



**PROFESSIONAL ENGINEER CERTIFICATION -
CONSTRUCTION OF FABRICATED MANURE STORAGE STRUCTURE**

ODA FORM ECERT-FS (Rev 9/2017)

INSTRUCTIONS

1. Use this form to certify construction of a fabricated manure storage structure as required in 901:10-2-01
2. Fill in all information requested **COMPLETELY**.
3. If additional space is needed for any portion of this form, include information on attachments as necessary.
4. Attach narratives, supporting documentation and testing results as needed.
5. This certification form must be completed, submitted, and approved by ODA-DLEP prior to the stocking of additional animals or use of the manure storage structure.
6. A professional engineer registered in the State of Ohio must certify this form.
7. Submit the Owner's Notarized Statement of Construction Conformity, along with this certification as required by OAC 901:10-2-01
8. Return this form to the address listed above.
9. Please maintain a copy of these forms in your facility operating record.
10. For more information, contact the ODA Division of Livestock Environmental Permitting at 614-387-0470.

GENERAL FACILITY INFORMATION

Facility Name	PTI#
Facility Contact Person	
Facility Address (number and street)	Telephone Number
City	Zip Code
County of Operation	Facility Contact Email
Location of Manure Storage Structure if different from Facility Address Above (nearest crossroads or mailing address)	

CERTIFYING PROFESSIONAL ENGINEER INFORMATION

Name	PE License Number
Company Name	Email Address
Address (number and street)	Telephone Number
City	ZIP Code



GENERAL CONSTRUCTION INFORMATION

Construction Start Date (month, day, year)	Construction Complete Date (month, day, year)
Name of Prime Contractor (If Applicable)	Telephone Number of Primary Contact for Contractor
Name of the Manure Storage Structure (as it appears in the PTI)	

CONSTRUCTION DETAILS: The following are the aspects of the fabricated structure that must be reviewed by the certifying engineer or their representative for compliance with the approved plans, specifications, and permit documents. Please attach applicable supporting documentation and testing results with this form (i.e. photographs, QA/QC inspection reports, concrete batch tickets, contractor’s daily log, etc.).

1.	SUBGRADE PREPARATION	YES	NO	N/A
a	Was the subgrade prepared and graded as required by the plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was the subgrade visually inspected and approved by the certifying engineer, or other designated representative, in accordance with the approved plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was the subgrade proof-rolled in accordance with the approved plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Were unsuitable soils removed and replaced in accordance with the approved plans and specifications? Explain below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Was the soil bearing capacity below footings confirmed to meet or exceed the design requirements/ assumptions? Describe below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS: (Explain any “No” answers)

2.	PERIMETER DRAIN	YES	NO	N/A
a	Was a perimeter drain system installed as specified on the approved drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was an observation stand pipe or sump installed as per plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was a shutoff installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Was the perimeter drain pipe and granular fill installed as per plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Were pump(s) installed and connected as per plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Were pump(s) connected to an electric supply?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g	Were the location of the perimeter drain system components, sump, and the outlet properly shown and described on the as-built drawings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h	Provide any additional information on the perimeter drain system installation. Please attach additional sheets/information if necessary.			

COMMENTS: (Explain any "No" answers)

3.	FOOTINGS	YES	NO	N/A
a	Were the footings located and constructed to the dimensions shown on the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was the specified reinforcing steel installed as per the approved plans and specifications (bar size, spacing, location, concrete cover, splice overlap, etc)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was the waterstop installed as per the approved plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Was concrete placement in accordance with the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Provide any additional information on wall footing construction. Please attach additional sheets/information if necessary			

COMMENTS: (Explain any "No" answers)

4.	WALLS	YES	NO	N/A
a	Were the walls constructed to the dimensions as shown on the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was the wall properly located on and tied to the footing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was the specified reinforcing steel installed as per the approved plans and specifications (bar size, bar spacing, bar location, concrete cover, splice overlap, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Were contraction control joints located and constructed as per the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Was the specified waterstop installed as per the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Was concrete placement in accordance with the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g	Was backfilling against new concrete walls performed as per the approved plans and concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h	Provide any additional information to document wall construction. Please attach additional sheets/information if necessary.			

