

III.F.

Memorandum

Department of Planning, Public Works & Parks

To: Michael Herring, CA
From: Mike Geisel, DPPW & P
Date: 9/16/2011
Re: Eberwein Construction



As you are aware, the City of Chesterfield acquired the 18 acre Eberwein tract at the intersection of Old Baxter and Highcroft for parks purposes in 2009. The Eberwein tract is situated at the crest of two watersheds, with approximately 1.4 of the tract draining eastwardly across Old Baxter Road, feeding the retention pond in Baxter Oaks subdivision, while the majority of the tract drains westwardly into an improved sewer behind Dierbergs Marketplace.

Recently, the trustees of Baxter Oaks have alleged that the City's construction activities on the Eberwein site have contributed to siltation entering their lake and have asked the City to participate in removing the silt from the lake.

Our experience with the Baxter Oaks lake extends back to the early 1990's, when we were asked to repair and reconstruct a pipe discharge into the lake. Since that time, we have had ongoing communications with residents and trustees about the condition of the lake and concerns with lake siltation. The initial complaints about siltation alleged that the then, privately owned agricultural fields on the Eberwein site allowed mud to flow into the lake. Subsequently, there were concerns expressed and damage alleged with the City's reconstruction of Old Baxter Road. More recently, at the request of the Baxter Oaks residents, the City required a pre and post construction survey of the lake in conjunction with the Villages at Olde Baxter Square residential development. Currently, the trustees are suggesting that the Eberwein park development has caused sediment to enter the lake and therefore requested assistance from the City.

Without attempting an exhaustive treatise, it should be understood that under any conditions, sedimentation of a water body is a normal and natural process. Even under undisturbed conditions, soil particles of various sizes are dislodged and conveyed by overland water flow. In fact, there are multiple soil loss models and equations dedicated to predicting sediment transfer rates. The City has had extensive experience in this area and has been a vigorous proponent of erosion and sediment control activities. Despite the fact that sediment transfer occurs, the larger question is whether or not a development, construction, or other physical disruption of the soil allowed for an unnatural or excessive conveyance of sediment into a water body over and above that amount that otherwise would occur. Accordingly, being well aware of the extreme concerns associated with the lake siltation, Staff planned for and required multiple and redundant sediment control during the construction of the Eberwein improvements. These facilities were

Mike Herring
Eberwein Construction
September 16, 2011
Page two

regularly inspected, cleaned, and when necessary, modified. [Unfortunately, we are also aware of instances when select controls were inexplicably moved by residents during rain events, believing that it was necessary to assist motorists.]

Councilmembers Grissom and Grier have had multiple communications with Staff with regard to the Eberwein site and the sediment concern. At their request, we have verified that we possess the post construction survey of Baxter Oaks Lake, completed by the developers of the Villages at Olde Baxter Square in 2008. Further, we have solicited a proposal to conduct a new survey of the lake from the same company who performed the previous survey. The proposed cost of that survey is \$1,825. This price includes calculations to determine the deviation in the lake bottom as compared to the 2008 survey. It does not, however, include any analysis of the natural rate of sediment, nor does it provide for any analysis of the source of sediment entry if found.

To be clear, [it is my belief that the City has been a good steward of the land and has exercised a great deal of care in preventing sedimentation damage to the Baxter Oaks Lake.] [It is also my belief that the City's activities did not contribute any excessive or undue sediment into the lake as a result of our construction activities.] The City has taken multiple, redundant precautions to prevent sediment from entering the Baxter Oaks Lake from our Eberwein Park construction. Each and every rain, turbid water enters their lake. It did before we started work, and it will after we finish work. In any rain event, clay, dirt, dust and simply flowing water entering the lake at the storm sewer discharges stirs up previously settled materials. It is an ongoing and natural process. To illustrate, I've enclosed photos of two storm sewer inlets upstream of the Eberwein Park site on Old Baxter Road, taken on 9/14/2011, which show extensive silt, soil, and debris accumulated in the inlet sumps. I've also enclosed photos taken from 2004, which depict discolored water flowing across Old Baxter Road. The real question is whether or not our construction processes have unnaturally or excessively contributed to siltation over and above the natural rate of siltation.

