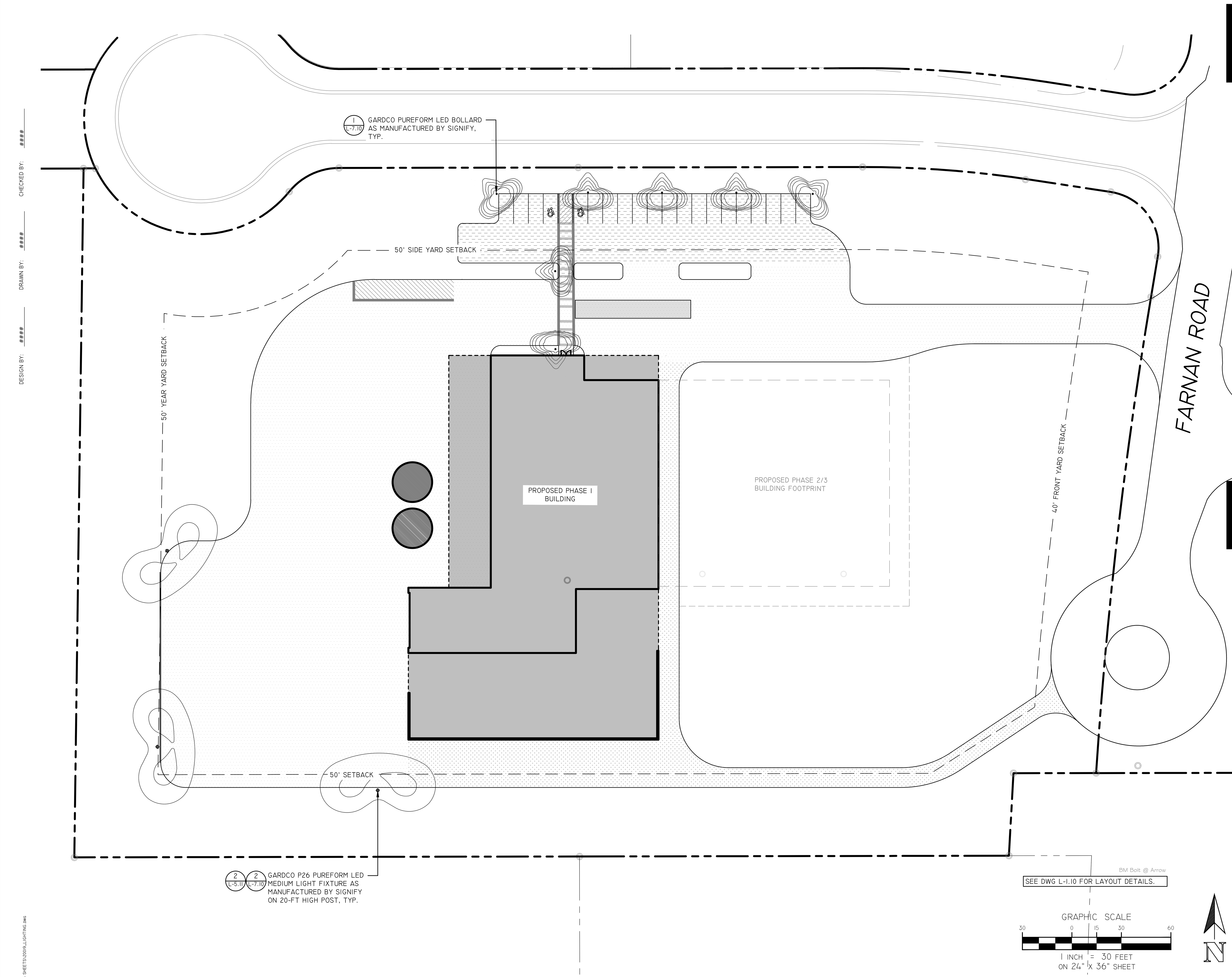
PREPARED FOR
SARATOGA BIOCHAR SOLUTIONS, LLC
26 F CONGRESS ST. #346
SARATOGA SPRINGS, NY 12866

