

Tier III Solid Waste Processing Facility Permit Application

Keota AD 1
21405 OK-9
Keota, Oklahoma

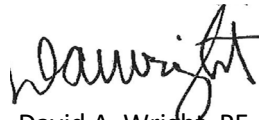
Prepared For:

Keota AD 1, LLC

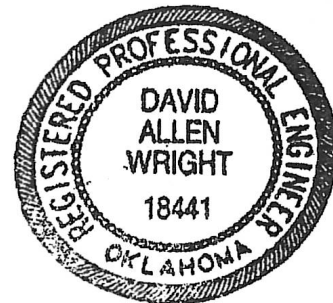
Professional Engineer Certification:

I, David A. Wright, hereby certify that I am a licensed professional engineer in the State of Oklahoma; that this document has been prepared in accordance with the Rules of Professional Conduct; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. OAS 252 to 515, Okl. Adm. Code.

The figures attached to this plan were prepared by others and are not included under this certification.



David A. Wright, PE
Project Engineer
License Number: 18441
June 21, 2024



Project B2308124.00

Braun Intertec Corporation

June 21, 2024

Project B2308124.00

Anne Marie Smith, PE
Engineering Manager
Solid Waste Permitting Section – Land Protection Division
Oklahoma Department of Environmental Quality (ODEQ)
Post Office Box 1677
Oklahoma City, OK 73101-1677

Re: Tier III Solid Waste Processing Facility Permit Application
Keota AD 1
21405 OK-9
Keota, Oklahoma


Dear Ms. Smith:

Keota AD 1, LLC herewith submits the enclosed Tier III Solid Waste Processing Facility Permit Application in accordance with Oklahoma Statute (O.S.) Part 27A and Oklahoma Administrative Code (OAC), Part 252, Section 515. The proposed Keota Anaerobic Digester facility will be a non-hazardous solid waste processing facility. The primary function of the Keota AD is to produce alternative greener fuel for the area in the form of renewable natural gas from the anaerobic co-digestion of manure and food waste.

If you have any questions regarding the attached report, please contact Sarah Braun at 320.204.9113 or SaBraun@braunintertec.com or Jennifer Wolff at 612.360.8630 or JWolff@braunintertec.com.

Sincerely,

BRAUN INTERTEC CORPORATION



Sarah A. Braun
Project Scientist



Jennifer B. Wolff, CPG, CHMM
Associate Director, Senior Scientist

Attachment:
Tier III Solid Waste Processing Facility Permit Application

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Executive Summary

The Keota AD 1 facility (Facility) is located within a leased area at 21405 OK-9 near Keota, Oklahoma (Site). The primary function of the Facility is to produce alternative greener fuel for the area in the form of Renewable Natural Gas (RNG) from the anaerobic co-digestion of manure and food waste.

The Facility will consist of an Anaerobic Digester (AD) vessel, hydrolysis tanks, process tanks, an Organics Receiving Area (ORA) building, a solid digestate storage area, a liquid digestate lagoon, a biogas upgrader system, fire water tank, sanitary tank, vehicle parking, and ancillary equipment associated with operations such as a boiler and two natural gas emergency back-up generators. The biogas upgrader is used to create pipeline quality gas and is connected to an emergency flare. The emergency flare provides an important safety function for the digesters and gas treatment system. A Site Layout Map is provided as **Figure 1** and included in **Appendix D**. The tanks are engineered systems and are designed per American Water Works Association (AWWA) D103 and/or Natural Resources Conservation Service (NRCS) 313 Code specifications. The tanks will be hydro-tested for leaks prior to filling with material, and inspected and maintained in accordance with the manufacturer's Operation and Maintenance Manual. The tanks will be designed by a licensed professional engineer in accordance with applicable codes, as well as NRCS 313 specification.

Manure feedstock for the anaerobic digester will be provided by local dairy farms as needed. The initial manure input will help grow the bacterial colonies needed for anaerobic digestion of the food waste. Food waste materials will be sourced from local businesses and delivered to the ORA via delivery trucks. Liquid food wastes will be unloaded either directly into the hydrolysis tank or into the processing tanks within the ORA building. The packaged food wastes are delivered within the enclosed ORA building. All depackaging and sorting operations will take place within the ORA building shortly after the food wastes arrive. Waste from the depackaging and sorting operations will be disposed of as solid waste at a permitted landfill.

After depackaging, the food wastes are macerated and processed into a slurry within the ORA process tanks before being directed into a hydrolysis tank. From the hydrolysis tank, the slurry will move into the hydrocyclone to remove any grit or inorganic particles from the food waste before moving into a secondary hydrolysis tank. In the second hydrolysis tank the slurry is combined with manure until homogenized and then passed through the hydrocyclone a second time to remove any remaining grit before being fed into the anaerobic digester. The secondary hydrolysis tank can store materials for a few days until it is ready to be fed to the anaerobic digester. Once the slurry is fed to the anaerobic digester, it is continuously mixed and heated for approximately 28 days. Biological processes break down the slurry into digestate and RNG.

The digestate material will be extracted from the anaerobic digester routinely to maintain optimum conditions. A screw press will be used in the solid separation building to dewater the digestate into a fibrous solid digestate and nutrient-rich liquid digestate. The liquid digestate will be stored in the onsite lagoon and the solid digestate will be stored in a sheltered outdoor bunker attached to the solid separation building. Both the nutrient-rich liquid digestate and solid digestate will be land applied to the Two State Sod Farm fields for agronomic benefit in accordance with Oklahoma regulations.

The RNG produced from the anaerobic co-digestion of food waste and manure will be piped into a biogas upgrader. The upgrader removes any impurities, upgrades the gas to pipeline quality, and compresses the gas. The RNG is then injected into a gathering pipeline on site.

The daily amount of food waste received is anticipated to be approximately 185-275 tons per day. On Site storage time for the food waste materials will be minimal due to the anaerobic digester requiring food waste materials to be fed continuously while the digester is in operation. Most of the material fed to the anaerobic digester will be comprised of food waste materials. Less than half will be comprised of manure from local dairy farms.

Keota AD 1, LLC (Vanguard) herewith submits this Tier III Solid Waste Processing Facility Permit Application to operate the Keota Anaerobic Digester (Facility). The Keota AD is a proposed addition to the pre-existing agricultural farm. For the purposes of this application, the terminology “food waste” and “organics” may be used interchangeably and are intended to have the same meaning.

1.0 Certification

(Oklahoma Administrative Code [OAC] 252:515-3-33 and 252:4-7-13(b))

The applicant signed the permit application under oath on Form #515-010, provided by the Oklahoma Department of Environmental Quality (ODEQ). The signed and notarized forms certifying this application are attached in **Appendix A**.

1.1 Legal Right to Property

(OAC 252:515-3-34(a), (b), (c))

An affidavit certifying that the applicant has a current lease, has legal right to access and use the property in the manner for which the permit is sought, and has notified the landowner is provided in **Appendix B**. A notarized Temporary Easement for Access granting the ODEQ right of access to the permitted Site for purposes of performing closure, post-closure monitoring, or corrective action in the event of default by the Facility is also supplied in **Appendix B**.

1.2 Engineer of Record

(OAC 252:515-3-35(a), (b))

Maps, drawings, surveys, calculations, information, and data submitted in support of the permit application for the Keota AD 1 facility have been prepared and or reviewed by a Professional Engineer licensed in the State of Oklahoma, as applicable. The engineer's seal has been placed on the cover page of this application.

2.0 General Information

(OAC 252:515-3-36(a))

This permit application contains all the information currently understood to be required by the Oklahoma Uniform Environmental Permitting Act for a new Tier III Solid Waste Processing Facility.

2.1 Site Information

(OAC 252:515-3-36(a)(1), (2))

Items	Information
Owner Name:	Keota AD 1, LLC
Owner Mailing Address:	133 Boston Post Road, Building 15, 2nd Floor, Weston, MA 02493
Owner Phone Number:	(781) 232-7597 Extension 5
Facility Name:	Keota AD 1
Facility Address:	21405 OK-9, Keota, OK 74941
Facility Phone Number:	To be determined

2.2 Disclosure Statement

(OAC 252:515-3-36(a)(3))

A disclosure statement has been signed that complies with OAC 252:515-3-36(a)(3) and 27A Oklahoma Statute (O.S.) §§ 2-10-103 and 2-10-302. The signed disclosure statement is provided in **Appendix C**.

2.3 Site Legal Description

(OAC 252:515-3-36(a)(4))

The legal description of the proposed permit boundary and processing area is identified below.

POINT OF BEGINNING (P.O.B., X: 2903104.81, Y: 715723.94) within said Section 16, at the Northwest corner of this site, from which a concrete nail found for the Northeast corner of said Section 16 bears North 75°26'42" East a distance of 512.55 feet; THENCE North 88°00'42" East a distance of 1000.00 feet to the Northeast corner of this site; THENCE South 01°59'18" East a distance of 900.00 feet to the Southeast corner of this site; THENCE South 88°00'42" West a distance of 1000.00 feet to the Southwest corner of this site; THENCE North 01°59'18" West a distance of 900.00 feet to the POINT OF BEGINNING, containing 20.66 acres (900,000 sq. ft.).

All bearings, distances and coordinates contained herein are grid, based upon the Oklahoma State Plane Coordinate System, South Zone, of the North American Datum 1983 (NAD83, Realization 2011, Epoch 2010.00), in U.S. Survey Feet

2.4 Latitude and Longitude of Permit Corners

(OAC 252:515-3-36(a)(5))

The northwest corner of the proposed Site is located at 35°15'36.39"N and 94°52'8.81"W, the northeast corner is located at 35°15'36.39"N and 94°51'56.94"W, the southeast corner is located at 35°15'27.69"N and 35°15'27.69"N, and the southwest corner is located at 35°15'27.69"N and 35°15'27.69"N.

2.5 Location to Nearest Town or City

(OAC 252:515-3-36(a)(10))

The closest town is Keota, Oklahoma located approximately 3.1 miles west from the center of the Site.

2.6 Facility Processing, Storage, and Disposal Operations

(OAC 252:515-3-36(a)(7))

Food waste materials of various types are transported to the Facility from local third-party organizations and industries. When food waste is delivered, the liquid food waste materials can be unloaded either directly into a hydrolysis tank or into a processing tank located within the enclosed ORA building. Within the ORA building, the packaged food waste will be received and separated from the packaging materials, processed into a slurry, and then directed to a hydrolysis tank. The hydrolysis tank will begin the digestion process before being sent through a hydrocyclone to remove any grit or inorganic material. The inorganic materials will then be captured and removed, baled together with similar packaging materials, and sent offsite for disposal to a permitted landfill.

2.7 Accepted Waste Streams and Anticipated Amounts

(OAC 252:515-3-36(a)(8))

The anticipated food waste acceptance rate is 185-275 tons per day, with a maximum acceptance rate of 275 tons per day. The waste streams that will be accepted at the facility are described below.

1. Source Separated Organics (SSO)

SSO are organic materials that waste generators segregate at the source for isolated collection to remove them from the waste disposal stream and direct to reuse. SSO includes organic residues generated by the handling, storage, sale, preparation, cooking, and serving of foods (including fruits, vegetables, meats, and bakery items); products that may be out of specification, past freshness date, or unsellable due to mishandling.

Sources of food waste may include commercial and institutional generators, including, but not limited to, food manufacturing and processing facilities, grocery stores, other retailers, restaurants, hotels, convention facilities, hospitals, colleges, and universities.

2. Packaged Food Material

Packaged food material is food that has been wrapped or encased to contain, protect, handle, deliver, and present it to individual, commercial, or industrial distributors or consumers generated by food production operations. The majority of this food is unspoiled, but is unsellable due to manufacturing errors, expiration dates, or mishandling.

3. Dairy Wastes

Dairy wastes include milk, milk products, buttermilk whey, ice cream, yogurt, and cheese or dairy processing wastes that may not meet applicable quality standards, or may be otherwise unsuitable for human consumption, animal feed, or other use.

4. Fats, Oils, and Greases (FOG)

Fats, Oils, and Greases (FOG) come from meat fats in cooking and food scraps, cooking oil, shortening, fryolator oil and grease, lard, butter and margarine, gravy, and food products such as mayonnaise, salad dressings, sour creams, and other foods high in fat.

5. Food Processing Wastewater

A typical type of food processing wastewater includes wastewater that has been collected from dissolved air floatation (DAF) pretreatment units at food processing plant wastewater treatment facilities. The DAF material is a thickened wastewater stream (liquid) collected from skimming wastewater containing FOG and suspended solids.

6. Glycerin

Glycerin is a high strength byproduct material derived from yellow grease and/or biodiesel production.

7. Brewery Wastes

Brewery wastes are waste materials produced during the brewing process including spent grains, brewery trub, and residual brewer process water.

2.8 Municipalities, Counties, and Populations Served

(OAC 252:515-3-36(a)(9), (10))

The Site will be located outside the city limits of Keota in Haskell County. Because the process facility will not serve a population, a population equivalent was calculated by using the method provided in OAC 252:515-5-36(a)(10). Based on the anticipated daily amount of waste received (185-275 tons), the population equivalent is 84,091.

Calculation Method: Anticipated Amount of Waste per Day ÷ 4.4 Pounds per Person per Day

Calculation: 185 tons x 2,000 (convert to pounds) ÷ 4.4 = 84,091

2.9 Access Roads

(OAC 252:515-3-36(a)(11))

The access roads that will serve the facility are paved and have a grade of less than 10 percent.

2.10 Heavy Equipment Used

(OAC 252:515-3-36(a)(12))

The heavy equipment to be used on Site includes forklifts, skid steers, and delivery trucks. Forklifts will be used in unloading activities. Skid steers will be used in the moving of food waste inside the ORA. Trucks will come onto the Site to deliver food waste and to remove packaging waste.

2.11 Data, Plans, and Specifications

(OAC 252:515-3-36(a)(14))

Per OAC 252:515 Subchapter 5, the Site location is not near a scenic river, recreation, or preservation area. Approximately seven federally listed species within 5 miles of the project area and four state listed species were identified within Haskell County. With the existing landcover consisting of recently fallowed cropland and cultivated cropland, the project site does not provide suitable habitat for a majority of species identified in state and federal databases. The project area also appears to have limited floral resources or pollinators, and therefore, the candidate listed Monarch Butterfly is unlikely to be present. As a candidate species, the Monarch Butterfly has no statutory protection under the Federal Endangered Species Act but is in consideration for future listing as a threatened or endangered species. Additionally, due to the general lack of trees and other woody vegetation, most migratory birds and listed bat species are also unlikely to be present. However, depending on the project design, access from Highway 9 may require tree removal and consideration of seasonal restrictions on tree/vegetation clearing to minimize impacts to migratory birds and listed bat species. A copy of the Protected Species Evaluation can be found in **Appendix G**.

Per OAC 252:515-3 Subchapter 17, the Site is not adjacent to other facilities to allow for run-on. Run-off from the Site will be prevented by waste receipt occurring within the enclosed ORA building. There will be no discharge of contaminated stormwater at the Site. Per OAC 252:515 Subchapter 19, applicable operational requirements are detailed in **Section 5.0**. Per OAC 252-515-3 Subchapter 25, the Site will abide by the regulations put in place if the facility were to close. A Closure Plan is detailed in **Section 6.0**. Per OAC 252:515 Subchapter 37, the Site will process all waste within the ORA building, reducing visual disturbance, noise, odors, and transmission of dust. Litter control is detailed in **Section 5.6**.

2.12 Financial Assurance

(OAC 252:515-3-36(a)(15))

In accordance with 252:515-27-1, this facility is subject to requirements set forth in Subchapter 27, Financial Assurance Mechanisms. The Financial assurance will be maintained continuously until released from the requirement by the DEQ. This is discussed further in Section 7.0

2.13 Aesthetic Enhancements

(OAC 252:515-3-37)

Aesthetic enhancements at the Facility will include the use of existing nearby trees and a fence. The Facility will achieve visual harmony with the surrounding area by conducting operations that are consistent with routine agricultural functions through waste management and producing nutrient-rich fertilizer. The Site will process all waste in the ORA, reducing visual disturbance, noise, odors, and the transmission of dust.

3.0 Maps and Drawings

(OAC 252:515-3-51(a))

The maps and designs submitted with this permit application are for the new proposed Tier III Keota AD 1 and follow the requirements below:

- OAC 252:515-3-51(c) - The permit application will be considered administratively incomplete if any maps or drawings submitted are not legible.
- OAC 252:515-3-51(d) - All maps and designs shall be submitted in the permit application in the sequence identified.
- OAC 252:515-3-51(e) - Unless otherwise identified, all maps submitted as part of a permit application shall be prepared at a scale of one inch equals one hundred feet (1" = 100'). An alternative scale may be used with approval of the DEQ.
- OAC 252:515-3-51(f) - Map details: (1) All maps shall show as a minimum, legend, title, north arrow, permit boundary, buffer zone, and boundaries of waste disposal or processing areas. (2) If applicable, the locations of groundwater monitoring wells, and gas monitoring probes shall be identified.

Maps of the proposed facility meeting the requirements of OAC 252:515-3-51 have been prepared as described in the sections below and can be found in **Appendix D**.

3.1 General Location Map

(OAC 252:515-3-52)

A county highway map showing the processing facility location and any airports within 6 miles of the facility has been provided in **Appendix D** as **Figure 2**.

3.2 Floodplain Map

(OAC 252:515-3-53)

A floodplain map depicting the limits and elevations of any 100-year floodplain on or within 1 mile of the permit boundary of the processing facility is provided in **Appendix D** as **Figure 3**. According to the FEMA Estimated Base Flood Elevation Flood Risk Report, the solid waste processing facility is not located within the current 100-year floodplain.

3.3 Quadrangle Topographic Map

(OAC 252:515-3-54(a), (b))

A quadrangle topographic map depicting: (1) the location of the facility permit boundaries; (2) access routes within one mile of the facility; (3) homes and buildings within one mile of the facility; (4) public water and wastewater collection, treatment, and distribution facilities within one mile of the facility; (5) receiving waters and surface variations within one mile of the facility; and (6) water wells, including private and municipal, potable, and irrigation water within one mile of the facility is provided in **Appendix D** as **Figure 4**.

3.4 Existing Contour Map

(OAC 252:515-3-55(a), (b), (c))

A contour map showing the topographic contours prior construction of the processing facility is provided in **Appendix D** as **Figure 5**. The contour interval on the map is 2 feet and 10 feet. The existing contour map shows the location of surface drainage entering and exiting the processing facility. No boreholes were completed on-site and therefore, locations of boreholes are not provided with this application.

3.5 Site Map

(OAC 252:515-3-56(a), (b))

A Site map is provided in **Appendix D** as **Figure 6** and **Figure 7**. The Site map identifies the following, as applicable to the solid waste processing facility: (1) the dimensions of the permit boundary as indicated by the legal description; (2) the receiving processing, storage, and disposal areas; (3) buffer zones; (4) the locations and surface elevations of each borehole, monitor well, test well, monitoring site, test pit, sampling site, and permanent benchmarks; (5) the surface and top casing elevations for each monitoring well or gas probe; (6) the surface drainage, including location of diversion ditches, dikes, dams, pits, ponds, lagoons, berms, terraces, and other relevant information; (7) the location of fencing and gates, utility lines, pipelines, and easements; (8) the access roads into and on the Site; (9) employee and equipment shelters; and (10) on- and off-Site soil borrow areas.

