



STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

November 17, 2003

Mr. Richard L. Walters
P.O. Box 409
Boyce, Virginia 22620

Subject: Oak Hill Plantation, Plat No. 1
Variance Request, IA 13.5.2
IDNR Project No. S2004-0149
DeSoto, Iowa

Dear Mr. Walters:

This is in response to Vance Hochstetler, P.C. request for a variance from Chapter 13.5.2 of the Iowa Wastewater Facilities Design Standards. Design Standard 13.5.2 states *"Check valves shall be suitable for the material being handled and shall be placed on the horizontal portion of discharge piping except for ball checks, which may be placed in the vertical run."*

The design variance for the proposed pumping station design including vertically positioned check valves is approved as substantially equivalent to the requirements of Design Standard 13.5.2 in accordance with Subrule 567 IAC 64.2(90) with the following conditions:

1. Only Gorman Rupp spring loaded check valves may be installed in the vertical position.
2. A cover plate on the check valve shall be provided which can be removed to inspect the entire valve on the discharge side.
3. The pumping station shall be sized and configured to allow for the addition of check valves in the horizontal portion of the discharge piping, as required by Chapter 13.10.4 which states *"Valves for submersible pumps required under Section 13.5 shall be located in a separate valve chamber. Accumulated water shall be drained to the wet well. An effective method shall be provided to prevent wastewater and gas from entering the valve chamber."*
4. A maintenance bond for a period of two to three years from the date of final acceptance shall be obtained in the name of the City of DeSoto.

If you have any questions, please call Jim Hallmark at 515-281-7767.

Sincerely,

Wayne Farrand, P.E.
Supervisor
Wastewater Section

cc: Vance Hochstetler, P.C.
Field Office #5
DNR File
City of DeSoto, City Clerk

Variance File

STATE OF IOWA
DEPARTMENT OF NATURAL RESOURCES
HENRY A. WALLACE BUILDING
DES MOINES, IOWA 50319

CONSTRUCTION PERMIT

Richard L. Walters
P.O. Box 409
Boyce, Virginia 22620

PERMIT NO.: 2004-0181-S
FILE: De Soto - Sewage
RE: Oak Hill Plantation,
Plat No. 1
PROJECT NO: S2004-0149

In accordance with the provisions of Section 455B.173.3 and 455B.174.4, Code of Iowa, and Rule 567--64.2(455B) or Rule 567--65.6(455B), or Rule 567--43.3(455B) of the Iowa Administrative Code, the Director of the Department of Natural Resources does hereby issue a permit for the construction of:

Duplex pumping station with wet well; and premanufactured valve vault, including submersible pumps, guide rails, screening basket, valves, piping, controls, electrical and alarm systems, 970 feet of 6 inch force main, 2,899 feet of 8 inch, 303 feet of 10 inch and 290 feet of 12 inch sanitary sewers, and all related appurtenances necessary to complete the project in accordance with the approved plans and specifications

Issuance of the construction permit is contingent upon the following items:

1. Only Gorman Rupp spring loaded check valves may be installed in the vertical position.
2. A cover plate on the check valve shall be provided which can be removed to inspect the entire valve on the discharge side.
3. The pumping station shall be sized and configured to allow for the addition of check valves in the horizontal portion of the discharge piping, as required by Chapter 13.10.4 which requires that "Valves for submersible pumps required under Section 13.5 shall be located in a separate valve chamber. Accumulated water shall be drained to the wet well. An effective method shall be provided to prevent wastewater and gas from entering the valve chamber."
4. A maintenance bond for a period of two to three years from the date of final acceptance shall be obtained in the name of the City of DeSoto.

The construction of the project shall be initiated within one year of issuance of this permit or this permit is no longer valid. Within thirty days after completion of construction, the permit holder shall submit a certification by a licensed professional engineer that the project was completed in accordance with the approved project documents.

The issuance of this permit in no way relieves the permittee of the responsibility for complying with any other local, state, and federal laws, ordinances, regulations or other requirements applicable to this facility.

Pursuant to Section 455B.174.4, Code of Iowa, you have the right to appeal any condition of this permit by filing with the Director of the Department of Natural Resources a notice of appeal and request for administrative hearing within thirty days of receipt of this permit.

Richard L. Walters
Oak Hill Plantation, Plat 1
Construction Permit

Permit No.: 2004-0181-S
Project No.: S2004-0149
November 17, 2003

Contact Jim Hallmark at 515/281-7767 with any questions or comments.

For the Department of Natural Resources

Jeffrey R. Vonk, Director

By


ENVIRONMENTAL SERVICES DIVISION

Date: November 17, 2003

cc: Field Office #5
Vance & Hochstetler, P.C.
DNR File
City of DeSoto, City Clerk

Plan Distribution

[1] Applicant; [1] DNR File

✓ 9-11-06 ✓

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: November 17, 2003
2. Review Engineer: James A. Hallmark
3. Date Received: November 14, 2003
4. Facility Name: City of DeSoto
5. County Number: Dallas (25)
6. Program Area: CP (Wastewater Construction)
7. Facility Type: C02 (Pumping)
8. Subject Area: 314
9. Rule Reference: 567-64.2(9)a
10. Design Stds Ref: 13.5.2
11. Consulting Engr: Vance & Hochstetler, P.C.
12. Variance Rule: 567-64.2(9)c

13. Decision: *approved*

Date: *11/18/03*

14. Appeal:

Date:

15. Description of Variance Request: A request was received from Vance & Hochstetler Engineers to locate the check valves in the discharge piping in the vertical position rather than the horizontal position as required by Iowa Wastewater Facilities Design Standards Chapter 13.5.2

16. Consulting Engineer's Justifications

- The vertical design has been used for many years and has not been a source of plugging.
- Similar designs have been approved by IDNR for package lift stations.
- This type of design minimizes the number of elbows, and space required.
- Elimination of fittings will reduce the required head on the pumps.
- Manufacturer states that valves can be installed in either the horizontal or vertical position.

17. Department's Justifications

- Not aware of any significant problems with this design.
- Concurrence with Engineers Justification.

18. Precedents Used

Oskaloosa (1982), Carlisle (1985), Perry (1988), Kellogg (1988), Fort Dodge (1991), Van Meter (1991), Alden (1996), and North Liberty (1998)

19. Staff Reviewer: *James A. Hallmark*

Date: *11/17/03*

20. Supervisor: *[Signature]*

Date:

21. Authorized by: *[Signature]*

Date: *11/18/03*