Councilmember's Grissom and Grier have requested that I obtain the estimated cost to perform the lake survey, and subsequently forward to the Planning and Public Works Committee for discussion, As such, I recommend that this item forwarded to the Planning and Public Works Committee at their next meeting on September 22, 2011, such that they can provide direction to Staff.

If you have any questions or require additional information, please advise.

Attachments

Cc Brian McGownd, Public Works Director – City Engineer
Aimee Nassif, Planning and Development Services Director

OK'd
JMG
9/16/11

Memorandum

Department of Planning and Public Works



To: Planning and Public Works Committee
From: Susan Mueller, Principal Engineer *S Mueller*
Date: September 7, 2011
Re: Professional Services for elevation survey of Baxter Oaks Lake

In April, 2008, Cornerstone Land Surveying & Civil Engineering, Inc. was retained by Flower Homes to perform an elevation survey of the private lake in Baxter Oaks Subdivision located off of Old Baxter Road. The survey was required as part of the posting and release of a Lake Protection bond for subdivision construction at Village at Old Baxter Square. The survey had shown little or no siltation accumulation due to the construction activities at the Village at Old Baxter Square.

Following two recent City construction projects, one along Old Baxter Road in 2008, and another within Eberwein Park in 2011, Baxter Oaks subdivision residents raised concerns regarding the potential for construction related silt to have accumulated in their lake. At the request of City Council, we requested the same company, now named Glasper Professional Services, to provide a proposal to re-survey this private lake and estimate any volume change since the April 2008 survey.

The attached proposal from Glasper Professional Services in the amount of \$1,825.00 is presented for your review and consideration.

cc: Mike Geisel, Director of Planning and Public Works
Brian McGownd, Public Works Director-City Engineer
Aimee Nassif, Planning and Development Services Director

PROFESSIONAL SERVICES PROPOSAL/CONTRACT



September 7, 2011

City of Chesterfield
Susan Mueller
#690 Chesterfield Parkway West
Chesterfield, MO 63017
Ph: 636-537-4757 (O)
Ph: 314-680-9806 (C)
smueller@chesterfield.mo.us

**RE: Old Baxter Rd. Lake
GPS #05-229**

Dear Susan Mueller,

We are pleased to offer you our proposal for professional services on the above referenced project. Our mission is EXCELLENCE, realized by completing Every Project, On Target, On Time and On Budget.

Our team is committed to providing professional services in an efficient, timely and cost effective manner while being thoroughly responsive to your needs. We look forward to the opportunity to be of service to you and thank you for your consideration.

PROPOSED SERVICES:

Topographic Survey of Lake

U.S.G.S. Elevations and 2' contours along top of silt in bottom of lake; price also includes the calculations to show the difference in lake volumes.

Proposed Fee:

\$1,825.00

PROFESSIONAL SERVICES PROPOSAL/CONTRACT (05-229)

Extra Services (Extras)/Re-work (Re-staking):

1. Services not specifically identified in this agreement are subject to additional fees. Changes in the description of services of the scope of work shall be agreed upon in written contract, addendum or confirmation letter. Any additional field verification services requested by the contractor will be considered beyond the scope of this contract and will be billed hourly. No time or expense has been allotted for meeting requested by client or clients appointed representative, thus any meetings will be billed hourly with for professional service.

Payment for Services:

Invoices for professional services and all associated billable items will be mailed, emailed and/or faxed to client upon the completion of the project. For projects whose duration is greater than two weeks, invoices will be sent on the first and fifteenth of each month and will be based on the percentage of completion of the contract at that time. Payment is due upon receipt of invoice or must be paid within 30 days of the invoice date to avoid penalties.

Payment Terms:

For all payments not received within 30 days of the invoice date, interest at a rate of 2% per month will be assessed and applied to client's bill. Invoices not paid in full within 90 day, will be assessed a \$200.00 service and processing fee each month until the 179th day of delinquency. Invoices not paid in full within 180 days, will be assessed an additional \$500.00 service and processing fee and will be presented for court action. Client agrees to pay all court costs and applicable attorneys' fees in the event Glasper Professional Services elects to file a Lien on the project property.