3.6 Design Drawings

(OAC 252:515-3-57)

Design drawings and specifications for receiving processing, storage, or disposal areas are supplied in **Appendix E**. Design drawings include the proposed activities within the ORA, as well as the dimensions of the processing and storage equipment:

1. Hydrolysis Tank #1 – 20 ft diameter x 15 ft. height
2. Hydrolysis Tank #2 – 50 ft diameter x 24 ft. height
3. Hydrolysis Tank #3 – 20 ft. diameter x 15 ft. height
4. Digester Tank – 90 ft. diameter x 32 ft. height
5. Lagoon – 8 million gallons of storage
6. Organics Receiving Area (ORA) – 173 ft. wide by 151 ft. long (26,123 ft² footprint)

4.0 Location Restrictions

(OAC 252:515-5-31(a), (b), (c) and OAC 252:515-5-32(a), (b), (c))

The following areas are protected, dedicated, and/or managed for public recreation or natural preservation by a federal, state, or local government agencies. The solid waste processing facility permit boundaries shall not be located within the following restricted areas.

4.1 Scenic Rivers

(OAC 252:515-5-31(a))

It is acknowledged that the solid waste processing facility cannot be located within the drainage basin of any river designated under the Oklahoma Scenic Rivers Commission (OSRC) Act unless a statement is obtained from the OSRC or Oklahoma Tourism and Recreation Department. The Site will not be located within the drainage basin of a river currently designated as scenic.

4.2 Recreation and Preservation Areas

(OAC 252:515-5-31(b))

It is acknowledged that the solid waste processing facility cannot be located within 0.5 mile of an area dedicated and managed for public recreation or natural preservation by any governmental agency. The Site is not located within 0.5 mile of an area dedicated and managed for public recreation or natural preservation by any governmental agency.

4.3 Threatened and Endangered Species

(OAC 252:515-5-31(c))

Requests for consultation concerning threatened or endangered wildlife or plant species within 5 miles of the proposed Solid Waste Processing Facility were sent to the Oklahoma Natural Heritage Inventory (ONHI), the United States Fish and Wildlife Service (USFWS), and the Oklahoma Department of Wildlife and Conservation (ODWC) on April 29, 2024. A written response from Ms. Kristin A. Comolli with ONHI on April 30, 2024, indicated eleven occurrences of two relevant species within the vicinity of the project location as described. Based on both species natural habitats being located within forested areas, impacts to threatened or endangered species are not anticipated due to the Site consisting of cleared agricultural cropland. **Appendix G** contains a copy of the request for consultation and a copy of the response.

4.4 100-Year Floodplain

(OAC 252:515-5-32(a))

It is understood that no waste management or disposal areas belonging to a solid waste disposal facility shall be located within the 100-year floodplain. According to the FEMA Estimated Base Flood Elevation Flood Risk Report, the solid waste processing facility is not located within the 100-year floodplain.

4.5 Public Water Supplies

(OAC 252:515-5-32(b))

All solid waste processing will take place inside the enclosed ORA building. No waste will be stored or placed on permeable surfaces outside of the building. Therefore, proximity to a public water supply is not applicable.

4.6 Wellhead Protection Area

(OAC 252:515-5-32(c))

After review of the Oklahoma DEQ, WaterWeb – Wellhead Protection Area Data Viewer, no Wellhead Protection Areas were noted near the Site. A wellhead protection map is included in **Appendix D** as **Figure 8**.

4.7 Wetlands

(OAC 252:515-5-32(d))

It is acknowledged that the solid waste processing facility should not be located within wetland areas and a verification letter from the Oklahoma Conservation Commission (OCC) is required.

The proposed permit boundary is not located within a current wetland area. A request for consultation was sent to the OCC on April 30, 2024. A written response from Mr. Brooks Tramell of the OCC on May 10, 2024, indicated there should be no significant impact on wetland resources in the area. A copy of the letter is included in **Appendix F**.

5.0 Operational Requirements for Solid Waste Facilities

5.1 Leachate Management and Discharges

(OAC 252:515-13-51 and OAC 252:515-17-3)

Leachate management will be maintained by receiving waste within the enclosed ORA, preventing rainfall exposure and potential leachate discharges. The facility is designed to maximize the capture of free liquids from the washing of equipment, unloading, processing, and transfer of food waste materials. The free liquids from these processes contain nutrients that are desired for digester operations. Gullies and drains covered by grating are installed on the inside of door thresholds to prevent liquid from escaping the building. The floor drain system within the ORA is designed to capture any wash water or free liquids and transfer these liquids to the hydrolysis tanks.

5.2 Utility Separation

(OAC 252:515-5-52(a))

The Site is not a land disposal facility. Therefore, utility separation is not applicable.

5.3 Prohibited Wastes

(OAC 252:515-19-31(a), (b), (c), (d), (e), (f), and (g))

All suppliers of food waste must be preapproved contractors for Vanguard. All feedstock is sourced from contracted partners who agree to comply with Vanguard's quality of standards. To maintain standard quality requirements, Vanguard requires the following standard sampling for all new feedstock customers in advance of receipt of the feedstock material, as well as annual testing of all incoming streams for compliance:

- Chemical Oxygen Demand (COD) [mg/L]
- Total Solids (TS) [mg/kg or %]
- Total Volatile Solids (TVS) [mg/kg or %]
- Total Organic Carbon (TOC) [mg/kg]
- Total Kjeldahl Nitrogen (TKN) [mg/kg]
- Total Sulfur [mg/kg]

All delivery vehicles are also required to be preapproved prior to delivery. All incoming delivery vehicles are weighed. The inbound truck weight, the generator name, and the time of delivery are recorded and maintained. The Facility will not accept food waste from the general public or from individuals.

Vanguard requires the preapproved food waste vendors to have programs in place to educate their generators on the materials that are acceptable, Vanguard will visually inspect received packaged loads prior to tipping into the ORA facility.

If hazardous or toxic materials are suspected by Vanguard in any load, the entire load will be rejected. Vanguard will provide signage at the entrance gate and the ORA listing acceptable and unacceptable food waste. The transporter and/or generator of food waste is required to provide to Vanguard a completed characterization form in advance of receipt of the food waste at the ORA. Facility employees will be given the authority to reject loads of food waste that do not meet Vanguard requirements.

The following wastes are prohibited and will not be accepted, handled, or disposed of at the Site:

- Hazardous, radioactive, and/or regulated Polychlorinated Biphenyl (PCB) containing waste of any kind.
- Regulated medical waste of any kind.
- Asbestos-containing waste of any kind.
- Industrial waste of any kind.

5.4 Public Access Control

(OAC 252:515-19-32)

The Site is accessible from Oklahoma State Highway 9 by a proposed access road located on the northern side of the Site. The Facility will not accept food waste directly from any individuals or the general public. The Facility will not be a drop off location for the public. The Site will control public access and prevent unauthorized traffic by using a security system with remote monitoring, electric perimeter fencing, and an access gate. The access gate will remain closed except during normal acceptance hours.

5.5 Measuring Waste Procedure

(OAC 252:515-19-33(c))

All incoming delivery vehicles will be weighed when entering the Facility. The scale shall be tested and certified annually in accordance with the requirements of the ODAFF. A delivery ticket will be created that includes the truck inbound weight, the generator name, and the time of delivery. The delivery will be classified according to its waste stream and cubic yards will be estimated based upon the size of the delivery vehicle container. The information will be recorded in the Facility operating record.

5.6 Blowing Litter

(OAC 252:515-19-35(a), (b))

Waste materials present at the facility which may be windblown include light plastic and paper packaging materials. All of these materials will be received and handled inside the ORA. The doors will remain closed at all times, except when trucks are entering or exiting the building. The air handling system will be designed to produce negative pressure for pulling fresh air into the building, trapping the windblown materials inside the building.

In addition, site employees will routinely monitor the exterior portions of the Site to ensure that windblown materials, if present, are collected and disposed of properly. These materials will also be prevented from leaving the Site by the enclosed fencing surrounding the Site.

5.7 Air Quality

(OAC 252:515-19-36(a), (b), (c))

The Site will be operated in compliance with the Oklahoma Clean Air Act, rules of the Air Quality Division of ODEQ, and any other requirements of an approved State Implementation Plan (SIP). Open burning of solid waste will be prohibited on-site. The Site will be submitting an application to ODEQ for a minor source Air Quality Construction Permit.

The Site will be operated to prevent the discharge of any visible fugitive dust emissions beyond the property boundaries to not damage or interfere with the use of adjacent properties, or to cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. The ORA is not anticipated to produce significant amounts of dust due to the moisture content of the organic materials received; however, the exhaust air from the ORA will be collected and filtered for dust. Water or other dust suppressants may be applied to the paved driveway to reduce fugitive dust from truck traffic, as needed.

5.8 Disease Vector Control

(OAC 252:515-19-37(b))

Facility operations are conducted in a manner to prevent public health hazards and nuisances, including keeping the processing facility and adjacent area clean and free from litter. The primary method of deterring vectors is the prompt depackaging and processing of all food waste deliveries within the enclosed ORA building. The solid waste is stored within the ORA building and picked up by a dedicated contracted solid waste hauler on a set schedule to eliminate any possibility of waste build-up. No food waste deliveries are stored outside of the ORA building at any time. Proper housekeeping and daily equipment cleaning are implemented, as well as daily trash pick-up and groundskeeping.

If daily investigations detect a vector issue, the issue will be investigated to determine the source of attraction for the vector. Once the source is found, it will be determined which of best management practices can alleviate the problem and implementing them immediately. If professional assistance is needed for disease vector control, a licensed professional will be contracted.

5.9 Buffer Zones

(OAC 252:515-19-38(b), (c))

The Site will be designed and maintained with a waste free buffer zone of at least 50 feet in width between all waste disposal activities and handling areas and adjacent properties.

5.10 Salvage and Recycling

(OAC 252:515-19-39(a))

Salvage and recycling operations will be conducted in accordance with a written plan approved by the ODEQ. The Recycling Plan has been provided in **Appendix H**.

5.11 Recordkeeping and Reporting

(OAC 252:515-19-40(a))

An operating record will be maintained on-Site containing all records concerning the planning, construction, operation, and closure of the facility. Such records will be maintained until the closure monitoring period is terminated and will include those records required to be maintained and/or submitted to ODEQ by Subchapter 29 of Chapter 15. The proposed facility is not a land disposal facility, therefore the recordkeeping and reporting requirements of Subchapters 7, 9, 11, 13, 15, and 31 are not currently applicable.

5.12 Putrescible Waste

(OAC 252:515-19-91(a))

All waste received at the facility will be processed within 24 hours of delivery. Incoming food wastes that are unprocessed due to being received at the end of operating hours shall remain stored within the ORA building and kept at levels to prevent spillage and/or overflow. If a processing failure occurs, waste capable of decay will be removed from the Site within 96 hours to an alternative disposal site.

5.13 Large or Bulky Items

(OAC 252:515-19-92)

Large and bulky items not suitable for facility operations will not be accepted at the Facility.

5.14 Processed Solid Waste and Characterization

(OAC 252:515-19-93)

Vanguard does not accept hazardous or toxic materials, septic, or rendering that may contain brain or spinal tissue from animals. If hazardous or toxic substances or any other unacceptable materials are suspected in any load, the entire load will be rejected. Vanguard will provide signage at the ORA listing acceptable and unacceptable materials. Facility employees will be given the authority to reject loads of waste that do not meet Vanguard requirements. All processed waste and residues produced at the Site will be characterized to be hazardous or non-hazardous, handled and transported accordingly, and disposed of off-Site to a properly permitted disposal or recycling facility.

6.0 Closure and Post Closure Care

(OAC 252:515-25)

The facility shall be closed in accordance with the approved closure plan and in a manner that minimizes the need for further maintenance controls which minimizes escape of waste and waste constituents into the environment.

6.1 Closure Plan

(OAC 252:515-25-2(a))

A Closure Plan describing compliance with the requirements of Part 3 of Subchapter 25 is included with this application in **Appendix I**.

6.2 Post-Closure Plan

(OAC 252:515-25-2(b))

Processing facilities are exempt from Post-Closure Plan requirements, per 252:515-25-2(b); therefore, a Post-Closure Plan was not submitted with this permit application.

6.3 Plan Amendments

(OAC 252:515-25-2(c))

An amended closure or post-closure plan will be submitted, as necessary, to ODEQ for approval when a cost estimate adjustment is required and/or with future applications for modifications of the permit if such modifications will affect closure or post-closure duties or requirements.

6.4 Records Retention

(OAC 252:515-25-3(a) & (b))

Copies of all closure documentation will be maintained on file at the proposed facility or at the owner/operator's place of business until ODEQ approves the completion of final closure.

6.5 Corrective Action

(OAC 252:515-25-4)

If at any time during closure activities, inspection of the facility and/or review of monitoring data indicates an actual release of contaminants into the environment, ODEQ may require corrective action to eliminate or mitigate such a release. Vanguard will adhere to corrective action recommendations established by ODEQ.

6.6 Performance Standard

(OAC 252:515-25-31)

The processing facility will be closed in accordance with the approved closure plan in a manner that controls escape of waste and waste constituents into the environment and minimizes the need for further maintenance. A Closure Plan is provided in **Appendix I**.

6.7 Notification to ODEQ

(OAC 252:515-25-33(a))

The ODEQ will be notified in writing prior to beginning final closure of the facility.

6.8 Initiation of Closure Activities

(OAC 252:515-25-33(b))

Closure activities will begin no later than 90 days after final receipt of wastes at the facility.

6.9 Completion of Closure Activities

(OAC 252:515-25-33(c))

Closure activities will be completed according to the ODEQ-approved Closure Plan within 180 days after closure activities are initiated. In the event that extensions of the closure period are deemed necessary, Vanguard will demonstrate to ODEQ that closure will take longer than 180 days and that all steps have been, and will be taken, to prevent threats to human health or the environment from the facility.

6.10 Certification of Final Closure

(OAC 252:515-25-34(a))

A Certification of Final Closure will be submitted to ODEQ after completion of final closure. The certification will contain all information requested in 252:515-25-34(a).

6.11 Final Closure Approval and Extension Periods

(OAC 252:515-25-35(a), (b))

Vanguard will receive approval of final closure from ODEQ. ODEQ may extend the closure period and require that Vanguard post additional financial assurance if any testing shows the confirmed presence of elevated levels of any constituent, any evidence of contamination related to Site operations is found, or final closure of the processing facility is found to be inadequate.

6.12 Extension of Post Closure Period

(OAC 252:515-25-52(a), (b))

Processing facilities are not subject to post-closure requirements; therefore, this regulation is not applicable to the Site or to this permit application.

6.13 Contents of Post-Closure Plan

(OAC 252:515-25-53)

Processing facilities are not subject to post-closure requirements; therefore, this regulation is not applicable to the Site or to this permit application.

6.14 Post-Closure Operational Requirements

(OAC 252:515-25-54)

Processing facilities are not subject to post-closure requirements; therefore, this regulation is not applicable to the Site or to this permit application.

6.15 Post-Closure Use of the Property

(OAC 252:515-25-55)

Processing facilities are not subject to post-closure requirements; therefore, this regulation is not applicable to the Site or to this permit application.

6.16 Certification of Post-Closure Performance

(OAC 252:515-25-56)

Processing facilities are not subject to post-closure requirements; therefore, this regulation is not applicable to the Site or to this permit application.

7.0 Financial Assurance

7.1 Applicability

(OAC 252:515-27-2)

In accordance with OAC 252:515-27-1, processing facilities are subject to requirements set forth in Subchapter 27, Financial Assurance Mechanisms. ODEQ financial assurance for closure and post-closure care will be established prior to the initial receipt of waste.

7.2 Duty to Maintain

(OAC 252:515-27-3, 4)

Financial assurance for closure, post-closure, and/or corrective action, as applicable, will be maintained continuously until released from this requirement by the ODEQ. Unit costs will be updated at least every 5 years after the initial receipt of waste.

7.3 Permit Transfer

(OAC 252:515-27-5)

The permit and financial insurance will be maintained by Keota AD 1, LLC. If the permit is to be transferred, the transferee shall either provide new financial assurance or assume the existing assurance, if adequate in amount.

7.4 Non-Renewal or Failure to Maintain

(OAC 252:515-27-6)

Keota AD 1, LLC understands that the ODEQ shall bring proceedings to suspend or revoke the permit if financial assurance is not provided, renewed, and maintained in accordance with OAC 252:515-27.

7.5 Financial Assurance and Substitute Financial Assurance

(OAC 252:515-27)

The Financial Assurance shall be in a form approved by the ODEQ.

7.6 Cost Estimates for Financial Assurance

(OAC 252:515-27-31 thru 33)

Prior to closure, all tanks and other equipment will be emptied of organic materials and cleaned. Processed organic materials (digestate) will be returned to Two State Sod to be land applied in accordance with applicable permits. Unprocessed organic materials will be sent to an off-site landfill or another appropriate site (such as an off-site anaerobic digester or composting facility). Solid wastes from the ORA or hydrolysis tanks will be sent to a landfill.

Equipment which would require decommissioning includes, but is not limited to, digestion tanks, hydrolysis tanks, biogas processing structures, ORA processing and sorting equipment, transportation and conveying systems, heating and power systems, digestate treatment equipment, and utility connections. All equipment, structures, and operations will be emptied and cleaned of process materials prior to reusing, retrofitting, dismantling, or removal.

The Keota AD Facility is located on an operational farm (Two State Sod) where the decommissioned equipment could conceivably be adapted to alternative beneficial uses. All decommissioned equipment, structures, and materials which cannot be managed through reuse or sale will be disposed of at recycling centers or landfills in accordance with all state and federal requirements.

The Closure cost estimate is provided to ODEQ as part of this application. As this facility is not a land application facility, cost estimates of post-closure care and corrective action would not apply and have not been prepared.

8.0 Waste Exclusion Plan

(OAC 252:515-29)

According to OAC 252:515-29-1(b), processing facilities are not required to submit a Waste Exclusion Plan (WEP); however, all processing facilities are subject to 252:515-29-3(e), Notification of Rejected Waste.

8.1 Notification of Rejected Wastes

(OAC 252:515-29-3(e))

The Site will notify ODEQ by the end of the following working day of any prohibited waste identified and rejected prior to receipt, as required by 252:515-29-3(e)(1). The notification of rejected wastes will describe the date and reason for the rejection and include the name, address, phone number and contact person of the waste generator (if data can be obtained), and/or the name of the driver, tag number of the vehicle, carrier name, address, telephone number, and contact person (if data can be obtained), as required per 252:515-29-3(e)(2).

9.0 Public Notices

(OAC 27A O.S. 2-14-301, 302, 303 and OAC 252:4-7-13(d))

Information regarding the pending application will be made available to the public as required in O.S. 27A Sec. 2-14-301, et. Seq., OAC 252:4-7-13. Proof of the public notice submittal will be made to ODEQ within 20 days of the publication, consisting of a copy of the publication in one newspaper local to the facility Site, in addition to an affidavit from the publishers showing the date of publication.

Appendix A
Signed Certification

APPLICATION FOR A Processing Facility PERMIT

Date: _____ County: Haskell

Send to:

Solid Waste Permitting Unit
Land Protection Division
Dept. of Environmental Quality
707 N. Robinson (PO Box 1677)
Oklahoma City, OK
73101-1677

FOR DEQ USE	
DEQ Log No.	_____
No. Copies	_____
Date Received:	_____

Keota AD 1, LLC proposes to establish, construct, operate, and maintain
(Applicant's Name)
the Keota AD 1, located at 21405 OK-9, Keota, Oklahoma, 74941
(Facility Name) (Exact legal description:

metes & bounds, platted lot, or land survey. Append extra sheets if necessary)

in Haskell County, Oklahoma, and hereby makes application for a permit to
establish, construct, operate, and maintain a Processing Facility as required by
Oklahoma Solid Waste Management Act and Rules pursuant thereto.

Brief description of application:

Application for a Tier III Processing Facility of non-hazardous municipal solid waste in Keota, Oklahoma.

