



April 28, 2022

Mr. Jay Adelman  
Van Lakes Homeowners Association  
905 Flag Court  
Auburndale, FL 33823  
[pizzaman1@earthlink.net](mailto:pizzaman1@earthlink.net)  
863-206-4226

**Re: Van Lakes subdivision drainage system rehabilitation  
RES # 21-177**

Dear Mr. Adelman,

As we discussed, attached for your review and use is a general summary of what we anticipate will be involved in the rehabilitation/reconstruction of the Van Lakes stormwater collection and disposal systems.

As you will recall, during our conversations and meeting with staff from the Southwest Florida Water Management District (SWFWMD), the SWFWMD staff agreed with our proposal to rehab/reconstruct the system and facilities back to the original designed conditions. In theory, this should restore the system to its proper operation and reduce the occurrences of overload and flooding that have been occurring in recent years, without the complexities of applying for a brand-new SWFWMD permit that would be required were the goal to design and install a brand-new system.

Background:

The systems in the subdivision's three phases were designed to collect and dispose of runoff through percolation into the soil via gravel-filled trenches, similar to the operation of septic drainfields. Unfortunately, also similar to septic drainfields, systems depending on percolation have a useful life, after which they cease to function properly. In most cases this is due to the buildup of fine dust and vegetative materials in the system, which results in the "plugging" of the soil pores that would normally allow passage of the liquid sought to be percolated into the soil. This appears to be the cause of the present malfunction of the Van Drive (Phase 1) systems.

The other two phases of the subdivision, known as Van Lakes II and III, were designed with a different type of system, where runoff would be allowed to pond along the fronts of the lots in the right-of-way and percolate there. These systems depended on "ditch blocks," small earthen dams perpendicular to the roadside swales. These dams were designed to force the runoff to pond up in front of each lot until the water percolated into the soil. Over time, however, these ditch blocks have been eroded or removed by homeowners, reducing or eliminating the vital ponding function and allowing runoff to flow freely instead.



Anticipated rehabilitation/reconstruction project features:

The current project will attempt to correct these conditions and hopefully return the systems to their original design configuration by the following actions:

1. The Van Drive system will be excavated and the existing inlets, pipes, gravel-filled trenches, and other features will be removed. These will be replaced in kind with new inlets, new pipes, and new gravel so that the original configuration is restored. The gravel-filled trenches will be made somewhat wider in an attempt to remove all the "plugged" soil surfaces on the sides of the trenches.
2. The Van Lakes II and III systems will be restored by regrading the area between the road edges and the right-of-way lines, restoring the areas to the original design configuration of roadside swales periodically blocked by the small dams as discussed above. The swales and dams will be sodded upon completion. This work is intended to restore the system to its original design and operating conditions.
3. Depending on the final configuration of the reconstructed drainage systems, new easements may be required to allow the HOA to perform maintenance and repair of the systems. While a number of drainage easements are shown on the plats of the three phases, it appears that some portions of the existing systems are not adequately protected by easement, and it may be that additional easements will be required.  
This may be something that the HOA can implement easily, depending on the HOA documents and covenants, or it may be something that will require negotiation with individual homeowners to implement. As a worst case, it may involve some sort of court action (note that I am not an attorney and am only offering my lay opinion on this).

Explanatory exhibits:

Attached are exhibits that generally explain and graphically depict the items discussed above. These can be distributed to your homeowners to help educate them on what to expect as the rehabilitation/restoration project moves forward. These exhibits are not intended to cover every detail of the anticipated work, but are intended to give a general idea of what can be expected when the project gets underway.

Rayl Engineering and Surveying, LLC appreciates the opportunity to be of service to you. If you have any questions, please contact us.

Sincerely,

A handwritten signature in blue ink that reads "Glenn I. Clover".

Glenn I. Clover  
Senior Project Manager  
Rayl Engineering and Surveying, LLC





## VAN LAKES COMMUNITY STORMWATER DRAINAGE SYSTEMS REHABILITATION/RECONSTRUCTION PROJECT

\*\*\* Explanatory exhibits \*\*\*

In recent years, the stormwater systems in our Van Lakes community have not been performing as they were intended to, with the result that there have been instances of flooding. The HOA is taking measures to attempt to correct this problem and restore our drainage systems back to their original operating conditions.

Our systems were originally installed in the 1980's. Over the years since then, natural deterioration and accumulation of debris and dirt inside the systems have resulted in the current less-than-desirable levels of operation. The present project seeks to fix this.

There are two general areas of work that must be addressed:

1. The underground percolation-disposal systems along Van Drive have become internally clogged, requiring removal and replacement of the components to restore the system's operating efficiency.
2. The surface percolation-disposal systems along Van Lakes Boulevard, Liberty Lane, and Flag Court have deteriorated over the years and must be regraded to their original configuration.
3. Depending on the final configuration of the reconstructed drainage systems, new easements may be required to allow the HOA to perform maintenance and repair of the systems. While a number of drainage easements are shown on the plats of the three phases, it appears that some portions of the existing systems are not adequately protected by easement, and it may be that additional easements will be required.

The sketches on the next two pages will provide a general idea of the locations where work is anticipated in order to carry out the rehabilitation and reconstruction that is required. The areas shown are conceptual at present, and may be enlarged or reduced based on actual field conditions.

## UNDERGROUND PERCOLATION SYSTEM VAN DRIVE

The existing inlets, pipes, and gravel-filled percolation ditches in the areas shown will be removed and replaced. This will involve excavation (digging) in the areas noted. Areas disturbed during construction will be resodded after construction is complete. There may be other areas that will be affected in addition to those shown here, depending on what other features of the system are found during construction.







**SURFACE PERCOLATION SYSTEMS  
VAN LAKES BOULEVARD, LIBERTY LANE, AND FLAG  
COURT**

The roadside, sideyard, and backyard swales that were part of the original design and construction of these areas will be reconstructed to match the original design. This will involve regrading of the areas noted and construction of small earthen dams perpendicular to the swales so that runoff water will pond until it percolates into the soil. Regraded areas will be resodded after construction. Piping systems will be evaluated and possibly reconstructed as well.