Nutrient Management Plan

August 2024

"J-S Ranch"

Operated by:

"J-S Ranch"
34905 Ranch DR
Brownsville, Oregon 97327
(541) 990-5999

Facility Address:
37225 Jefferson-Scio Drive
Scio, Oregon 97374
(541) 990-5999

Operation:

Broiler Growout Operation
State Large CAFO

As owner and operator of "J-S Ranch". We intend to manage in accordance with the practices and operation and maintenance described in this Animal Waste Management Plan.

Name: Eric Simon Date: 8/13/24

Signature: Eric Simon Date: 8/13/24

The “J-S Ranch” is located at 37225 Jefferson-Scio Dr. and is owned and operated by Eric Simon. The farm is a contract farm which will raise broilers for a local integrator. The farm has 60.27 acres, 45.7 acres are irrigated with Oregon water rights. Approximately 20 acres are leased to a local Scio grass seed farmer. We plan to produce 566,400 broilers per flock. All poultry is delivered as day old chicks and will remain on the farm until 45-50 days maturity. The integrator will then pick the chickens up and deliver them to their processing facility.

Manure Collection Methods

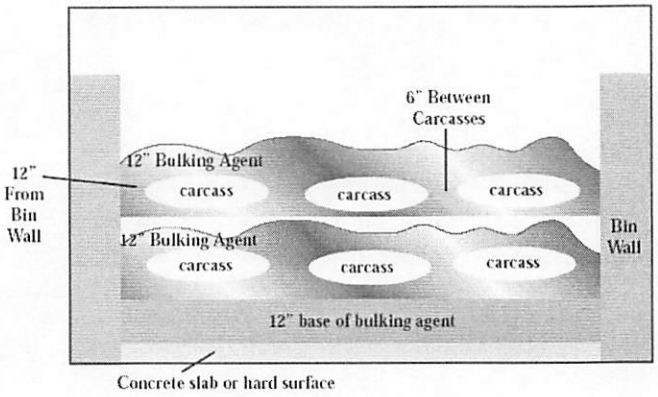
All poultry raised on this farm will be raised inside one of (10) 60’ x 652’ houses or (1) 60’ x 536’ house. We will initially spread approximately 712 cubic yards of kiln dried wood shavings in each house before chick placement. For each following flock we will spread approximately 64 cubic yards of kiln dried wood shavings in each house before bird placement. The house will provide enough manure storage for each grow out period and year. We expect to use about 11,352 cubic yards of bedding per year of production. The first 7-10 days the chicks will be in the front half of the barn with a migration fence at the halfway point of the house. At day 7-10 the migration fences will be lifted and the chickens will be released into the full house. The sawdust/manure will remain in the house until the chickens have been picked up by the integrator. At the end of a flock, we will remove any caked manure from the houses with a poultry housekeeper, skid steer and/or carry-all scraper and place it in the 60’ x 200’ manure shed. We will then wind row the remaining litter inside the house with a tractor and windrower for 3 days. On the 4th day we will rotate our manure wind rows, spread them throughout the barn, level the surface and top dress it with 64 cubic yards of fresh kiln dried shavings.

100% of the poultry manure will be exported at J-S Ranch. Manure will be stored on concrete under cover in the manure shed. Customers will arrange an appointment time to pick up manure. Customers will come to the ranch and the manure will be loaded into the trucks by loader bucket or litter conveyor. The customer will cover their manure with tarps and export it from J-S Ranch. On all concrete pads and manure handling areas, we will ensure that any manure/litter that falls to the ground during transfers will be blown or swept up.

The manure shed will be approximately 18' tall and can hold up to 5,333 yards of manure. The shed provides storage for 102 days production of manure and bedding. Due to production cycles and the time for clean-outs the shed provides about 166 days of storage. These calculations do not account for volume reduction due to composting as the process is variable and may proceed at different rates at different times of year, however volume reduction due to composting will only increase the number of days of storage provided by the shed. These calculations also do not account for the 31,360 cubic yards of bedding storage provided in the houses. This litter will also be used for composting the poultry mortality inside the manure shed.

Animal Mortality Management

All animal mortality will typically be composted in the manure shed. After sufficient composting the mortality piles will be added to the general manure pile and exported. Rapid composting of dead animals occurs when the carbon to nitrogen (C:N) ratio of the compost mix ranges between 10 and 20 to 1. To achieve the recommended C:N ratio, we will build the initial compost pile by placing 12-18 inches of sawdust or other bulking agent on the floor of the composting area. The bulking agent will extend beyond the perimeter of the animal to be composted by at least 2 feet. If using a compost bin, the bulking material will extend at least 1 foot beyond the perimeter of the animal being composted. Use of a bulking agent will also absorb any liquids released by the animal decomposition process. Poultry mortality will be layered in a compost pile by placing 12 inches of the bulking agent between layers as shown in the figure below. The first heating or primary composting cycle takes about 15 days. Refer to the table below for estimated primary composting times.



Primary Composting Times

Carcass Size (lb)	*Estimated Primary Composting Days*
0-10	15
10-25	22
25-300	45
300-750	60
750-1400	90

The temperature of the compost pile will reach at least 130 degrees Fahrenheit (F) within two days and peak around 150 degrees F in 3 to 4 days. When the temperature of the compost pile falls below 130 degrees F, the compost will be aerated by turning or other means. To ensure proper composting, we will take temperature readings as needed to verify that these stages are occurring. It is important to maintain a temperature above 130 degrees F for at least 7 days during the primary composting cycle as failure to do so will result in the incomplete destruction of pathogens and can cause fly and odor problems. After aerating the compost pile, the secondary composting times will be similar to the first. After the composting process is finished, it will be added to the main manure pile and a small portion will be retained as a bulking agent for the next composting cycle. Using finished compost in the following cycles will reduce the amount of bulking agent needed for the new pile and will provide microbial inoculants to jumpstart the composting process.

As an alternative to composting our poultry mortality in the manure shed one of the following methods may be used in rare circumstances:

Landfill - Dead animals may be transported to a permitted landfill that accepts animal carcasses for disposal.

In the event of an animal disease outbreak, a catastrophic mortality plan will be developed with the Oregon Department of Agriculture and executed upon.

Stormwater Management

Stormwater from the roof of the poultry houses will be directed to the non-working ends of each house. We will install drain tile, slope grading, ditches and culverts to direct the stormwater to a ditch on the south end of the property. This design has been engineered to maintain a 2' separation between the compacted soil pad and the seasonal high-water table. See maps. There will be concrete aprons on the front and the back ends of the houses. They will extend 4' inside the barn and 8' from the doorway of the barn and are 6" thick by 14' wide with proper slope to allow water to drain to the outside beginning at the outside doorway. These pads will be blown or swept clean after each clean-out cycle.

Wastewater Management

There will be (2) 110' cool cell systems per house (which use cardboard media that is sprayed with water to cool the incoming air). Once a year, they will be cleaned and flushed before being winterized. The wastewater from the cool cells will be transferred to a liquid 275 gallon tote on a trailer or in the back of a pickup by a sump pump transfer system. The wastewater will be added to the manure/compost piles and will be absorbed as part of the composting process. 270 gallons of wastewater will be generated each year per cool cell side per house totaling 5,940 gallons of wastewater.