Applicant or Authorized Agent:

Preparing Engineer:

Signature

Signature

Victoria Lepore

Typed Name

Typed Name

Address: 133 Boston Post Road, Bldg 15, 2nd Floor

Address: _____

City: Weston State: MA

City: _____ State: _____

Date signed: _____

Date signed: _____

Phone: 781-232-7597 Extension 4

Phone: _____

Facility Address (if any): _____

21405 OK-9, Keota, Oklahoma, 74941

DEQ USE ONLY

APPLICATION FOR A Processing Facility PERMIT

Date: _____ County: Haskell

Send to:

Solid Waste Permitting Unit
Land Protection Division
Dept. of Environmental Quality
707 N. Robinson (PO Box 1677)
Oklahoma City, OK
73101-1677

FOR DEQ USE

DEQ Log No. _____
No. Copies _____
Date Received: _____

Vanguard Organics, LLC proposes to establish, construct, operate, and maintain

(Applicant's Name)

the Keota AD1, LLC, located at 21405 OK-9, Keota, Oklahoma, 74941

(Facility Name)

(Exact legal description:

metes & bounds, platted lot, or land survey. Append extra sheets if necessary)

in Haskell County, Oklahoma, and hereby makes application for a permit to establish, construct, operate, and maintain a Processing Facility as required by **Oklahoma Solid Waste Management Act** and Rules pursuant thereto.

Brief description of application:

Application for a Tier III Processing Facility of non-hazardous municipal solid waste in Arkoma, Oklahoma.

Applicant or Authorized Agent:

Preparing Engineer:

Signature

Michelle Durand

Typed Name

Address: 133 Boston Post Road, Bldg 15, 2nd Floor

City: Weston State: MA

Signature

David A. Wright

Typed Name

Address: 11001 Hampshire Avenue S

City: Minneapolis State: MN

Date signed: _____

Phone: 781-232-7597 Extension 4

Date signed: 6-21-2024

Phone: 903-245-0192

Facility Address (if any): _____

21405 OK-9, Keota, Oklahoma, 74941

DEQ USE ONLY

VERIFICATION¹

STATE OF OKLAHOMA)
COUNTY OF Oklahoma) ss

VICTORIA A. Lepore, of lawful age, being first duly sworn, upon oath state that I have read the foregoing APPLICATION FOR A _____ PERMIT, that I am familiar with the matters set forth therein, and that the same are true to the best of my information and belief.

Victoria A. Lepore
Applicant

Subscribed and sworn to before me this 21st day of June, 2024
by Victoria A. Lepore (Applicant or legal representative).

Laura K. Ward
Notary Public

My commission expires:

8-18-2025



¹ This Verification is required for a Tier III application.

Appendix B

Legal Right to Property Documentation

DEQ LANDOWNER NOTIFICATION AFFIDAVIT

Tier I, II, or III permit applications in which the applicant does not own all the land subject to the application must notify the owner(s) of leases and/or pipeline right-of-ways. The basis for this requirement is Title 27A of the Oklahoma Statutes § 2-14-103(9), as described in OAC 252:004-7-13(b).

Please note that you MUST fill out and return this affidavit even if you don't have to give any landowner notice.

A	NOTICE TO THE LANDOWNER(S) IS NOT REQUIRED because: (check one)
<input type="checkbox"/>	My application does not involve any land. <input type="checkbox"/> My application involves only land owned by me (or applicant business).

OR

B	NOTICE TO THE LANDOWNER(S) IS REQUIRED because the land is owned by someone other than myself or the applicant business AND I HAVE NOTIFIED the following (check one):		
<input checked="" type="checkbox"/>	Landowner(s)	<input type="checkbox"/>	Lessor or Administrator or Executor of the land
METHOD OF DELIVERY (check one):			
<input type="checkbox"/>	Actual notice, for which I have a signed and dated receipt		
<input type="checkbox"/>	Service by Sheriff or private process server, for which I have an affidavit		
<input checked="" type="checkbox"/>	Service by certified mail, restricted delivery, for which I have a signed return receipt		
<input type="checkbox"/>	Legal publication, for which I have an affidavit of publication from the newspaper, because the landowners could not be located through due diligence		
MY RIGHT TO USE THIS LAND is by:			
<input checked="" type="checkbox"/>	Lease	<input type="checkbox"/>	Easement <input type="checkbox"/> Other, Specify _____

LANDOWNER AFFIDAVIT CERTIFICATION			
I, as the applicant or an authorized representative of the applicant, hereby certify that notice to the landowner(s) about the permit application for the facility described below was provided per Option A or B above.			
Company Name	Keota AD 1, LLC	Facility Name	Keota AD1 Solid Waste Processing
Facility Address or Legal Description.	21405 OK-9, Keota, Oklahoma, 74941		
Responsible Official (signature)		Date Signed	
Responsible Official (typed)	Michelle Durand and Patrick Crowley	Title	Development Manager

If the landowner notice applies to your application (Option B Above) you can send the following form to them as your notice:

NOTICE TO LANDOWNER OF FILING	
Dear Landowner: (Name) <u>Don and Jan Sebo</u>	
(Applicant name) <u>Keota AD 1, LLC</u> has filed a permit application with the Oklahoma Department of Environmental Quality for (Name) <u>Keota AD1 Solid Waste Processing</u> facility.	
This application involves the land owned by you located at: Address or Legal Description: <u>21405 OK-9, Keota, Oklahoma, 74941</u>	
Signed: <u>Victoria Lyore</u>	Date: <u>6/20/2024</u>

TEMPORARY EASEMENT FOR ACCESS

This temporary easement is issued pursuant to the Oklahoma Environmental Quality Code (27A O.S. §2-1-101 *et seq.*, including the Solid Waste Management Act, the rules promulgated thereunder, and in accordance with the conditions and requirements of Permit No. _____, issued by the Oklahoma Department of Environmental

Quality (DEQ) on _____ to Vanguard Organics, LLC.
(Date) (Name of permittee)

The facility is located on property owned by Don and Jan Sebo, hereinafter referred to as Grantor. Grantor does hereby grant unto the DEQ, including its contractors, employees, and its successors and assigns, the right of access to the below described land for purposes of performing closure, post-closure monitoring, or corrective action in the event of default by the owner or operator of the permitted facility.

The easement is granted over and across the permitted area ("Tract") on land situated in Haskell County, State of Oklahoma.

Following is the legal description of the Tract:

Please see attached for legal description.

more particularly described as the permitted area of Keota AD1 Solid Waste Processing Facility
(Facility name)

_____, DEQ Permit Number: _____.

This Temporary Easement for Access is given subject to the following conditions:

1. The Grantor hereby grants unto the DEQ an easement and right-of-way over and across the Tract of land described above for access to said Tract for the purposes of

conducting closure and post-closure activities and/or corrective action as prescribed by the laws of the State of Oklahoma and Rules of the DEQ;

2. This Easement is temporary and shall become null and void upon certification by the DEQ that post-closure and/or corrective action has been properly completed; and

3. This Easement shall be binding upon the heirs, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the Grantor has hereunto set (his/her/its) hand this

11 Day of June, 2024.

Jan & Don DeLo owners
(Name, Title)

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
COUNTY OF Haskell) SS:

Before me, the undersigned, a Notary Public within and for said County and State, on this 11th day of June, 2024,

Jan DeLo & Don DeLo owners
(name, title)

did personally appear before me and is known to be the identical person who executed the within and foregoing instrument and acknowledged to me that (he/she) executed the same as (his/her) free and voluntary act and deed, for the uses and purposes therein set forth.

Witness my hand and official seal the date above written.

Calista Haywood
Notary Public

My commission expires:

08-22-2027



Appendix C
Disclosure Statement

DISCLOSURE STATEMENT FORM

INFORMATION AND INSTRUCTIONS: The Solid Waste Management Act requires applicants to provide the Department of Environmental Quality with information about themselves, any officer, director or partner, any person employed by the applicant as general or key manager who directs the operations of the site which is the subject of the application, and any person owning or controlling more than five percent (5%) of the applicant's debt or equity. By law, the "Disclosure Statement" must be completed by all applicants for the issuance or transfer of any solid waste permit.

If the applicant is a publicly held company, it does not need to submit a disclosure statement, but only need submit the most recent annual (SEC Form 10-K) and quarterly reports (SEC Form 10-Q) required by the Securities and Exchange Commission (SEC), which provide information regarding legal proceedings in which the applicant has been involved. However, the applicant must submit such other information as the Department may require that relates to the competency, reliability, or responsibility of the applicant, officers, directors, or other persons as set out above.

PLEASE PROVIDE THE FOLLOWING INFORMATION: (If additional space is required to answer any of the following questions, please make attachments as needed.)

- (1) Name of facility:
Keota AD 1
- (2) Applicant's full name and social security number:
Keota AD 1, LLC EIN:99-2891057
- (3) Applicant's business address: 133 Boston Post Road, Building 15, 2nd Floor, Weston, MA 02493
- (4) Applicant's business telephone number: 781-232-7597
- (5) Applicant's form of business:
 publicly-held corporation;
 privately-held corporation;
 partnership or sole proprietorship;
 municipality or public agency;
 other: _____
- (6) Is Applicant a publicly-held company required to file annual reports with the Securities and Exchange Commission, or a wholly-owned subsidiary of such a company?
 yes no
- (7) If Applicant answered "yes" to question (6) above, Applicant is required to submit copies of the most recent annual and quarterly reports required by the SEC *that provide information regarding legal proceedings in which Applicant has been involved.* In addition, list below, the name and business address of any person employed by the Applicant as a general or key manager who directs the operations of the site or facility which is the subject of the application.

(NOTE: If Applicant is required to submit SEC reports under this section, no further reporting is required under the disclosure statement requirement, and Applicant should skip to the "Certification and Oath" section on the last page of this form. Applicant should submit copies of any SEC reports as an attachment to this form to be submitted as part of the permit application. If Applicant answered "no" to question (6) above, Applicant is required to complete all remaining sections of this Form.)

- (8) Full name, business address and social security number of all affiliated persons:
(NOTE: "Affiliated person" means:
(a) any officer, director, or partner of the applicant;
(b) any person employed by the applicant as a general or key manager who directs the operations of the site or facility which is the subject of the application; and
(c) any person (including corporations, partnerships, etc.) owning or controlling more than five (5) percent of the Applicant's debt or equity.):

Officers of Keota AD 1

1. Neil Smith, Chief Executive Officer (99-2891057)
2. Marc Stewart, Chief Financial Officer (99-2891057)
3. Victoria Lepore, General Counsel (99-2891057)
- Key Manager:
 4. Kevin Chase, Chief Development Officer (99-2891057)

Parent Entity:

5. VR Holdings 2, LLC, sole member of Keota AD 1, LLC
 - a. Address: 133 Boston Post Road, Building 15, 2nd Floor, Weston, MA 02493
 - b. EIN: 61-1885366

- (9) Full name and address of any legal entity in which the Applicant holds a debt or equity interest of at least 5 percent, or which is a parent company or subsidiary of the Applicant, and a description of the ongoing organizational relationships as they may impact operations within the State:

133 Boston Post Road, Building 15, 2nd Floor, Weston, MA 02493

- (10) Description of the experience and credentials of the Applicant and any "affiliated person", including any past or present permits, licenses, certifications, or operational authorizations relating to environmental facility regulation:

N/A

- (11) Listing and explanation of any administrative, civil or criminal legal actions against the Applicant or any affiliated person which resulted in a final agency order or final judgment by a court of record

including any final order or judgment on appeal in the ten (10) years immediately preceding the filing of the application relating to solid or hazardous waste. Such action shall include, without limitations, any permit denial or any sanction imposed by a state regulatory authority or the U.S. Environmental Protection Agency:

N/A

(12) Listing of any federal environmental agency and any state environmental agency that has or has had regulatory responsibility over Applicant:

CERTIFICATION AND OATH

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Victoria A. Lepore

6/24/2024

(Printed or Typed) Name of Applicant or Agent

Date

Victoria Lepore

Signature of Applicant or Agent

General Counsel

Title

ACKNOWLEDGMENT

State of Oklahoma)
)
Oklahoma County) ss.

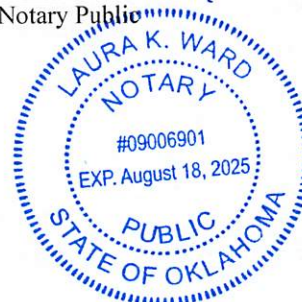
Before me, the undersigned, in and for said county and state, on this 24th day of June, 2024, personally appeared Victoria Lepore, to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed for the uses and purposes therein set forth.

Laura K Ward
Notary Public

My commission expires:

