



October 6, 2009

Mrs. Rebecca Horner, Planning Director
Sarpy County Administration
1210 Golden Gate Dr.
Papillion, NE 68046

RE: Southern Pines Plat Review
168th & Giles Road
Sarpy County, Nebraska

Dear Mrs. Horner,

The following are our review comments for the revised preliminary plat and final plat along with supporting documents provided for Southern Pines located near 168th & Giles Road in Sarpy County, Nebraska.

Water Quality

1. As Sarpy County is a member of the Papillion Creek Watershed Partnership, the Post Construction Stormwater Management Plan (PCSMP) provisions adopted by the Partnership apply. The required documents and forms need to be submitted for review, including an application form, conceptual PCSMP, and Stormwater Management Maintenance Agreement. We recommend following the forms created for the Partnership by the City of Omaha for this submittal.
2. Verify water quality pond and silt pond are allowed in Outlot C underneath OPPD power lines and are not prohibited per the existing OPPD easement.
3. Verify swale volumes listed include volumes only to top of pond elevation.
4. Show location of swale in basin C-2 within the boundary of the development.
5. Submit plans to the Papio-Missouri River Natural Resource District showing the overflow paths for storm water from the water quality ponds during larger storm events.

Grading and Improvements

1. Provide easements or additional right-of-way at street intersections to allow for the installation of handicap ramps meeting ADA codes.
2. Modify grades at end of 171st Street north of Greenfield Street where street meets adjoining Tax Lot 11 to the west. The street and temporary turn-arounds appear to be on a steep slope.
3. Review grades where Meadows Boulevard terminates at Tax Lot 11 to the west; it appears as though there is a drainage channel through the street at the temporary turn-arounds.
4. Consider alternative grading on Lots 56 thru 59. It appears as though drainage from Lots 56 –59 and Lots 45 – 47 drain toward the daylight / walkout houses.
5. Consider alternative grading on Lots 107 thru 110. It appears as though drainage from Lots 107 – 109 and Lots 111 – 113 drain toward the daylight / walkout houses.
6. Provide grading plans around Ponds 1, 2, & 3 to verify volumes shown can be obtained and ponds can discharge to existing drainageways. Existing contours are not shown on the basin map, and contours on the preliminary grading plan don't appear to match actual existing conditions.
7. Submit cross section information to Sarpy County for review that shows the relationship of the proposed site grading to the existing and future improvements of Giles Road.
8. Provide easements for storm sewer and grading on Tax Lot 11 west of Southern Pines at Meadows Boulevard.
9. Provide letter from Sarpy County Emergency Management & Communications Agency that no civil defense sirens are necessary in this development.
10. Provide for the use, ownership, and maintenance of the outlots in the subdivision agreement.

Drainage

1. Provide calculations for 10, 50, and 100-year flows contributing to culvert crossing under Giles Road. Provide delineation of watershed area and characteristics, including any drainage from off-site.
2. Provide 100-year storm path and calculations.
3. Proposed 60" culvert under Giles Road overtops at 160 cfs +/- at elevation 121.50 (Shown as 122.5 in cross section) according to HY-8 output, which is below the 10-year discharge shown in the drainage report of 300.5 cfs +/-, and does not include any off-site drainage. This culvert appears to need to be re-designed to accommodate design flows. Verify 100-year flow overtops Giles Road by less than 6" with adjusted culvert design.
4. Use computer methods to model culvert crossing under Giles Road, including the drop immediately upstream of culvert for hydraulics and scour potential due to inlet characteristics.
5. Obtain drainage easement on abutting property for outlet protection of culverts / pipes discharging onto said properties.

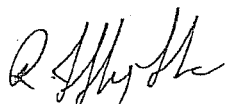
6. Tailwater slope shown in culvert output as 2.0 ft/ft. This needs to be corrected to 0.02 ft/ft, or actual downstream slope.
7. Tailwater velocity downstream of Giles culvert crossing is erosive. Please provide design for protection of downstream channels from erosive discharge.
8. Provide outlet energy dissipation to slow discharge to non-erosive velocities and shear stresses at all outlet structures.

Source and Use of Funds

1. Provide interlocal agreement for Giles Road improvements shown as a reimbursable cost in the source and use of funds.
2. Plan review fee should be split between general obligation and special assessments as stated in Section IV of the subdivision agreement.
3. Verify calculations for acreage of purchased park ground as stated in the subdivision agreement. Adjust the outlot designations in Section II-N of the subdivision agreement to match the final plat.
4. All sidewalks are to be specially assessed or paid privately per Section IV-B of subdivision agreement. Shift sidewalk costs shown in Phase 2 to special assessments or private costs. There didn't appear to be any provisions for trails to be a general obligation in the subdivision agreement, assuming that is the intent of the sidewalk line item in the source and use of funds.

We are available to discuss these comments with you prior to the County Planning Commission meeting should you wish to do so.

Sincerely,
Olsson Associates



R. Jeffery Lake, PE