VARIANCE REQUEST

Iowa Department of Natural Resources

1.	Date: July 21, 1995		13.	**Decision:** Approved
2.	Review Engineer:	Bill Graham		Date: 7/28/95
3.	Date Received:	April 17, 1995		
4.	Facility Name:	Floris WWTF	14.	**Appeal:**
5.	County Number:	26		Date:
6.	Program Area:	CP (wastewater)		
7.	Facility Type :	C05		
8.	Subject Area:	350, number of lagoon cells		
9.	Rule Reference:	900-64.2(9)a		
10.	Design Stds Ref:	18C.5.1		
11.	Consulting Engr:	Garden and Associates, Oskaloosa, Iowa		
12.	Variance Rule:	900-64.2(9)c		

15. Description of Variance Request:

The city of Floris and the Wapello Rural Water Association are requesting a variance from the design standard which requires a minimum of three cells for all facilities greater than one acre total surface area. Floris is proposing a two cell lagoon even though total water surface area is 2.46 acres.

16. Consulting Engineer's Justifications

Small community pilot project.

17. Department's Justifications

Departmental approval for this variance is recommended since Floris is one of the small community pilot projects.

18. Precedents Used

Timber Lake Subdivision; Approved, 9-21-87

19.	Staff Reviewer: William Graham	Date:	July 21, 1995
20.	Supervisor: [signature]	Date:	7/25/95
21.	Authorized by: [signature]	Date:	7/28/95

Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

April 9, 2002

City of Riverton
P.O. Box 147
Riverton, IA 51650-0147

Attn: David Detrick, Mayor of Riverton

RE: Variance Requests
2002 Wastewater Improvements

Honorable Mayor:

The Iowa Department of Natural Resources, in accordance with subrule 567 IAC 64.2(9), has reviewed the variances requested in JEO Consulting Group, Inc.'s letter dated February 25, 2002. The following variances are **approved**:

1. A variance from Design Standard 12.5.1 allowing the use of 6" sewer in place of the minimum 8" sizing allowed by the standards where sufficient hydraulic capacity exists. This variance is approved with the following condition:

    - A minimum slope of 0.34% must be maintained in all 6" segments in accordance with Design Standard 12.5.3.

2. A variance from Design Standard 12.5.7 to allow a maximum manhole or single cleanout spacing of 500 feet. This variance is approved with the following condition:

    - Spacing of 500 feet will be allowed if written assurance is provided to the Department that sewer cleaning equipment capable of cleaning this distance will be made available when necessary.

3. A variance from Design Standard 18C.5.1 to allow a two-cell controlled discharge lagoon system in lieu of the minimum three cells required by the standards for all facilities greater than one acre total surface area.

4. A variance from Design Standard 18C.5.6.2 to allow piping with buried valves in place of an inter-cell control structure. This variance is approved with the following condition:

    - Only ductile iron piping will be used for the inter-cell lines.

5. A variance from Design Standard 18C.7.4.4 to allow installation of the influent lines at or above the elevation of the pond seal.

6. A variance from Design Standard 18C.7.4.6 to eliminate the saucer-shaped depression at the discharge point of the influent lines.

Please note that the City must also give written assurance that any additional maintnance required by proposed sewer segments with slopes providing only 1.5 feet per second full flow velocities will be provided in accordance with Design Standard 12.5.3.

These decisions are based on our review of justification presented to support your requests and our concurrence that the resulting project will provide substantially equivalent effectiveness as would be provided by technical compliance with the design standards on these issues.

If there are any questions, please feel free to contact Larry Bryant at 515/281-8847.

Sincerely,

Jack Riessen, P.E., Chief
Water Quality Bureau

c: JEO Consulting Group, Inc./Norfolk, NE
Field Office 4

JEO Consulting Group, Inc.
Engineering Architecture Surveying Planning

February 25, 2002

Larry Bryant
Wastewater Section
Iowa Department of Natural Resources
Wallace State Office Building
900 East Grand Avenue
Des Moines, IA 50319

RE: Riverton, IA
Wastewater System
JEO Project No. I937S2

Dear Larry:

The City of Riverton, IA is an unsewered community and is proceeding with the development of the wastewater system. The City has tentatively received project funding from the Iowa Department of Economic Development and the USDA Rural Development (USDA-RD).

In order to control the user rates that would ultimately offset the project costs, the USDA-RD would like the design to move forward in a manner that would work to minimize construction, operation, and maintenance costs. Accordingly, a request is being made for the following variances from the Design Standards in order to significantly reduce the cost of constructing a gravity sewer system and controlled discharge lagoon system.

Collection System:

1. Design Standard 12.5.1 – Request to utilize 6-inch diameter sewers for the 800 feet of sanitary sewer where sufficient hydraulic capacity exists and utilize a cleanout at the end of lateral sewer pipe.
2. Design Standard 12.5.7 – Request to allow maximum manhole or single cleanout spacing of up to 500 feet on gravity sewer of 6-inch and 8-inch diameter sewers. Written assurance will be provided that sewer cleaning equipment capable of cleaning up to 500 feet in length will be made available when necessary.

803 W. Norfolk Avenue, PO Box 1424 Norfolk, NE 68702-1424 Tel (402) 371-6416 Fax (402) 371-5109 www.jeo.com

Treatment System

3. Design Standard 18C.5.1 – Request to allow a two cell controlled discharge lagoon system for facility with approximately 4.1 acres of total surface area.
4. Design Standard 18C.5.6.2 – Request to allow piping with buried valves in place of Inter-Cell Structure.
5. Design Standard 18C.7.4.4 – Request to allow installation of influent lines at or above elevation of pond seal.

The USDA-RD believes that the requested Design Standard Variances for the Collection System will provide equivalent effectiveness of transporting the wastewater from the service connection to the treatment system. The smaller diameter gravity sewer should adequately serve the small and stable population of Riverton. There are now commercial companies capable providing cleaning services of more than 500 feet between service entry points.

The requested Design Standard variances for the treatment system are requested by the USDA-RD to minimize construction costs while providing equivalent treatment effectiveness. The two cell system will have the hydraulic capacity necessary for 180 days storage and the secondary cell will have approximately 75 days storage capacity. This would allow either cell to be taken out of service for repairs or maintenance.

If you require any additional information to further evaluate the requested variances, you may contact me in our Norfolk office at 402-371-6416 or Gary Sasse in our Nebraska City office at 402-873-4509.

Sincerely,

Roger S. Protzman, P.E.
Project Engineer

RSP:skw