At the end of each flock, we will clean our fans as needed with high pressure air, or by pressure washing them from the inside of the barn. When water is used, approximately 2/3 of the water will run off the fans and back into the bedding/manure inside the barn. Approximately 1/3 of the water will run off the fan and fan cones and outside the building. To prevent wastewater discharge, we will use a catch basin or movable plastic trough to collect the wastewater to be transported to the manure shed for use in the composting process. Each fan will take about 5 minutes to clean with a 4 gpm pressure washer, for a total of 20 gallons used per fan. 1/3 of that, or about 7 gallons will be collected outside in

our catch basins and used in the manure shed. Each house will have 15 fans for a total of 300 gallons per house, or 3300 gallons for the ranch. Please note that fans will not always be cleaned using water, so this number is the upper estimate of what will be used. With an average of 6 flocks/year there will be 6 cleanouts. As an absolute maximum, we may use up to 19,800 gallons annually.

Odor Barrier

When selecting a site to build this poultry ranch we considered the proximity of neighboring homes and the surrounding land. We chose 37225 Jefferson-Scio Dr as our ranch site due to its secluded location from neighboring homes and the surrounding farmland buffer. We intend to plant trees as a wind and odor buffer to minimize the impact on our neighbors. The nearest neighboring home will be over 1200' from the closest exhaust fan.

Land Application Areas

No manure or wastewater will be land applied at J-S Ranch.

Manure and Waste Volumes

Calculated volumes of all manure, bedding, wash water, and contaminated storm water have been completed using an excel worksheet based on the NRCS Agricultural Waste Field Handbook (ORAWM). The worksheet is included in this Nutrient Management Plan. Please note that chickens shown as grazing in the spreadsheet are not actually grazing. There are no animals on site during those periods shown as grazing. During that time, building clean-out and maintenance are underway. This spreadsheet was not originally developed for short production rotations.

Nutrient Content of Manure, Litter and Process Wastewater

The ORAWM excel worksheet was used to estimate the nutrient content of the manure.

Record Keeping and Reporting

Manure and wastewater will be sampled annually. The protocol for sampling and testing soil, and manure are included in this Nutrient Management Plan.

1. J-S Ranch will record the date and amount of compost sold and exported from the ranch.
2. J-S Ranch will keep accurate records of daily inspections, weekly inspections, and the results from periodic state inspections as required by the permit. If any corrective action is taken it will be recorded and if it is not corrected explanations will be given.
3. J-S Ranch will monitor soil moisture below all poultry housing areas and record weekly readings from installed soil moisture sensors. If sensors indicate that moisture is moving downward in the soil profile, corrective action to absorb the excess moisture will be taken to prevent a discharge.
4. J-S Ranch will report any discharge within 24 hours to the Oregon Department of Agriculture.
5. J-S Ranch will follow all necessary requirements for Large CAFO's. This includes inspecting storm water diversions, runoff diversions, waste transport, storage structures and storage structure volume weekly.

NUTRIENT MANAGEMENT PLAN
MINIMUM REQUIRED MAINTENANCE ELEMENT

☐ **J-S Ranch**
Name of Operation

☐ Culverts
Inspect annually or after large rainfall event. All foreign objects restricting water flow will be
removed. Damaged sections will be repaired or replaced. Erosion around inlet or outlet will be corrected.

☐ Dry Stack Storage Facility
Solid manure storage facility will be inspected annually. Broken slabs and curbs will be repaired.
Repair or replace rusted or damaged areas on roof structure. Broken gutters and/or downspouts will be repaired or replaced. Check for adequacy and function of drain away from downspouts. Check side and back walls for soundness.

☐ Filter Strips
Maintain vigorous growth of vegetative covering. This includes reseeding, fertilization and application of herbicides when necessary. Periodic mowing, harvesting or grazing may also be needed to control height. Remove all foreign debris that hinders system operation. Limit the traffic from filter strip area. Limit livestock usage to vegetative growth periods when the animals will not damage vegetative root system or compact the soil. Eradicate or otherwise remove all rodents or burrowing animals. Immediately repair any damage.

☐ Gutters and Downspouts
Gutters will be inspected annually to ensure all gutters are free of foreign materials. Broken gutters
or downspouts will be replaced or repaired. Gutters will be connected to downspouts. Leaky gutters and downspouts will be repaired. Weeds and sediment will be removed from downspout outlets. All downspouts will be connected to outlets, which are kept free flowing. Outlets will be inspected for rodent guards and repaired or replaced as needed.

☐ Slabs
Concrete Slabs will be cleaned after usage.

OREGON ANIMAL WASTE MANAGEMENT DESIGN AID (ORAWM)

Version 5.1

CLIENT: simon

ASSISTED BY: ODA

ANIMAL WASTE MANAGEMENT SYSTEM INVENTORY

ANIMAL INVENTORY

Type of Animal	Number of Animals	Average Weight (lbs.)	Animal Units (1,000 lb.)	Nutrient Production (lbs./day/1000 lb. Animal Unit) N	P	K	Nutrient Production (lbs./day) N	P	K	Manure CF/D/AU	Annual Days Confined	Days Grazed	Days Off Farm
CHICKEN(BROILER)	566,400	3	1,699.2	0.96	0.28	0.54	1631.23	475.78	917.57	1.37	273	92	0
Totals/Averages-	566,400	3	1,699.2	0.96	0.28	0.54	1,631.2	475.8	917.6	1.4			

GRAZING PERIOD

Type of Animal	Percent of Month and Number of Animals Grazing OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	AU-YR.
CHICKEN(BROILER)	0%	50%	0%	50%	0%	50%	0%	50%	0%	50%	0%	50%	
	566400	566400	566400	566400	566400	566400	566400	566400	566400	566400	566400	566400	5,098
													0
													0
													0
													0
													0
													0
													0
													0
													0
													0
Total AUM's Available>	0	0	0	0	0	0	0	0	0	0	0	0	0
Total AUM's Needed>>>	0	850	0	850	0	850	0	850	0	850	0	850	5,098
Total AUM's>>>>>>>>>>	0	-850	0	-850	0	-850	0	-850	0	-850	0	-850	-5,098

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ANIMAL WASTE MANAGEMENT SYSTEM INVENTORY

WEATHER STATION

EUGENE WSO AIRPORT

Month	25Yr-24Hr	5.00	Lot Runoff Factors as a Percent of Monthly Precipitation	
	RCN=	95.00		
	Average Monthly Inches			
	Precipitation	Evaporation	Paved	Unpaved
October	3.35	1.66	50%	20%
November	8.43	0.50	50%	25%
December	8.29	0.26	55%	20%
January	7.65	0.30	55%	25%
February	6.35	0.59	50%	20%
March	5.80	1.47	45%	15%
April	3.66	2.38	40%	10%
May	2.66	3.77	35%	10%
June	1.53	4.66	35%	10%
July	0.64	6.09	30%	0%
August	0.99	5.32	35%	10%
September	1.54	3.57	45%	15%
Annual	50.89	30.57		