Reimbursable:

Items such as printing costs, mileage to meeting, gathering, unscheduled site visits, parking fees, recording fees, deed costs, plat fees, courier costs, inspection fees, connection fees, application fees, special escrows, etc., that are paid by Glasper Professional Services for the convenience of the client and/or the project, will be billed as reimbursable items.

General Conditions:

1. Requests for professional services provided by Glasper Professional Services may be approved and accepted by written agreement received by mail, email, or facsimile. This proposal/contract shall become void if not signed by the appropriate personnel and returned to Glasper Professional Services within 30 days. Should this proposal/contract become active after 30 day, the client agrees that Glasper Professional Services shall review the proposed dollar amount for services and if applicable, adjust accordingly. These services will be provided in accordance with generally accepted practices performed by professional performing under similar conditions.

2. The client agrees to do the following in a timely manner as a part of this contract:

- a) Provide all available information pertaining to the project including previous plans, reports and any other data relative to the project.
- b) Provide written notice to Glasper Professional Services concerning developments or complications, of which the client becomes aware, which may affect the scope of services being provided by Glasper Professional Services on this project.

3. Glasper Professional Services may utilize information compiled and/or furnished by others in the course of preparing plans. Glasper Professional Services will not be responsible for any errors or omissions, which have been incorporated into the plans.

PROFESSIONAL SERVICES PROPOSAL/CONTRACT (05-229)

Liability:

Glasper Professional Services disclaims and assumes no liability for damage arising from or related to force majeure, labor difficulties and damages resulting from delays or for any consequential special, punitive or compensatory damages arising from negligence. All fees for professional services are with the standard professional liability coverage of one million dollar single occurrence, two million dollar aggregate. If client requires Glasper Professional Services to obtain additional coverage, said additional expense will be added to the total proposed fees.

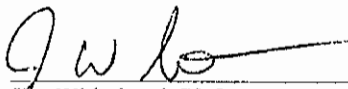
Ownership of Documents:

Title to all final documents, drawings, specifications, and the like with respect to work performed under this Agreement shall vest with Client at such time as Client has compensated Glasper Professional Services, as provided herein, for the services rendered by Glasper Professional Services in connection with which they were prepared. Notwithstanding the above, all computer data and models, field data, or other work product used or developed by Glasper Professional Services in performing its work are proprietary and shall remain property owned solely by the Glasper Professional Services.

Termination:

This agreement may be terminated by either party upon receipt of written notice, received within seven days of the originating contract date. In the event of termination, Glasper Professional Services shall be paid for all service performed and rendered up to termination date, including all reimbursable and termination expenses. Until such final payment is received, no form of deliverable shall be released to client, nor shall the client use, sell, license, convey or otherwise dispose of product delivered to date in any such manner. Suspension of work shall not constitute breach of agreement, nor shall Glasper Professional Services be held liable for any such delay of the project. In the event suit is commenced to enforce the terms of this agreement, the prevailing party shall be entitled to recover its court cost and applicable attorney's fees.

If this proposal/contract is acceptable, please sign and return copy to office of Glasper Professional Services. Your signature on this document signifies that you have read, understood and agree to the terms hereon and it will serve as authorization to proceed with the professional services listed above.