COMMENTS: (Explain any "No" answers)

5.	COLUMNS	YES	NO	N/A
a	Were the columns located and constructed to the dimensions shown on the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was the specified reinforcing steel installed as per the approved plans and specifications (bar size, spacing, location, concrete cover, splice overlap, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was concrete placement in accordance with the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Provide any additional information to document column construction. Please attach additional sheets/information if necessary.			

COMMENTS: (Explain any "No" answers)

6.	FLOOR SLABS	YES	NO	N/A
a	Were floor slabs constructed to the dimensions shown on the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Was the specified reinforcing steel installed as per the approved plans and specifications (bar size, spacing, location, concrete cover, splice overlap, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was the reinforcing steel correctly located within the floor/slab cross section and placed on concrete bricks, corrosion resistant metal chairs or plastic chairs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Was concrete placement in accordance with the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Were contraction control joints, isolation joints, and construction joints installed in the proper location and depth as per approved plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Were contraction control joints installed in a timely manner to prevent cracking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g	Were contraction control joints properly cleaned and dried as per manufacturer's recommendations prior to filling with the specified sealant?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h	Provide any additional information to document slab construction. Please attach additional sheets/information if necessary.			

COMMENTS: (Explain any "No" answers)

7.	CONCRETE	YES	NO	N/A
a	Did all concrete mix designs meet requirements of the approved plans and the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Were the batch tickets collected and confirmed to meet the specified mix design(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Was the % air entrainment within the specifications of the approved plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Was the final slump of concrete at point of placement verified to be within the approved specifications for each mix design?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Were surfaces of forms smooth, clean, and free of holes or foreign matter/debris?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f	Was the concrete cured as required in the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g	Were the form removal procedures followed as specified in the concrete construction specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h	Was cold weather or hot weather concreting procedures followed as specified in the concrete construction specifications? Explain below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i	Provide any additional information on concrete construction. Please attach additional sheets/information if necessary			

COMMENTS: (Explain any "No" answers)

8.	RECORD/AS-BUILT DRAWINGS	YES	NO	N/A
a	Were scaled as-built drawings prepared under the supervision of a professional engineer registered in the State of Ohio?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b	Do the as-built drawings accurately reflect the actual as-built conditions? (to include dimensions; elevations; structural details; backfill details; earthwork etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c	Were test results and defensible construction documentation reviewed and consulted to verify adherence to the plans and specifications? Describe below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d	Do the as-built drawings show the final locations of all manure storage and treatment facilities relative to siting criteria (from property lines, residences, streams, roadways, wells, etc.), as required by the approved plans and specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e	Are the stamped as-built drawings included with this certification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMENTS: (Explain any "No" answers)				
9.	CHANGE ORDERS, MODIFICATIONS, DEVIATIONS, ETC.			
<p>Provide detailed explanation for any portions of construction that deviated from the approved plans and specifications. Attach additional sheets as necessary. Any deviations in structural design details from the approved plans and specifications must be approved by the engineer and shown on the record as-built drawings. Construction of manure storage or treatment facilities not meeting the approved plans, specifications and permit documents may result in denial of stocking approval and or usage of said structure.</p>				

10.	PROFESSIONAL ENGINEER'S CERTIFICATION STATEMENT
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I, _____ (your name), being a Registered Professional Engineer in the State of Ohio, do hereby attest that, to the best of my knowledge, the information on and attached with this construction certification form for _____ (name of structure), constructed at _____ (facility name), is true and accurate. The construction inspection activities, either directly overseen by _____ or as documented by _____, have been reported to me to have been performed in accordance with the approved plans and specifications.

Name _____ Signature _____ By signing this form, I attest that the information provided herein is true and accurate.	Date _____ (month/day/year)
Ohio PE License Number	
Expiration Date (month/day/year) _____	
"SEAL"	