AREAS CONTRIBUTING RUNOFF TO LIQUID STORAGE FACILITY

Description of Runoff Area	Area in SF
Paved Lot Area >> Is paved lot scraped daily? (Y/N) NO	0
Unpaved Lot Area >>	0
Roof Area >>	0
Surface Area of Silage Storage Facility>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> Does Silage Seepage Drain to Storage Facility? (Y/N) NO	0
Total Runoff Area Contributing to Liquid Storage Facility>>>>>>>>>>>>>>>>>	0

WATER USE THAT ENTERS LIQUID STORAGE FACILITY

Type of Water Use	Number of Animals	Number of Washes per Day	Gallons of Water Used per Wash-Day	Total Water Use per Day, Gallons	Total Water Use per Day, Cubic Feet
Animal Washwater	566400	0	0.00	0	0.0
Equipment Wash		0	0.00	0	0.0
Flushwater		0	0.00	0	0.0
Miscellaneous		0	0.00	0	0.0
Total>>				0	0.0

CROP DATA

Field Number	Acres	Crop	Percent Dry Matter (DM)	Yield Units	Target Yield	Nutrients Removed in Pounds per Acre		
						Nitrogen N	Phosphorous P2O5	Potassium K2O
Off Farm								
Total Acres-	0.0							

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ANIMAL WASTE MANAGEMENT SYSTEM INVENTORY

BEDDING VOLUME

Type of Animal	Type of Bedding Facility	Bedding Material	Unit Weight Lbs/CF	Amount Needed Lbs/Day/AU	Volume CF/Day/AU	Total Volume CF/Day	Total Weight Lbs/Day
CHICKEN(BROILER)	Free Stall	Sawdust	12.00	7.93	0.66	1121	13,471

SOLIDS SEPARATION FACTOR

Type of Animal	Type of Separator	% Solids Separated	Volume of Solids Separated CF/Day	Volume of Solids in Liquids CF/Day	Volume of Manure in Liquids CF/Day	Volume of Manure in Solids CF/Day	Accumulated Sludge in Storage CF/Day	Density of Separated Solids Lbs/CF	Weight of Separated Solids Lbs/Day
CHICKEN(BROILER)	Dry Scrape System	100%	3,449	0	0	2,328	0	30	102,205
Totals>>			3,449	0	0	2,328	0		102,205

OREGON ANIMAL WASTE MANAGEMENT DESIGN AID (ORAWM)

Version 5.1

CLIENT: **simon**
ASSISTED BY: **ODA**

ANIMAL WASTE MANAGEMENT SYSTEM PRODUCTION

MONTHLY VOLUMES

	Runoff in Cubic Feet					Manure									
	Roof Area Square Feet	Paved Slab Area Square Feet	Unpaved Lot Area Square Feet	Silage Pit Surface Area, SF	Facility Water Use	Solids	Liquids	Bedding		Solids Separated		Solids in Liquids		Total Solids	Total Liquids
Month	0	0	0	0	Cubic Feet	Cubic Feet	Cubic Feet	Cubic Feet	Pounds	Cubic Feet	Pounds	Cubic Feet	Pounds	Cubic Feet	Cubic Feet
October	0	0	0	0	0	18,402	53,763	34,766	417,609	106,931	3,168,355	0	0	106,931	0
November	0	0	0	0	0	8,904	26,014	16,822	202,069	51,741	1,533,075	0	0	51,741	0
December	0	0	0	0	0	18,402	53,763	34,766	417,609	106,931	3,168,355	0	0	106,931	0
January	0	0	0	0	0	9,201	26,881	17,383	208,804	53,465	1,584,178	0	0	53,465	0
February	0	0	0	0	0	16,621	48,560	31,401	377,195	96,583	2,861,740	0	0	96,583	0
March	0	0	0	0	0	9,201	26,881	17,383	208,804	53,465	1,584,178	0	0	53,465	0
April	0	0	0	0	0	17,808	52,029	33,644	404,138	103,481	3,066,150	0	0	103,481	0
May	0	0	0	0	0	9,201	26,881	17,383	208,804	53,465	1,584,178	0	0	53,465	0
June	0	0	0	0	0	17,808	52,029	33,644	404,138	103,481	3,066,150	0	0	103,481	0
July	0	0	0	0	0	9,201	26,881	17,383	208,804	53,465	1,584,178	0	0	53,465	0
August	0	0	0	0	0	18,402	53,763	34,766	417,609	106,931	3,168,355	0	0	106,931	0
September	0	0	0	0	0	8,904	26,014	16,822	202,069	51,741	1,533,075	0	0	51,741	0
Annual	**0**	**0**	**0**	**0**	**0**	**162,057**	**473,461**	**306,162**	**3,677,653**	**941,680**	**27,901,968**	**0**	**0**	**941,680**	**0**
Annual Gallons	**0**	**0**	**0**	**0**	**0**	**1,212,187**	**3,541,486**	**2,290,091**		**7,043,764**		**0**		**7,043,764**	**0**

DAILY NUTRIENT PRODUCTION

	Pounds/Day of Nutrients from **LIQUIDS**			Pounds/Day of Nutrients from **SOLIDS**			Pounds/Day of Nutrients from **GRAZING**			Grazing Manure	Confined Manure
Type of Animal	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	Gallons/Yr	Cubic Feet/Yr
CHICKEN(BROILER)	0.00	0.00	0.00	1,631.23	1,090.00	1,105.67	1,631.23	1,090.00	1,105.67	1,601,970	635,518
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
									Total-	**1,601,970**	**635,518**

OREGON ANIMAL WASTE MANAGEMENT DESIGN AID (ORAWM)

Version 5.1

CLIENT: **simon**
ASSISTED BY: **ODA**

ANIMAL WASTE MANAGEMENT SYSTEM PRODUCTION

MONTHLY NUTRIENT PRODUCTION

Month	Pounds of Nutrients from LIQUIDS			Pounds of Nutrients from SOLIDS			Pounds of Nutrients from GRAZING			Total Pounds of Nutrients from ALL SOURCES		
	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
October	0	0	0	50,568	33,790	34,276	0	0	0	50,568	33,790	34,276
November	0	0	0	24,468	16,350	16,585	24,468	16,350	16,585	48,937	32,700	33,170
December	0	0	0	50,568	33,790	34,276	0	0	0	50,568	33,790	34,276
January	0	0	0	25,284	16,895	17,138	25,284	16,895	17,138	50,568	33,790	34,276
February	0	0	0	45,674	30,520	30,959	0	0	0	45,674	30,520	30,959
March	0	0	0	25,284	16,895	17,138	25,284	16,895	17,138	50,568	33,790	34,276
April	0	0	0	48,937	32,700	33,170	0	0	0	48,937	32,700	33,170
May	0	0	0	25,284	16,895	17,138	25,284	16,895	17,138	50,568	33,790	34,276
June	0	0	0	48,937	32,700	33,170	0	0	0	48,937	32,700	33,170
July	0	0	0	25,284	16,895	17,138	25,284	16,895	17,138	50,568	33,790	34,276
August	0	0	0	50,568	33,790	34,276	0	0	0	50,568	33,790	34,276
September	0	0	0	24,468	16,350	16,585	24,468	16,350	16,585	48,937	32,700	33,170
Annual	**0**	**0**	**0**	**445,326**	**297,571**	**301,848**	**150,073**	**100,280**	**101,722**	**595,400**	**397,851**	**403,569**