Jim Whitehead, PLS
COO of Surveying

9/2/11

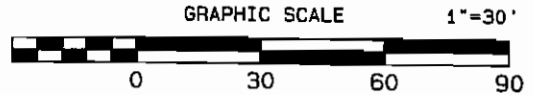
Date

Accepted by:

Name, Title

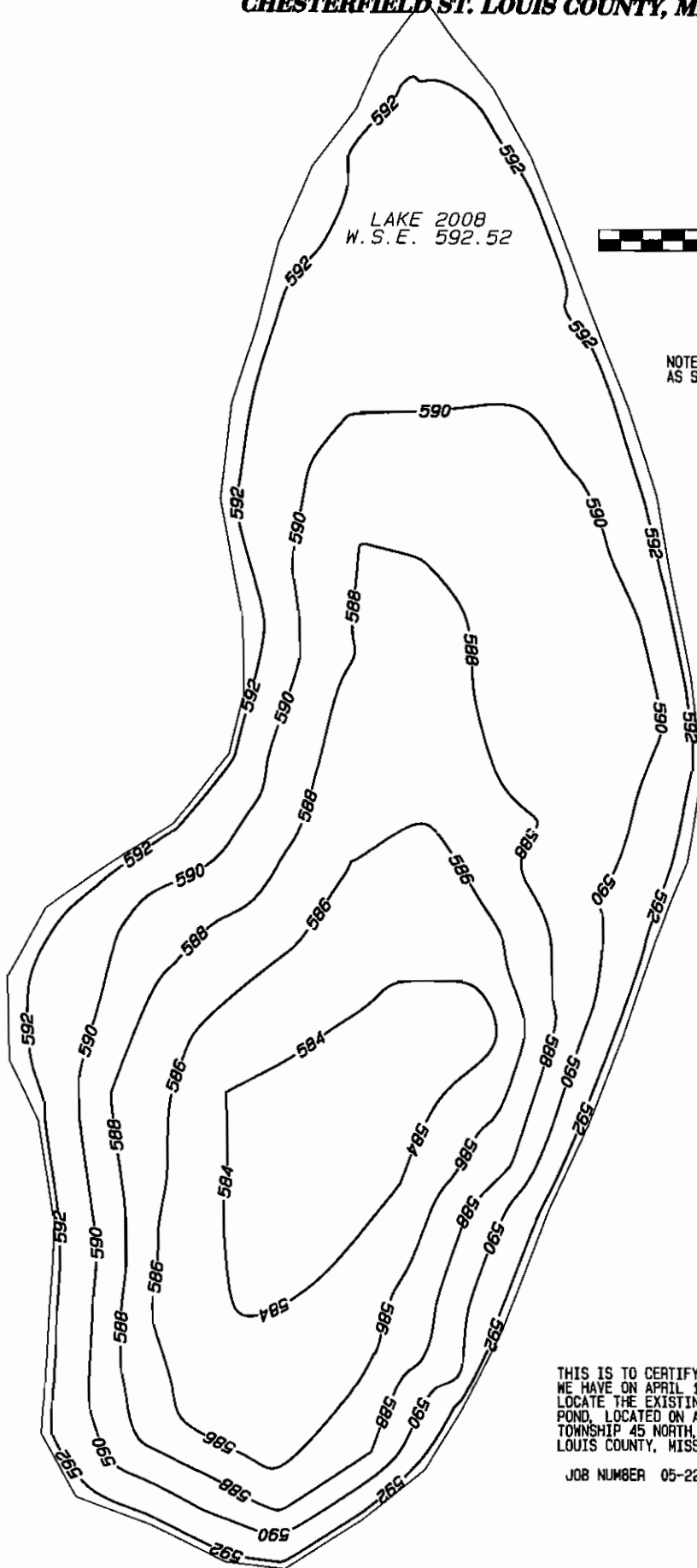
Date

A TRACT OF LAND IN U.S. SURVEY 2002, TOWNSHIP 45 NORTH, RANGE 4 EAST CITY OF CHESTERFIELD ST. LOUIS COUNTY, MISSOURI



LAKE 2008
W. S. E. 592.52

NOTE: CONTOURS REPRESENT THE TOP OF SILT LAYER AS SURVEYED ON 4/15/08



SITE INFO:
LOC#19S51 0604
N/F BAXTER OAKS
TRUSTEES
15600 CENTURY LAKE DR.



