

Preliminary Hearing Report
Ruder / Toot
Drainage Petition per O.R.C. 6131
August 29, 2005

This report has been prepared for the preliminary hearing on a drainage improvement petition filed by Jeff and Margaret Steen and others on February 27, 2006. These signatures account for 27 of 104 parcels within the watersheds. These 27 parcels account for approximately 27 % of the total watershed acreage and 44% of the 61 total residences. The general location and course of the requested improvements is stated in the petition as follows:

“Commencing in Delaware County, Liberty Township, within the Ruder #86 and Toot #98 watersheds and generally following, but not limited to the course and termini of the existing improvements.”

The following is the nature of the work petitioned:

“ Generally improve the drainage, both surface and subsurface, to a good and sufficient outlet, by replacing, repairing, or altering the existing improvements as required and /or creating new surface subsurface drainage mains or laterals as requested by this petition.”

Petition Process

This petition has been submitted according to section 6131 of the Ohio Revised Code, which authorizes The Board of Commissioners to act on behalf of benefited property owners to make drainage improvements. If The Board of Commissioners decides to proceed with a project, the costs related to the improvements and the development of plans, report and schedules are assessed to the landowners in the watershed according to the benefit received to their watershed acreage. These special assessments will be added to the property taxes for each property and can be spread over a maximum of an 8-year period. Property owners may also choose to pay their assessment in a lump sum payment prior to placement on their taxes. Additionally, the improvements will be placed in perpetuity on the Delaware County drainage maintenance program and an annual maintenance assessment will be placed on property tax bills. These annual maintenance assessments are generally in the range of 2% to 3% of the construction assessment.

It should be noted that property owners are only assessed for those improvements that are located downstream from their properties. No property is assessed for improvements located “upstream”. The public agencies that own rights of way for public roads would also be assessed for both construction and maintenance costs in the same manner as private property owners.

The decision to approve a petition project is a 3-step process. First, a viewing of the proposed improvement is conducted for the commissioners to familiarize themselves with the watershed and general conditions. The commissioners conducted the viewing for this project on May 1, 2006. Next, a preliminary hearing is held to consider the initial feasibility of the proposal. It is this preliminary hearing that is before us this evening. If this petition is approved, a final hearing will be conducted to further consider this petition. At that time, final details such as the engineering plans, specifications and a schedule of assessments to benefited landowners will be known.

Existing Conditions

The Delaware Soil and Water Conservation District used site visits, aerial photos and soils maps to develop the estimates and recommendations included in this preliminary report.

The total watershed is approximately 500 acres. The current predominant land use in the watershed is rural residential, with approximately 61 rural residences. Agriculture is also a significant land use with the remaining portion in wooded brushy areas and road rights of way. A historical records search of the drainage improvements in the watershed found they were initiated over a period of 44 years between 1881 and 1925 with the 1925 project being the most recent petition in the Toot #98 sub watershed. A total of 7 petitions have been filed to address the various sub watersheds across the area. The improvements varied from open channel construction and subsurface drainage main and sub main installation to reconstruction of the earlier improvements.

Based upon the above information and an investigation of the existing conditions performed by the Delaware Soil & Water Conservation District the following determinations and observations have been made. Overall the drainage system is not functioning per design due to an overall lack of maintenance and deterioration. The subsurface drainage system shows signs of failure in the mid portion of the watershed and sporadic "blowouts" in the upper reaches of the drainage area. The surface grade appears to be uneven and restricted due to sediment accumulation, excessive woody vegetation and lack of planning during the development of the numerous residences. While it is clear that individual landowners have taken some efforts to maintain some minimum level of function, these efforts have been hampered due to the absence of modern comprehensive system planning and maintenance.

Proposed Improvements

The proposed improvements would consist of the following basic elements. For clarity the estimate has been divided by the two major sub watersheds mentioned in the petition.

Ruder #86 Sub watershed Main and associated Laterals

Open Channel Restoration/Clearing	3000 Feet	\$9,000
Seeding and Mulching	9 Acres	\$19,125
Surface Drain Shaping/ Grading	7200 Feet	\$21,600
Subsurface Drain Installation/Disposal 10 to 18 inch	7200 Feet	\$81,625
Grade stabilization Structure	1 Lump	\$10,000
Private Drive Culverts	7 Lump	\$42,000
Farm Crossing	1 Lump	\$3,000
Fence removal for reuse	500 Feet	\$5,000
Contingency	20%	\$38,270
	Construction Subtotal	\$229,620
Engineering and Construction Inspection	8%	\$18,369
Drainage Maintenance Fund Start up	2.5%	\$5,740
	<u>TOTAL</u>	<u>\$253,729</u>