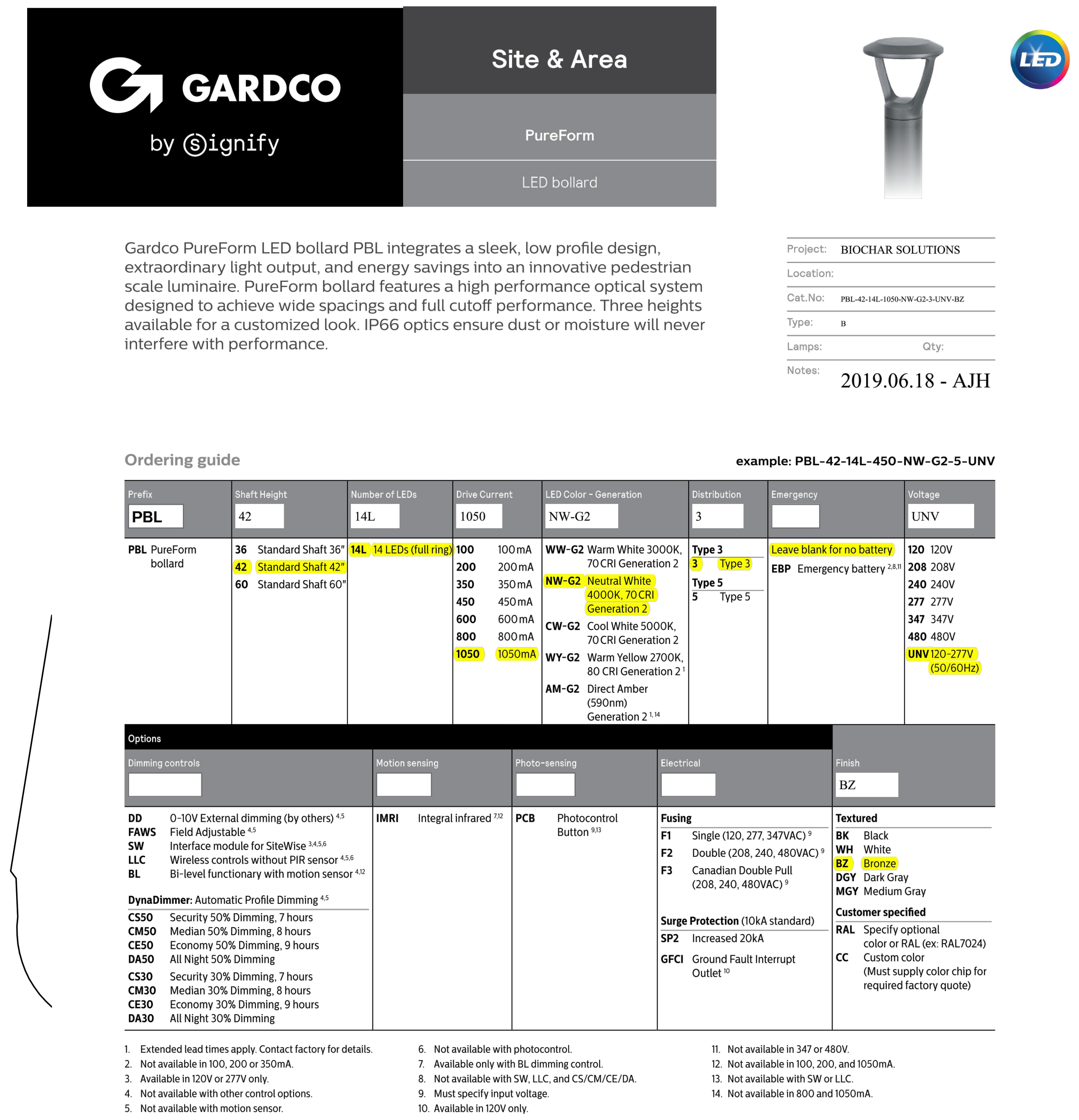
PROJECT
SARATOGA BIOCHAR SOLUTIONS, LLC

DRAWING TITLE
LAYOUT PLAN

DATE: 03/25/2022
PROJECT NO. 20019
DRAWING NO.
L-1.10
DWG 2 OF 9

DESIGN BY: ####
DRAWN BY: ####
CHECKED BY: ####





GARDCO by Signify | Site & Area | PureForm | LED bollard

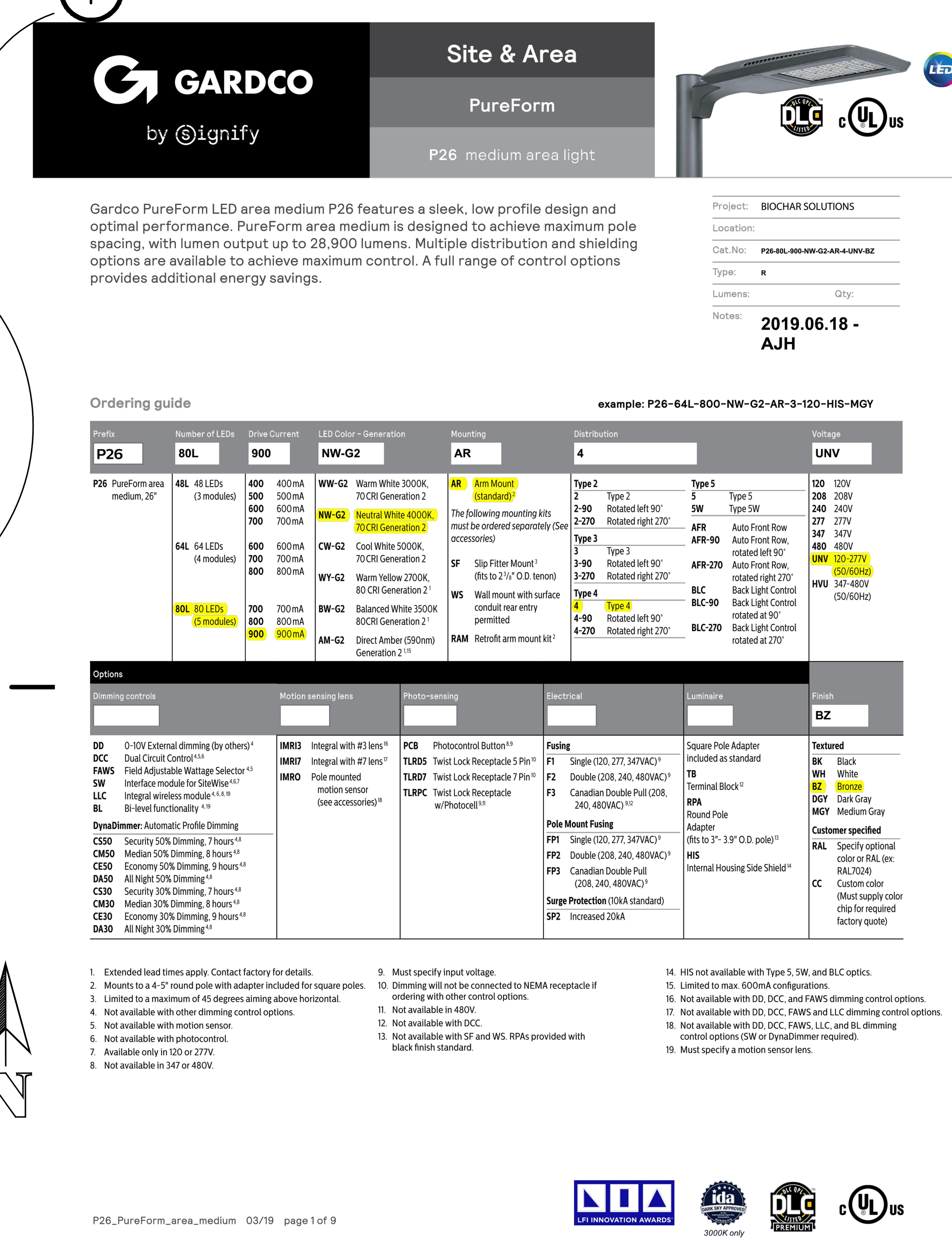
Gardco PureForm LED bollard PBL integrates a sleek, low profile design, extraordinary light output, and energy savings into an innovative pedestrian scale luminaire. PureForm bollard features a high performance optical system designed to achieve wide spacings and full cutoff performance. Three heights available for a customized look. IP66 optics ensure dust or moisture will never interfere with performance.