8-18-2025

:\DisclStmtFORM.doc
12/00



Appendix D
Figures and Maps




 Approximate Site Boundary



Image Source: Google Earth Imagery

**BRAUN
INTERTEC**
The Science You Build On.

11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No:
B2308124.00

Drawing No:
Fig1_SiteLayout

Drawn By: ZS
Date Drawn: 2/2/2024
Checked By: SB
Last Modified: 5/10/2024

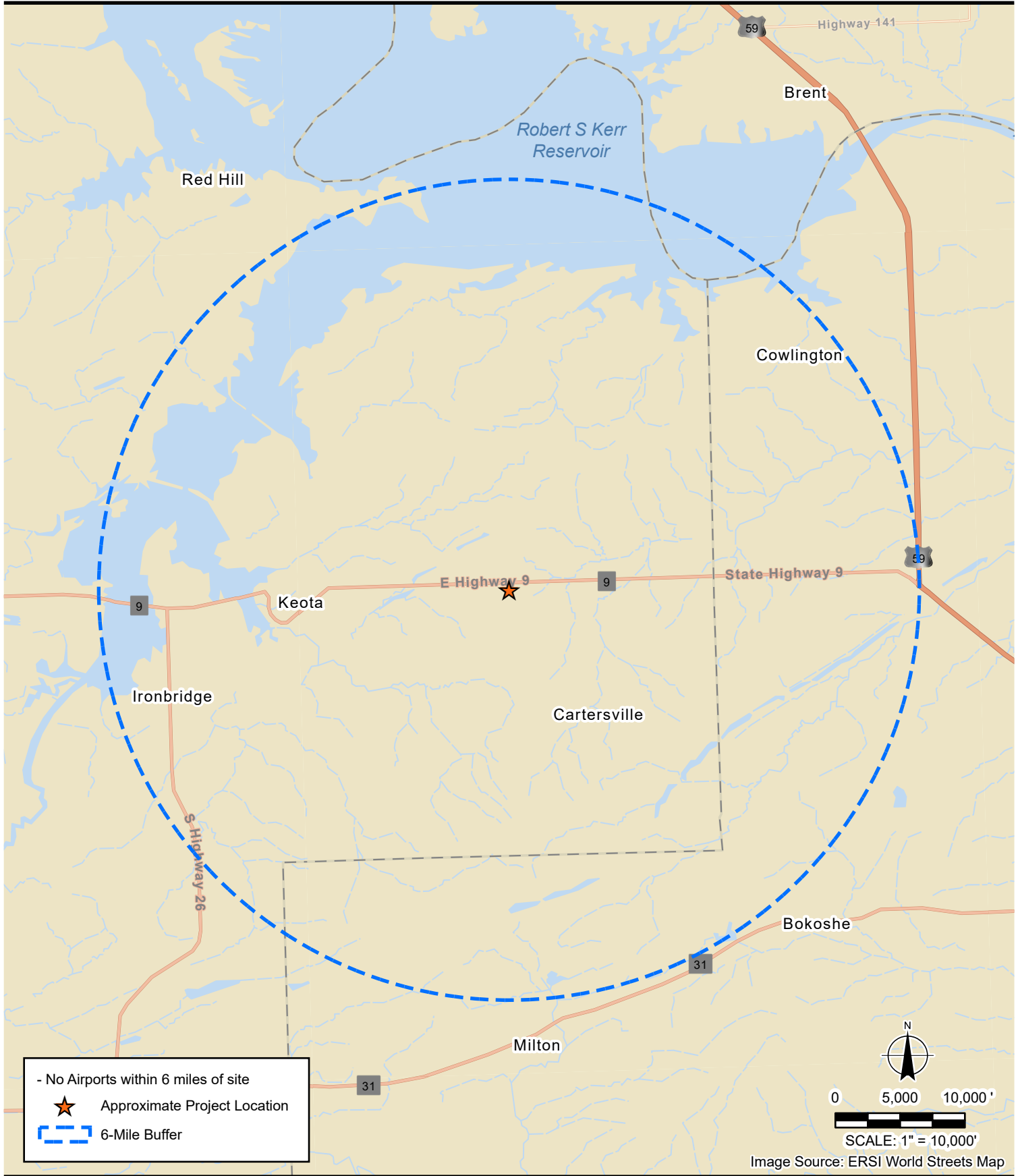
Two State Sod Farm - Keota AD1

21405 OK-9

Keota, Oklahoma

Site Layout

Figure 1



11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No:
B2308124.00

Drawing No:
Fig2_General_Location

Drawn By: ZS
Date Drawn: 2/2/2024
Checked By: SB
Last Modified: 5/10/2024

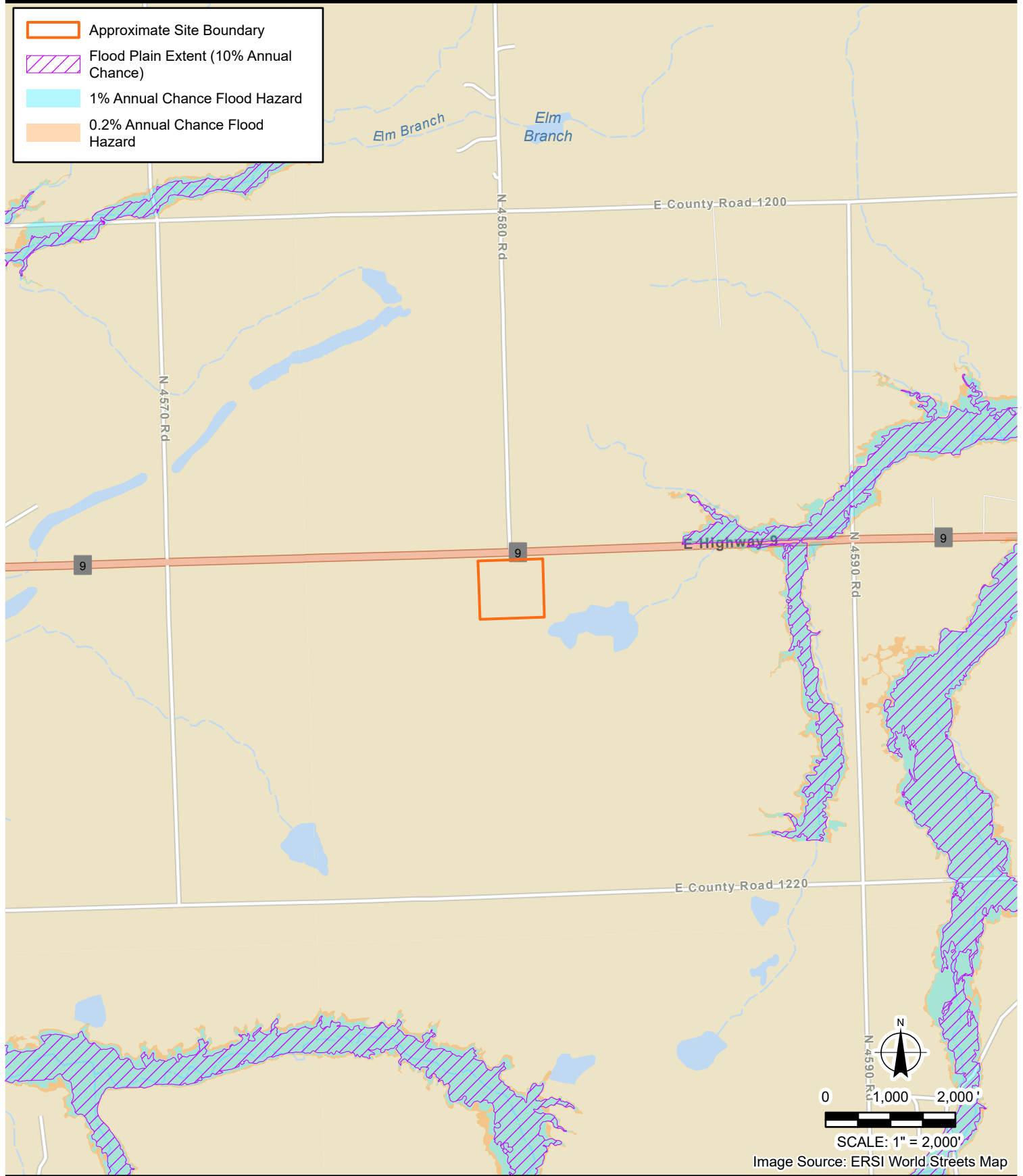
Two State Sod Farm - Keota AD1

21405 OK-9

Keota, Oklahoma

General Location

Figure 2



11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No:
B2308124.00

Drawing No:
Fig3_Flood_Plain_Map

Drawn By: ZS
Date Drawn: 2/2/2024
Checked By: SB
Last Modified: 5/10/2024

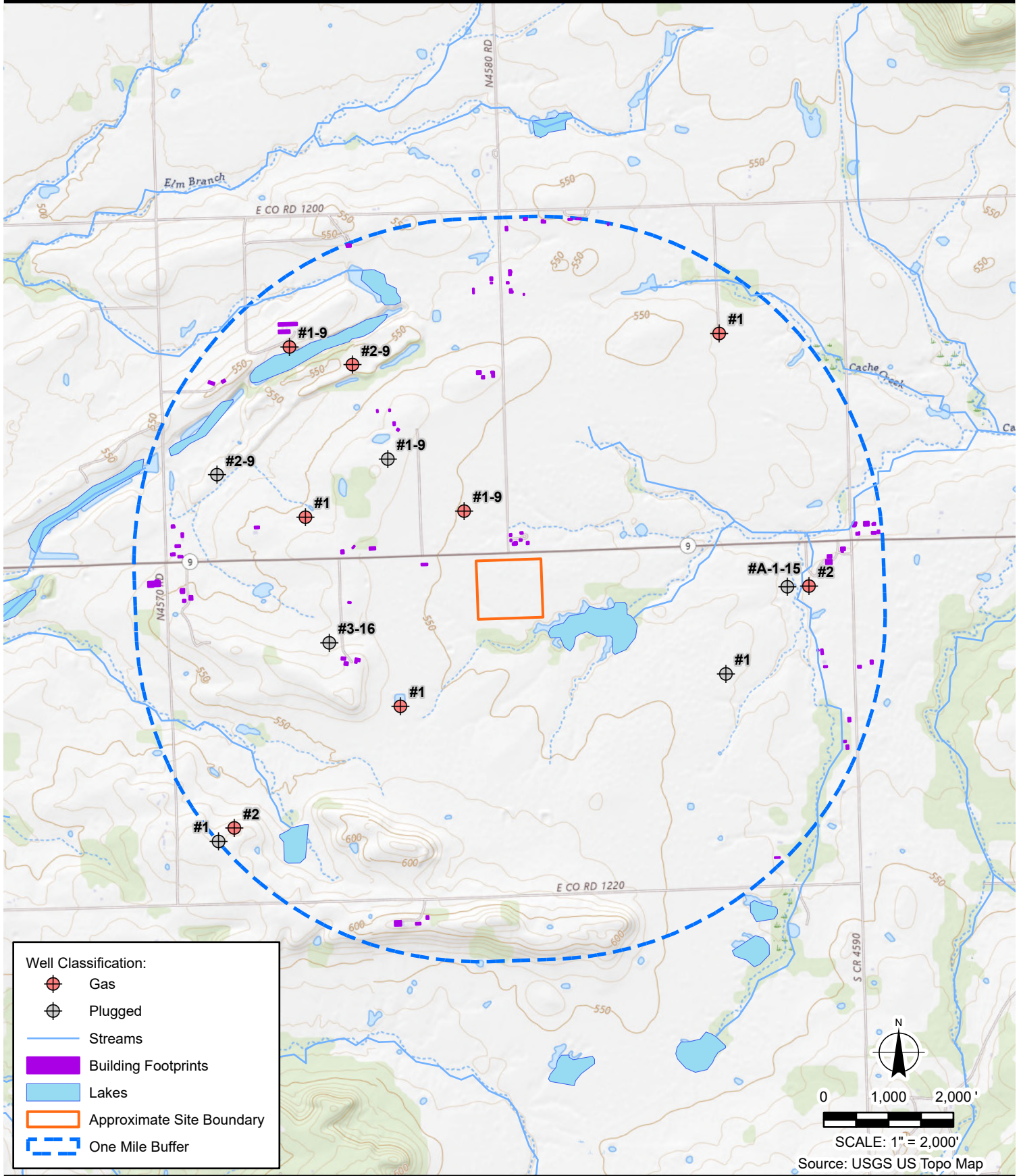
Two State Sod Farm - Keota AD1

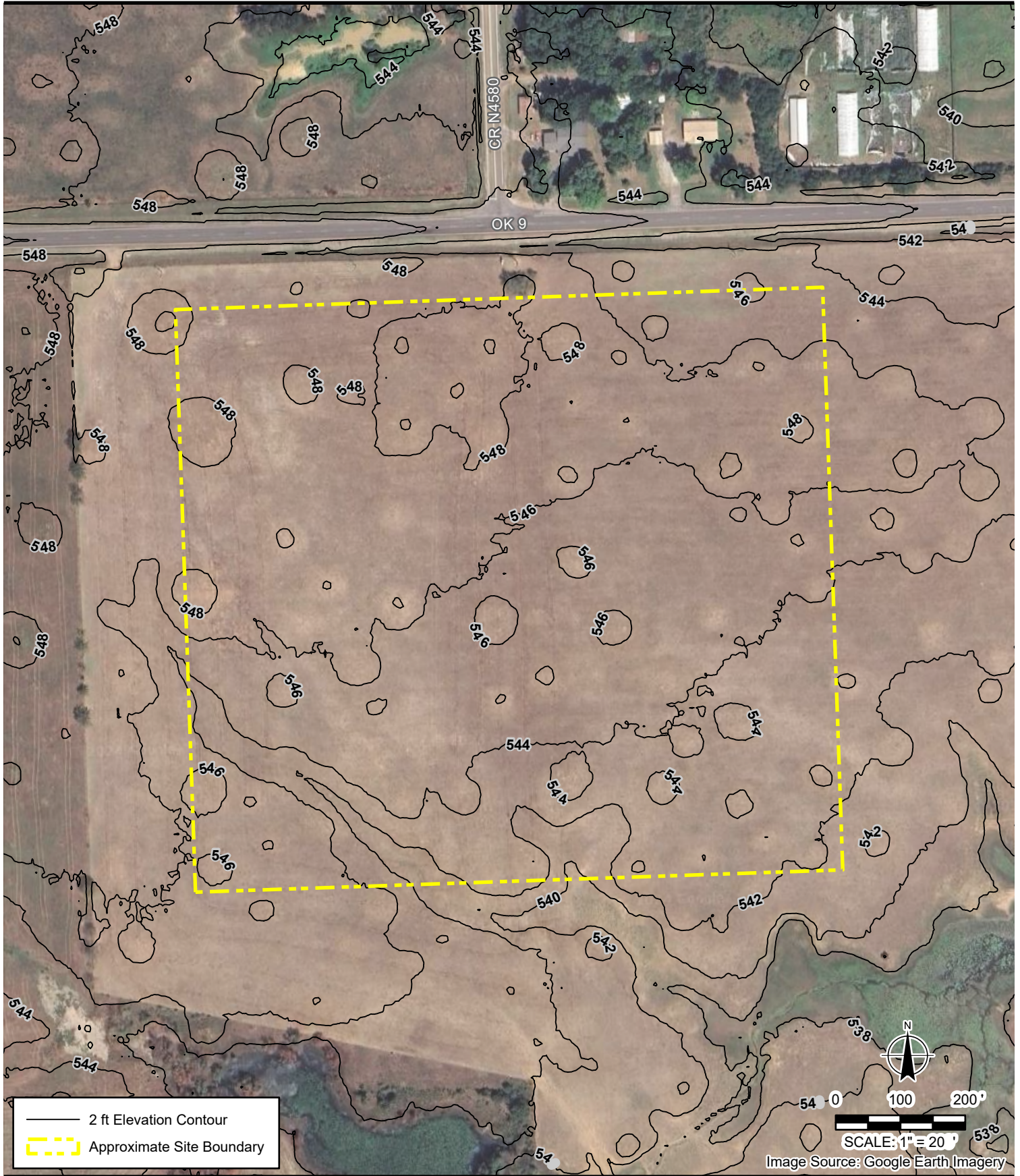
21405 OK-9

Keota, Oklahoma

Flood Plain Map

Figure 3





11001 Hampshire Avenue S
 Minneapolis, MN 55438
 952.995.2000
 braunintertec.com

Project No:
 B2308124.00

Drawing No:
 Fig5_ExistingContours

Drawn By: ZS
 Date Drawn: 2/2/2024
 Checked By: SB
 Last Modified: 5/14/2024

Two State Sod Farm - Keota AD1

21405 OK-9

Keota, Oklahoma

Existing
 Contours Map

Figure 5

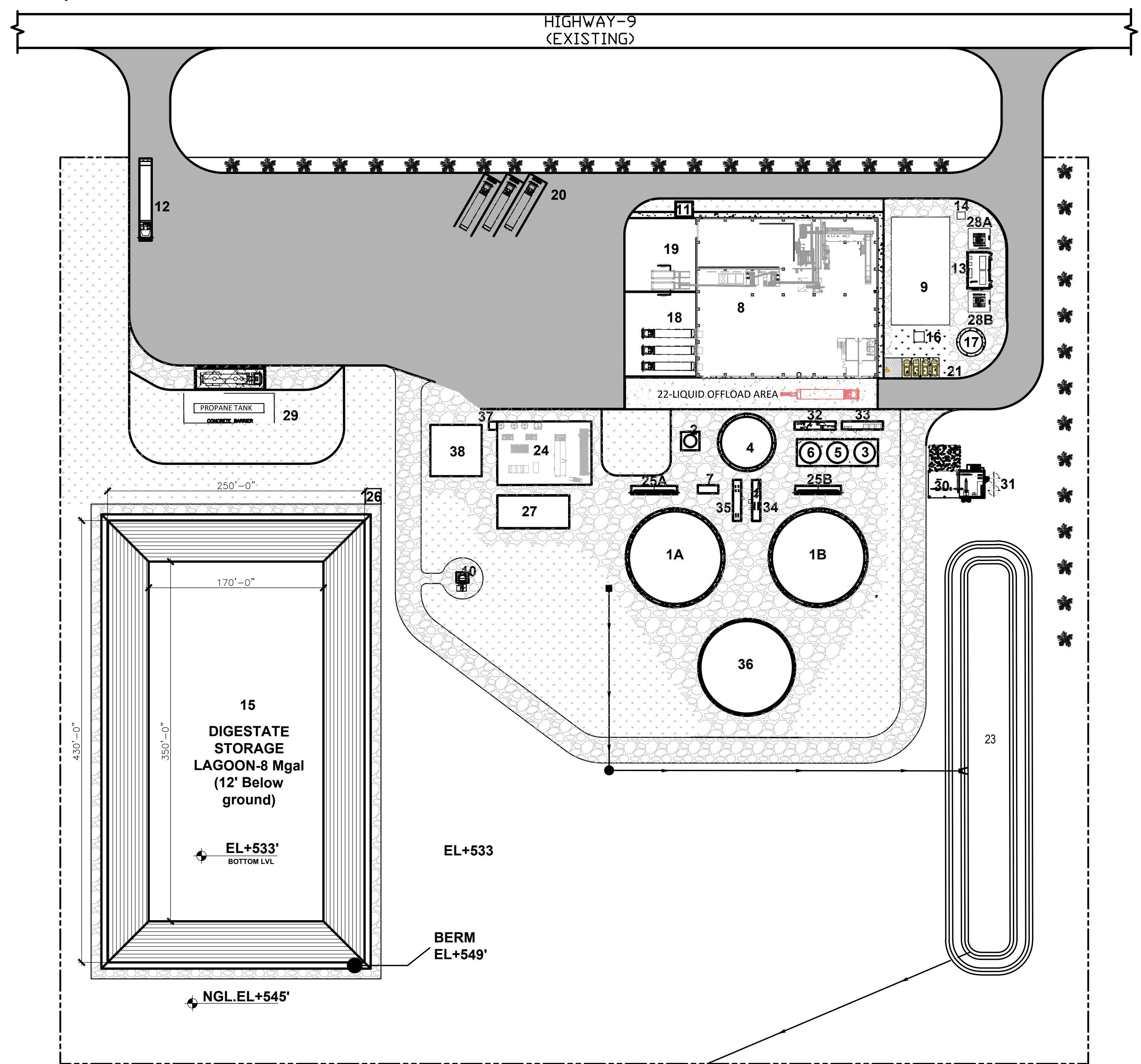
SITE PLAN LEGEND		
NUMBER	NAME	DIMENSIONS
1A	DIGESTER-1	90' DIA x 32'Ht.
1B	DIGESTER-2	90' DIA x 32'Ht.
2	FERRIC DOSING TANK	Ø12' X 16' ht
3	HYDROLYSIS TANK 1	20' DIA. x 15'Ht.
4	HYDROLYSIS TANK 2	50' DIA. x 24'Ht.
5	HYDROLYSIS TANK 3	20' DIA. x 15'Ht.
6	PROCESS WATER TANK	20' DIA. x 15'Ht.
7	BOILER CONTAINER	8'X20'
8	ORGANICS RECEIVING AREA	173'X151'
9	ODOR CONTROL SYSTEM	57'X105'
10	FLARE	12'X12'
11	MANURE SUMP	16' X 14' X 12' DEEP
12	TRUCK SCALE	12'X80'
13	ELECTRICAL ROOM	22'X36'
14	GENERATOR	7'X8'
15	DIGESTATE STORAGE LAGOON	REF.DRAWING
16	SEPTIC HOLDING TANK	10'X10'
17	FIRE WATER TANK	22' DIA' x 25'Ht.
18	LOADING RAMP (UP)	70' LONG
19	LOADING RAMP (DOWN)	70' LONG
20	TRUCK PARKING (3)	20'X70'
21	CAR PARKING (5)	9'X20'
22	LIQUID OFFLOADING AREA	30'X195'
23	STORM WATER RETENTION POND	TBD
24	BIOGAS UPGRADER	91'X61'
25A	HEAT EXCHANGERS-1	45'X8'
25B	HEAT EXCHANGERS-2	45'X8'
26	LOADOUT STATION	15'X15'
27	CO2 RECOVERY AREA (FUTURE)	70'X32'
28A	TRANSFORMER-1	10'X12'
28B	TRANSFORMER-2	10'X12'
29	PROPANE TANK	68' X 9'
30	SOLID SEPARATOR BUILDING	54'-6" X 27'
31	PRESSATE HOLDING TANK(2 Nos)	Ø10' X 10' ht
32	CONTAINER-1	40' X 8'
33	CONTAINER-2	40' X 8'
34	CONTAINER-3	40' X 8'
35	CONTAINER-4	40' X 8'
36	DIGESTATE HOLDING TANK	90' DIA x 32'Ht.
37	De-OXY SYSTEM	8'x8'
38	M&R STATION	50'x50'

- 32.Container-1
 1)FOG Dosing Pump
 2)Ferric dosing Pump
 3)Hydrolysis Tank-1 Pump
 4)Electrical Panel
- 33.Container-2
 1)Nutrient Dosing(IBC &Pump)
 2)NaOH (IBC & Pump)
 3)Antifoam(IBC & Pump)
 4)O2 Generator(x2 or x3)
 5)Electrical panel.

- 34.Container-3
 1)Digestate Removal Pumps
 2)Feed Pump from HT2 to Digesters
 3)Electrical Panel.
 4)Biogas Analyzer.
- 35.Container-4
 1)Digestate HX pumps
 2)Digester Hot water pumps
 3)HT#2 Hot water pump
 4)Hot Water Pump For BUP
 5)Electrical Panel.

DRAWING IS PRELIMINARY IN NATURE AND IS NOT FOR CONSTRUCTION OR BUILDING PERMIT.

FOR SOLID WASTE PERMIT APPROVAL ONLY



LEGENDS	
	PROPERTY LINE
	HEAVY DUTY ASPHALT
	LIGHT DUTY ASPHALT
	GRAVEL
	GRAVEL ROAD
	HEAVY DUTY CONCRETE
	GRASS

1 ARCHITECTURAL SITE PLAN
 SCALE: 1/64 = 1'-0"

PRELIMINARY
 NOT FOR
 CONSTRUCTION



VANGUARD RENEWABLES
 KEOTA AD1
 ORGANICS RECEIVING AREA (ORA)
 ARCHITECTURAL SITE PLAN
 HASKEL COUNTY

REV	DATE	BY	APPD	DESCRIPTION
A	05.31.24	DP	DP	SOLD WASTE PERMIT ONLY
B	6.14.24	DP	DP	SOLID WASTE PERMIT ONLY

Professional seal of Weldon Bowman, AIA, OK License No. 6042, CA# 02461, expires 06/30/2025. Date: 6/14/2024.

wdesign
 ARCHITECTURE & INTERIORS
 608 East 3rd Street
 Tulsa, OK 74120
 Office: 918.794.6616
 Fax: 918.794.6602
 www.wdesignsite.com

DWG NUMBER
 0576-A-101

SCALE AS NOTED	REV B
-------------------	----------

EXHIBIT "B"
HASKELL COUNTY, OKLAHOMA
SURFACE SITE DESCRIPTION
TWO STATE SOD FARM

DESCRIPTION OF A 20.66 ACRE SITE, SITUATED IN SECTIONS 15 AND 16, T-9-N, R-23-E.I.M., HASKELL COUNTY, OKLAHOMA, OUT OF A TRACT OF LAND RECORDED IN BOOK 817, PAGE 537, DEED RECORDS HASKELL COUNTY, OKLAHOMA (D.R.H.C.O.), SAID SITE LIMITS BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

POINT OF BEGINNING (P.O.B., X: 2903104.81, Y: 715723.94) within said Section 16, at the Northwest corner of this site, from which a concrete nail found for the Northeast corner of said Section 16 bears North 75°26'42" East a distance of 512.55 feet;

THENCE North 88°00'42" East a distance of 1000.00 feet to the Northeast corner of this site;

THENCE South 01°59'18" East a distance of 900.00 feet to the Southeast corner of this site;

THENCE South 88°00'42" West a distance of 1000.00 feet to the Southwest corner of this site;

THENCE North 01°59'18" West a distance of 900.00 feet to the **POINT OF BEGINNING**, containing 20.66 acres (900,000 sq. ft.).

All bearings, distances and coordinates contained herein are grid, based upon the Oklahoma State Plane Coordinate System, South Zone, of the North American Datum 1983 (NAD83, Realization 2011, Epoch 2010.00), in U.S. Survey Feet.

A survey exhibit of even date accompanies and is considered an integral part of this easement description.

