

DAD Rental Inc. Farm

PUBLIC INFORMATION MEETING

Frank & West
Environmental
Engineers, Inc.

DAD Rental Inc. Farm

- Introduction of the Farm Overview & Layout
- Conformance with Livestock Management Facilities Act

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DAD Rental Inc. Farm Overview



DAD Rental Inc.
Location Map

Google Earth

DAD Rental Inc. Farm Layout

PROPOSED FINISHER

321'

121'-10"

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Siting Criteria

1. Registration and certification requirements
2. Design, location, and operation standards.
3. Location compatibility.
4. Floodplain and aquifer protection.
5. Minimize environmental impact.
6. Odor control/reduction.
7. Traffic patterns minimize impacts
8. Facility consistent with area development.

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Siting Criteria #1 – Registration & Certification Definition

- Whether registration and Livestock Waste Management Plan Certification requirements, if required, are met by the Notice of Intent to Construct.

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Siting Criteria #1 Part 1 - Registration Requirements:

- Notice of Intent to Construct was filed with IDOA on June 19, 2017.
- Notice of Intent to Construct **Deemed Complete** by the IDOA on July 17, 2017.

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Siting Criteria #1 Part 2 - Nutrient Management Plan:

- According to the Livestock Management Facilities Act, a farm which exceeds 1,000 animal units but less than 5,000, shall prepare, maintain and implement a Nutrient Management Plan within 60 working days after commencing operation.
- The farm will prepare, maintain, and implement a **Comprehensive Nutrient Management Plan.**

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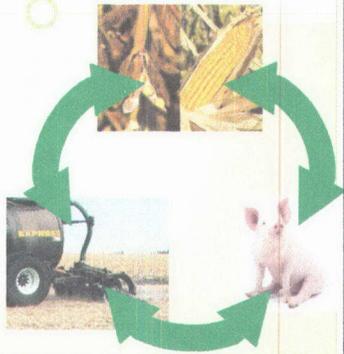
Siting Criteria #1
Part 2 - Nutrient Management Plan:

- The farm will submit to the IDOA the Nutrient Management Plan Certification Form certifying that the Nutrient Management Plan has been prepared.
- The farm will keep the Comprehensive Nutrient Management Plan as well as records of livestock waste disposal on file at the farm.
- The Comprehensive Nutrient Management Plan and associated records will be available for IDOA inspections.

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Siting Criteria #1
Part 2 - Nutrient Management Plan:

- The goal of the Comprehensive Nutrient Management Plan will be to utilize the manure at approved agronomic loading rates that meet the nutrient needs of locally grown crops in an environmentally sound fashion.



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Siting Criteria #1
Part 2 - Nutrient Management Plan:

- Goal will be accomplished by developing a Comprehensive Nutrient Management Plan which includes the following:
 - Total annual manure volume calculations
 - Historically proven yields in application areas
 - Manure analysis to provide the nutrient content of manure
 - Agronomic loading rates of manure
 - Land application provisions for setbacks and incorporation standards
 - Documentation of all phases of the Plan

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Siting Criteria #2 – Design & Operation Standards
Definition

- Whether the design, location or proposed operation will protect the environment by being consistent with the Livestock Management Facilities Act.

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Siting Criteria #2
Part 1 - Design of Concrete Structures

- Designed According to MWPS Concrete Manure Storage Handbook guidance.
- MidWest Plan Service (MWPS), is a university-based publishing cooperative dedicated to publishing and disseminating research-based and peer-reviewed publications.
 - Concrete Specifications
 - Reinforcement Requirements
 - Water-stop Requirements

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Siting Criteria #2
Part 1 - Design of Concrete Structures

- The design for the proposed farm will consist of construction plans for:
 - One finishing barn

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Siting Criteria #2
Part 1 - Design of Concrete Structures

- Finishing Barn



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Siting Criteria #2
Part 1 - Design of Concrete Structures

- Finishing Barn



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Siting Criteria #2
Part 1 - Design of Concrete Structures

- Typical Pit Cross Section

The diagram illustrates a cross-section of a concrete structure. At the top, there is a sloped roof. Below the roof, a pig is shown standing on a horizontal line labeled "Stand Floor". Below the stand floor is a rectangular area labeled "Pit (Manure Storage)". A vertical dimension line on the right side of the pit indicates a height of "8 ft.". The name "Frank & West" is printed at the bottom of the diagram.

Siting Criteria #2
Part 2 - Location

- Location and setback distances have been met
 - Occupied Residence
 - Populated Area
 - The farm location was **Deemed Complete** by IDOA on July 17, 2017.

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Siting Criteria #2
Part 3 - Proposed Operation

- The manager of the farm will be a Certified Livestock Manager
 - Program developed by the IDOA to educate livestock managers on manure management handling and systems.
 - Managers of farms over 1,000 animal units are required to attend a training course and pass an exam.
- Livestock Waste Management Plan
 - The plan will detail the operation at the farm so that all manure applications will be based on site specific data.