Project: BIOCHAR SOLUTIONS
Location:
Cat.No: PBL-42-14L-1050-NW-G2-3-UNV-BZ
Type: B
Lamps: Qty:
Notes: 2019.06.18 - AJH

Ordering guide — example: PBL-42-14L-450-NW-G2-5-UNV

Prefix	Shaft Height	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Emergency	Voltage
PBL	42	14L	1050	NW-G2	3		UNV

1 GARDCO PBL PUREFORM LED BOLLARD



GARDCO by Signify | Site & Area | PureForm | P26 medium area light

Gardco PureForm LED area medium P26 features a sleek, low profile design and optimal performance. PureForm area medium is designed to achieve maximum pole spacing, with lumen output up to 28,900 lumens. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project: BIOCHAR SOLUTIONS
Location:
Cat.No: P26-80L-900-NW-G2-AR-4-UNV-BZ
Type: R
Lumens: Qty:
Notes: 2019.06.18 - AJH

Ordering guide — example: P26-64L-800-NW-G2-AR-3-120-HIS-MGY

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage
P26	80L	900	NW-G2	AR	4	UNV

P26_PureForm_area_medium 03/19 page 1 of 9

2 GARDCO P26 PUREFORM LED MEDIUM AREA LIGHT

MAP REFERENCE:
BASE MAP INFORMATION OBTAINED FROM "MAP OF TOPOGRAPHIC SURVEY MADE FOR NORTHEAST BIOCHAR SOLUTIONS, INC., TOWN OF MOREAU, SARATOGA COUNTY, NEW YORK" PREPARED BY VAN DUSEN & STEVES SURVEYORS, DATED JULY 28, 2021.

DIG SAFE NOTE:
THIS PLAN SET WAS DRAFTED WITHOUT THE BENEFIT OF "DIG SAFE" MARKINGS. UTILITIES SHOWN ARE NOT WARRANTED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT "DIG SAFE" AT 811 BEFORE COMMENCING ANY WORK AND SHALL PRESERVE EXISTING UTILITIES WHICH ARE NOT SPECIFIED TO BE REMOVED IN THIS PLAN SET.

studioA
Landscape Architecture + Engineering, DPC
STUDIO A
LANDSCAPE ARCHITECTURE + ENGINEERING, DPC
MAILING:
PO BOX 272
SARATOGA SPRINGS, NY 12866
OFFICE LOCATION:
38 HIGH ROCK AVE, SUITE 3
SARATOGA SPRINGS, NY 12866
(518) 450-4030

DRAWINGS NOT FOR CONSTRUCTION

REVISIONS	DATE	DESCRIPTION

northeastern BIOCHAR SOLUTIONS — WASTE NOT

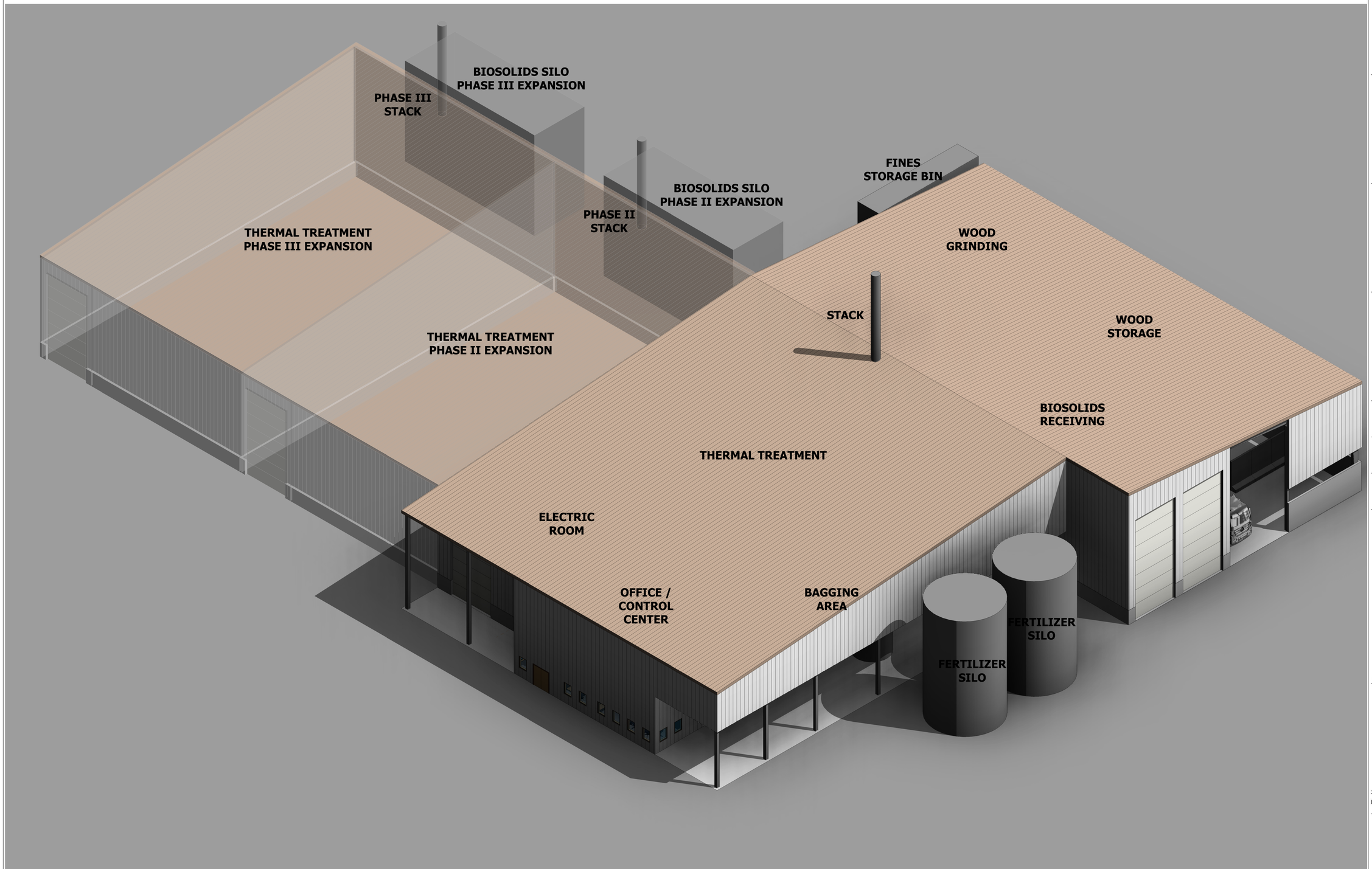
PREPARED FOR
SARATOGA BIOCHAR SOLUTIONS, LLC
26 E CONGRESS ST. #346
SARATOGA SPRINGS, NY 12866