MONTHLY IMPORTS INTO STORAGE FACILITIES

Month	Liquids		Solids	
	Cubic Feet	Gallons	Cubic Feet	Tons
October	**0**	0	**0**	0
November	**0**	0	**0**	0
December	**0**	0	**0**	0
January	**0**	0	**0**	0
February	**0**	0	**0**	0
March	**0**	0	**0**	0
April	**0**	0	**0**	0
May	**0**	0	**0**	0
June	**0**	0	**0**	0
July	**0**	0	**0**	0
August	**0**	0	**0**	0
September	**0**	0	**0**	0
Totals-	**0**	**0**	**0**	**0**

OREGON ANIMAL WASTE MANAGEMENT DESIGN AID (ORAWM)

Version 5.1

CLIENT: **simon**
ASSISTED BY: **ODA**

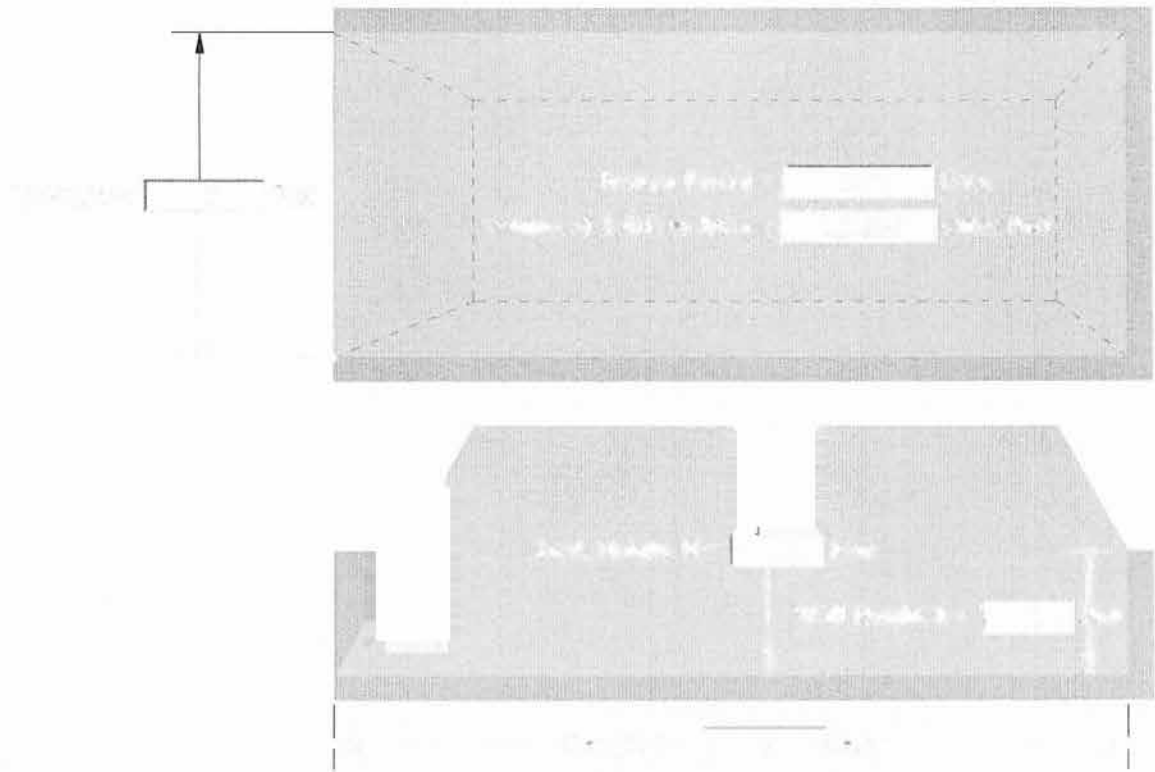
ANIMAL WASTE MANAGEMENT SYSTEM STORAGE

SOLIDS STACKING FACILITY

Solids Storage Facility Parameters	Value
Storage Period, Days=	102
Stacking Width, W in Feet=	0
Stacking Height, H in Feet=	0.00
Wall Height, h in Feet=	0.00
Stack Side Slope (X:1)=	0.00
Existing Storage, Cubic Feet=	144,000
Surface Area of Existing Storage, SF=	0
25 Year-24 Hour Storm Runoff, CF=	0
Volume Needed, Cubic Feet=	143,494
Design Volume, Cubic Feet=	0
Is Facility Covered?	YES
Volume Reduction Factor=	0.50

VOLUME OF MONTHLY SOLIDS STACKED IN FACILITY

Month	Number of Days	Manure CF	Bedding CF	Solids to Store CF	Solids to Store Tons	Normal Runoff CF
October	31	72,165	34,766	53,465	1,584	0
November	30	34,919	16,822	25,870	767	0
December	31	72,165	34,766	53,465	1,584	0
January	31	36,083	17,383	26,733	792	0
February	28	65,181	31,401	48,291	1,431	0
March	31	36,083	17,383	26,733	792	0
April	30	69,837	33,644	51,741	1,533	0
May	31	36,083	17,383	26,733	792	0
June	30	69,837	33,644	51,741	1,533	0
July	31	36,083	17,383	26,733	792	0
August	31	72,165	34,766	53,465	1,584	0
September	30	34,919	16,822	25,870	767	0
Annual	365	635,518	306,162	470,839	13,951	0



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ANIMAL WASTE MANAGEMENT SYSTEM UTILIZATION

NUTRIENTS AVAILABLE AFTER STORAGE

Nutrient Source	Type of Operation / Type of Storage Facility	Pounds of Nutrients Available			Percent Nutrients Retained After Storage			Pounds of Nutrients Retained After Storage		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Tank (Covered)	0	0	0	NA	NA	NA	NA	NA	NA
Solids	Solids Storage Facility (Roofed)	445,326	297,571	301,848	65%	90%	90%	289,462	267,814	271,663
Grazing	NONE	150,073	100,280	101,722	100%	100%	100%	150,073	100,280	101,722

NUTRIENTS AVAILABLE AFTER APPLICATION

Nutrient Source	Type of Application System	Pounds of Nutrients Available			Percent Nutrients Retained After Application			Pounds of Nutrients Retained After Application		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Sprinkling	NA	NA	NA	75%	100%	100%	NA	NA	NA
Solids	Broadcast (Incorporated 7 or more days after application)	289,462	267,814	271,663	70%	100%	100%	202,623	267,814	271,663
Grazing	Grazing	150,073	100,280	101,722	85%	100%	100%	127,562	100,280	101,722

NUTRIENTS AVAILABLE AFTER DENITRIFICATION

Nutrient Source	Location: Between Coastal and Cascade Mountains / Soil Drainage Class	Pounds of Nutrients Available			Percent Nutrients Retained After Denitrification			Pounds of Nutrients Retained After Denitrification		
		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Liquids	Somewhat Poorly Drained	NA	NA	NA	80%	100%	100%	NA	NA	NA
Solids	Somewhat Poorly Drained	202,623	267,814	271,663	83%	100%	100%	168,177	267,814	271,663
Grazing	Somewhat Poorly Drained	127,562	100,280	101,722	80%	100%	100%	102,050	100,280	101,722
							TOTAL	***270,227***	***368,094***	***373,385***

CAFO SITE PLAN

FOR

J-S RANCH INC.

