O23-0010EVR

Olmsted County Planning Department

Olmsted County Board	03/06/2023

Prepared by: Olmsted County Planning Department-Inspections Well & Septic Staff

Request: Preliminary Plat review of well and septic for Mayo Woodlands 4th

Location: Rochester Township (T106N, R14W) Section SE¼ 17,

Zoning: Rochester Township - Township Planning Cooperative Association

ACTION ITEMS

Preliminary Mayo Woodlands 4th has been submitted to the Olmsted County Planning Department for Environmental Review and comment by Rochester Township.	Recommend Approval with staff recommendations

BACKGROUND INFORMATION

Background

The proposed plat Mayo Woodlands 4th is located in the SE¼ of Section 17, Rochester Township (T106N, R14W). It is bound on the east, North and East by Mayo Woodlands and west by unplatted land.

The applicant requests the following:

Preliminary Plat review for Well and Septic on the Mayo Woodlands 4th Proposed Plat

Staff Findings

The plat under review is 20.76 acres in size, which includes 6 buildable lots ranging in size from 2.01 to 2.30 acres in size. The plat also contains 1 outlot at 7.61 acres in size.

The nearest municipal sewer and water are approximately mile away to the Northeast of the Eastern plat corner.

The lots are proposed to have individual on-site sewage treatment systems.

The potable water will be constructed by drilling a new single shared well. The application will be reviewed and with subsequently be permitted and inspected by Olmsted County Planning-Inspections Well Staff.

STAFF REVIEW OF GEOLOGY AND SITE

1) Geologic Atlas:

    a) The Galena group is the first bedrock encountered, consisting of the Stewartville Formation (Dolomite) encountered at the higher elevations within the proposed subdivision's Eastern edge. The Prosser Limestone is the primary geologic bedrock formation within the plat. The Decorah Shale underlies the Galena group and would not be outcrop within the development. St. Peter Sandstone underlies the Decorah Shale. (Per Geologic Atlas).

    b) Depth to bedrock –Less than 25 feet (per Geologic Atlas).
    c) First aquifer encountered-Galena group (per Geologic Atlas). Wells must be drilled to at least the Prairie Du Chien or Jordan aquifers per state well code.
    d) The Geologic Atlas has identified a classification to "Sensitivity of the Ground Water System to Pollution" within the boundaries of the proposed subdivision.
        (1) Very High - Contaminates will almost certainly reach the water table in hours to months.

2) The Geologic Atlas has identified one sinkhole probability classification for the proposed subdivision.
    a) High Probability-The average sinkhole density is 5-20 sinkholes per square mile. (per Geologic Atlas)
    b) There is 10+ sinkholes within a mile of the plat.

3) Proposed Water Supply
    a) The applicant's engineer is proposing one well for the proposed subdivision's water supply. The well will serve all 6.
    b) The location of the proposed well is in the NW corner of Block 1, Lot 5
    c) The watermain will be a 2-inch line and each lot will be stubbed with a 1 inch line to the curb stop.

4) Proposed Sub-Surface Sewage Treatment System's (SSTS)

    a) The Engineer proposes individual septic systems, 6 pressurized mound systems. Mounds are proposed where the soil cover doesn't allow for 3 feet of natural separation between the drain field bottom and a limiting layer.
    b) Slopes in the proposed drainfield areas range from 2-4%.
    c) The dwellings and septic tanks will be sized for five-bedroom houses. Per the Townships SSTS Ordinance, all tanks are sized for use with a garbage disposal.

d) This proposed subdivision does have limitations as to where septic systems can be constructed. The limiting factors are redox soils and shallow bedrock. The saturated soils and shallow bedrock have been addressed through design.

SUMMARY OF FINDINGS

The proposed plat will comply with current regulations for the water supply and sewage treatment systems if constructed as the applicant proposes and according to the conditions listed under "Staff Recommendations to the Planning Advisory Commission".

Staff Recommendations

Staff recommends approval of the proposed plat, Mayo Woodlands 4th if the following requirements are met:

1. Water Supply
   a) All Lots: All curb stops shall be located as close as feasible to the connection to the main water line serving two or more lots.
   b) Any proposed changes in the well or water distribution system design, construction, or location shall be presented to the Olmsted County Planning Inspections Division - Well Staff to review for approval prior to construction.
   c) Schedule 40 or better protective sleeves are required for all water lines that pass under any road; insulated pipe is recommended. The applicant's Minnesota-licensed professional engineer, prior to the water system being placed into service, shall confirm the installation of the water lines and protective sleeves in writing to the Olmsted County Planning Inspections Division - Well staff.
   d) When there are two or more dwellings that are to be served by one well, a backflow preventer shall be provided for each building service line. A dual backflow preventer meeting the American Society of Sanitary Engineering (ASSE) Standard 1024 shall be installed on each water service line within each dwelling. The owner of the property, at the time the water line is installed into the building, shall arrange for the installation of the required backflow preventer as required through the Olmsted County Water Well and Water Supply Ordinance Resolution 3200 section 3207.04 (2).
   e) Water lines shall be sized to provide a minimum of 10 gpm at the service connection of each dwelling with a minimum of one-inch internal diameter. Olmsted County Water Well and Water Supply Ordinance Resolution 3200 section 3207.03 (1).
   f) A minimum operating pressure of 30 psi shall be maintained at a dwelling service connection during the maximum momentary volume rate of water flow, or at a rate of 10 gpm, whichever is the greater rate. Olmsted County Water Well and Water Supply Ordinance Resolution 3200 section 3207.03 (2).
   g) All septic systems must maintain a minimum 10-foot setback from all water lines, a minimum 50-foot setback from all wells, a minimum 20-foot setback from any dwellings or permanent structures and a minimum 10-foot setback from all property lines.

2. Sewage Treatment Support Areas

   a) Sewage support areas shall be clearly identified by placement of durable posts at 50-foot intervals and at the corners of the support area. The posts shall be marked or signed to define the limits of the sewage support area. The posts shall be embedded before any earth moving, for street and lot development, to protect the SSTS soils.
   b) SSTS support areas shall be monitored by the developer/owner or his assigned representative to ensure that the SSTS sites are protected from soil compaction or scalping during plat development/construction.
   c) Water diversions must be constructed upslope of all drainfields that are proposed to be located on any slope greater than 1%.
   d) All sewer lines will be pressure tested at 5 psi for a minimum of 15 minutes with no allowable drop in pressure. All pressure tests must be observed by the septic inspector and documented.
   e) All the recommendations made by GGG Engineering for the township review need to be completed.

cc:	Owner/Developer:	Clark Development
	Design Engineer:	Jason Kappers-GGG Engineering
	Rochester Township Clerk:	Randy Staver
	TCPA	Roger Ihrke

ATTACHMENTS

1. Plat Map
2. Applicant Submittals