PROJECT
SARATOGA BIOCHAR SOLUTIONS, LLC

DRAWING TITLE
LIGHTING PLAN

DATE: 03/25/2022
PROJECT NO. 20019
DRAWING NO. L-7.10
DWG 9 OF 9

DESIGN BY: #### DRAWN BY: #### CHECKED BY: ####



SEAL

PROJECT TITLE

SARATOGA
BIOCHAR
SOLUTIONS

2 Electric Drive
South Glens Falls, NY 12803

SHEET
TITLE

AXONOMETRIC

CONSULTANT

DRAWN BY: CMS

CHECKED BY: GLM

DATE: 3/30/22

PROJECT NO.: 20-020

REVISIONS

NO.	DESCRIPTION	DATE

PRINTED ON: 3/30/2022 11:15:18 AM

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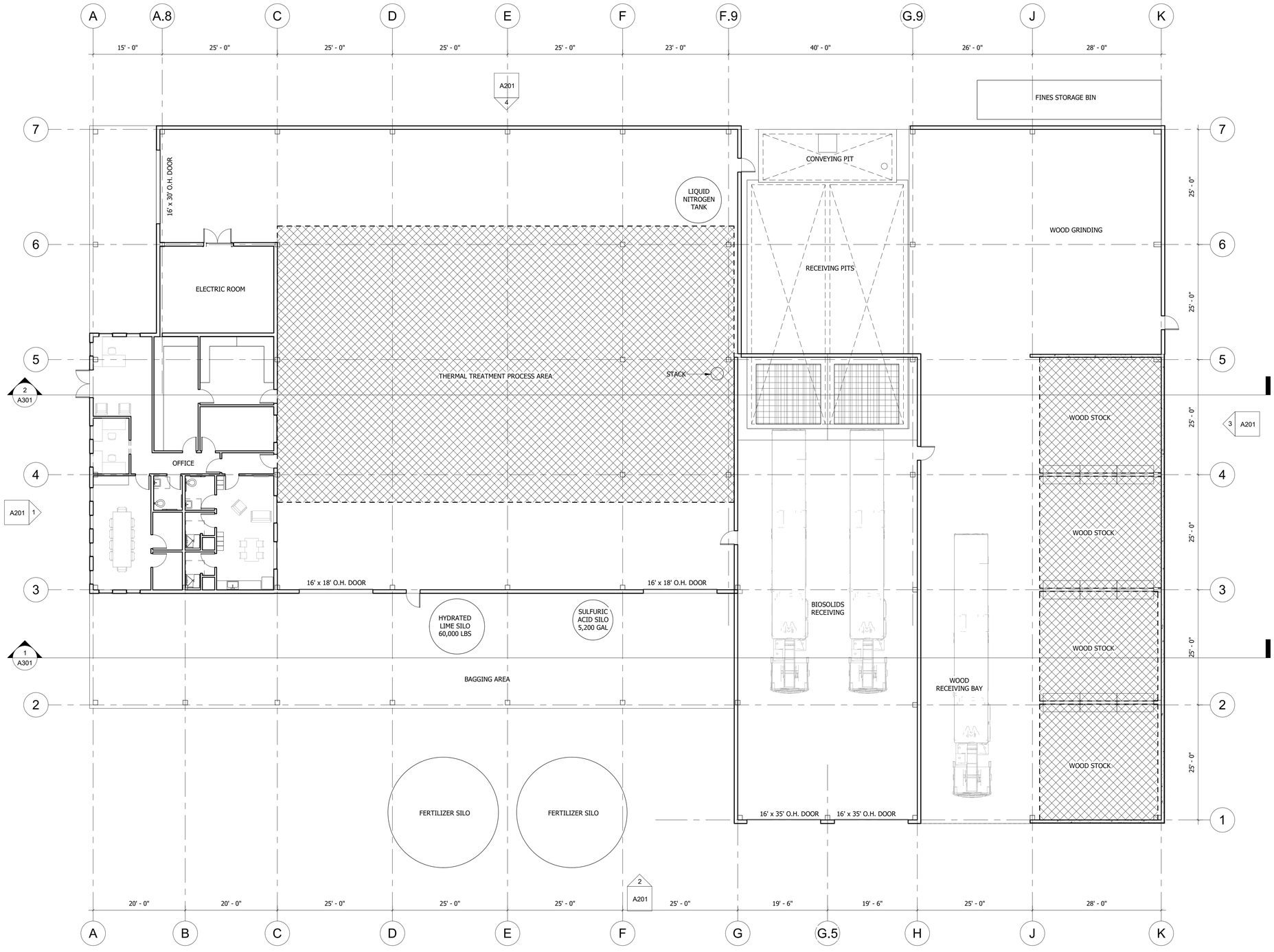
283 RIVER STREET • TROY, NY • 12180
PH 518 618 0900 FX 518 618 0901

SHEET
NO.

A100



SEAL

PROJECT TITLE

SARATOGA BIOCHAR SOLUTIONS

2 Electric Drive
South Glens Falls, NY 12803

SHEET TITLE

PLAN

CONSULTANT

DRAWN BY: CMS

CHECKED BY: GLM

DATE: 3/30/22

PROJECT NO.: 20-020

REVISIONS

NO.	DESCRIPTION	DATE

PRINTED ON: 3/30/2022 11:15:19 AM

3tarchitects.com

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PH 518 618 0900 FX 518 618 0901

SHEET NO.