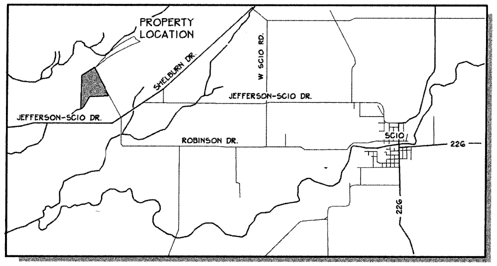
LOCATED IN THE

SW 1/4 OF SECTION 10, T. 10 S., R. 02 W., W.M.

IN

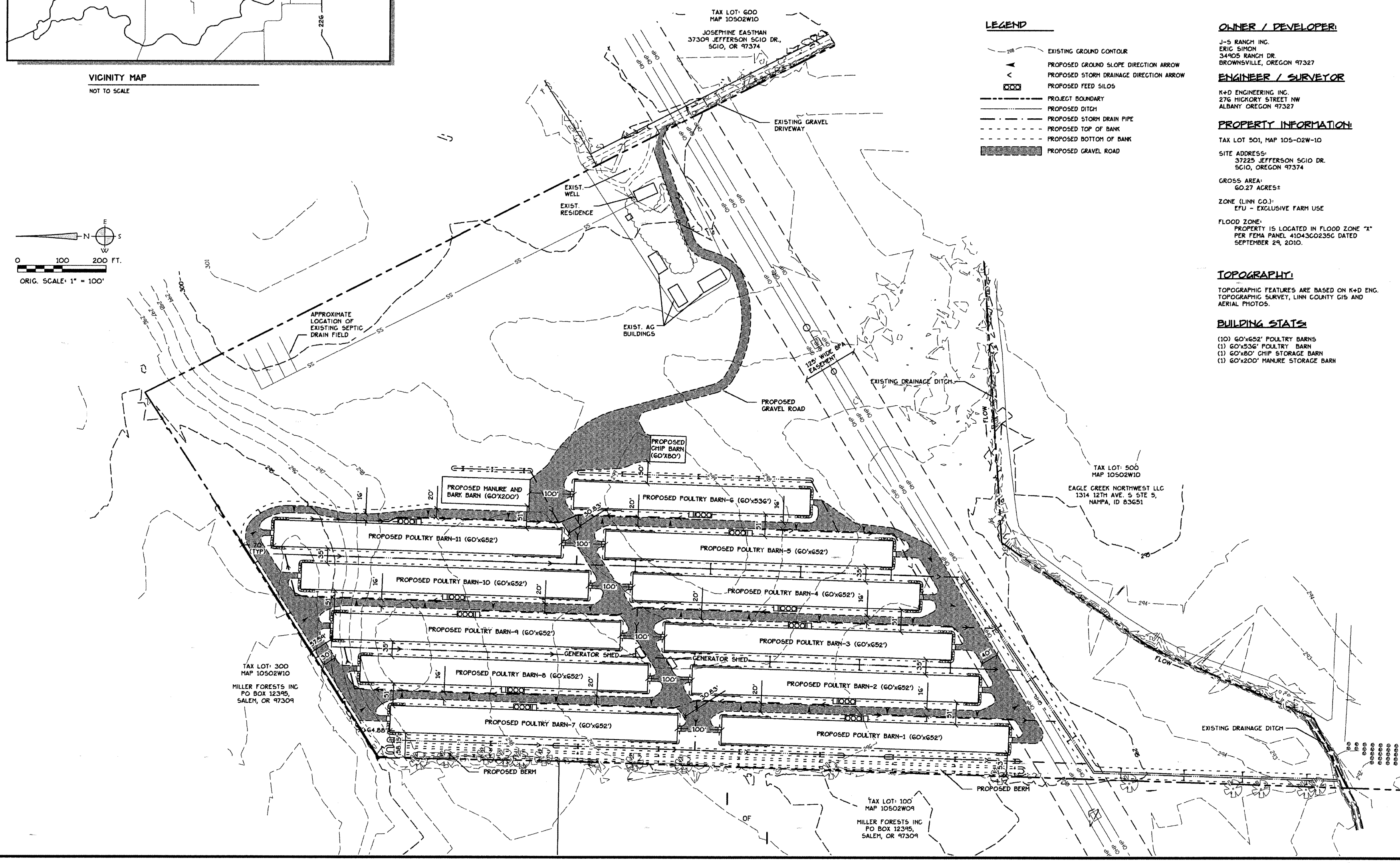
LINN COUNTY, OREGON

JUNE 28, 2021



VICINITY MAP

NOT TO SCALE



LEGEND

- EXISTING GROUND CONTOUR
- PROPOSED GROUND SLOPE DIRECTION ARROW
- PROPOSED STORM DRAINAGE DIRECTION ARROW
- PROPOSED FEED SILOS
- PROJECT BOUNDARY
- PROPOSED DITCH
- PROPOSED STORM DRAIN PIPE
- PROPOSED TOP OF BANK
- PROPOSED BOTTOM OF BANK
- PROPOSED GRAVEL ROAD

OWNER / DEVELOPER:

J-S RANCH INC.
ERIC SIMON
34905 RANCH DR.
BROWNSVILLE, OREGON 97327

ENGINEER / SURVEYOR

K+D ENGINEERING INC.
276 HICKORY STREET NW
ALBANY OREGON 97327

PROPERTY INFORMATION:

TAX LOT 501, MAP 10S-02W-10

SITE ADDRESS:
37225 JEFFERSON SCIO DR.
SCIO, OREGON 97374

GROSS AREA:
60.27 ACRES±

ZONE (LINN CO.):
EFU - EXCLUSIVE FARM USE

FLOOD ZONE:
PROPERTY IS LOCATED IN FLOOD ZONE "X" PER FEMA PANEL 41043C0235C DATED SEPTEMBER 29, 2010.

TOPOGRAPHY:

TOPOGRAPHIC FEATURES ARE BASED ON K+D ENG. TOPOGRAPHIC SURVEY, LINN COUNTY GIS AND AERIAL PHOTOS.

