

MEMORANDUM

FOCUS ENGINEERING, inc.

Cara Geheren, P.E. 651.300.4261
Jack Griffin, P.E. 651.300.4264
Ryan Stempski, P.E. 651.300.4267
Chad Isakson, P.E. 651.300.4285

Date: December 2, 2019

To: Ken Roberts, Planning Director
Cc: Chad Isakson, Assistant City Engineer
From: Jack Griffin, P.E., City Engineer

Re: Lake Elmo Senior Development
Final Plan Review

Engineering has reviewed the Final PUD and Site Plans for the Lake Elmo Senior Development to be located along 39th Street North, just east of Arbor Glenn Senior Living. The submittal consisted of the following documentation received November 11, 2019:

- Final PUD and Site Plans dated November 6, 2019, prepared by Ayres Associates.
- Erosion Control and Storm Water Management Plan dated September 17, 2019 prepared by Ayres Associates.
- Traffic Impact Study dated August 30, 2019 prepared by Ayres Associates.

Engineering review comments are as follows:

Final Construction Plans and Specifications must be prepared in accordance with the latest version of the City Engineering Design Standards Manual, using City details, plan notes and specifications and meeting City Engineering Design Guidelines.

STREETS AND TRANSPORTATION

- Site Access/Access Management is sufficient. The site plan provides for one driveway access to the development. The proposed access meets the acceptable spacing guidelines from the existing driveway at Arbor Glen and maintains an adequate offset from the south leg of Laverne Avenue.
- Traffic Impact Study. A traffic impact study has been submitted as part of the site plan application. The Study findings indicate no additional travel lanes, turn lanes or other road improvements are required.
- Private roads internal to the site have been provided at a minimum width of 24 feet. Additional width up to 32 feet is provided where bump-out parking is accommodated. Fire lanes to the east and west side of the Senior Living Building have been provided. The private roadway network and emergency vehicle access must meet the approval of the Lake Elmo Building Official and Fire Department.

RIGHT-OF-WAY AND EASEMENTS

- No additional right-of-way dedication is required along 39th Street North. The site plans show that the existing right-of-way provides a minimum of 40 feet from street centerline along the entire length of the property.
- 39th Street North Utility Easement Dedication. A 10-foot drainage and utility easement for small utilities must be dedicated to the city along the entire north boulevard of 39th Street North. The plans indicate that this easement exists for the current platted lot. The site plans must be prepared in a manner to preserve the full 10-feet for small utility installation with no obstructions (e.g. signs, trees, structures, etc.).
- Drainage and utility easements for the public watermain and hydrants must be dedicated to the city in the city's standard form of easement agreement. These easements have been shown on C501. However, no easement agreements have been submitted as required by the conditions of preliminary plat.

STORMWATER MANAGEMENT

- The site plan is subject to a Storm Water Management Plan meeting State, VBWD and City rules and regulations. A Valley Branch Watershed District (VBWD) permit has been obtained, dated November 6, 2019. The applicant must provide a full combined PDF Stormwater Management Plan. The plan must be signed by a Professional Engineer registered in the State of Minnesota.
- The storm water facilities constructed for this development will remain privately owned and maintained. The applicant will be required to execute and record a Stormwater Maintenance and Easement Agreement in the city's standard form of agreement.
- Stormwater calculations indicate that the proposed private stormwater basins on-site include sufficient storm water detention to reduce the storm water rates discharging to the public storm sewer systems located along 39th Street North. Therefore, no additional downstream capacity is shown to be needed.