PRELIMINARY

Codi L. Lamberson
Oklahoma P.L.S. No. 1963

Date: _____
Date of Survey: April 14, 2024

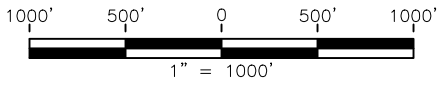
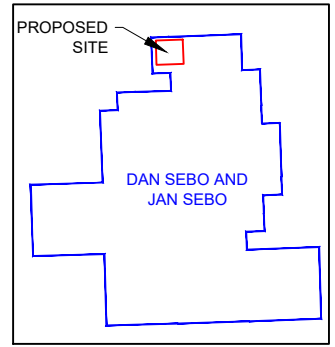


EXHIBIT "B"

HASKELL COUNTY, OKLAHOMA

SURFACE SITE PLAT

TOTAL SURFACE SITE: 20.66 ACRES
OR 900,000 SQUARE FEET

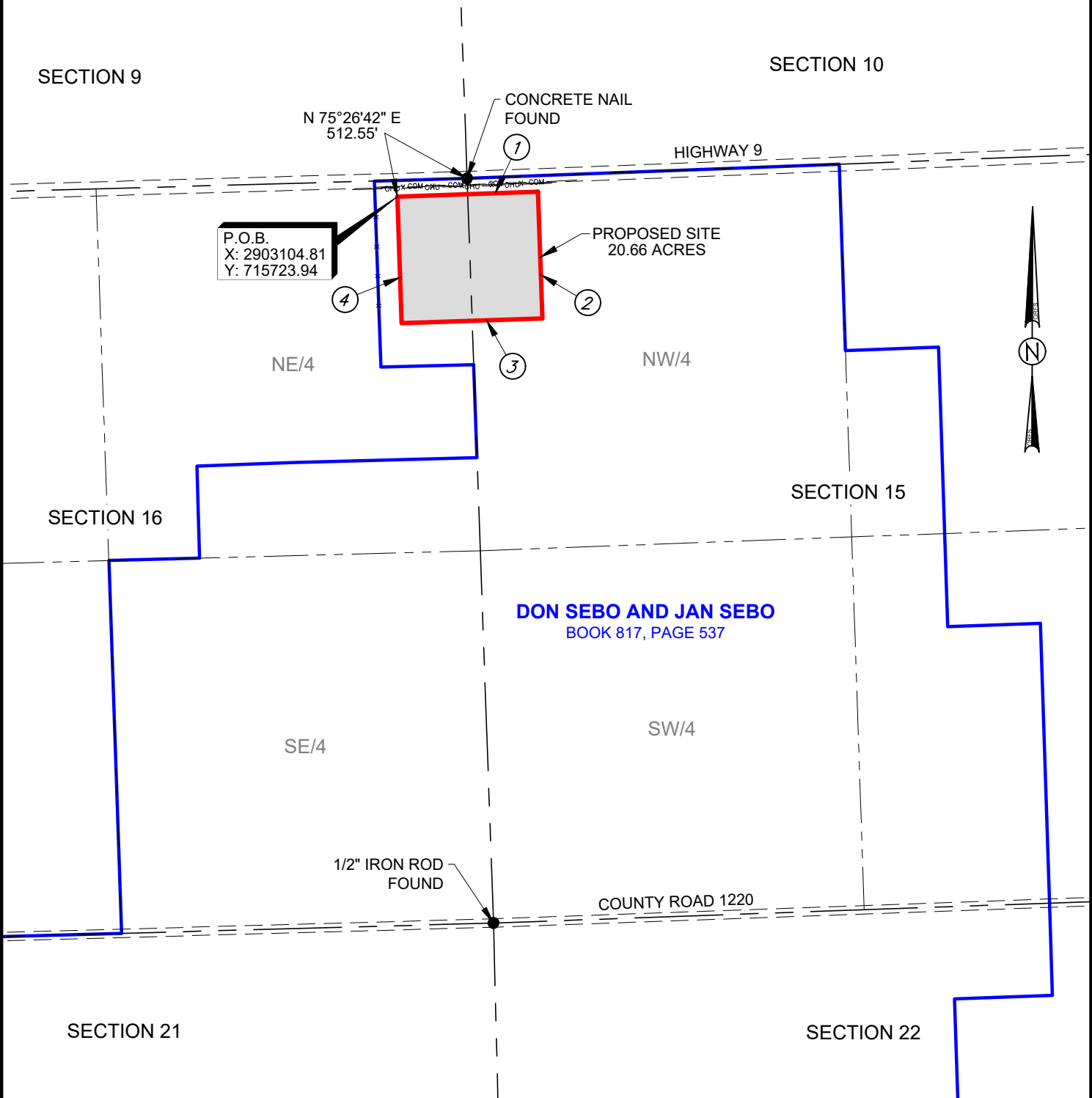


VICINITY MAP
NOT TO SCALE

LEGEND	
	SURFACE SITE LIMIT
	FENCE
	OVERHEAD UTILITY
	UNDERGROUND CABLE
	SECTION LINE
	1/4 SECTION LINE
	SUBJECT TRACT
	ROAD WAY
	MONUMENT FOUND

LINE TABLE		
LINE	BEARING	DISTANCE
1	N 88°00'42" E	1000.00'
2	S 01°59'18" E	900.00'
3	S 88°00'42" W	1000.00'
4	N 01°59'18" W	900.00'

T-9-N, R-23-E1M



- CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT ACCORDING TO EVIDENCE AND/OR LINES OF OCCUPATION OBSERVED UPON THE DATE OF THIS FIELD SURVEY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE AND APPARENT ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THE DESCRIBED EASEMENT, HAVE BEEN LOCATED, SHOWN AND/OR DESCRIBED HEREON OF WHICH I HAVE KNOWLEDGE OF. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS EXHIBIT, IS NON-TRANSFERABLE AND MADE FOR THIS TRANSACTION ONLY.
- TITLE INFORMATION HAS BEEN PROVIDED BY THE CLIENT; AS SUCH, OPEN RANGE FIELD SERVICES DOES NOT WARRANT OR GUARANTEE THAT ALL CONFLICTS, EASEMENTS OR ENCUMBRANCES ARE SHOWN. ADJOINER INFORMATION SHOWN OR DESCRIBED IS FOR INFORMATIONAL PURPOSES ONLY.
- ALL BEARINGS, DISTANCES AND COORDINATES CONTAINED HEREIN ARE GRID, BASED UPON THE OKLAHOMA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, OF THE NORTH AMERICAN DATUM 1983 (NAD83, REALIZATIONS 2011, EPOCH 2010.00), IN U.S. SURVEY FEET.
- MONUMENTS SET MARKING BOUNDARY CORNERS SHALL BE 1/2 INCH DIAMETER REBAR WITH ORANGE PLASTIC CAP STAMPED "OPEN RANGE FS RPLS 6480", UNLESS NOTED OTHERWISE.
- SURFACE SITE DESCRIPTION OF EVEN DATE ACCOMPANIES AND IS A PART OF THIS SURVEY EXHIBIT.

"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT."

CODI LAMBERSON, P.L.S. 1963

REVISION				SURVEYED BY			B.C.		
NO.	DESCRIPTION	BY	DATE	DRAWN BY	D.G.	4-17-24			
1	NEW PROJECT LOCATION	DG	4-17-24	CHECKED BY	C.L.	4-18-24			
				PROJECT MGR.	D.G.				
				PROJ. NO.	ORFS-8800-117				
				DWG NAME:	TWO STATE SOD FARM SITE.DWG				



OPEN RANGE
FIELD SERVICES, LLC.

1503 S. BARNES, PAMPA, TX 79065
TBPELS No.: 10193994
OFFICE: 806-665-0770

39350 IH-10 WEST, BOERNE, TX 78006
TBPELS No.: 10194069
OFFICE: 830-816-5009
(CA-7824 LS 6/30/2025)



- No Wells or Wellhead Protection Areas within Vicinity

Approximate Site Boundary

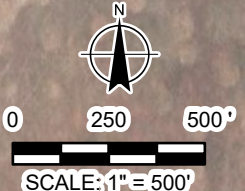


Image Source: Google Earth Imagery

**BRAUN
INTERTEC**
The Science You Build On.
11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Project No:
B2308124.00

Drawing No:
Fig7_Wells_Wellhead

Drawn By: ZS
Date Drawn: 2/2/2024
Checked By: SB
Last Modified: 5/10/2024

Two State Sod Farm - Keota AD1

21405 OK-9

Keota, Oklahoma

**Wellhead
Protection Area
Location Map**

Figure 7

Appendix E
Design Drawings

SITE PLAN LEGEND		
NUMBER	NAME	DIMENSIONS
1A	DIGESTER-1	90' DIA x 32'Ht.
1B	DIGESTER-2	90' DIA x 32'Ht.
2	FERRIC DOSING TANK	Ø12' X 16' ht
3	HYDROLYSIS TANK 1	20' DIA. x 15'Ht.
4	HYDROLYSIS TANK 2	50' DIA. x 24'Ht.
5	HYDROLYSIS TANK 3	20' DIA. x 15'Ht.
6	PROCESS WATER TANK	20' DIA. x 15'Ht.
7	BOILER CONTAINER	8'X20'
8	ORGANICS RECEIVING AREA	173'X151'
9	ODOR CONTROL SYSTEM	57'X105'
10	FLARE	12'X12'
11	MANURE SUMP	16' X 14' X 12' DEEP
12	TRUCK SCALE	12'X80'
13	ELECTRICAL ROOM	22'X36'
14	GENERATOR	7'X8'
15	DIGESTATE STORAGE LAGOON	REF.DRAWING
16	SEPTIC HOLDING TANK	10'X10'
17	FIRE WATER TANK	22' DIA' x 25'Ht.
18	LOADING RAMP (UP)	70' LONG
19	LOADING RAMP (DOWN)	70' LONG
20	TRUCK PARKING (3)	20'X70'
21	CAR PARKING (5)	9'X20'
22	LIQUID OFFLOADING AREA	30'X195'
23	STORM WATER RETENTION POND	TBD
24	BIOGAS UPGRADER	91'X61'
25A	HEAT EXCHANGERS-1	45'X8'
25B	HEAT EXCHANGERS-2	45'X8'
26	LOADOUT STATION	15'X15'
27	CO2 RECOVERY AREA (FUTURE)	70'X32'
28A	TRANSFORMER-1	10'X12'
28B	TRANSFORMER-2	10'X12'
29	PROPANE TANK	68' X 9'
30	SOLID SEPARATOR BUILDING	54'-6" X 27'
31	PRESSATE HOLDING TANK(2 Nos)	Ø10' X 10' ht
32	CONTAINER-1	40' X 8'
33	CONTAINER-2	40' X 8'
34	CONTAINER-3	40' X 8'
35	CONTAINER-4	40' X 8'
36	DIGESTATE HOLDING TANK	90' DIA x 32'Ht.
37	De-OXY SYSTEM	8'x8'
38	M&R STATION	50'x50'

32.Container-1
 1)FOG Dosing Pump
 2)Ferric dosing Pump
 3)Hydrolysis Tank-1 Pump
 4)Electrical Panel

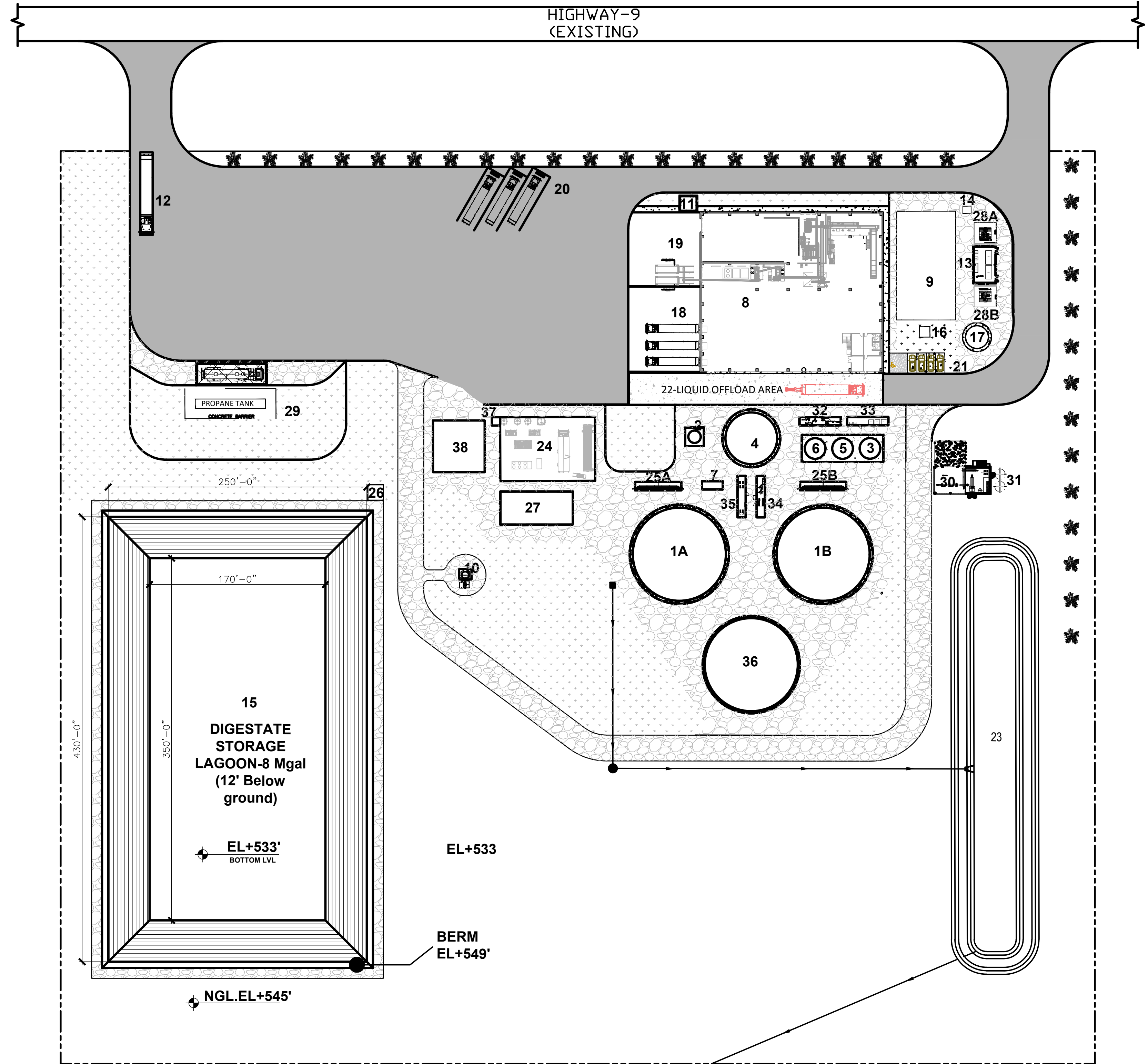
34.Container-3
 1)Digestate Removal Pumps
 2)Feed Pump from HT2 to Digesters
 3)Electrical Panel.
 4)Biogas Analyzer.

33.Container-2
 1)Nutrient Dosing(IBC &Pump)
 2)NaOH (IBC & Pump)
 3)Antifoam(IBC & Pump)
 4)O2 Generator(x2 or x3)
 5)Electrical panel.

35.Container-4
 1)Digestate HX pumps
 2)Digester Hot water pumps
 3)HT#2 Hot water pump
 4)Hot Water Pump For BUP
 5)Electrical Panel.

DRAWING IS PRELIMINARY IN NATURE AND IS NOT FOR CONSTRUCTION OR BUILDING PERMIT.

FOR SOLID WASTE PERMIT APPROVAL ONLY



LEGENDS	
	PROPERTY LINE
	HEAVY DUTY ASPHALT
	LIGHT DUTY ASPHALT
	GRAVEL
	GRAVEL ROAD
	HEAVY DUTY CONCRETE
	GRASS

1 ARCHITECTURAL SITE PLAN
 SCALE: 1/64" = 1'-0"

PRELIMINARY
 NOT FOR
 CONSTRUCTION

VANGUARD RENEWABLES

VANGUARD RENEWABLES
 KEOTA AD1
 ORGANICS RECEIVING AREA (ORA)
 ARCHITECTURAL SITE PLAN
 HASKEL COUNTY OK

REV	DATE	BY	APPD	DESCRIPTION
A	05.31.24	DP	DP	SOLD WASTE PERMIT ONLY
B	6.14.24	DP	DP	SOLID WASTE PERMIT ONLY

6/14/2024
 WELDON BOWMAN, AIA
 OK LICENSE NO. 6042
 CA# 02461 EXPIRES 06/30/2025

wdesign
 ARCHITECTURE & INTERIORS
 608 East 3rd Street
 Tulsa, OK 74120
 Office: 918.794.6616
 Fax: 918.794.6602
 www.wdesignsite.com

DWG NUMBER
 0576-A-101

SCALE
 AS NOTED

REV
 B

LEGEND

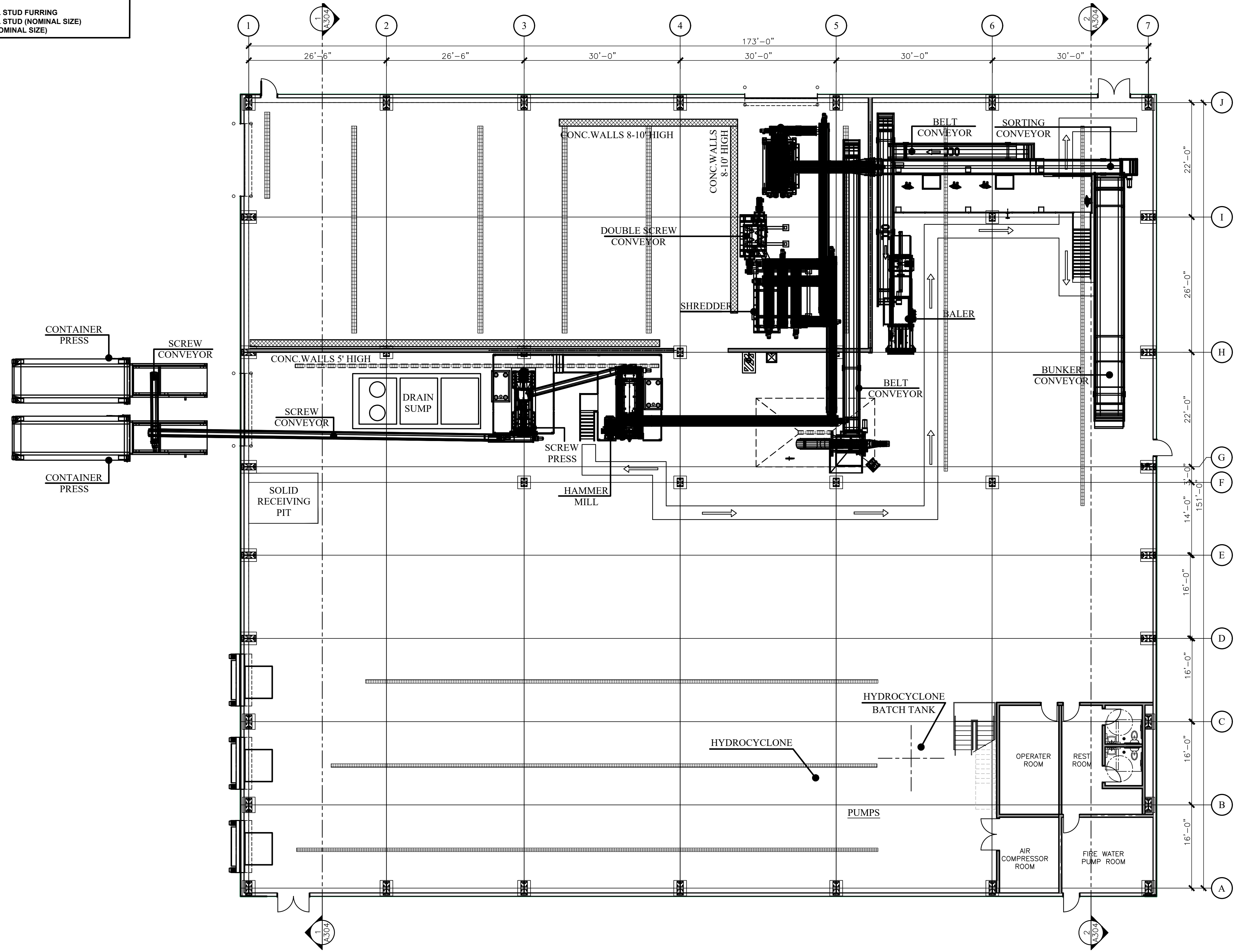
SYMBOL	DESCRIPTION
	NEW WALL - METAL STUD
	METAL PANEL BUILDING SYSTEM BY METAL BUILDING MANUFACTURER
	NEW 1-HOUR FIRE RATED WALL - METAL STUD - UL U419
	NEW 16" CONCRETE PUSH WALL. RE: STRUCTURAL
	LOCATION OF X-BRACING, CONTRACTOR TO COORDINATE FINAL LOCATION WITH METAL BUILDING PACKAGE
<p>LETTER INDICATES WALL TYPE REF PLANS</p> <p>A6</p>	<p>NUMBER INDICATES STUD HEIGHT NO NUMBER INDICATES STUD HEIGHT TO BOTTOM OF ROOF DECK TYP</p> <p>NUMBER INDICATES STUD SIZE AS FOLLOWS: 2 - 2 1/2" METAL STUD FURRING 4 - 3 5/8" METAL STUD (NOMINAL SIZE) 6 - 6" METAL (NOMINAL SIZE)</p>

FOR SOLID WASTE PERMIT APPROVAL ONLY

DRAWING IS PRELIMINARY IN NATURE AND IS NOT FOR CONSTRUCTION OR BUILDING PERMIT.