BUILDING STATS:

(10) 60'x652' POULTRY BARNS
(1) 60'x536' POULTRY BARN
(1) 60'x80' CHIP STORAGE BARN
(1) 60'x200' MANURE STORAGE BARN

SITE PLAN

J-S RANCH INC.
CAFO PERMIT

LINN COUNTY, OREGON

	REVISIONS	DATE	BY

K&D ENGINEERING, INC.
276 N.W. HICKORY ST.
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

HORZ. SCALE:
VERT. SCALE:
SIGN DATE:
DSGN BY: GMB
DRWN BY: GSG
CHCK BY: GMB
PROJECT No.: 21-20

SHEET No.: 1 OF 1

Date: 6/28/2021 Time: 9:52
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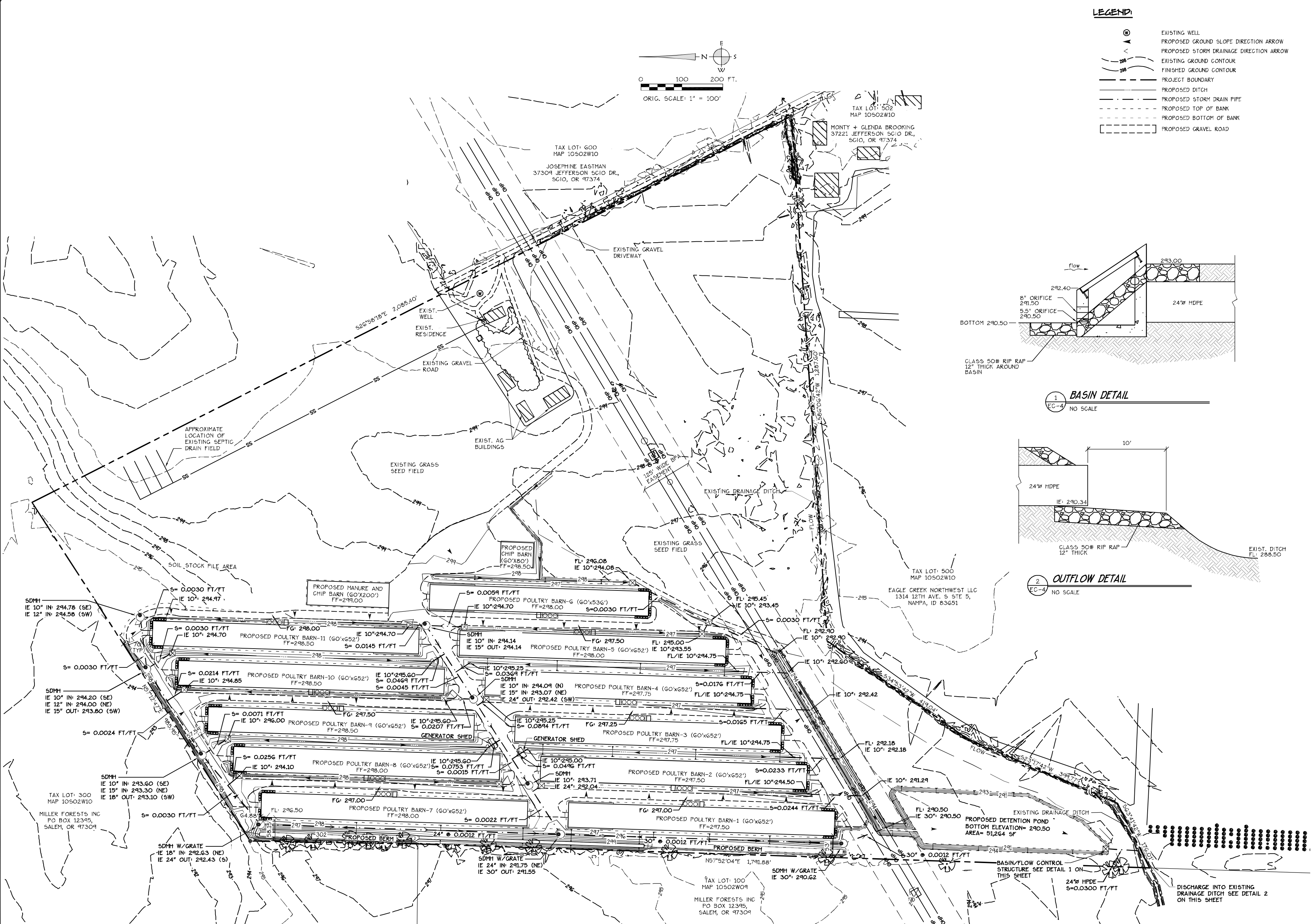
Date: 6/12/2024 Time: 13:25
Scale: 1=1(PS)
File: dwg\2021\21-20\21-20_SD.dwg (George)



UTILITIES

J-S RANCH INC.
EROSION CONTROL PERMIT
LINN COUNTY, OREGON

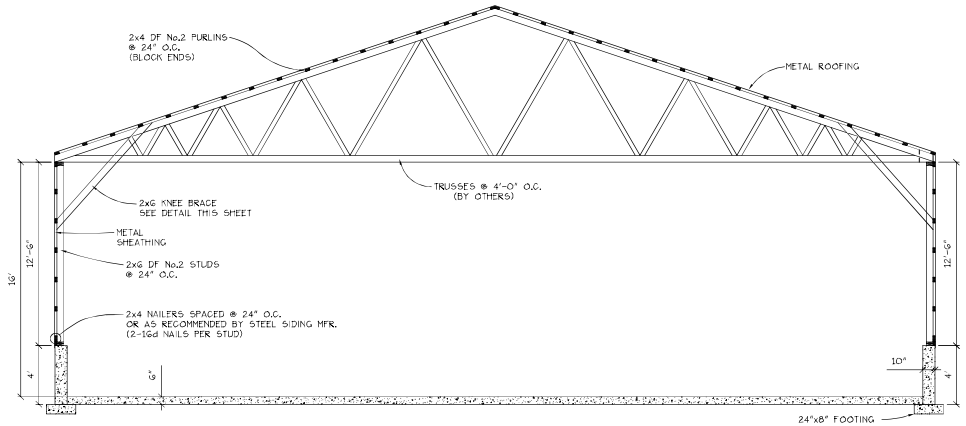
REVISIONS	DATE	BY

K&D ENGINEERING, INC.
276 N.W. HICKORY ST.
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

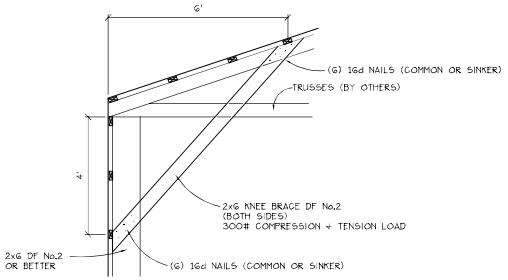
REGISTERED PROFESSIONAL ENGINEER 53046 Digitally Signed OREGON JAN. 23, 2007 GRANT M. BEEM Expires: 12-31-25

