CITY OF EDINA

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MEMO

Date: March 25, 2015

To: Planning Commission

From: Cary Teague, Community Development Director

Re: Blake Woods Subdivision

This item was continued at the last Planning Commission meeting so the applicant could address concerns raised by the engineering department in regard to the grading and drainage plan.

The applicant submitted revised plans on March 19, 2015. Staff reviewed the plans and found they did not follow the recommendations of the engineering department. Therefore, staff has forwarded the plans to Barr Engineering for further review to determine if the alternative plans are acceptable. The City needs to be assured that the proposed subdivision will not create any additional drainage problems in the area; especially to the west, where there are known capacity constraints.

Due to the short turn-around time afforded to staff, and the proposed direction of the revised drainage plans, staff recommends the Planning Commission again continue action on the request to the April 8, 2015 Planning Commission meeting.

The City has until May 20th, 2015 to take final action on the Preliminary Plat.

Attachments:
Revised plans date stamped March 19, 2015

LANDFORM
From Site to Finish

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March 17, 2015

City of Edina
Attn: Ross Bintner
Environmental Engineer
4801 W. 50th Street
Edina, MN 55424

Re: Response to City Drainage Review Comments

Dear Mr. Bintner:

We have received and reviewed the City of Edina drainage comments dated March 3, 2015. We have revised our plans, drainage report and calculation based upon those comments and below are a list of our responses address your comments. It is our intent that the changes made to the documents have addressed the City's concerns and we ask for the staff support at the March 25th planning commission meeting.

Storm Water Utility

1. Submit a revised Stormwater Management Plan, and development plan that meets the following performance standard. Design to these restrictions will ensure that either east or west flow path meet level of service and level of protection for 100 year events, and risk in downstream water body MD_25 is not increased.

   We have revised our plans and calculations based upon your comments below. We do not have the capacity or data to analyze downstream catchment areas outside of our property. Our development shows both a decrease in offsite storm water rate and a decrease in offsite storm water volume.

2. Applicant must not increase stormwater peak rate or volume to neighboring private properties, which will be demonstrated by the following criteria:
   a. No increases in stormwater volumes to MD_29 pond (to west) for the 2-year, 10-year, and 100-year 24 –hour Atlas 14 events, as compared with existing conditions.

      The hydrocad analysis of the existing and proposed conditions shows a decrease in storm water volume to the MD_29 pond in the proposed conditions.

   b. No increases in peak stormwater rates to MD_29 pond (to west) for the 2-year, 10-year, and 100-year 24-hour Atlas 14 events, as compared with existing conditions.

      The hydrocad analysis of the existing and proposed conditions show a decrease in stormwater rate to the MD_29 pond in the proposed conditions

   c. Summarize direct offsite drainage to the south property line separately.

      The revised plans indicate a swale on the south property line. This drainage will be routed to the existing MD_29 pond.

d. No limitations to total volume runoff (to east) aside from meeting Nine Mile Creek Watershed District volume control requirements for the entire site.

The hydrocad analysis shows a reduction in storm water volume to the east in the proposed conditions for the 2-year, 10-yr and 100-yr, 24-hour storm.

3. Limit peak stormwater rates from the overall site to peak rates from existing conditions for the 2-year, 10-year, and 100-year, 24-hour Atlas 14 event, not per sub watershed (a sub watershed basis increase to the Blake Road system is allowed, as that direction has capacity to direct stormwater)

The hydrocad analysis shows a reduction in storm water rate to the pond in the proposed conditions for the 2-year, 10-yr and 100-yr, 24-hour storm.

4. Achieve compliance with Nine Mile Creek Watershed District water quality treatment requirements.
   a. The submittal indicates that the site is primarily comprised of D soils and the rain gardens will primarily serve as stormwater filtration. Given the limited infiltration and presence of drain tile in the bottom of the rain gardens, the TP removals sited in the submittal seems high.

Our initial calculations were based on Hennepin County Soils data which indicated Silty Sandy soils. We have since completed a geotechnical report that shows Clay (D) soils and our models have since been updated to reflect those. Our project will meet/exceed the watershed requirements for water quality as we will be required to obtain a permit through the watershed prior to final plat recording.

5. Recorded easements will be required for all public infrastructures not already in platted drainage and utility easement.
   a. Drainage to the west is proposed in a flow concentration onto private property then onto a private pond. Applicant must negotiate future public easement for: the flow path, any drainage infrastructure, or any increase in pond bounce with any affected private parties.

The applicant and Landform have been in contact with the two property owners through the design process. Both owners have indicated support for continual storm water drainage to the pond. We will continue to work with the owners to establish any required easements during the final platting process.

