

## APPENDIX B: Corrections & Rebuttal

Date: August 18, 2005

### Re: Tollgate Drainage: Safety, Legal Liability Exposure and Accessibility

#### Background and Situation:

- ? Original Tollgate drainage system was engineered and functioned effectively for 20+ years. No atypical erosion impacted the alley from 106 to 112.
  - o There is currently less erosion and more grass in the alley than there has ever been in the last 6 years.
- ? Manipulation of original engineered drainage system initiated to promote the growth of standard lawn grass between 114 and 116 and 118 and 122 by placing dams between 114 and 116 and 118 and 122 in the rear next to the alley. This alleviated one problem (i.e., create ground conditions suitable for standard lawn grass), but created serious safety, legal liability exposure and accessibility issues downstream.
- ? Manipulation of engineered drainage system reduced from 3 to 1 the number of drains for the alley behind units 106 to 112;
  - o During a heavy downpour there is so much water coming down from Broad Street that there is a 3 inch deep river of water coming down between 114-116 and 118-122.
- ? further, accessibility to the alley was diminished by the placing of shrubs between 114 and 116 next to the alley.
  - o The shrubs were placed there at the request of Ray Wilkinson, then chair of the landscape committee, to hide the electric transformer. He checked with the city to ensure that the plants were not too close to the transformer, which by the way already blocks the walkway.
- ? Specifically, water can no longer drain from the alley to the drains in front of units 114 and 116 and 118 and 122.
  - o As noted above, plenty of water comes over the landscape timbers.
- ? The shrubs noted above also effectively limit access to the alley for units 110 and 112 from 2 pathways to 1.
  - o There is no restriction to foot traffic between 114 -116. In fact, the access to the rears of 106-112 is far superior to the majority of residences in Tollgate. Most residents on the south side have to walk through a narrow path in the ivy and avoid tripping over tree roots. It would cost a small fortune to bring the rest of rear property of tollgate up to the level that 106-112 enjoys.
- ? Result of manipulation of the engineered drainage system: Greatly accelerated erosion in the alley behind 106 to 112 resulting in safety, liability exposure and accessibility issues.

- There is no more erosion & therefore no more safety, liability exposure or accessibility problems that exceed any of the other rear areas of Tollgate.
- ? Due to deep erosion behind residences 108 and 110, a brick and slate walk-way patch was installed behind 108 and 110 without prior consultation with the impacted residents.
  - On the contrary, the repairs were done in response to an e-mail from Karen Stephenson about the erosion problems. The Chair of the landscape committee communicated with her our intentions to effect further repairs. When questions were brought up the day the work was being done, Karen was contacted in Hawaii to ensure it was ok to proceed. Since Karen was the only one who contacted the landscape committee, she was the one who was consulted. NOTE FROM KATHY (LANDSCAPE CHAIR): In fact, the brick and slate walkway was voted upon at a meeting of the full Homeowners Association in November 2004, to be built when weather improved in the spring of 2005.
- ? The patch is very limited in scope and has not fixed the root cause of the erosion/drainage problem – that is the reduction in drains from 3 to 1.
  - One of the root causes of the significant erosion behind 110 was the damage done by workmen who were installing a new patio at 110. Furthermore, additional runoff from the rear yard did not help the situation.
- ? One (1) drain for the entire alley is insufficient.
  - Drainage Engineers from the City of Falls Church and 2 landscape companies all agreed that the single drain behind 106 is more than sufficient to hand all the water flow, even during a heavy downpour.
- ? The patch itself is a liability issue because it is inclined and very slick and slippery during and after precipitation. This impacts both Tollgate residents and non-residents (e.g., delivery people).
  - It is a very slight incline and is definitely less slippery than other rear areas that are nothing but slippery mud after a rainstorm. There is significantly less liability here than at other rear entrances throughout tollgate.
- ? Current Situation:
  - Safety issue for anyone using the alley. See above.
  - Substantial HOA legal liability exposure (i.e., slip and fall). No more than the rest of Tollgate.
  - Accessibility to the alley is significantly impacted for residents of 110 and 112. These units have only one (1) effective means for access to the rear of their residences via the path between 106 and 108. How is accessibility impacted? You can get to the rear area from both the 106 and 114 right-of-ways.
  - The right of access and enjoyment to an HOA common area is severely impacted. Severely? How? Speaking of adverse impacts,

what about the limitation to access for 102-104 when they have to traverse the jungle behind 106.

**Observed Facts:**

- ? Residents of 110 have observed on numerous occasions precipitation cascading down the alley that was ankle high depth; including ankle high depth water next to the green utility box between 114 and 116.
  - o The above was documented pre and post patch (noted above)
  - o Resident of 106 has observed the same.
  - o Residents of 114 and 118 have observed ankle deep water cascading down their side yards since the landscape timbers were installed. This happens with every thunderstorm. The landscape timbers only divert some of the water, not all of it.
  
- ? Resident of unit 112, an original Tollgate owner, never observed nor experienced alley drainage issues until after the above-mentioned dams were installed. Since the dams were installed, the following has occurred:
  - o Backyard floods
  - o Expensive flagstone has been broken (due to water flooding into the premises and lifting the stones).
  - o An attempt to fix the problem by placing a piece of wood in front of the rear gate of 112 does not work (especially with the high water noted above by residents of 110 and 106).
  - o The stone has been broken for years and will be replaced. I have observed during a rainstorm that water was being trapped INSIDE the yard because it couldn't get out fast enough. The wooden barrier has been removed.
  
- ? Other notes:
  - o The situation described above will result in wall damage (i.e., need for expensive re-pointing of the brick) and will undermine the stability of the wall structures.
  - o This is not true. The wall has a footing that goes down at least 2 feet below ground level and cannot be undermined. It will take more than a little water to erode the mortar in the brick walls. Furthermore, the latest repairs have solved the problem with water running along the wall, per Kevin Stephenson.
  - o Erosion will accelerate greatly in the Fall/Winter months (as it has in the past) after the summer vegetation disappears (note: resident of 106 seeded heavily from 106 to 112 to help mitigate damage this summer).
  - o It remains to be seen whether or not any further erosion will occur.
  
- ? **Conclusion:** Present safety, legal liability exposure and accessibility will only be compounded by the current manipulation of the original engineered drainage system.

- ? As was stated during the landscape meeting, many things have changed in Tollgate in the last 20+ years that have made the original drainage plan obsolete. The problems with the original drainage plan are many:
- o The owners of 122 have water cascading into their basement during a thunderstorm. (No changes were made there).
  - o 116 had water in the basement prior to the landscape timbers being installed and has not had a problem since.
  - o The rear yards at 114 and 118 were a swampy mess prior to the modifications.
  - o The side yards between 114-116 and 118-122 were a bog where grass would not grow prior to the modifications.
  - o From this, I would have to conclude that the “original engineered drainage system” was not working and going back to that situation would be unwise.

### **Proposal:**

1. Immediate action: remove the dams and regrade the land around the dams prior to the Fall/Winter months when the opportunity for erosion is the greatest.  
? I suggest we wait and see if there is any further erosion.
2. Retain a qualified/licensed civil engineer to examine the entire Tollgate drainage system and make recommendations  
? Who is going to pay for this?
3. Consider replacing standard lawn grass with native Virginia plants and grasses between units 114 and 116 and 118 and 122 (and in other locations as appropriate). Such plants and grasses are more suitable for the environment and terrain of Northern. Virginia.  
? The only native Virginia grass I know of is crabgrass & nothing will kill that, but I don't think we want to reseed Tollgate with crabgrass.