HORZ. SCALE:	
VERT. SCALE:	
SIGN DATE:	
DSGN BY:	GMB
DRWN BY:	BLE
CHCK BY:	GMB
PROJECT No.:	21-20

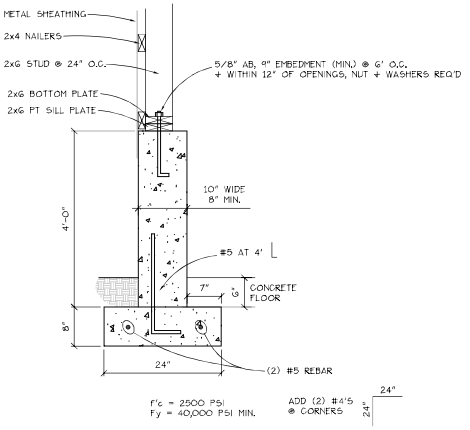
SHEET No.:
SD



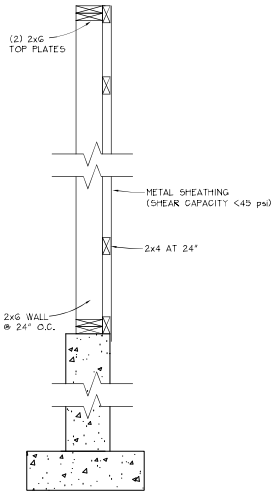
1/2 SECTION "A-A"
SCALE: 1/4" = 1'-0"



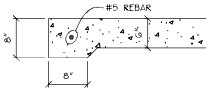
2/2 TYPICAL KNEE BRACE DETAIL
NOT TO SCALE



3/2 TYPICAL FOUNDATION DETAIL
NOT TO SCALE



4/2 TYPICAL WALL DETAIL
NOT TO SCALE



5/2 TYPICAL THICKENED EDGE DETAIL
NOT TO SCALE

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File: dwg\2021\21-20\21-20_fp.dwg (George)

DETAILS

AGRICULTURE BARN
J-S RANCH
LINN COUNTY, OREGON

DATE	REVISIONS	BY

K&D ENGINEERING, INC.
278 N.W. HICKORY ST.
P.O. BOX 725
ALBANY, OREGON 97321
(541) 926-2583

REGISTERED PROFESSIONAL ENGINEER
17,612
OREGON
JULY 13, 1982
DANIEL K. WATSON
RENEWAL DATE 6-30-22

HORZ. SCALE:	1/8" = 1'-0"
VERT. SCALE:	
SIGN DATE:	8-24-2022
DSGN BY:	DKW
DRWN BY:	GSG
CHCK BY:	DKW
PROJECT No.:	21-20

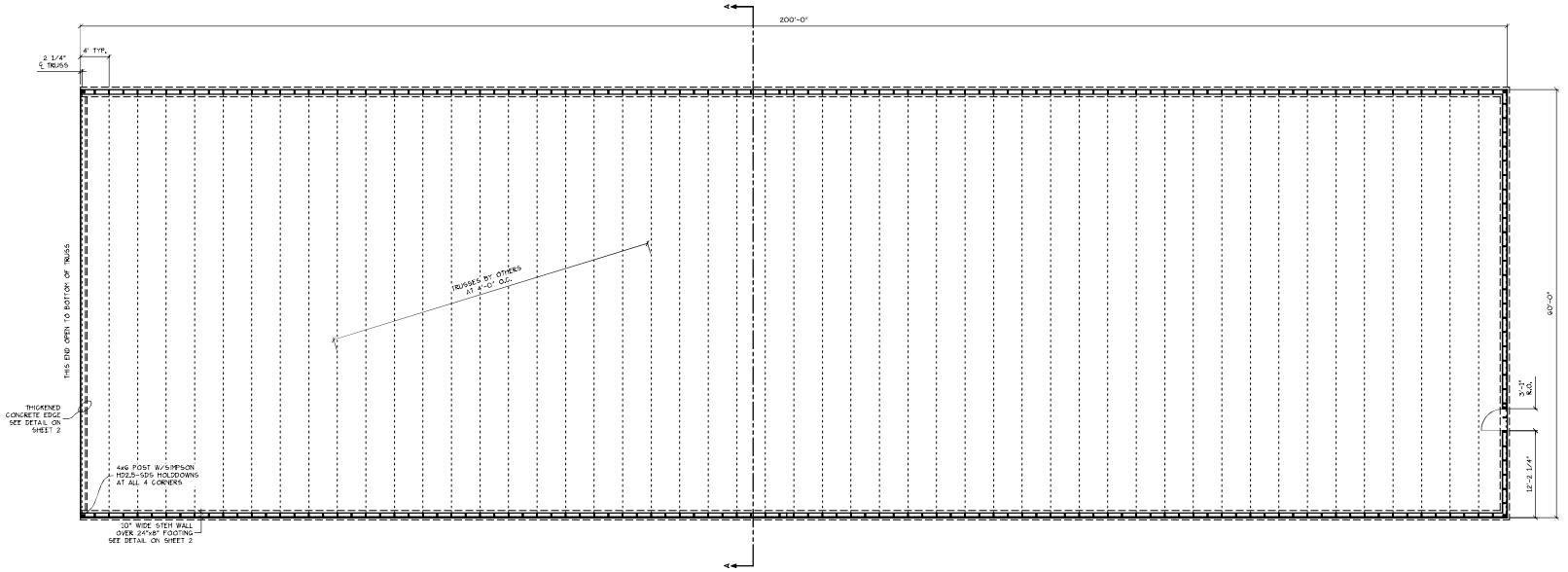
SHEET No.: 2 OF 2

AGRICULTURE BARN
J-S RANCH
LINN COUNTY, OREGON
AUGUST 24, 2022

SITE:
J-S RANCH
37225 JEFFERSON-SCIO DR.
SCIO, OR 97374

OWNER:
ERIC SIMON
34905 RANCH DR.
BROWNSVILLE, OR. 97327

ENGINEER:
DANIEL K. WATSON, PE.
K&D ENGINEERING, INC.
276 N.W. HICKORY STREET
ALBANY, OR 97321
(541) 928-2583



FLOOR/FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. ALL WORK SHALL BE PERPENDICULAR AND PLUMB.
2. ALL WORK SHALL COMPLY WITH THESE PLANS AND PERMITS TO BE ISSUED BY OTHERS.
3. MECHANICAL, PLUMBING, AND ELECTRICAL BY SEPARATE PERMITS
4. ENGINEERED TRUSSES BY MANUFACTURER. (LOAD FROM KNEE BRACE MUST BE CONSIDERED)
5. SEE CALCULATIONS PREPARED FOR THIS WORK

BUILDING NOTES:

1. BUILDING SIZE = 60' x 200'
2. UNHEATED MANURE SHED
3. OCCUPANCY CLASS = U
4. CONSTRUCTION TYPE = TYPE V-B
5. ALLOWABLE AREA (TABLE 602.1) = 12,000 S.F. ONE STORY
6. EVE HEIGHT = 16'
7. WALLS = 2x6 AT 24" O.C.
8. SHEATHING = METAL - OWNER SELECT (SHEAR CAPACITY < 45 psi)
9. TRUSSES = MANUFACTURER DESIGN BY OTHERS
10. ELECTRICAL = DESIGN BUILD

STRUCTURAL NOTES:

CODE OSSC 2019 + ASCE 7-16

WIND
Vtrans = 98 mph
EXPOSURE = "C"

SEISMIC
s_{DS} = 0.617
s_{D1} = 0.424
s_{MS} = 0.962
s_{M1} = 0.636
s_S = 0.779
s_1 = 0.364

FLOOR/FOUNDATION PLAN

AGRICULTURE BARN
J-S RANCH
LINN COUNTY, OREGON

DATE	REVISIONS	BY

K&D ENGINEERING, INC.
276 N.W. HICKORY ST.
P.O. BOX 725
ALBANY, OREGON 97321
(541) 928-2583

REGISTERED PROFESSIONAL ENGINEER
17,612
OREGON
JULY 12, 1985
DANIEL K. WATSON
RENEWAL DATE 6-30-22

HORZ. SCALE:	1/8" = 1'-0"
VERT. SCALE:	
SIGN DATE:	8-24-2022
DSGN BY:	DKW
DRWN BY:	GSG
CHCK BY:	DKW
PROJECT No.:	21-20

SHEET No.: 1 OF 2

Date: 8/24/2022 Time: 11:54
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MANURE SAMPLING AND ANALYSIS

This fact sheet was prepared by Jan Jarman, formerly with the Mn. Dept. of Agriculture.