A101

FACILITY MANUAL
APPENDIX B

RANDOM LOAD INSPECTION FORM

RANDOM LOAD INSPECTION FORM
SARATOGA BIOCHAR SOLUTIONS, LLC.
MOREAU, NEW YORK

1. **Completed by**: _____ _____
Print Signature

2. **Date**: _____ **Time**: _____

INSPECTION INFORMATION

3. **Delivery Vehicle Information** (company, truck number, etc.):

_____

_____

_____

_____

4. **Load Contents and Source** (biosolids, wood waste, generator location):

_____

_____

_____

5. **Authorized Waste?** (Yes/No):_____

6. **If Yes, the load may be accepted.**

7. **If No, the load may not be accepted and must be rejected. Describe Response Action:**

_____

_____

_____

_____

FACILITY MANUAL
APPENDIX C

UNAUTHORIZED WASTE INCIDENT FORM

UNAUTHORIZED WASTE INCIDENT FORM
SARATOGA BIOCHAR SOLUTIONS, LLC.
MOREAU, NEW YORK

1. **Completed by**: _____ _____
Print Signature

2. **Date**: _____ **Time**: _____

INCIDENT INFORMATION

3. **Unauthorized Waste Description:**

_____

_____

_____

_____

4. **Delivery Vehicle Information** (company, truck number, etc.):

_____

_____

_____

5. **Generator Information** (Name, contact information):

_____

_____

_____

6. **Response Action**:

_____

_____

_____

_____

FACILITY MANUAL
APPENDIX D

PERMITS

FACILITY MANUAL
APPENDIX E

FACILITY ANNUAL REPORT

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

COMBUSTION AND THERMAL TREATMENT FACILITY ANNUAL / QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2021.

A. This annual/quarterly is for the year of operation from January 01, 2020 to December 31, 2020

B. Quarterly Report for: ☐ Quarter 1 ☐ Quarter 2 ☐ Quarter 3 ☐ Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION			
FACILITY NAME:			
FACILITY LOCATION ADDRESS:	**FACILITY CITY:**	**STATE:**	**ZIP CODE:**
FACILITY TOWN:	**FACILITY COUNTY:**	**FACILITY PHONE NUMBER:**	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report).		**NYSDEC REGION #:**	

360 PERMIT #:	**DATE ISSUED:**	**DATE EXPIRES:**	**NYS DEC ACTIVITY CODE:**

FACILITY CONTACT:	☐ **public** ☐ **private**	**CONTACT PHONE NUMBER:**	**CONTACT FAX NUMBER:**
CONTACT EMAIL ADDRESS:			

OWNER INFORMATION			
OWNER NAME:	**OWNER PHONE NUMBER:**	**OWNER FAX NUMBER:**	
OWNER ADDRESS:	**OWNER CITY:**	**STATE:**	**ZIP CODE:**
OWNER CONTACT:	**OWNER CONTACT EMAIL ADDRESS:**		

OPERATOR INFORMATION	
OPERATOR NAME: ☐ *same as owner*	☐ **public** ☐ **private**

PREFERENCES
Preferred address to receive correspondence: ☐ *Facility location address* ☐ *Owner address* ☐ *Other (provide):*
Preferred email address: ☐ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*
Preferred individual to receive correspondence: ☐ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Did you operate in 2020? ☐ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 16. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - SOLID WASTE RECEIVED/PROCESSED

Provide the tonnages of solid waste received. DO NOT REPORT IN CUBIC YARDS!

Specify the methods used to measure the quantities received and the percentages measured by each method

_____% Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Construction & Demolition Debris							
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)							
Sewage Treatment Plant Sludge							
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Received							
Total Tons Processed							

SECTION 2 - SOLID WASTE RECEIVED/PROCESSED (continued)

Type of Solid Waste	Tip Fee ($/ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Construction & Demolition Debris								
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)								
Sewage Treatment Plant Sludge								
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Received								
Total Tons Processed								

SECTION 3 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 2 (Solid Waste Received/ Processed). DO NOT REPORT IN CUBIC YARDS!

- If the waste ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

_____% Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which waste types and service areas below are included in these transport methods _____

_____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Construction & Demolition Debris					
Industrial Waste (Including Industrial Process Sludges)					

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)					
Sewage Treatment Plant Sludge					
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons):	_____

Part 360 Permit Limit (tpy) _____

Permit Limit based on Steaming rate (tpy) _____

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

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SECTION 4 – PLANT PERFORMANCE LOG

Complete the following Annual/Quarterly Plant Performance Log:

PLANT PERFORMANCE LOG ANNUAL/QUARTERLY SUMMARY

Processible Waste Bypassed (Tons): _____

Untreatable Waste Bypassed (Tons): _____

Incinerator #1 Operations (Hours): _____

Incinerator #2 Operations (Hours): _____

Incinerator #3 Operations (Hours): _____

Incinerator #4 Operations (Hours): _____

Steam Generated (Klbs): _____

Steam Sold (Klbs): _____

Turbine Operation (Hours): _____

Turbine Steam Consumption (Klbs): _____

Power Generation (MWH): _____

Purchased Power (MWH): _____

Annual Electricity Sold to User (MWH): _____

Ash Residue (Tons): _____

Volatile Matter in Ash (%):_____

Ferrous Metal Recovered (Tons): _____

Ferrous Metal Sold (Tons): _____

Non-ferrous Metal Recovered (Tons): _____

Non-ferrous Metal Sold (Tons) _____

Water Consumption (Kgal): _____

Facility's Size	**Operations**
Number of Units Installed: _____	Facility is in production:
	Hours per day: _____
Nominal rated capacity of each unit: _____	Days per week: _____
	Days per year: _____

Hours of Downtime	Unit #1	Unit #2	Unit #3	Unit #4	Total
Scheduled Maintenance	_____	_____	_____	_____	_____
Unscheduled Maintenance	_____	_____	_____	_____	_____
Total	_____	_____	_____	_____	_____
Availability (%) Reprinted	_____	_____	_____	_____	

SECTION 5 – TRANSFER OR DISPOSAL DESTINATION

Identify the transfer or disposal destination of waste removed by indicating the name of the transfer or disposal facility, the type of solid waste transferred, the corresponding State/Country, the County/Province, the NYS Planning Unit of the transfer or disposal destination facility, and the amount transferred or disposed or used as alternative operating cover (AOC) at each destination. This only includes waste sent off-site for disposal, not metal recovered reported in Section 6. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Transport (specify percentages):