Toot #98 Sub watershed Main and associated Laterals

Open Channel Restoration/Clearing	650 Feet	\$2,000
Seeding and Mulching	6 Acres	\$13,500
Surface Drain Shaping/ Grading	4900 Feet	\$14,700
Sub Surface Drain Installation/Disposal 8 to 15 inch	4900 Feet	\$49,900
Private Drive Culverts	9 Lump	\$54,000
Fence removal for reuse	100 Feet	\$1,000
Contingency	20%	\$27,020
	Construction Subtotal	\$162,120
Engineering and Construction Inspection	8%	\$12,969
Drainage Maintenance Fund Start up	2.5%	\$4,053
	<u>TOTAL</u>	<u>\$179,142</u>

Combined Project estimate **\$432,871**

It is important to keep in mind the above outlined work items and associated cost estimate is preliminary and not based on an actual site-specific survey and investigation.

Assessments

If the project moves forward to the second hearing, the Ohio Revised Code instructs the County Engineer to calculate the assessments to individual property owners based on the benefits received from the improvements for the various properties in the watershed. The ORC further defines benefits as:

- Elimination or reduction of damage from flooding;
- Removal of water conditions that jeopardize public health, safety, or welfare;
- Increased value of land resulting from the improvement;
- ... lands that have been removed from their natural state by deforestation, cultivation, artificial drainage, urban development, or other manmade causes shall be considered as benefited by an improvement required to dispose of the accelerated flow of water from the uplands.

Individual parcel assessments are not calculated for the preliminary hearing and are only calculated if the petition moves forward to a second hearing.

Factors Favorable/Unfavorable

Section 6131 of the Ohio Revised Code requires the County Engineer to state in a report, factors favorable and unfavorable to a proposed project estimate the cost of the project and state an opinion as to whether the benefits of the project exceed the cost. The following information is presented for your consideration:

Factors favorable to the improvement:

1. Improved surface and subsurface drainage in the watershed.
2. Probable increase in productivity on farmlands.
3. Improved outlet for subsurface drainage components of household sewage treatment systems.
4. Reduces future deterioration of agricultural tile system.
5. Annual inspection and maintenance of improvement in perpetuity.

Factors unfavorable to the improvement:

1. Removal of existing trees and brush in improvement area.
2. Temporary disruption during construction.
3. Cost of construction and maintenance may be a burden to some landowners.

Benefits versus Cost

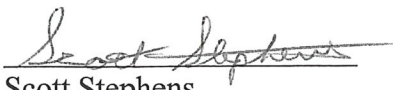
Assessments for property within the watershed are calculated based on the benefits derived. Based on a Soil and Water Study conducted by the Cooperative Extension Services of the Ohio State University in July of 1979 titled "Drainage—What is it Worth" stated that typically drainage improvements in agricultural areas are beneficial due to increased agricultural crop yields. The main premise of this study was that benefits = increased yield x market price." This benefit does not take into consideration other drainage benefits such as more timely tillage, harvesting, or improved drainage for area residences.

The increased value or benefit for residential properties is much more subjective and difficult to quantify. However, for residential properties the lack of an adequate drainage outlet can dramatically deteriorate the condition of household sewage treatment systems potentially limiting the value of the home for resale as well as costing thousands of dollars to repair or construct an alternate sewage treatment system should the existing system fail. It would also be reasonable to consider the cost of environmental degradation due to residential sewage treatment system that may not be functioning properly. Other benefits that are commonly perceived as a result of drainage improvements focus on quality of life and positive neighborhood perception. Communities that have planned and maintained storm water drainage infrastructures, generally have higher resale values than those communities that are known to have a history of drainage problems or flooding.

Based on all of the information gathered and generated for this project, I believe this project is technically feasible and would adequately serve the watershed's drainage needs. However, the Board of Commissioners should be mindful that this project as proposed is extensive and significantly more costly than other projects recently approved by the board. This project may be a financial burden to some landowners in the watershed. The testimony brought to the Board by the landowners as to whether the benefits of this project exceed the costs, should be given consideration in the decision to move forward with this project.

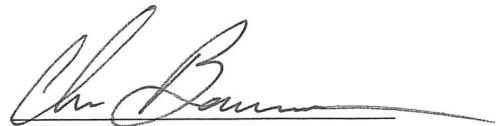
Should this project proceed to a final hearing, the petition bond will be returned and detailed plans, specifications, estimated costs and schedule of assessments would be prepared. Additionally, a comprehensive benefit versus cost analysis will also be performed to further determine the feasibility of constructing this proposed project.

Prepared by,



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Delaware Soil and Water
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Approved by,



Chris Bauserman P.E., P.S.
Delaware County Engineer