Manure nutrients applied to cropland should be accounted for when determining commercial fertilizer needs. Manure nutrient composition varies widely between farms due to differences in animal species and management and manure storage and handling. Sampling and laboratory analysis is the only method for determining the actual nutrient content of manure. Published average values should only be used for initial application rate planning when no previous analyses are available, for estimating total nutrients generated in a specific time period, or for MPCA permitting requirements.

WHEN TO SAMPLE

Manure is very heterogeneous and nutrients stratify in storage. Sample manure at application time following adequate agitation of liquids in storage or mixing of solids in the spreader loading process. If no previous analyses are available, use published average values for initial application rate planning, then use the analysis results to calculate commercial fertilizer needs. Sample manure each time it is applied, over the course of several applications. Track analysis results to determine the needed sampling frequency and develop farm-specific average value to use for application rate planning. Nutrient content will change with changes in management (housing, feed, bedding, storage, handling) and can vary between years or seasons depending on precipitation (for manure stored outdoors).

WHAT TO SAMPLE

Agitated liquid slurries: Agitate liquid in entire structure for 2-4 hours just prior to application. Take one sample per 300,000 gallons of pumped manure. Avoid sampling near beginning and end of pump-out. Each sample may consist of several subsamples mixed together. If it is not possible to agitate liquid slurries before application, several samples taken throughout pump-out will be needed to characterize the manure. Keep track of which sample results correspond to manure applied to which fields.

Unagitated lagoon liquids (single/multiple stage, settling basins): Lagoons, which act as settling basins or are used in flush/recycle systems, are usually not agitated. Take out sample per 300,000 gallons of pumped liquid. Avoid sampling near beginning and end of pump-out. Each sample may consist of several subsamples mixed together.

Stored solids: Depending on the size of the pack, pile or stack, take at least three samples during application, each consisting of 5-10 subsamples from different loads. More samples are needed for stored solids because of its extreme variability. Avoid sampling the outside foot of a pile or stack.

Scrape and haul: Sample when applying to fields where nutrients will be credited. Fall is probably the most important time to sample. Take several subsamples from consecutive applications and mix together. Samples may be taken throughout the year to characterize variability.

Poultry in-house systems: For litter or manure that is not stored for any length of time prior to application. Use a pitchfork or shovel to sample to the depth of the floor in 5-10 locations in each house. Mix subsamples to obtain 1 or 2 samples for analysis. Take subsamples from around feeders and waterers in proportion to the areas they occupy.

HOW TO SAMPLE

Liquid manure: Samples can be taken in the field (for broadcast manure) or from the application equipment. Sampling in the field can be done by placing catch cans throughout the area where manure will be spread. Mix the subsamples in a bucket and take a smaller sample for analysis. Sampling from the application equipment is the easiest and most effective way to get a good sample. Take subsamples from the filling hose or from a bottom unloading port, mix together in a bucket and take a sample for analysis. Sampling from liquid storage structures is not recommended since it is much safer and easier to sample from application equipment or in the field.

Solid manure: Samples can be taken in the field or from the spreader. In the field, spread tarps to catch manure as it is applied. For each sample, take several small subsamples from the tarps and place in a bucket or pile. Avoid larger pieces or chunks of bedding. Collect other subsamples throughout application and keep cool. Subsamples can be mixed by placing in a pile and repeatedly shoveling the outside of the pile to the inside. Use a trowel or plastic gloves to take a smaller sample for analysis. Samples can also be taken with a pitchfork or shovel from the spreader box after it is loaded. Collect subsamples throughout application, keep cool, mix and take a smaller sample for analysis. Again, sampling from the field or spreader is much easier and safer than trying to sample from a pack or pile.

SAMPLE HANDLING AND ANALYSIS

Laboratories: A listing of manure testing laboratories is available from the Minnesota Department of Agriculture Manure Testing Laboratory Certification Program, (612) 297-2530.

Preparing samples: For liquids and solids, clean, leakproof plastic jars with wide mouths may be used for the samples. Solids with lower water content can also be placed in leakproof plastic ziplock bags. Most laboratories will provide sample jars and postpaid mailing packages. Jars should be filled no more than 2/3 – ¾ full, tightly sealed and placed in a leakproof plastic bag. For solids, plastic bags can be partially filled and all the air squeezed out. Fill the sample container with about 1-2 cups or 1-2 pounds (a large handful) of manure for analysis. Tightly seal containers and label with the farmer's last name and a sample ID using a waterproof marker. Place in a second plastic bag and freeze overnight if possible. Do not let samples sit in the sun or at room temperature for more than 12 hours. Mail samples early in the week and avoid weekends and holidays. Be sure to include payment and the sample information sheet.

Analyses: Analyses needed for developing a manure application plan are total nitrogen (N), phosphate (P_2O_5) and potash (K_2O). Laboratories usually provide these analyses plus dry matter (solids) and sometimes ammonium-N (NH_4-N) for a set fee. Knowing NH_4-N can be useful if this fraction makes up a large percentage of the total N in the manure. All of the NH_4-N is usually available the first year of application. If this fraction is high (70% or more of total N), then total N availability the first year may be higher than average. It is usually not necessary to analyze manure for other mineral constituents such as calcium, magnesium, zinc, sulfur or boron. Most manures contain significant quantities of these minerals, and fields with manure histories are rarely deficient.

Results: Manure nutrient content should be reported in units of lbs/ton or lbs/1000 gallons, on an as-is basis. Phosphate and potash should be reported as such, rather than as P and K. A table of conversion factors is given below. Always check results to make sure they fall within normal ranges for that particular species and storage system. Use University of Minnesota nutrient availability factors to calculate total available nutrients applied.

CONVERSION FACTORS

To convert Column 1 into Column 2, multiply by	Column 1	Column 2	To convert Column 2 into Column 1, multiply by
10,000	percent (%)	parts per million (ppm)	0.0001
% DM / 100	%, DM basis	%, as-is basis	100 / % DM
83.3	%, as-is basis	lbs/1000 gal	0.012
20	%, as-is basis	lbs/ton	0.05
2.29	P, any unit	P_2O_5, any unit	0.44
1.2	K, any unit	K_2O, any unit	0.83