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Siting Criteria #3 – Location Compatibility Definition

- Whether the location minimizes any incompatibility with the surrounding area's character by being zoned for agriculture, where the county has zoning, or where the county is not zoned, the setback requirements established by the Livestock Management Facilities Act are complied with.

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Siting Criteria #3 County Zoning

- The proposed farm location is not zoned.
- The farm is compatible with surrounding area in that the area is a rural agricultural area.
- Source: Illinois Association of County Zoning Officials



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Siting Criteria #3 Setbacks

- 4,800 animals >55 lbs = 1,920 animal units
 - Occupied Residence – 1,320 feet
 - 1/4 mile
 - Populated Areas – 2,640 feet
 - 1/2 mile
- The IDOA deemed the setbacks for the farm **complete** on July 17, 2017.

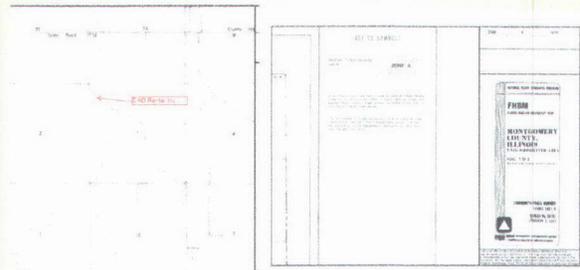
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Siting Criteria #4 – Floodplain & Aquifer

- Whether the farm is located within a 100-year floodplain or an otherwise environmentally sensitive area (defined as an area of karst area or with aquifer material within 5 feet of the bottom of the livestock waste handling facility) and whether construction standards set forth in the NOITC are consistent with the goal of protecting the safety of the area.

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Siting Criteria #4 100 Year Floodplain



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Siting Criteria #4 – Karst Area

- An area with a land surface containing sinkholes, large springs, disrupted land drainage, and underground systems **associated** with karstified carbonate bedrock (limestone or dolomite) and caves or a land surface without these features but containing a karstified carbonate bedrock unit generally overlain by less than 60 feet of unconsolidated materials.

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Siting Criteria #4 – Karst Area - Illinois

- Source: Illinois State Geological Survey's Map of Karst Terrains and Carbonate Bedrock in Illinois <http://www.isgs.illinois.edu/maps>

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Siting Criteria #4 – Aquifer Material

- Sandstone that is five feet or more in thickness, or fractured carbonate that is ten feet or more in thickness; or sand, gravel, or sand and gravel, such that there is at least two feet or more present within any five foot section of a soil boring.

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Siting Criteria #4 – Soil Boring Detail

- A site investigation was conducted on July 18, 2017.

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Siting Criteria #5 – Minimize Env. Impact Definition

- Whether the owner or operator has submitted plans for operation that minimize the likelihood of any environmental damage to the surrounding area from spills, runoff, and leaching.

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Siting Criteria #5 Spills

- Proper sizing
 - Adequate storage capacity - In excess of required 150 days.
 - Farm will have storage capacity in excess of 365 days.
- Closed system
 - No uncontrolled release of livestock manure.

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Siting Criteria #5 Runoff

- Clean water diversion that will allow for rain water to be directed away from the farm.

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Siting Criteria #5 Leaching

- Farm designed so as to prevent a release of livestock manure.
 - Solid concrete construction reinforced with Grade 60 steel rebar.
 - Waterstop will be placed in all construction and stoppage joints.
- All surfaces in contact with livestock manure (concrete) will meet the required permeability standards.

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Siting Criteria #6 – Odor Control/Reduction
Definition

- Whether odor control plans are reasonable and incorporate reasonable or innovative odor reduction technologies given the current state of such technologies.

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Siting Criteria #6
Odor Control Plan

- The proposed farm will implement a Comprehensive Odor Control Plan:
 - Controlled land application of manure
 - Routine maintenance
 - Feed Management
 - Location

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Siting Criteria #6
Odor Control Plan (continued)

- Controlled application of manure by injection based upon nitrogen and phosphorus loading from actual on-site data.
- The DAD Rental Inc. farm intends to utilize injection as the application method for livestock manure.
 - Minimizes contact with air
 - Injection is widely accepted as the best available technology for manure application.

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Siting Criteria #6
Odor Control Plan (continued)

- All livestock manure will be applied by the farm owner.
- Application equipment will contain safety controls:
 - Equipment will be visually monitored continuously
 - Emergency shut-offs in cab
 - Communication between personnel available at all times

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Siting Criteria #6
Odor Control Plan (continued)

- Example of injection with manure tanker



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Siting Criteria #6
Odor Control Plan (continued)

- Example of injection with manure tanker.



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Siting Criteria #6
Odor Control Plan (continued)

- Example of injection with drag line system.



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Siting Criteria #6
Odor Control Plan (continued)

- The DAD Rental Inc. farm has at least 1,045 acres locally per year available for livestock manure applications.
 - Utilizing local yields combined with area soil types, it is anticipated that the farm would utilize approximately 415 acres of a corn/corn rotation.