MUNICIPAL WATER SUPPLY

- The proposed property is located in the Old Village MUSA and intermediate water system pressure zone.
- Connection to the municipal water supply is readily available to serve this property. The applicant will be required to connect, at its sole cost, to the existing 8-inch DIP stub that was installed to serve this property. A minimum 8-inch diameter watermain is shown to be extended internal to the site with private water services stubbed for connection to each individual building.
- Hydrants and gate valves are proposed throughout the property as directed by the Fire Department and Public Works Department. The most northeastern hydrant must be relocated in accordance with the plan submitted to the developer's engineer dated October 9, 2019. The hydrant service must be moved north of the water services for all twin homes. The 8-inch service line north of the relocated hydrant "tee" must be clearly labeled "Private Water Service" for the Lake Elmo Senior Living Building. The hydrant "tee" must be clearly labeled "end of public watermain".
- Drainage and utility easements are proposed to be dedicated to the city for the public watermain and hydrants, minimum 30-foot easements centered over the hydrant or pipe, as shown on C501. These easements must be revised per the revised watermain layout required in this plan review.
- Water availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the WAC/Connection charges for each building.

MUNICIPAL SANITARY SEWER

- The proposed property is located in the Old Village MUSA current Regional Sewer Staging Plan and would discharge to the MCES Cottage Grove Ravine Interceptor.
- Connection to the municipal sanitary sewer system is readily available to serve this property. The applicant will be required to connect, at its sole cost, to the existing 8-inch PVC stub that was installed to serve this property. An 8-inch diameter sanitary sewer main will be required to be extended internal to the site with private sewer service stubs installed for connection to each individual building.
- All sanitary sewer mains internal to the site shall remain privately owned and maintain.
- Sewer availability charges and connection charges will apply to the service connections. A Met Council SAC determination will be required to determine the SAC/Connection charges for each building.

SITE PLANS

- The plans must incorporate construction parking and staging that clearly provides for the maintenance of unobstructed traffic along 39th Street North, the protection and preservation of 39th Street North, and the restoration of any damage within the public right-of-way. No parking and construction staging, including loading and unloading materials and equipment will be allowed along 39th Street North at any time during the construction of the site improvements and buildings. All street and boulevard damage caused by the construction activities must be repaired or replaced at no cost to the city and meeting city standards and specifications.

- C100 and C200. Existing conditions and demolition plans are incomplete. The plans must clearly label all existing utilities, including utility type, material, and size; label all adjacent streets, showing street name, street width, and right-of-way width; label all trails and sidewalks including trail and sidewalk width.
- C200. Revise sawcut location. Street cuts are allowed only to full drive lane widths.
- C300. Revise asphalt patch location along 39th Street North to provide only full drive lane patches.
- C300-C500. All plans must clearly label all existing utilities, including utility type, material, and size; label all adjacent streets, showing street name, street width, and right-of-way width; label all trails and sidewalks including trail and sidewalk width, and pavement types.
- C400. Site Grading. The grading plans must be revised to show the “low floor elevation for all buildings. Plans currently show first floor elevations but do not clearly indicate slab on grade structures. Plan notes must clearly indicate the lowest floor elevation allowed for any building.
- C500. Site Utilities. Relocate the most northeastern hydrant in accordance with the plan submitted to the developer’s engineer dated October 9, 2019. The hydrant service must be moved north of the water services for all twin homes. The 8-inch service line north of the relocated hydrant “tee” must be clearly labeled “Private Water Service” for the Lake Elmo Senior Living Building. The hydrant “tee” must be clearly labeled “end of public watermain”.
- C500. Castings appear to be called out as WisDOT standards; Neenah type should be indicated in plans.
- C500. Remove the 24”x6” orifice reference for Structure S05 to be consistent with the approved HydroCAD model.
- C501. Easements. Revise the drainage and utility easement per the revised watermain layout required on C500.
- C807. Revise plan note on Storm Chamber Sheet 5 or 5 from 9” Stone Foundation to 1.6 feet of Stone Foundation to be consistent with the HydroCAD model and the table on Storm Chamber Sheet 2 or 5. Approved HydroCAD model assumes 1.6 feet of stone under arch gallery.

LANDSCAPE PLANS

- L101 and L102. Correct Plan scale.
- L101 and L102. Revise tree planting locations to eliminate drainage conflicts. Trees should not be planted in drainage flow paths, near emergency overflows, within 10-feet of storm sewer inlets or outlets, or within 10-feet of infiltration and bioretention basins to allow maintenance access around basin perimeters.