6. Road grade blocks drainage from proposed lot and private property to the north. Provide positive drainage to low area to north. Summarize any flow through areas separately in hydrology calculations.

After further analysis, the low point in the neighboring property is 13 feet outside of our property. We think it is unreasonable for the City to require the applicant to fix this existing off site condition. The proposed road is set at the elevations in the existing condition and the roadway elevations are not higher in the proposed elevation so the outlet elevation is not changing in the proposed condition. Our plans have been modified to swale our eastern drainage to a rain garden on our site which is then directed to the offsite pond.

7. Use NOAA Atlas 14 rainfall precipitation frequency

The hydrocad models use the Atlas 14 rainfall data for this local.

8. Provide justification for pre and post curve numbers. Previous submittal claimed curve number reductions in post development condition. Curve and drainage numbers should make conservative assumptions about activity that will occur to develop custom graded lots.
   a. The curve numbers used for the pervious areas in the existing conditions model (Woods, and Woods/grass combination) reflect "poor" conditions, whereas the curve numbers used for the pervious areas in the proposed conditions models (Woods/grass combination, >75% grass cover) reflect "good" or "fair" conditions. The selection of "poor" conditions in the existing conditions model results in generation of higher stormwater volumes under existing conditions than likely appropriate. The inconsistency in curve number selection for pervious areas should be corrected in future submittals to ensure an appropriate comparison between existing and proposed runoff volumes.

      The original curve numbers were selected based on the existing site conditions and anticipated future conditions. The existing site has very little established vegetated ground cover and the curve number of "Poor" was selected. We anticipate the future homes to have established grass in the full build-out so "Good" and "Fair" conditions were selected. However we have revised the existing model to show similar "Fair" conditions similar to that in the proposed model. This will give conservative assumptions for the future condition.

9. Future building sites can be limited by impervious surface assumptions though developers agreement. Previous submittal claimed 5,450 sf impervious per lot. Recommend conservative impervious assumptions provide flexibility to allow for future expansion.

   The applicant feels comfortable that 5,450 SF of impervious surface per lot is sufficient for the development. Reducing impervious area will help protect trees and other natural topographic features which has been a priority of the applicant and land owner.

10. Model results contain a significant continuity error. Correct this error.
    a. This may be a result of the model duration, time step or improper routing.

       Model duration has been extended to show equal volumes. The net changes were very minimal and still below the existing conditions.

We hope this letter answers the outstanding concerns. Additionally, we have a few items that have been discussed previously in our memo to you that are pretty important to us for the development. We would like to have the City staff weigh in on these items as they greatly impact our development.

- Item 7 requests B618 curb and gutter only. Our plans propose to use B618 curb and gutter in most locations throughout the development including the north side of the new road and the cul-de-sac, however, we are proposing a flush ribbon curb on the south side of the street as part of our overall storm water management plan. The storm water from the new road will sheet drain north to south over this ribbon curb and will be pre-treated through a grass filter strip prior to entering the proposed rain gardens. Pretreatment is required for the rain gardens and we feel strongly that non-concentrated storm water, pretreated by grass filter

strips is the best choice for this application. We strongly request the City to consider our proposed ribbon curb and grass filter strips on the south side of the road for the best long term function and performance of the rain gardens. We ask that the ribbon curb on the south side of the new road be allowed as shown on the plans and incorporated in the conditions.

- Item 8 requests a 5-foot sidewalk be installed with a 5-foot boulevard. While we can revise our plans to provide this sidewalk on the north side of the street, the Planning Commission noted a number of concerns about this item. Commissioners noted that the living streets policy would not necessarily require the sidewalk on a cul de sac such as this, that the drainage issues and tree preservation should take precedent over the sidewalk and that alternative designs be considered. We would like to discuss the need, location and design of the sidewalk with you or receive written feedback so that we can prepare a plan that responds to the Commissions noted concerns.

- Item 11 requests a looped 6" DIP from Blake Road through to the Southeast corner of lot 6 north along the property line to Evanswood Lane. It is very common to have a water main dead-end in cul-de-sacs in subdivisions. We understand this was approved by the City Council in the Morningside/Acres Dubois development in 2013. Installing a looped main between lots 6 and 7 would cause the unnecessary removal of at least 13 mature trees that all parties wish to preserve. We believe that we can show that the required water pressure can be provided as designed and request that this condition be removed.

Our hope is that this letter, the revised plans and reports have addressed the outstanding Engineering comments as outlined in your memo. We ask for your support at the March 25th Planning Commission meeting.

Sincerely,
Landform

Reid Schulz
Project Lead

COPY: Frank Berman
Cary Teague, City Planner
Chad Millner, City Engineer