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Siting Criteria #6
Odor Control Plan (continued)

- The farm will utilize regular maintenance to minimize dust originating from the facility.
- Regular maintenance will include routine visual walkthroughs of the barns to ensure there is no manure buildup above the slatted floor and walkways and the regular cleaning of fans to prevent the accumulation of dust.

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Siting Criteria #6
Odor Control Plan (continued)

- The farm will be thoroughly pressure washed and sanitized between each production cycle. This will minimize the amount of odor causing particles that are able to leave the facility through the ventilation fans.
- The farm will ensure that the building's fans operate efficiently, thus minimizing dust buildup.
- Regular maintenance is known to reduce odor concentrations and odor intensity.

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Siting Criteria #6
Odor Control Plan (continued)

- The farm has incorporated an animal diet formulated to allow the most efficient utilization of proteins and nutrients in the feed. This dietary practice aids in the reduction of overall odors from the farm by reducing excess nutrients excreted by the animals.

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Siting Criteria #6
Odor Control Plan (continued)

- The farm complies with and exceeds facility setback distances as established in the Livestock Management Facilities Act. The residential setback is exceeded by 1,140'. The populated area setback is exceeded by 7,240'.

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Siting Criteria #6 Odor Control Plan

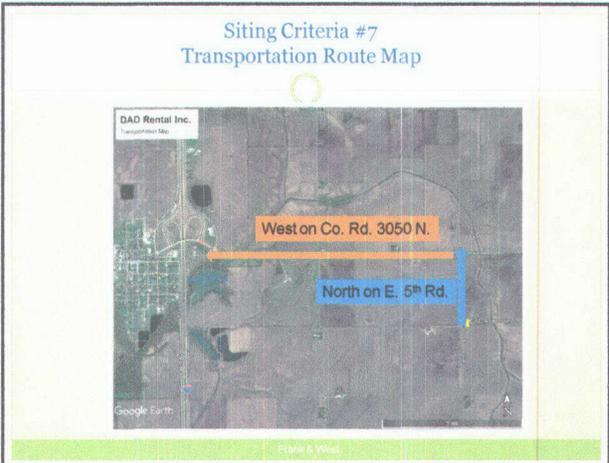
- The farm has diligently planned an overall odor control strategy by incorporating numerous odor control techniques and technologies. The farm will also continue to look for and incorporate other technologies as they become available. This strategic plan incorporates reasonable and innovative technologies that will allow the facility to operate with minimal odor impact to the surrounding area.

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Siting Criteria #7 – Traffic Patterns

- Whether traffic patterns minimize the effect on existing traffic flows.

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Siting Criteria #7 – Traffic Patterns

- East 5th Road
 - Weekly Average of 350 vehicles
- County Road 3050 N.
 - Weekly Average of 9,450 vehicles

Source: Illinois Dept. of Transportation Traffic Count
<https://www.gettingaroundillinois.com/gai.htm?mt=aadt>

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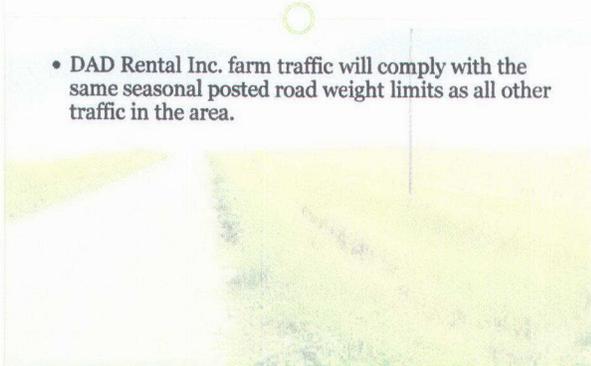
Siting Criteria #7 – Traffic Patterns

- 8 total trucks weekly
 - feed transportation and animal transportation trucks.
- DAD Rental Inc. farm traffic will consist of less than 2.3% of the average weekly vehicle traffic on East 5th Road and less than 0.09% on County Road 3050 N.

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Siting Criteria #7 – Traffic Patterns

- DAD Rental Inc. farm traffic will comply with the same seasonal posted road weight limits as all other traffic in the area.



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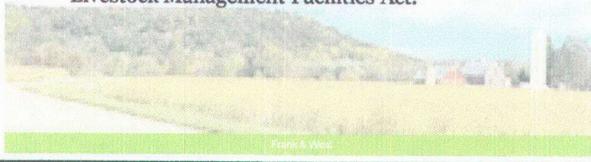
Siting Criteria #8 – Farm Consistent with Area

- Whether construction of a new farm is consistent with existing community growth, tourism, recreation, or economic development or with specific projects involving community growth, tourism, recreation or economic development that have been identified by government action for development or operation within one year through compliance with applicable zoning and setback requirements for populated areas as established by the Livestock Management Facilities Act.

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Siting Criteria #8
- Consistent with Area

- The farm is consistent with existing and planned community development of this rural agricultural area by demonstrating compliance with zoning and setback requirements.
- The farm will meet all the requirements of the Livestock Management Facilities Act.



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DAD Rental Inc. Farm

We appreciate the opportunity!

Thank You.