VANGUARD RENEWABLES
KEOTA AD1
ORGANICS RECEIVING AREA (ORA)
GENERAL ARRANGEMENT
FLOOR PLAN
HASKEL COUNTY OK



REV	DATE	BY	APPD	DESCRIPTION
A	05.31.24			SOLD WASTE PERMIT ONLY



wdesign
ARCHITECTURE & INTERIORS
608 East 3rd Street
Tulsa, OK 74120
Office: 918.794.6616
Fax: 918.794.6602
www.wdesignsite.com

1 GENERAL EQUIPMENT ARRANGEMENT PLAN
SCALE: 3/32" = 1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

DWG NUMBER
0576-A-201

SCALE
AS NOTED

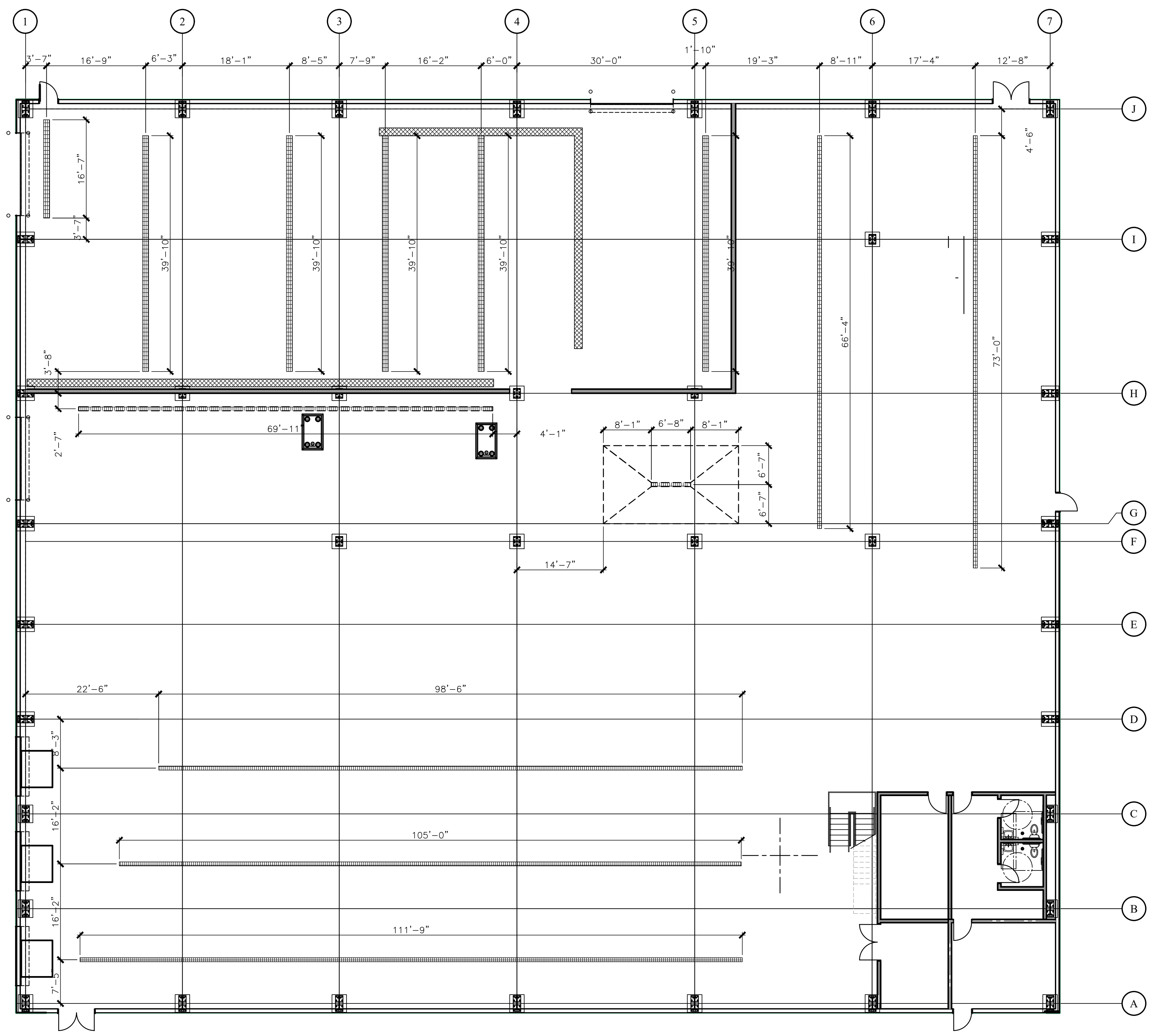
REV
A

FOR SOLID WASTE PERMIT APPROVAL ONLY

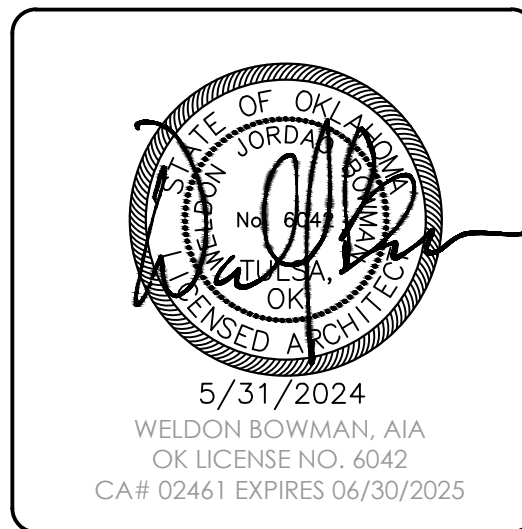
DRAWING IS PRELIMINARY IN NATURE AND IS NOT FOR CONSTRUCTION OR BUILDING PERMIT.



VANGUARD RENEWABLES
 KEOTA AD1
 ORGANICS RECEIVING AREA (ORA)
 DRAIN LOCATION PLAN
 HASKEL COUNTY OK



REV	DATE	BY	APPD	DESCRIPTION
A	05.31.24	DP	DP	SOLID WASTE PERMIT ONLY



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 Tulsa, OK 74120
 Office: 918.794.6616
 Fax: 918.794.6602
 www.wdesignsite.com

DWG NUMBER
 0576-A-202

SCALE
 AS NOTED

REV
 A

1 PRELIMINARY DRAIN LOCATION PLAN
 SCALE: 3/32" = 1'-0"

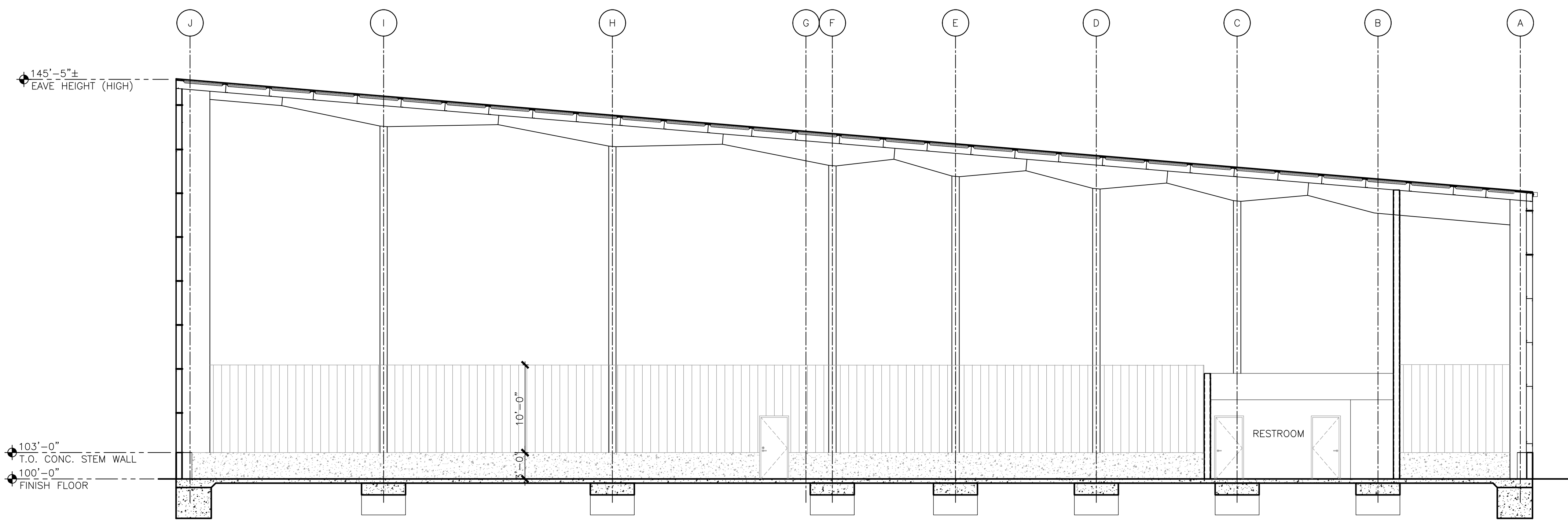
PRELIMINARY NOT FOR CONSTRUCTION

FOR SOLID WASTE PERMIT
APPROVAL ONLY

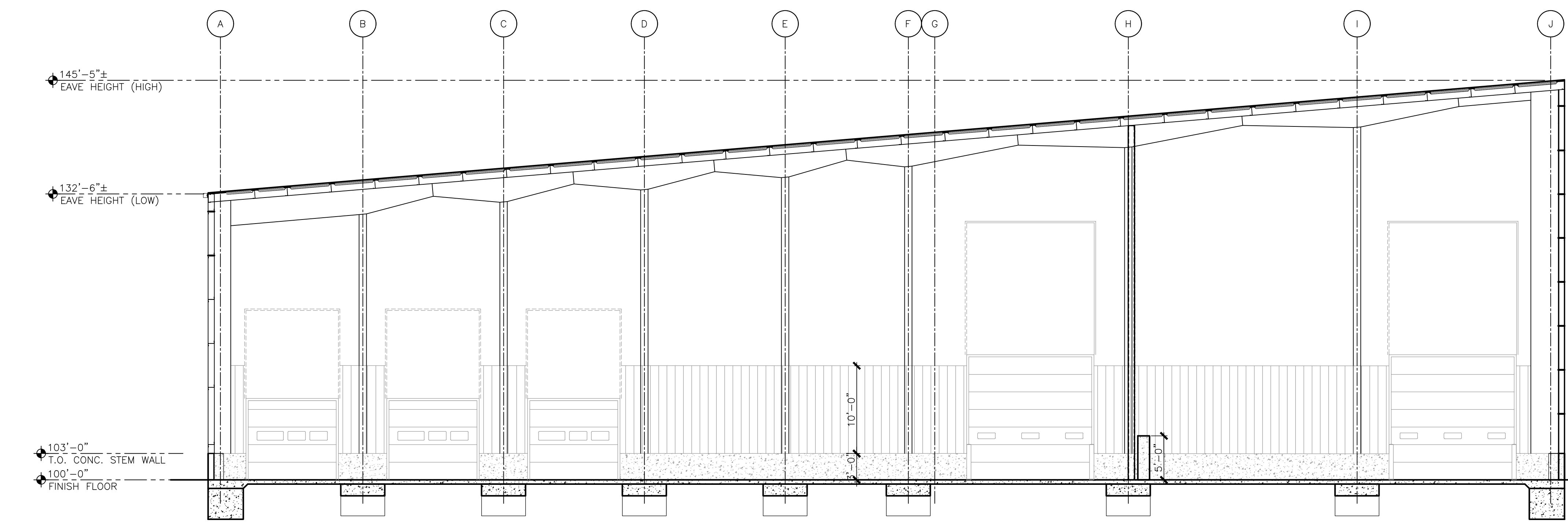
DRAWING IS PRELIMINARY IN
NATURE AND IS NOT FOR
CONSTRUCTION OR BUILDING
PERMIT.



VANGUARD RENEWABLES
KEOTA AD1
ORGANICS RECEIVING AREA (ORA)
BUILDING SECTIONS
HASKEL COUNTY



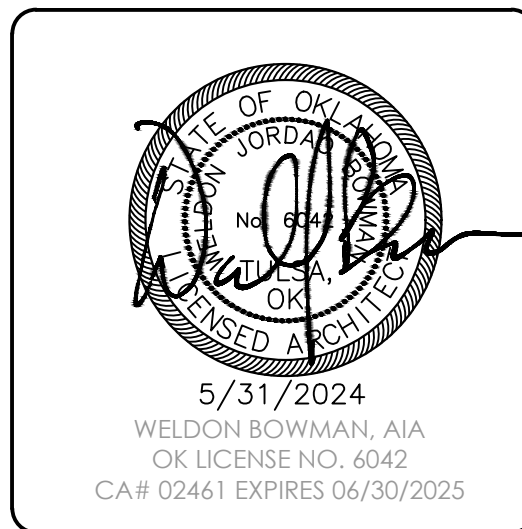
2 BUILDING SECTION
SCALE: 1/8" = 1'-0"



1 BUILDING SECTION
SCALE: 1/8" = 1'-0"

PRELIMINARY
NOT FOR
CONSTRUCTION

REV	DATE	BY	APPD	DESCRIPTION
A	05.31.24	DP	DP	SOLD WASTE PERMIT ONLY



DWG NUMBER
0576-A-304

SCALE
AS NOTED

REV
A

Appendix F

Letter from Oklahoma Conservation Commission

J. KEVIN STITT
GOVERNOR

MATT PINNELL
LIEUTENANT GOVERNOR



Our Land • Our Heritage • Our Future

TREY LAM
EXECUTIVE DIRECTOR

LISA KNAUF OWEN
ASSISTANT DIRECTOR

May 2, 2024

Sarah Braun
BRAUN INTERTEC
3900 Roosevelt Road
St. Cloud MN 56301

RE: Wetland review for solid waste permit (approximate center coordinates 34.259062, -94.867389)

Dear Ms. Braun:

Your request for a wetland determination for the referenced project, as described in your email of April 30, 2024, has been reviewed using the Soil Survey of Haskell County and the U.S. Fish and Wildlife Service National Wetland Inventory Mapper. Neither hydric soils nor wetlands are indicated within the proposed project area as illustrated in the supplied map, indicating that these areas most likely do not contain wetland ecosystems and that your project should not significantly impact wetland resources in the area. If you believe this determination to be inaccurate, an on-site investigation may be needed. This investigation needs to be coordinated with the U.S. Army Corps of Engineers, Regulatory Branch, in Tulsa. Their address and phone number is:

U.S. Army Corps of Engineers
Mr. Andy Commer
Chief of Regulatory Branch
2488 E 81st St.
Tulsa, OK 74137
918/669-7400

Based on our wetlands determination criteria there should be no significant impact on wetland resources in the area described. If you have any further questions or concerns, please contact me at 405/534-6997.

Sincerely,

A handwritten signature in blue ink that reads "Brooks R. Trammell".

Brooks Trammell
Director of Monitoring, Assessment, and Wetlands Programs
Water Quality Division

cc: Wetlands file

Appendix G
ONHI Request and Response

Project Name: Two State Sod Farm- Anaerobic Digester
Site Address: Hwy 9, Keota, OK 74941
Client: Vanguard Organics, LLC
County: Haskell
Lat/Long: 35.258941, -94.867650

Date: May 14, 2024
Project No.: B2308124.00
Evaluator: B. Ruhme
TRS: Sec. 15 &16, T9N R23E

Resource	Description	Evaluation
Aerial Photo	Historical Aerial Photographs (1995-2023)	Historically, and through at least 2023, the project area has consisted of cultivated cropland (1995-2023 aerial photos). A stream channel is intermittently apparent in the southwest portion of the project area in the historical aerial photos.
Site Photos	Google Earth Street View (June 2023)	The project area consists of open fields consistent with fallow cropland or an early old field environment. Vegetation present includes grasses, forbs and sparse early stage shrubs. A small cluster of trees is located just north of the project area boundary along Hwy 9.
Federal (IPaC)	Query of IPaC Database	Seven federally listed species were identified for the project area in the IPaC database.
State	Oklahoma Natural Heritage Inventory (ONHI)	Four state listed species were identified for Haskell County in the ONHI database.

Field Survey Conducted No

Conclusion: Not likely to adversely affect protected species.

With existing landcover consisting of recently fallowed cropland, the project area does not provide suitable habitat for the majority of species identified in state and federal databases. The project area also appears to have limited floral resources for pollinators, and therefore, the candidate listed Monarch Butterfly is unlikely to be present. As a candidate species, the Monarch Butterfly has no statutory protection under the Federal Endangered Species Act but is in consideration for future listing as a threatened or endangered species. Additionally, due to the general lack of trees and other woody vegetation, most migratory birds and listed bat species are also unlikely to be present. However, depending on the project design, access from Highway 9 may require tree removal and consideration of seasonal restrictions on tree/vegetation clearing to minimize impacts to migratory birds and listed bat species.

Further Action Recommended: Yes

If required for the proposed project, it is recommended to conduct tree/vegetation clearing from November 16-February 28 to avoid impacts to listed bat species and nesting migratory birds (nesting season is typically from March 1 to August 31). Additionally, voluntary conservation measures for the Monarch Butterfly are encouraged for development projects that occur within its range. Conservation measures would include planting native flowering vegetation species that bloom spring through fall in landscaping and removal/control of invasive plant species present.

Signed: _____



Attachments: Yes IPaC output, Species Determination Keys and table of listed species attached.

Common Name	Scientific Name	Federal Status ¹	State Status ¹	Habitat	Impact	Comment
Alligator Snapping Turtle	<i>Macrochelys temminckii</i>	Proposed T	none	Lakes, rivers, streams and sloughs.	No effect.	Suitable habitat is not present within the project area.
American Burying Beetle	<i>Nicrophorus americanus</i>	T	T	Tall grass prairie, open oak-hickory woodlands and forests.	No effect.	Suitable habitat is not present within the project area.
Arkansas River Shiner	<i>Notropis girardi</i>	T	T	Shallow sandy areas and backwaters of sand bars in large rivers.	No effect.	Suitable habitat is not present within the project area.
Blackside Darter	<i>Percina maculata</i>	none	T	Streams and rivers in the Mountain Fork, Poteau, Kiamichi and Litter River watersheds.	No effect.	Suitable habitat is not present within the project area.
Monarch Butterfly	<i>Danaus plexippus</i>	C	none	Meadows, open fields and clearings with plants that provide floral resources, particularly milkweed.	May affect; not likely to adversely affect.	Limited floral resources appear to be at the Site, which provides poor habitat for the species and it is unlikely to be present.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	E	E	Caves, mesic-hardwood and floodplain forests	May affect; not likely to adversely affect.	This project may affect the northern long-eared bat due to the presence of trees on Site. While the bat is unlikely to be present, the trees on site may provide potential summer roosting habitat. To avoid impacts to the bat, it is recommended to complete tree clearing activities outside the active roosting season (Nov 16- March 31).
Piping Plover	<i>Charadrius melodus</i>	T	E	Coastlines, sandy beaches and tidal flats, mudflats, spoil islands, shorelines of lakes, reservoirs & rivers, alkali wetlands	No effect.	Suitable habitat is not present within the project area.
Red Knot	<i>Calidris canutus rufa</i>	T	T	Tundra slopes, sedge meadows, lakeshores, estuaries, sandy beaches, tidal mudflats and salt marshes	No effect.	Suitable habitat is not present within the project area.
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed E	none	Caves, mesic-hardwood and fire dependent forests	May affect; not likely to adversely affect.	This project may affect the tricolored bat due to the presence of trees on Site. While the bat is unlikely to be present, the trees on site may provide potential summer roosting habitat. To avoid impacts to the bat, it is recommended to complete tree clearing activities outside the active roosting season (Nov 16- March 31).
Migratory birds		MBTA		Various	May affect; not likely to adversely affect.	Various migratory birds may nest in shrubs and trees on the property. Avoidance should be considered by clearing vegetation outside the migratory bird breeding season (May-August for most species).