_____% Road _____% Rail

_____% Water _____% Other (specify: ______________________________)

Explain which waste types and service areas below are included in these transport methods ____

____

TRANSFER OR DISPOSAL DESTINATION								
TYPE OF SOLID WASTE	SOLID WASTE MANAGEMENT FACILITY TO WHICH IT WAS SENT (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	AMOUNT TO TRANSFER DESTINATION (TONS)	AMOUNT TO DISPOSAL DESTINATION (TONS)	AMOUNT USED AS AOC (TONS)	TOTAL YEAR (TONS)
Ash (MSW Energy Recovery)								
Bypass								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
							TOTAL SENT (tons):	________

Reprinted (12/20)

SECTION 6 – METAL RECOVERED

Provide the tonnages of metal recovered from the mixed solid waste stream. Identify the location or solid waste management facility to which the recovered metal was sent from your facility, by indicating the name of the facility, the type of metal recovered, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount recovered. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Transport (specify percentages):

_____% Road _____% Rail

_____% Water _____% Other (specify: _____)

Explain which waste types and service areas are in these transport methods_____

_____

METAL RECOVERED FOR REUSE/RECYCLING					
METAL RECOVERED	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Ferrous Metal					
Non-ferrous Metal					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	

SECTION 7 - FIRE AND SAFETY INCIDENTS

Provide a summary of the time, date, and details of any incidents which required the implementation of the contingency plan.

_____

_____

_____

_____

SECTION 8 - BUDGET

Provide an annual income and expense statement providing details on the major accounting items and operating and maintenance costs.

_____

_____

_____

_____

SECTION 9 - INSPECTIONS

Provide a copy of the annual facility inspection report conducted and stamped by a professional engineer licensed to practice in New York State.

_____

_____

_____

_____

SECTION 10 - GOALS

Provide a narrative of the goals and objectives to be attained in the next future calendar year and any major repairs or renovations proposed.

_____

_____

_____

_____

SECTION 11 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ☐ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? _____ Yes _____ No

Identify Manufacturer _____ and Model _____ of fixed unit.

Does your facility use a portable radiation monitor? _____ Yes _____ No

Identify Manufacturer _____ and Model _____ of fixed unit.

If the radiation monitors been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time

SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure?

☐ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☐ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☐ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 15 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ☐ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 16 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts.)

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

_____ _____
Signature Date

_____ _____
Name (Print or Type) Title (Print or Type)

_____
Email (Print or Type)

_____ _____
Address City

_____ (_____)_____-_____
State and Zip Phone Number

ATTACHMENTS: ☐ YES ☐ NO
(Please check appropriate line)

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Division of Materials Management
New York State Department of Environmental Conservation
Albany, New York 12233-7260

COMBUSTION AND THERMAL TREATMENT FACILITY

These facilities use combustion to treat solid waste, including . but not limited to: mass burn, modular, and fluidized bed combustors; thermal treatment facilities that utilize plasma arc, pyrolysis and gasification; low-temperature thermal desorption units such as thermal strippers and soil roasters; and facilities that combust refuse-derived fuel.

Forms for all solid waste management facilities can be found at http://www.dec.ny.gov/chemical/52706.html and a brief description of each type of facility can be found at http://www.dec.ny.gov/chemical/8495.html.

Annual/Quarterly Report

Submit the Annual Report no later than March 1, 2021.

Reporting of the information indicated on this Combustion and Thermal Treatment Facility Annual/Quarterly Report form is required pursuant to 6 NYCRR Part 360. Failure to provide the required information requested is a violation of Environmental Conservation Law. Timely submission of a properly completed form to the Department's Regional Office that has jurisdiction over your facility and to the Department's Central Office is required to meet the Annual/Quarterly Report requirements of 6 NYCRR Part 360.

Where the Annual Report requirements have been modified, appropriate Sections (as necessary to reflect the modification) must be completed and submitted with a copy of the Department's written notification which allows the modification.

Entries on the report forms should be either typewritten or neatly printed in black ink. Attach additional sheets if space on the pages is insufficient or supplementary information is required or appropriate.

SECTION 3 – SERVICE AREA OF SOLID WASTE RECEIVED

Identify the facility's service area by indicating the type of solid waste received, the Solid Waste Management facility (SWMF) from which it was received (or Direct Haul), the corresponding State/Country, the County/Province, and the NYS Planning Unit and the amount received. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Additional Service Area Guidance:

1) Direct hauled from the generator of the waste. In the case where the waste is hauled to your facility from the generator (i.e. hauled from residences, commercial establishments, etc.), "Direct Haul" is the appropriate response in Column 2 under "Service Area." Please report the tonnage by waste type and identify the state, county and planning unit where it was generated;

2) Sent to your municipal waste combustion or thermal treatment facility from another solid waste management facility. Waste may be sent to your municipal waste combustion or thermal treatment facility from another solid waste management facility. In this case, please report the tonnage by waste type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

*This page for reference only. Please do not return with submittal.

New York State Planning Units & Regions

When completing the annual report, please use the ***Planning Unit*** listed below that corresponds with the municipality and county. Note: The Planning Unit is not the DEC Region.