THIS IS TO CERTIFY TO FLOWER HOMES, THAT AT THEIR REQUEST, WE HAVE ON APRIL 15, 2008 EXECUTED A TOPOGRAPHIC SURVEY TO LOCATE THE EXISTING ELEVATION OF THE BOTTOM OF A RETENTION POND, LOCATED ON A TRACT OF LAND IN U.S. SURVEY 2002, TOWNSHIP 45 NORTH, RANGE 4 EAST CITY OF CHESTERFIELD, ST. LOUIS COUNTY, MISSOURI.

JOB NUMBER 05-229 DRAWN BY T.E.B. CHECKED BY G.S.M.

CORNERSTONE LAND SURVEYING & CIVIL ENGINEERING, INC.

2705 DOUGHERTY FERRY RO., SUITE 100 ST. LOUIS, MO. 63122 (314) 966-9987 (314) 966-0329 (FAX)

Work Order

#Name?

Reporte 6/18/2010

WO#: 50787

Disposition: Development Services

Problem: Miscellaneous

Mud from construction is running into street and lake. Would like the developer to control their mud. Mrs. Hillis would liked to be notified of the process to get this to be stopped.

Solution:

6-21-10; No mud on driveway.

6-22-10; Flower Homes laborer was not on site.

6-23-10; Contacted Tim of Flower Homes & inform to add silt fence in front of the lots with new foundations.

6-25-10; Silt fence in place as requested.

6-28-10; Called Mrs. Hillis & inform of above. She also had questions regarding the lake Protection Bond. Informed Mrs. Hillis that Kimberly McMahan is the engineer for this site. E-mail Kimberly M. to inform. No further action.

Location:

OLD BAXTER RD
BAXTER OAKS

INSP: JohnHuskey

Sched. Start:

Sched. Comp:

Priority: No

Rpt. By: Hillis, Kelly

Home Phone: 636-537-9720

Work Phone:

Man Hrs: 1.5

Started: 6/21/2010

Completed: 6/28/2010



690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

March 25, 2010

Kelly Hillis
1634 Old Baxter Rd.
Chesterfield, Missouri, 63017. home: 636.537.9720

RE: Storm Sewer concern

Dear Kelly;

Subsequent to our conversation I did visit the site you described where the lake discharge mixes with the discharge from the storm sewer off of Century Lake. I was prepared to see a catastrophic sewer problem.... Fortunately, it wasn't as bad as I expected. While the area is swampy, messy and slightly overgrown, I'm not sure that there is any immediate action required. If you want to head off future problems, you could certainly spend a lot of money in the area, but I'm assuming this will be a very low priority for MSD.

Let me preface my thoughts with a disclaimer; I'm only able to give you my opinion and my impression of how the MSD will treat the maintenance. Every time I think I understand what the policies are, they do something that surprises me.

I'm happy to discuss this with you personally or over the phone. However, I wanted you to have the benefit of several documents before we spoke. I've attached scanned copies of record plats; an enlarged section of the City's subdivision map (to show the layout and boundaries of the surrounding subdivisions), and selected pages of the construction plans that we had on micro-fiche. I apologize for the quality of some of these copies, but many of the old documents simply aren't high quality to begin with. We are fortunate to be able to retrieve them in any fashion whatsoever.

I also want to share that all of the record plat information is available from our newly improved City website, www.chesterfield.mo.us. Go to the resident information portal and our GIS map, and you can get all the information except the micro-fiche materials.

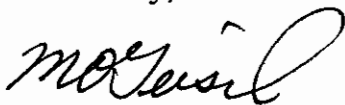
I was actually a little surprised with what I found. Based upon my viewing of the site and a review of the documentation, I believe that:

- 1) The pipe coming off of Century Lake is a public sewer and should be maintained by MSD.
- 2) The pipe that discharges the combined storm water from your lake and the runoff from Oak Post Lane is a public sewer and should be maintained by MSD. Typically, MSD would not maintain the pipe below your lake, but about halfway down it connects to the storm sewer coming off of Oak Post Lane. This makes it unusual! From the lake to this inlet is private. From the inlet where the flow combines, to the point of discharge, should be a public sewer. I tell you this, because if an MSD inspector is not aware of the connection, they'll deny any responsibility for the sewer.
- 3) MSD typically maintains the pipe and pipe discharges. Meaning they should take care of the pipe itself, and the rock blanket that is supposed to be at the end of the pipe. MSD will not maintain the open channel. They won't maintain the railroad retaining walls or the swampy area in the common ground. In my experience, the Common Ground is the responsibility of the subdivision trustees.