¹ T = Threatened, E = Endangered, C = Candidate, SPC = Special Concern, NEP = Non-Essential Population (experimental); MBTA = protected under Migratory Bird Treaty Act



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, OK 74129-1428
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:

05/14/2024 19:19:53 UTC

Project Code: 2024-0090467

Project Name: Sebo Parcel- Two State Sod Farm

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oklahoma Ecological Services Field Office

9014 East 21st Street

Tulsa, OK 74129-1428

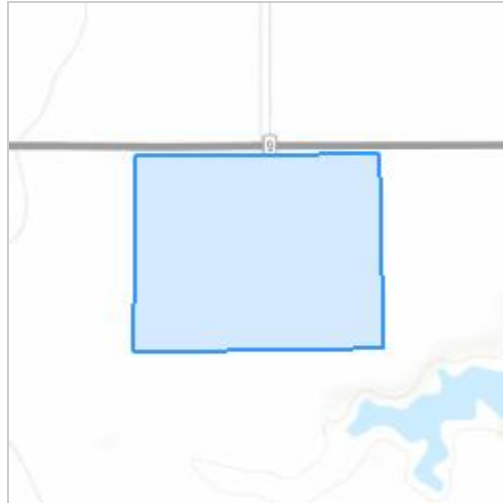
(918) 581-7458

PROJECT SUMMARY

Project Code: 2024-0090467
Project Name: Sebo Parcel- Two State Sod Farm
Project Type: Power Gen - Other
Project Description: Location of farm where installation of an anaerobic digester is proposed.
Construction is anticipated to begin in late 2024 or 2025.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.259172899999996,-94.86749290731552,14z>



Counties: Haskell County, Oklahoma

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66	Threatened
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

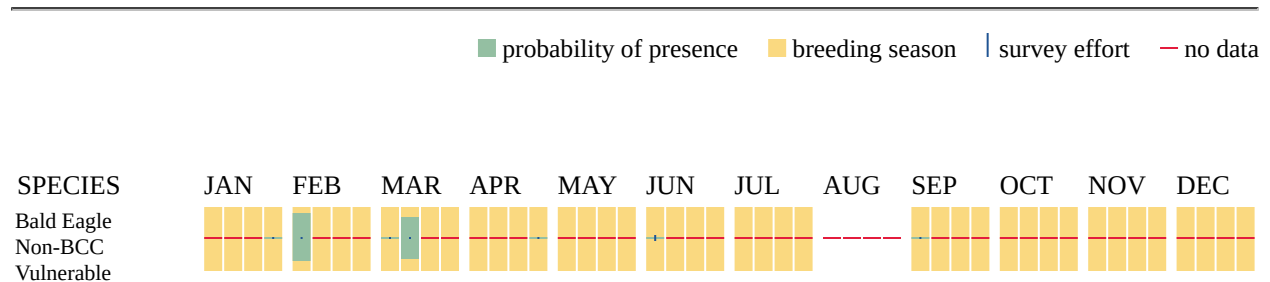
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Least Tern <i>Sternula antillarum antillarum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11919	Breeds Apr 25 to Sep 5
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Southeastern American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4076	Breeds Apr 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

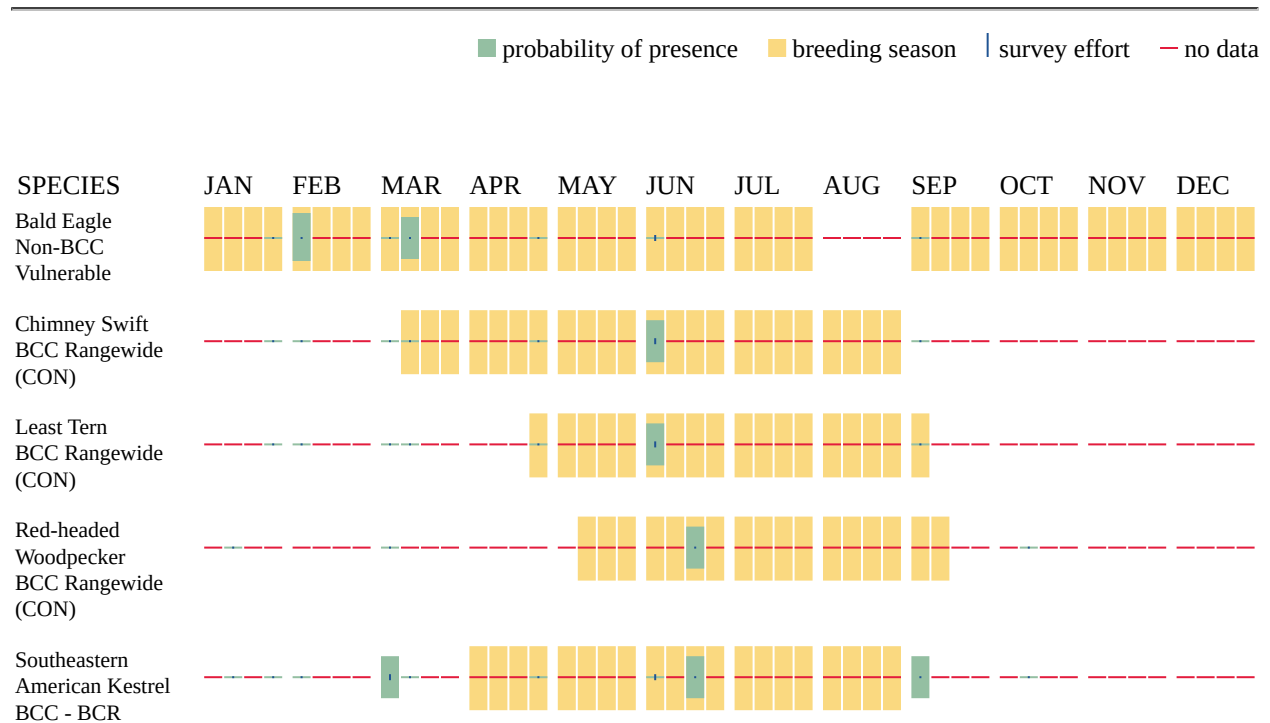
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (-)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>

- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Braun Intertec
Name: Ben Ruhme
Address: 11001 Hampshire Ave South
City: Minneapolis
State: MN
Zip: 55438
Email: bruhme@braunintertec.com
Phone: 6125082770



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, OK 74129-1428
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:

05/14/2024 19:55:00 UTC

Project code: 2024-0090467

Project Name: Sebo Parcel- Two State Sod Farm

Subject: Consistency letter for 'Sebo Parcel- Two State Sod Farm' project for a No Effect determination for the American burying beetle

Dear Ben Ruhme:

The U.S. Fish and Wildlife Service (Service) received on **May 14, 2024** your effect determination(s) for the 'Sebo Parcel- Two State Sod Farm' (the Action) using the American burying beetle (*Nicrophorus americanus*) determination key within the Information for Planning and Consultation (IPaC) system.

The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.)

Based on your consideration of the Action and the assistance in the Service's American burying beetle determination key, you have determined that your proposed action will have No Effect on the American burying beetle.

Your agency has met consultation requirements for these species by informing the Service of your "no effect" determination. No further consultation for this project is required for the American burying beetle. This consistency letter confirms you may rely on effect determinations you reached by considering the American burying beetle DKey to satisfy agency consultation requirements under Section 7(a) (2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.; ESA).

Coordination with your local Ecological Services Office is complete for the American burying beetle. If your project may affect additional listed species, please contact your local Ecological Services Field Office for assistance with those species. Thank you for considering Federally-listed species during your project planning.

This letter covers only the American burying beetle. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Alligator Snapping Turtle *Macrochelys temminckii* Proposed Threatened
- Monarch Butterfly *Danaus plexippus* Candidate

- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Piping Plover *Charadrius melodus* Threatened
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

If your project may affect additional listed species, you must evaluate additional DKeys for other species, or submit a request for consultation for the additional species to your local Ecological Services Field Office.

The Service recommends that your agency contact the Service or re-evaluate the project in IPaC if: 1) the scope or location of the proposed project is changed significantly, 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation should take place before project changes are final or resources committed.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

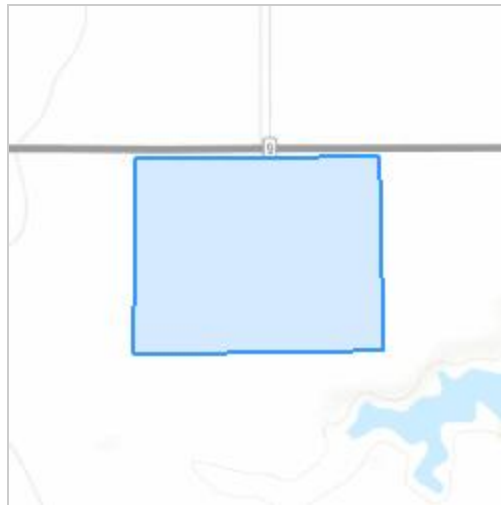
Sebo Parcel- Two State Sod Farm

2. Description

The following description was provided for the project 'Sebo Parcel- Two State Sod Farm':

Location of farm where installation of an anaerobic digester is proposed.
Construction is anticipated to begin in late 2024 or 2025.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.259172899999996,-94.86749290731552,14z>



QUALIFICATION INTERVIEW

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Have you determined that the proposed action will have “no effect” on the American burying beetle? (If you are unsure select "No")

No

3. Will your activity **purposefully take** American burying beetles?

No

4. Is your project wholly inside the 4d rule Analysis Area? For areas of your project occurring inside the Analysis Area (New England, Northern Plains, Southern Plains), your project may qualify for exemptions. For areas of your project occurring outside the Analysis Area, all incidental take is exempted according to the ABB 4d Rule.

Automatically answered

Yes

5. Is American burying beetle [suitable habitat](#) present within the action area?

No

PROJECT QUESTIONNAIRE

Please select the activity that best matches your proposed action.

1. Soil disturbance related to urban expansion or construction of structures

If you chose 13 above, please describe below. If you did not choose 13 above, please type "0".

0

IPAC USER CONTACT INFORMATION

Agency: Braun Intertec
Name: Ben Ruhme
Address: 11001 Hampshire Ave South
City: Minneapolis
State: MN
Zip: 55438
Email: bruhme@braunintertec.com
Phone: 6125082770



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, OK 74129-1428
Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To:
Project code: 2024-0090467
Project Name: Sebo Parcel- Two State Sod Farm

05/14/2024 19:58:45 UTC

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for 'Sebo Parcel- Two State Sod Farm'

Dear Ben Ruhme:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 14, 2024, for 'Sebo Parcel- Two State Sod Farm' (here forward, Project). This project has been assigned Project Code 2024-0090467 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Alligator Snapping Turtle *Macrochelys temminckii* Proposed Threatened
- American Burying Beetle *Nicrophorus americanus* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Piping Plover *Charadrius melodus* Threatened
- Rufa Red Knot *Calidris canutus rufa* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the Oklahoma Ecological Services Field Office and reference Project Code 2024-0090467 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

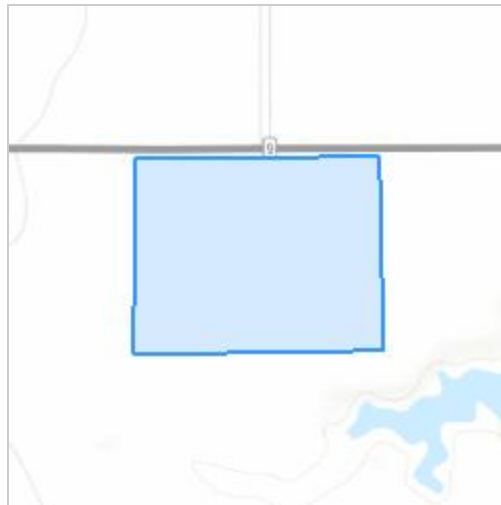
Sebo Parcel- Two State Sod Farm

2. Description

The following description was provided for the project 'Sebo Parcel- Two State Sod Farm':

Location of farm where installation of an anaerobic digester is proposed.
Construction is anticipated to begin in late 2024 or 2025.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.259172899999996,-94.86749290731552,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

No

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Braun Intertec
Name: Ben Ruhme
Address: 11001 Hampshire Ave South
City: Minneapolis
State: MN
Zip: 55438
Email: bruhme@braunintertec.com
Phone: 6125082770

From: [Comolli, Kristin A.](#)
To: [Braun, Sarah](#)
Subject: Re: ONHI Data Request
Date: Monday, April 29, 2024 5:10:31 PM
Attachments: [2024-260-BUS-SIC.pdf](#)

You don't often get email from kcomolli@ou.edu. [Learn why this is important](#)

See attached results of your information request.

Please note, in accordance with our standard protocol (to ensure appropriate representation given the manner in which our data are formatted), I searched for occurrences of federal and state regulatory species within a 5-mile radius of your project area.

Kristin Comolli (she/her)
Database Analyst
Oklahoma Natural Heritage Inventory
University of Oklahoma
111 East Chesapeake Street
Norman, OK 73019
<https://ou.edu/oknaturalheritage>

Check out our database: <https://obis.ou.edu>



From: ONHI Data Request <noreply@qemalserver.com>
Sent: Monday, April 29, 2024 12:25 PM
To: Comolli, Kristin A. <kcomolli@ou.edu>
Subject: ONHI Data Request

Recipient Data:
Time Finished: 2024-04-29 12:25:12 CDT
ResponseID: R_3EXoTClyTjdiaJu
Link to View Results: [Click Here](#)
URL to View Results: <https://ousurvey.yu1.qualtrics.com/apps/single-response-reports/reports/pB2mMjpn7Ven%2EPpxrhTUNjegY62iC3dqHrTibdPJ5wpBfNXUxS8Y2kzKHqaXBFq6P2qdBws2IOFnE9OMkbXq0boT8JKXppA5d%2EengXT5cOzDS%2EJFuvSEd8t8NzWYSvtg6f0ked1QcItGq6s69usmsOj3JEf0tY6fm4lAz4G5pQDfvyFagocitO-HC0iV2ItaSlp7g19eMetgqabqz4HHzVJuDQ4hYp%2EIn9xNYZTsQybQTIWAIRU7ITnmvWzuz-82HLLfDs8loy9prugkxIDGLkMblXv4GsZG99DhK6tgMfg9OxyO69zDcMZq6tUSKULLfsc-iKAsqYa10PvFDEfTg>

Response Summary:

Requestor Information Organization or Company Name
Braun Intertec Corporation

Requestor Name
Sarah Braun

Email (a copy of this request will be sent to this email)
SaBraun@braunintertec.com

Secondary Email (this will send a copy of the request to a second email)
sabraun@braunintertec.com

Phone
3202049113

Project Information Project Name
Tier III Solid Waste Processing Facility Permit Application

Project Description
Construct a Solid Waste Processing Facility using an anaerobic digester to create renewable natural gas. Per OAC 252:15-5-31(c), statement concerning endangered or threatened wildlife or plant species within 1 mile of proposed site from ODWC, OBS, &ONHI

Location Information Please note: Shapefiles or KMZs/KMLs are the preferred method to specify loc...
Haskell County

Description of Project Location
35.258877, -94.867395

Please upload location information (shapefile, KMZ, KML, or PDF). Only one file can be attached...
https://ousurvey.qualtrics.com/WRQualtricsControlPanel/File.php?F=F_2tbiAb4OflU3mP2

OBS Ref. 2024-260-BUS-BIC

Dear Sarah Braun,

April 29, 2024

We have reviewed occurrence information on federal and state threatened, endangered, or candidate species currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec. 15, 16, 21, and 22-T9N-R23E, Haskell County

We found 11 occurrences of relevant species within the vicinity of the project location as described.

Species Name	Common Name	Federal Status
<i>Nicrophorus americanus</i>	American Burying Beetle	Threatened
County	TRS	Count
Haskell	Sec. 18-T9N-R23E	1
Haskell	Sec. 25-T9N-R23E	1
Haskell	Sec. 26-T9N-R23E	1
Haskell	Sec. 28-T9N-R23E	4
Le Flore	Sec. 8-T9N-R24E	1
Le Flore	Sec. 30-T9N-R24E	1
Le Flore	Sec. 31-T9N-R24E	1
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Protected
County	TRS	Count
Haskell	Sec. 21-T10N-R23E	1

Additionally, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email.

Kristin Comolli
Oklahoma Natural Heritage Inventory
(405) 325-4700
kcomolli@ou.edu

Appendix H
Salvage and Recycling Plan

Operational Plan for Conducting Salvage and Recycling Activities at a Permitted Solid Waste Disposal Facility

Regulatory Reference: OAC 252:515-19-39(a)

Applicability: All solid waste disposal facilities.

Technical Discussion. Owner/operators of solid waste disposal facilities who wish to conduct salvage/recycling activities at the facility should complete this form and submit it to the DEQ. Once approved, salvage/recycling activities may begin.

Name of site: Keota AD 1 Solid Waste Processing Facility
County: Haskell County, Oklahoma
Permit number: To Be Determined

1. MATERIALS AND STORAGE

What materials will be *reused at the facility* (Include the type and source of the material, an estimate of the largest quantity that will be on-site on a given day and how long and how the material will be stored. Generally, such material should be processed within 90 days of receipt.)

No items are anticipated to be reused at the facility.

If any of these materials are to be reused at the facility, how will they be reused:

No items are anticipated to be reused at the facility.

What materials will be salvaged/recycled at the facility (Include the type and source of the material, an estimate of the largest quantity that will be on-site on a given day, how long and how the material will be stored)?

The anticipated food waste acceptance rate is 275 tons per day. All food wastes will be stored within the facility. On-Site storage time for non-perishable food waste materials will be less than 5 days and perishable food wastes will be processed within approximately 24 hours. The waste streams that will be accepted at the facility are described below.

- **Source Separated Organics (SSOs)**

Source separated organics (SSOs) are organic materials that waste generators segregate at the source for isolated collection to remove them from the waste disposal stream and directly to reuse. SSO includes organic residues generated by the handling, storage, sale, preparation, cooking, and serving of foods (including fruits, vegetables, meats, and bakery items). The SSOs are products that may be out of specification, past the freshness date, or unsellable due to mishandling. Sources may include commercial and institutional generators, including, but not limited to, food manufacturing and processing facilities, grocery stores, other retailers, restaurants, hotels, convention facilities, hospitals, colleges, and universities.

- **Packaged Food Material (PFM)**

Packaged food material (PFM) is food that has been wrapped or encased to contain, protect, handle, deliver, and present it to individual, commercial, or industrial distributors or consumers generated food production operations. The majority of this food is unspoiled but is unsellable due to manufacturing errors, expiration dates, or mishandling.