DEC Region	Planning Unit	County	Municipality
1	Glen Cove	Nassau	Glen Cove (City)
	Hempstead		Hempstead (Town)
	Long Beach		Long Beach (City)
	North Hempstead Solid Waste Management Authority		North Hempstead (Town), except 10 villages (see below)
	Oyster Bay Solid Waste Disposal District		Oyster Bay (Town), except 17 villages (see below)
	Babylon	Suffolk	Babylon (Town)
	Brookhaven		Brookhaven (Town)
	East Hampton		East Hampton (Town)
	Fishers Island Waste Management District		Fishers Island
	Huntington		Huntington (Town)
	Islip Resource Recovery Agency		Islip (Town)
	Riverhead		Riverhead (Town)
	Shelter Island		Shelter Island (Town)
	Smithtown		Smithtown (Town)
	Southampton		Southampton (Town)
	Southold		Southold (Town), except Fishers Island
2	New York City	Bronx	Bronx
		Kings	Kings (Brooklyn)
		New York	New York (Manhattan)
		Queens	Queens
		Richmond	Richmond (Staten Island)
3	Dutchess County	Dutchess	
	Orange County	Orange	
	Putnam County	Putnam	
	Rockland County Solid Waste Management Authority (RCSWMA)	Rockland	
	Sullivan County	Sullivan	
	Ulster County Resource Recovery Agency (UCRRA)	Ulster	
	Westchester County	Westchester	
4	Colonie	Albany	Cohoes (City)
			Colonie (Town)
			Colonie (Village)
			Menands (Village)
			Watervliet (City)
	Capital Region Solid Waste Management Partnership	Albany	Albany (City)
			Altamont (Village)
			Berne (Town)
			Bethelehem (Town)
			Green Island (Town/Village)
			Guilderland (Town)
			Knox (Town)
			New Scotland (Town)
			Rensselaerville (Town)
			Voorheesville (Village)
			Westerlo (Town)

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		Rensselaer	East Greenbush (Town)	
			Rensselaer (City)	
4	Eastern Rensselaer County Solid Waste Management Authority	Rensselaer	Castleton-on-Hudson (Village)	
			Hoosick Falls (Village)	
			Nassau (Village)	
			Pittstown (Town)	
			Schaghticoke (Town/Village)	
			Stephentown (Town)	
			Valley Falls (Village)	
			Berlin (Town)	Inactive Members
			Grafton (Town)	
			Hoosick (Town)	
			Nassau (Town)	
			Petersburg (Town)	
			Poestenkill (Town)	
	Columbia County	Columbia	All, except Town of Canaan	
	Delaware County	Delaware		
	Greene County	Greene		
	Montgomery County	Montgomery		
	Otsego County	Otsego		
	Schoharie County	Schoharie		
	Schenectady County	Schenectady		
5	Clinton County	Clinton		
	Essex County	Essex		
	County of Franklin Solid Waste Management Authority (CFSWMA)	Franklin		
	Fulton County	Fulton		
	Hamilton County	Hamilton		
	Saratoga County	Saratoga		
	Warren County	Warren		
	Washington County	Washington		
6	Development Authority of the North Country (DANC)	Jefferson		
		Lewis		
		St. Lawrence		
	Oneida-Herkimer Solid Waste Authority	Oneida		
		Herkimer		
7	Broome County	Broome		
	Cayuga County	Cayuga		
	Chenango County	Chenango		
	Cortland County	Cortland		
	Madison County	Madison		
	Onondaga County	Onondaga	All municipalities, except Town and Village of Skaneatles (See below)	
	Oswego County	Oswego		
	Tioga County	Tioga		
	Tompkins County	Tompkins		
8	Chemung County	Chemung		
	GLOW Region Solid Waste Management Committee	Genesee		
		Livingston		
	Monroe County	Monroe		
	Ontario County	Ontario		
	Orleans County	Orleans		
	Schuyler County	Schuyler		
	Seneca County	Seneca		

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	Steuben County	Steuben	
	Wayne County	Wayne	
	Yates County	Yates	
9	Allegany County	Allegany	
	Cattaraugus County	Cattaraugus	
	Chautauqua County	Chautauqua	
	GLOW Region Solid Waste Management Committee	Wyoming	
	Niagara	Niagara	
	Northeast-Southtowns Solid Waste Management Board (NEST)	Erie	Akron (Village)
			Alden (Town/Village)
			Angola (Village)
			Aurora (Town)
			Blasdell (Village)
			Boston (Town)
			Brant (Town)
			Cheektowaga (Town)
			Clarence (Town)
			Colden (Town)
			Collins (Town)
			Concord (Town)
			Depew (Village)
			East Aurora (Village)
			Eden (Town)
			Elma (Town)
			Evans (Town)
			Farnham (Village)
			Gowanda (Village)
			Hamburg (Town/Village)
			Holland (Town)
			Lackawanna (City)
			Lancaster (Town/Village)
			Marilla (Town)
			Newstead (Town)
			North Collins (Town/Village)
			Orchard Park (Town/Village)
			Sardinia (Town)
			Sloan (Village)
			Springville (Village)
			Wales (Town)
			West Seneca (Town)
	Northwest Communities Solid Waste Management Board (NWCB)	Erie	Amherst (Town)
			Grand Island (Town)
			Kenmore (Village)
			Tonawanda (Town/Village)
			Williamsville (Village)

*This page for reference only. Please do not return with submittal.

Municipalities Not Currently Affiliated With a Recognized Planning Unit

DEC Region	County	Non-Member Municipality	
1	Nassau	North Hempstead	Great Neck Estates (Village)
			Great Neck Plaza (Village)
			Mineola (Village)
			New Hyde Park (Village)
			Old Westbury (Village) (portion)
			Plandome (Village)
			Plandome Manor (Village)
			Roslyn Harbor (Village) (portion)
			Westbury (Village)
			Williston Park (Village)
		Oyster Bay	Bayville (Village)
			Brookville (Village)
			Centre Island (Village)
			Cove Neck (Village)
			East Hills (Village) (portion)
			Glenwood – Glen Head Garbage District
			Lattington (Village)
			Laurel Hollow (Village)
			Matinecock (Village)
			Mill Neck (Village)
			Muttontown (Village)
			Old Brookville (Village)
			Old Westbury (Village) (portion)
			Oyster Bay Cove (Village)
			Roslyn Harbor (Village) (portion)
			Sea Cliff (Village)
			Upper Brookville (Village)
4	Albany	Coeymans (Town)	
		Ravena (Village)	
	Rensselaer	Brunswick (Town)	
		North Greenbush (Town)	
		Sand Lake (Town)	
		Schodack (Town)	
		Troy (City)	
	Columbia	Canaan (Town)	
7	Onondaga	Skaneatles (Town/Village)	
9	Erie	Buffalo (City)	

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New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management

MATERIAL MANAGEMENT PROGRAM CONTACTS

CENTRAL OFFICE
Bureau of Solid Waste Management
625 Broadway
Albany, NY 12233-7260
Phone: (518) 402-8678

