

J. W. Dansby  
Civil and Environmental Engineer

---

Mr. Todd McLellan  
Development Engineer  
City of Norman  
201-C, West Gray  
Norman, OK 73071

November 1, 2011

RE: Flood Plain Certification  
Cypress Lake and Channel  
Norman, Oklahoma 73034

Dear Mr. McLellan:

The proposed improvements consist of repair and/ or replacement of several drainage structures around the lake and channel that flows into the lake from the east. Also, there are areas around the discharge structure and adjacent creek channel on the west side of the lake that are encroaching into the toe of the embankment on the downstream side of the dam. There is also a wood retaining wall on the northeast corner of the lake that needs to be replaced since it is leaning across a walking path. These areas are designated as Lots A and B on the Cambridge Addition plat.

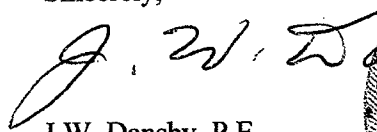
The proposed improvements in the channel and inlets to the lake consist of replacement of flumes that have been undercut and have failed as well as providing erosion protection in areas that need better erosion control. All of the inlets to the lake, retaining walls and channel improvements are in the 100 year flood plain. All of the proposed improvements will bring the existing structure back to original grade. The Cambridge Homeowners Association is also considering dredging some of the sand out of the lake that has accumulated in front of the inlets.

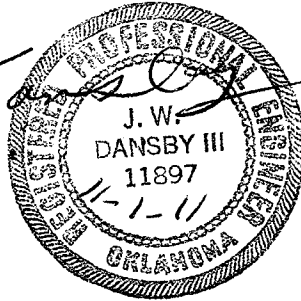
The dam on the west side of the lake, the outlet structure and adjacent creek are in the flood way based on the FEMA map. Improvements in this area consist of providing erosion protection to prevent erosion of the outside toe of the dam due to meandering of the adjacent creek and improvements to stop erosion at the outlet structure. All of the areas will be brought back to existing conditions prior to any erosion occurring.

No rise in the BFE will occur due to these improvements since the areas where the improvements are proposed will be repaired and brought back to the original slopes and grades before the erosion occurred.

Pictures are attached. If you have any questions, or require additional information, please call.

Sincerely,

  
J.W. Dansby, P.E.  
Civil Engineer



#### LIST OF PICTURES

Picture No.	Description
1.	Undercut of flume at drainage structure and retaining wall to be replaced.
2.	Bank erosion that needs to be repaired along creek.
3.	undercut and failed flume at drainage structure.
4.	Sand bar and area where additional erosion protection is needed at inlet to the lake.
5.	Aerial Photo showing Cypress Lake and areas that need improvements.
6.	Aerial Photo showing channel to the east and areas that need improvements.