- **Liquid Wastes**

Liquids generated during food manufacturing or preparation can include fats, oils, and grease (FOG); food process water, glycerin, brewery trub, dairy wastes, dissolved air flotation (DAF); and similar. These wastes are not consumable food products but are composed of edible materials.

Removed packaging will be stored within the enclosed Organics Receiving Area (ORA) and picked up by a dedicated contracted solid waste hauler on a set schedule to eliminate any possibility of waste build-up. No food waste deliveries are stored outside of the ORA building at any time.

What will be done with any stored materials at the end of the approved storage period?

On-Site storage time for the food waste materials will be minimal due to the anaerobic digester requiring food waste materials to be fed continuously while the digester is in operation. All solid waste from packaging will be picked up on a schedule by a dedicated and contracted solid waste handler.

How will the materials be transported to and from the facility?

Food waste materials will be transported to the facility from local third-party organizations and industries via delivery trucks. Food packaging will be picked up by a contracted solid waste hauler on a regular basis.

How will the salvaged/recycled materials be weighed and reported?

All incoming delivery vehicles will be weighed at the entrance of the facility. The scale shall be tested and certified annually in accordance with the requirements of ODAFF. A delivery ticket will be created that includes the truck inbound weight, the generator name, and the time of delivery. The delivery will be classified according to its waste stream and cubic yards will be estimated based upon the size of the delivery vehicle container. The information will be recorded in the facility operating record.

Will the materials to be reused/salvaged/recycled be source separated? **YES X NO**

If no, how will the materials be separated?

N/A

2. HOURS OF OPERATION

What will be the hours the salvage/recycling area will be open to receive and/or handle material?

5:00 am - 10:00 pm, Monday through Saturday

3. OPERATIONAL AREA

Briefly describe where the location salvage/recycling activities will take place and show the area on a site map.

The Keota AD 1, Solid Waste Processing Facility will be constructed at 21405 OK-9 in Keota, Haskell County, Oklahoma. Appendix D of the Application contains a Site Map (Figure 6).

How will stormwater run-on/run-off be controlled?

Stormwater run-on/run-off will be controlled by the construction of a stormwater pond. All solid food wastes will be unloaded indoors within the Organic Receiving Area (ORA) building. Drains within the ORA building will collect any liquid wastes and direct the stream into a processing tank. Unloading liquid food waste outdoors will take place on an impervious unloading pad using sealed pumping equipment, reducing the potential for a release of materials to the ground surface. All unloading activities will be monitored to ensure any accidental release is promptly cleaned up. Spill kits will be present in areas where food waste will be unloaded, and employees will be trained to properly use the spill kits.

How will blowing litter be controlled?

Waste materials will be received and handled inside the enclosed ORA. Except when trucks are entering or exiting the ORA, the building doors will remain closed at all times. In addition, as discussed above, the air handling system will be designed to produce negative pressure for pulling fresh air into the building, trapping the windblown materials inside the building.

Site employees will routinely monitor the exterior portions of the Site to ensure that windblown materials, if present, are collected and disposed of properly. These materials will also be prevented from leaving the Site by the fencing that will enclose the Site.

How will disease vectors (rodents, birds, insects, etc.) be controlled?

The Site will promptly de-package and process all of the food waste deliveries within the enclosed ORA building. The solid waste will be stored within the ORA building and picked up by a dedicated contracted solid waste hauler on a set schedule to eliminate any possibility of waste build-up. No food waste deliveries will be stored outside of the ORA building at any time. Proper housekeeping and daily equipment cleaning will be implemented, as well as daily trash pick-up and groundskeeping.

How will fires be controlled?

Open burning at the facility is prohibited. The processing facility is equipped with appropriately rated fire extinguishers throughout. Personnel will be trained on the proper operation of these fire suppression systems.

4. PROCESSING EQUIPMENT

What equipment will be used for the collection, transportation, and processing of the material?

Traffic cones, barricades, spill control kits, forklifts, skid steer loader, packer truck, dump truck, roll-off truck, carts, and other equipment as needed.

What will be done with stored materials to be salvaged/recycled in the event of an equipment failure?

All wastes received at the facility will be processed within 24 hours of delivery. Incoming food wastes that are unprocessed due to being received at the end of operating hours shall remain stored within the ORA building and kept at levels to prevent spillage and/or overflow. If a processing failure occurs, waste capable of decay will be removed from the Site within 96 hours to an alternative disposal site.

The ORA will be designed to provide full containment of materials processed. Isolation valves will be installed to allow for quick isolation in the event of spillage within the building. The containment area will include level control (where possible) and a drain or pump to allow for removal of collected material.

Location and elevation of equipment will be considered in the design of the facility to prevent damage to equipment if there is a catastrophic loss of containment. Tanks and piping will be designed and constructed to decrease or eliminate the potential for discharge of untreated material. Tanks will be protected from vehicles using bollards to provide impact and edge protection. The facility will have an on-Site operator and spills will be caught through facility inspections, operator observations, and remote data monitoring.

For other facility breakdowns that are not related to spill prevention, the Site is equipped with redundant equipment that can be used while one part of the system is down. This is the case for the de-packaging systems in the ORA as well as the hydrolysis tanks. The hydrolysis tanks have 3 days of storage during normal operation and 5 days maximum storage on Site that can be used while other parts of the facility are down if needed. The ORA is designed with extra storage for pallets if there is a need.

5. SAFETY

List any training that employees who will conduct salvage/recycling operations have received or will receive.

- **Waste Characterization, Identification, and Segregation**
- **OSHA Training**
- **General Safety Rules**
- **PPE Programs**
- **Fire Extinguishers**
- **First Aid**
- **Chemical Safety**
- **Hazardous Emergency Response**

6. COST ESTIMATES AND FINANCIAL ASSURANCE

If the facility is required to maintain financial assurance, closure cost estimates must be adjusted to reflect the cost for landfill disposal of the maximum amount of recyclable material that is authorized to be stored by this plan, or the maximum amount actually on site, whichever is greater. Documentation that the additional financial assurance has been established must be submitted before DEQ will approve the plan.

Current DEQ-approved closure cost estimate:	\$ <u>345,041.38</u>
Current DEQ-approved post-closure cost estimate:	\$ <u>N/A</u>
Cost estimate for landfill disposal of recyclables:	\$ <u>N/A</u>
Grand Total:	\$ <u>345,041.38</u>

NOTE: Receipts for pick up or delivery of the recyclable material must be kept as part of the operating record of the facility.

Please attach additional sheets to the back of this form if necessary.

Appendix I
Closure Plan

Solid Waste Processing Facility Closure Plan

Keota AD 1 Solid Waste Processing Facility 21405
OK-9
Keota, Oklahoma 74941

Prepared For

Keota AD 1, LLC

Prepared By

Braun Intertec Corporation

June 21, 2024
Project B2308124.00

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1.0 Introduction

The Keota AD Solid Waste Processing Facility (Facility), operated by Keota AD 1, LLC (Vanguard), is a proposed addition to the pre-existing Two State Sod Farm located at 21405 OK-9A in Keota, Oklahoma (Site). The Facility will produce renewable natural gas from the anaerobic co-digestion of food waste and manure.

Manure feedstock for the anaerobic digester will be provided by local dairy farms as needed. The initial manure input will help grow the bacterial colonies needed for anaerobic digestion of the food waste. Food waste materials will be sourced from local businesses and delivered to the Organics Receiving Area (ORA) building via delivery trucks. Liquid food wastes will be unloaded either directly into the hydrolysis tank or into the processing tanks within the ORA building. The packaged food wastes are delivered within the enclosed ORA building. All depackaging and sorting operations will take place within the ORA building shortly after the food wastes arrives.

After delivery and depackaging, the food waste will be macerated and processed into a slurry within the ORA processing tanks before being directed into a hydrolysis tank. After the hydrolysis tank, the slurry will be sent through a hydrocyclone to screen for indigestible inorganic material prior to being fed into the anaerobic digester. The inorganic material will be collected, compacted with similar materials, and sent off-site for waste disposal.

The daily amount of food waste received is anticipated to be approximately 185 - 275 tons per day. On-Site storage time for the food waste materials will be minimal because the anaerobic digester will require food waste materials to be fed continuously while the digester is in operation. Most of the material fed to the anaerobic digester will be comprised of food waste materials and less than half from manure.

For the purposes of this solid waste management facility closure plan, the terminology “food waste” and “organics” may be used interchangeably and are intended to have the same meaning.

2.0 Closure Plan

Vanguard will implement the following Closure Plan in accordance with Oklahoma Administrative Code (OAC) Title 252, Chapter 515, Subchapter 25(2)(a) (252:515-25-2(a)).

2.1 Schedule (252:515-25-32(a)(1))

The Oklahoma Department of Environmental Quality (ODEQ) will be notified in writing at least 6 months prior to beginning final closure of the facility. Closure activities will begin no later than 90 days after final receipt of wastes at the facility. Closure activities will be completed according to this approved closure plan within 180 days after closure activities are initiated. Extensions of the closure period may be granted by ODEQ if the facility can demonstrate that closure will, of necessity, take longer than 180 days. All steps will be taken to prevent threats to human health or the environment from the unclosed facility. The approximate Site-specific closure schedule is provided in **Table 2-1**.

Table 2-1. Approximate Closure Schedule

Month	Closure Task/Milestone
Month 1	Planning for disposals and relocations
Month 2	Trucking out liquid material from tanks (~20 days)
	Trucking out ORA unsorted material to other Anaerobic Digester (AD) facilities (~10 days)
Month 3	Solid (bedding and nutrient) (~7 days)
	ORA stored materials (~9 days)
Month 4	Dismantling and removing tanks and equipment (work can be started in previous months as equipment is emptied and cleaned. Month 4 is the last month when this is occurring)
Months 5 and 6	Return Site to original working condition (mostly civil work and ground movement)
Month 6	Environmental professional assessment and final report (10 days)

2.2 Calculation of Closure Cost Estimates (252:515-25-32(a)(2))

(OAC 252:515-27-31 thru 33)

Prior to closure, all tanks and other equipment will be emptied of organic materials and cleaned. Processed organic materials (digestate) will be returned to Two State Sod to be land applied in accordance with all applicable permits. Unprocessed organic materials will be sent to an off-site landfill or another appropriate site (such as an off-site anaerobic digester or composting facility). Solid wastes from the ORA or hydrolysis tanks will be sent to a landfill.

Equipment which would require decommissioning includes, but is not limited to, digestion tanks, hydrolysis tanks, biogas processing structures, ORA processing and sorting equipment, transportation and conveying systems, heating and power systems, digestate treatment equipment, and utility connections. All equipment, structures, and operations will be emptied and cleaned of process materials prior to reusing, retrofitting, dismantling, or removal.

The Keota AD Facility is located on an operational farm (Two State Sod) where the decommissioned equipment could conceivably be adapted to alternative beneficial uses. All decommissioned equipment, structures, and materials which cannot be managed through reuse or sale will be disposed of at recycling centers or landfills in accordance with all state and federal requirements.

The Closure cost estimate is provided to DEQ as part of this application. As this facility is not a land application facility, cost estimates of post-closure care and corrective action would not apply and have not been prepared.

2.3 Estimate of Maximum Waste Inventory (252:515-25-32(a)(3))

Based on the operating hours of 5:00 am to 10:00 pm from Monday to Saturday, the expected food waste acceptance rate is approximately 85,800 tons per year at 275 tons per day. With a maximum acceptance rate of 156,000 tons per year at 500 tons per day. An estimation of the maximum inventory of waste on-site will be provided to ODEQ upon closure.

2.4 Site-Specific Closure Activities (252:515-25-32(a)(4))

2.4.1 Equipment and Temporary Buildings Removal

All tanks, equipment, and temporary buildings will be emptied of organic materials and cleaned prior to removal, dismantling, retrofitting, or reusing. Equipment requiring decommissioning includes, but is not limited to the anaerobic digestion tank, hydrolysis tanks, biogas processing structures, ORA processing and sorting equipment, transportation and conveying systems, heating and power systems, digestate treatment equipment, and utility connections.

The Site will be located within a leased area on an operational farm (Two State Sod Farm) where the decommissioned equipment could potentially be adapted to alternative beneficial uses. In alignment with Vanguard's mission, it would be a priority to repurpose or retrofit decommissioned equipment to serve the Two State Sod Farm's agricultural operations. Equipment and systems which cannot be effectively repurposed by the Two State Sod Farm will be sold on the market for reuse or scrap. All decommissioned equipment, structures, and materials which cannot be managed through reuse or sale will be disposed of at recycling centers or authorized landfills in accordance with all state and federal requirements.

2.4.2 Defective Groundwater Monitoring Wells

Groundwater monitoring wells are not required at the Site. Therefore, the requirements of this section are not applicable.

2.4.3 Monitoring Ground and Surface Water (if required)

The Site is not required to conduct ground or surface water monitoring; however, to prevent contamination the waste receiving areas and processing areas will be located indoors. Any outdoor loading activities such as pumping liquid food wastes directly from a tanker truck to a hydrolysis tank will occur on a paved unloading area with a spill kit. Therefore, the Site does not anticipate contamination of soil or groundwater from the Site's activities. The unloading activity is expected to be regulated under an Oklahoma Pollutant Discharge Elimination System permit.

2.4.4 Collecting and Analyzing Soil and Water Samples

The Site will conduct waste processing activities indoors. Any outdoor loading activities will be conducted on a paved surface. The Site does not anticipate contamination of soil, groundwater, or surface water; therefore, soil and water sampling of the process area is not planned.

2.4.5 Disposal of Final Wastes and Affected Soils

All final waste will be collected by authorized transporters and disposed of at authorized disposal facilities. Final wastes include residual waste from tanks, residuals from decontamination activities (if applicable), and non-recyclable equipment. Unprocessed organic materials will be sent to an off-site landfill or another appropriate site (such as an off-site anaerobic digester or composting facility). Solid wastes from the ORA or hydrolysis tanks will be sent to a landfill. Processed organic materials from the anaerobic digester (digestate) will be returned to Two State Sod Farm to be land applied in accordance with all applicable permits. Vanguard does not anticipate the contamination of soils; however, if soil removal is necessary, the affected soils will be disposed of by a properly permitted contractor at an authorized disposal facility.

2.4.6 Decontamination of Facility Structures (if necessary)

Facility structures that may require decontamination include paved surfaces in the processing areas. If the paved surfaces are in good condition and unstained, decontamination will not be necessary. If the paved surfaces are stained, decontamination will be conducted by an experienced and properly permitted contractor. Decontamination may include the removal of the top layer of the paved surface via abrasive blasting until a clean debris-free surface is obtained. The anaerobic digester and associated tanks will be purged of all methane and hydrogen sulfide based on safety precautions prior to decontamination. The tanks will then be deconstructed and the materials will be sent to the appropriate disposal facility. All waste generated by the decontamination activity will be disposed of at an authorized disposal facility.

2.4.7 Post-Closure Monitoring Site Security and Access Control

The Site is not required to conduct post-closure monitoring; therefore, Site security and access control requirements are not applicable. In the instance that post-closure monitoring is required by ODEQ due to

soil or surface or groundwater contamination from Site activities, Vanguard will maintain the lease agreement with the landowner for the period specified by ODEQ. Vanguard will provide limits of no access until no longer necessary.

2.4.8 Redesigning Final Closure (if necessary)

If during the closure process the ODEQ determines that contamination of the Site occurred or any additional closure activities are necessary, Vanguard will amend the Closure Plan to ensure a clean closure.

2.4.9 Final Closure Certification

A Certification of Final Closure will be submitted to ODEQ after final closure is completed. The certification will meet requirements set by OAC 252:515-25-34 which include the signature of the owner/operator, a statement indicating that the Site was closed according to the approved closure plan, the permit, and applicable rules. The certification will also include a closure report with related drawings, plans describing how closure was performed, and if evidence of contamination was found. Corrective measure taken will be included in the certification if contamination was discovered.

2.4.10 Other Tasks as Necessary

The Site will perform any other tasks deemed necessary by ODEQ to achieve final closure and to protect human health and the environment.

3.0 Final Closure

The ODEQ must approve the final closure of the Site. ODEQ may extend the closure period if any evidence of contamination related to Site operations is found or if final closure is determined to be inadequate. Records of closure documentation will be maintained on file until ODEQ approved completion of final closure.

4.0 Post-Closure

Post-closure activities are not applicable to the Site, per 252:515-25-51(a), unless soil or surface or groundwater contamination from activities performed at the Site are discovered. If ODEQ deems post-closure monitoring necessary, Vanguard will conduct such monitoring activities for the period specified by ODEQ.

2023 Worksheet for Calculating Closure Cost Estimates

All site data necessary to calculate estimates of closure and post-closure costs can be gathered by completing Table H.1. Data from Table H.1 should be inserted into Tables H.2 to complete calculations.

Table H.1: Site Data

Facility Name: Keota AD 1

Permit Number:

Description	Quantity	Units
Total Permitted Area	20.66	acres
Groundwater Monitoring Wells	0	VLF
Average Daily Flow	275	tons/day
Landfill Disposal Cost	132	\$/ton

VLF = Vertical linear feet. The sum of the depths of all monitoring wells.

Table H.2: Closure Cost Estimate

Facility Name: Keota

AD 1

Permit Number:

	Task/Service	Quantity	Units	Multiplier ^a	Unit Cost ^b	Subtotal
1	Preliminary Site Work					
1.1	Conduct Site Evaluation	1	Lump sum	1	\$4,222.39	\$4,222.39
1.2	Dispose Final Wastes					
	Average Daily Flow ^c	275	tons/day			
	Disposal Cost ^{d,e}	275	tons/day	5 (5 days waste)	\$132	\$181,500.00
1.3	Remove Temporary Building(s)	1	lump sum	1	\$3,871.95	\$3,871.95
1.4	Remove Equipment	1	lump sum	1	\$3,160.64	\$3,160.64
2	Monitoring Equipment					
2.1	Rework/Replace Monitoring Well(s)	0	VLF	0.25 (25% of wells)	\$88.78	0
2.2	Plug Abandoned Monitoring Well(s)	0	VLF	0.25 (25% of wells)	\$35.54	0

2023 Worksheet for Calculating Closure Cost Estimates

	Task/Service	Quantity	Units	Multiplier ^a	Unit Cost ^b	Subtotal
3	Construction					
3.1	Complete Site Grading to include on- and off-site borrow areas	0	acres	1	\$1,674.07	0
3.2	Establish vegetative cover, including on- and off-site borrow areas	0	acres	1	\$1,193.06	0
4	Tasks Not Identified					
4.1	Landfill - Unprocessed Materials Packaged food	500	tons	1	\$132 (\$/ton)	\$66,000
4.2	Landfill - Unprocessed Materials: Packaging inorganics	20	tons	1	\$132 (\$/ton)	\$2,640
5	Subtotal					\$261,394.98
6	Administrative Services^g	1	lump sum	0.1 (10%)	\$261,394.98	\$26,139.50
7	Technical and Professional Services^g	1	lump sum	0.12 (12%)	\$261,394.98	\$31,367.40
8	Closure Contingency^g	1	lump sum	0.1 (10%)	\$261,394.98	\$26,139.50
9	Total Final Closure^h					\$345,041.38

a Multipliers are determined from the *Solid Waste Financial Assurance Program Report*, December 22, 2000.

b Unit costs include a 6.98% inflationary adjustment for 2023.

c New facilities: Insert the value for “W” in OAC 252:515-27-8(a)(2). Existing facilities: Insert reported annual tonnage for the previous year, divided by 312 operating days per year (52 weeks per year x 6 operating days per week).

d Insert number of tons/day from above.

e Insert landfill disposal cost per ton of waste (\$/ton).

f Input capital cost for gas control/remediation equipment, if installed at the site.

g Input subtotal from line 5.

h Add rows 5 through 8.