For Submission of Solid Waste Management Facility Annual Reports only:
Fax: (518) 402-9041
Email: swmfannualreport@dec.ny.gov

REGIONAL OFFICE ADDRESS & LEAD CONTACT PERSON

REGION 1 (Nassau, Suffolk)

Syed Rahman/David Gibb
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790
Phone: (631) 444-0375
SWMFannualreportR1@dec.ny.gov

REGION 2 (Bronx, Kings, New York, Queens, Richmond)

Joseph O'Connell
47-40 21st Street
Long Island City, NY 11101-5407
Phone: (718) 482-4896
SWMFannualreportR2@dec.ny.gov

REGION 3 (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester)

Lee Reiff
21 South Putt Corners Road
New Paltz, NY 12561
Phone: (845) 256-3134
SWMFannualreportR3@dec.ny.gov

REGION 4 (Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady, Schoharie)

Brian Maglienti
1130 North Westcott Road
Schenectady, NY 12306
Phone: (518) 357-2085
SWMFannualreportR4@dec.ny.gov

REGION 5 (Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington)

Jessie Sangster
1115 State Route 86, PO Box 296
Ray Brook, NY 12977
Phone: (518) 897-1266
SWMFannualreportR5@dec.ny.gov

REGION 6 (Herkimer, Jefferson, Lewis, Oneida, St. Lawrence)

Gary McCullouch
317 Washington Street
Watertown, NY 13601
Phone: (315) 785-2513
SWMFannualreportR6@dec.ny.gov

REGION 7 (Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins)

Thomas Annal
615 Erie Boulevard West
Syracuse, NY 13204
Phone: (315) 426-7419
SWMFannualreportR7@dec.ny.gov

REGION 8 (Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates)

Greg MacLean
6274 East Avon-Lima Road
Avon, NY 14414
Phone: (585) 226-5411
SWMFannualreportR8@dec.ny.gov

REGION 9 (Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming)

Peter Grasso
270 Michigan Avenue
Buffalo, NY 14203
Phone: (716) 851-7220
SWMFannualreportR9@dec.ny.gov

September 2020

FACILITY MANUAL
APPENDIX F

FACILITY INSPECTION FORM

DAILY FACILITY INSPECTION FORM

SARATOGA BIOCHAR SOLUTIONS, LLC.

MOREAU, NEW YORK

DATE: _____ TIME: _____

INSPECTOR: _____

CARBON FERTILIZER MANUFACTURING BUILDING

ACTIVITY	COMPLETED Y	COMPLETED N	CONDITION S	CONDITION D	ACTION/COMMENTS
TRUCK DOORS OPERATIONAL	☐	☐	☐	☐	
TRUCK WASH OPERATIONAL	☐	☐	☐	☐	
GENERAL HOUSEKEEPING	☐	☐	☐	☐	
ACCESS TO EMERGENCY EQUIPMENT	☐	☐	☐	☐	

GROUNDS

CONDITION	STATUS S	STATUS D	ACTIONS/COMMENTS
LITTER	☐	☐	
DUST	☐	☐	
ODORS	☐	☐	
VECTORS	☐	☐	
STORMWATER SYSTEM	☐	☐	
NOISE	☐	☐	

SAFETY EQUIPMENT

EQUIPMENT	CONDITION S	CONDITION D	ACTION TAKEN/COMMENTS
	MOBILE EQUIPMENT		
MIRRORS	☐	☐	
BACK-UP INDICATORS	☐	☐	
MAINTENANCE RECORDS	☐	☐	
	PERSONAL PROTECTIVE EQUIPMENT		
HARDHATS	☐	☐	
SAFETY GLASSES	☐	☐	
STEEL TOE BOOTS	☐	☐	
HEARING PROTECTION	☐	☐	
GLOVES	☐	☐	
	COMMUNICATION SYSTEMS		
TELEPHONES	☐	☐	
EMERGENCY TELEPHONE LIST	☐	☐	
RADIOS	☐	☐	

SPECIFIC EQUIPMENT

ITEM	UTILIZED TODAY Y	UTILIZED TODAY N	CONDITION S	CONDITION D	COMMENTS
		MOBILE EQUIPMENT			
FRONT END LOADER	☐	☐	☐	☐	
		CARBON MANUFACTURING EQUIPMENT			
PROCESS LINE NO. 1	☐	☐	☐	☐	
PROCESS LINE NO. 2	☐	☐	☐	☐	
PROCESS LINE NO. 3					
AIR TREATMENT SYSTEM	☐	☐	☐	☐	
		OTHER			
TRUCK SCALE	☐	☐	☐	☐	
SCALE HOUSE	☐	☐	☐	☐	

NOTES:

Y = YES N = NO S = SATISFACTORY D = DEFICIENT

ADDITIONAL COMMENTS: _____

_____

_____

_____

_____

FACILITY MANUAL
APPENDIX G

COMPLAINT ACTION FORM

COMPLAINT ACTION FORM
SARATOGA BIOCHAR SOLUTIONS, LLC.
MOREAU, NEW YORK

1. **Completed by**: _____ _____
Print Signature

2. **Date**: _____ 3. **Time**: _____

4. **Weather**: _____
Temp, Wind Direction, and Speed

COMPLAINT INFORMATION

5. **Complaint made by**:

Name: _____

Address: _____

_____

_____

6. **Date of Complaint**: _____ 7. **Time of Complaint**: _____

8. **Specific Complaint** (odor, dust, noise, truck traffic, litter, facility appearance, vibrations, etc):

_____

_____

_____

9. **Specific action taken to address complaint** (describe):

_____

_____

10. **Notification of officials** (Name and Date):

City _____ **NYSDEC** _____

11. **Attach all relevant documentation** (correspondence, photographs, etc.)

FACILITY MANUAL
APPENDIX H

EMPLOYEE TRAINING FORM

EMPLOYEE TRAINING FORM

SARATOGA BIOCHAR SOLUTIONS, LLC.
MOREAU, NEW YORK

Purpose: This form documents employee training in accordance with the Facility Manual.

Employee Signature: _____

Employee Name: _____**(Print)**

Date Hired: _____

Date of Initial Training: _____

Trainer Signature: _____

	Continued Training Topic	**Date**	**Trainer**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			