While I was out there, I noticed that the property corner was marked for the residential lot where the storm sewer comes off of Century Lake. It is very unclear to me whether or not the railroad retaining wall is located on that lot, or more likely, it was constructed on the Baxter Oaks Common Ground. I doubt, however, that it was constructed with the original development. The wall is not shown on the plans. So, it is potentially an improvement that was constructed by the resident in order to re-claim a larger rear yard. It may very well even be constructed over the easement, which is generally prohibited without a release. Regardless, the wall is rotted. It is probably 25 or more years old.

I hope this information is useful to you. Feel free to contact me at your convenience to discuss further.

Sincerely,



Mike Geisel, P.E.



690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

May 2, 2008

Don Flower
Flower Homes, Inc.
P. O. Box 4050
Ballwin, MO 63022

RE: Village at Olde Baxter Square

Dear Mr. Flower:

The post construction survey of the downstream lake has been completed. When compared to the pre construction survey, no change in the bottom elevation of the lake was found. Therefore, Bond No. B-80477071 for \$75,000.00 is no longer required. I'm returning it so it can be cancelled at this time.

If you have any questions, please call me at (636)537-4762.

Sincerely,

A handwritten signature in cursive script that reads 'Linda Jones'.

Linda Jones
Dept. of Public Works



DATE: April 29, 2008
TO: Linda Jones, Executive Secretary
FROM: *BGM*
Brian McGowhd, PWD\CE

SUBJECT: The Village at Olde Baxter Square (301) – Release of Lake Protection Bond

The post construction survey of the downstream lake has been completed. When compared to the pre construction survey, no change in the bottom elevation of the lake was found.

Therefore, please release the \$75,000 bond that was posted for this development.

cc: Mike Geisel, Director of Planning & Public Works
John Huskey, Senior Construction Inspector
Subdivision File

April 25, 2008

Mr. Mike Giesel
Department of Public Works
Chesterfield City Hall
690 Chesterfield Parkway W
Chesterfield, MO 63017-0670

RECEIVED

APR 28 2008

CITY OF CHESTERFIELD
DEPT. OF PLANNING & PUBLIC WORKS

Re: Village at Olde Baxter Square

Dear Mike:

The topographic survey of the lake at Baxter Oaks has been completed per the request of Mr. Don Flower of Flower Homes, Inc.

This lake was previously surveyed in June of 2006 and a copy of the survey was provided to the City of Chesterfield in March of 2007. The topographic survey drawing that was provided to the city in March of 2007 was graphically incorrect due to using multiple field shots in the lake. A corrected pre-condition lake topo survey is being provided with this letter. The March 2008 topo survey is being provided for your use to compare the two topo conditions. A plot of the 2006 and 2008 topo overlay shows minor differences in the two lake topos. This would seem to be a nominal difference in the lake for a two year period.

If you have any questions, please contact me.

Sincerely,



Glenn S. Mazuranic, P.L.S.

CORNERSTONE LAND SURVEYING AND CIVIL ENGINEERING

2705 Dougherty Ferry Road, Suite 100 St. Louis, Missouri 63122 | 314-966-9987 | Fax 314-966-0329 | E-mail CORNERSTONELAND@aol.com



Work Order

2/22/2005

Reported 2/16/2005

WO#: 31236

Disposition: Engineering Analysis

Problem: Drainage

Flowing water. Said for past 7-8 months water is flowing onto Old Baxter Road near old farm. Location is Old Baxter Road & Baxter. Can City of Chesterfield do something about it? When it is cold weather, Old Baxter Road gets slick. Mr. Schulze lives near/at Brandywine Condos.
Time of call: 3:42 p.m.

Solution:

2-16-05

Water flowing into street from field.
Per M.O.G, issue will be resolved
with the reconstruction of Old Baxter.
Took pictures.

Matthew W. Coley

Resident Contacted ✓

Location:

OLD BAXTER RD
NO SUBDIVISION - WARD 2

Rpt. By: Schulze, Tom

Home Phone: 636-532-2965

Work Phone:

INSP: MattD

Man Hrs: 1

Sched. Start:

Started:

Sched. Comp:

Completed: 2-22-05

Priority: No

Work Order

#Name?

Reporte 6/18/2010

WO#: 50787

Disposition: Development Services

Problem: Miscellaneous

Mud from construction is running into street and lake. Would like the developer to control their mud. Mrs. Hillis would liked to be notified of the process to get this to be stopped.

Solution:

6-21-10; No mud on driveway.

6-22-10; Flower Homes laborer was not on site.

6-23-10; Contacted Tim of Flower Homes & inform to add silt fence in front of the lots with new foundations.

6-25-10; Silt fence in place as requested.

6-28-10; Called Mrs. Hillis & inform of above. She also had questions regarding the lake Protection Bond. Informed Mrs. Hillis that Kimberly McMahan is the engineer for this site. E-mail Kimberly M. to inform. No further action.

Location:

OLD BAXTER RD
BAXTER OAKS

Rpt. By: Hillis, Kelly

Home Phone: 636-537-9720

Work Phone:

INSP: JohnHuskey

Man Hrs: 1.5

Sched. Start:

Started: 6/21/2010

Sched. Comp:

Completed: 6/28/2010

Priority: No

07/10/03



690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

March 26, 2004

Mr. & Ms. Donald and Lucy Johnson
1650 Old Baxter Road
Chesterfield, Missouri 63017

RE: Old Baxter Road - Phase II
Erosion and Sediment Control

Dear Mr. & Ms. Johnson:

Thank you for calling me this week to discuss the Old Baxter Road project. During our conversation, you requested a letter describing the City's plans for limiting sedimentation of the lake during the proposed construction. The construction plans and specifications include a description of the methods to be employed by the contractor during the project. No permanent sediment control measures will be installed as part of this project. Several permanent measures were investigated, but the size of the drainage area renders them ineffective.

As noted above, the temporary erosion and sediment control items are shown on the construction plans and further described in the project specifications. Copies of the pertinent construction plan sheets and specifications are attached to this letter for your information. In summary the methods to be employed are:

- to limit the time that bare ground is exposed,
- install silt fence at the down slope boundary of all disturbed areas,
- protect inlets with either fabric drops or TrueDams, and
- install Floc Logs in each inlet.

Silt fence, fabric drops and TrueDams are shown in the construction plans. Floc Logs function by causing soil particles to stick together, thereby settling quicker. The intent is to get the soil to settle out in the inlets, where it can be cleaned following construction.

During our phone conversation, you also expressed concern about the outlet pipe from the existing stormwater system into the lake. Two specific concerns were discussed. The first was the angle of the pipe (outfall structure) with respect to the lake. As you are aware, the stormwater system is not the responsibility of the City. The system is the responsibility of MSD and the lake is the responsibility of the subdivision. The City does

March 26, 2004

Page 2

not have any plans to alter this outfall structure. The second issue is the quantity of water that flows through this pipe. The City understands that existing quantity of water appears to be excessive to those that live in the area. The flow quantity has been checked, and is below the design capacity of the pipe. It should also be noted that the flow quantity of this pipe does not change as a result of the proposed project.

We hope that the above discussion and the attached documents ease at least some of your concerns with respect to the proposed project. If you have further questions or need something clarified, please feel free to call me at 636-537-4759.

Sincerely,



Michael Lambert, P.E.
Project Manager

Enclosures

cc: Mike Geisel, Director of Public Works/City Engineer
Brian McGownd, Deputy Director of Public Works/Assistant City Engineer
Bonnie Hubert, Superintendent of Engineering Operations
File 2004-PW-05B



Old Baxter - looking north - showing east gutter line.JPG



Old Baxter - Looking south showing water in east gutter line.JPG













