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April 15, 2025

Chris McLeod, Planning Manager
Department of Planning and
Economic Development
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309-3033

**Subject: Old Orion Court Development,
Site Plan Review #4,
Plans dated April 4, 2025
City of Rochester Hills
ASTI File No. A25-1482.10**

Applicant: Mark Bismack

Dear Mr. McLeod:

The above-referenced project proposes to construct five residential structures on 2.41 acres of land located along at 6780 Old Orion Court. The subject site includes wetland regulated by the City of Rochester Hills and likely regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

ASTI has reviewed the site plans, dated April 4, 2025, as received by the City (Current Plans) for conformance to the Wetland and Watercourse Protection Ordinance and the Natural Features Setback Ordinance and offers the following comments for your consideration.

COMMENTS

- 1. Applicability of Chapter (§126-500).** The Wetland and Watercourse Protection Ordinance is applicable to the subject site because the subject site is not included within a site plan which has received final approval, or a preliminary subdivision plat which received approval prior to January 17, 1990, which approval remains in effect and in good standing, and the proposed activity has not been previously authorized.
- 2. Wetland and Watercourse Determinations (§126-531).** This Section lists specific requirements for completion of a Wetland and Watercourse Boundary Determination.
 - a. This review has been undertaken in the context of a Wetland and Watercourse Boundary Determination completed on the site by ASTI on October 9, 2023. One

wetland and one watercourse were found on-site; Wetland A was observed in the western portion of the site and an unnamed watercourse flows through the central portion of Wetland A and off-site to the south. Wetland boundaries with alpha-numeric flagging shown on the Current Plans are to ASTI's satisfaction. The unnamed watercourse is not shown on the Current Plans. However, no impacts are shown to this natural feature. If impacts are proposed to the unnamed watercourse in revised plans, ASTI will re-evaluate the depiction of this feature as applicable.

Wetland A and the Unnamed Watercourse

Wetland A is a forested and emergent wetland. Vegetation within the emergent portion was dominated by the non-native species of *Phragmites australis*, which comprised approximately 80-85% of the total emergent vegetation, and narrow-leaved cattail. Common native herbaceous hydrophytic vegetation such as New England aster (*Symphyotrichum novae-angliae*), lake bank sedge (*Carex lacustris*), and joe-pye weed (*Eutrochium purpureum*) were also observed in sporadic populations. Scattered shrubs of the non-native species glossy buckthorn and the common native species of silky dogwood (*Cornus amomum*) and green ash saplings were observed. Trees were absent. The emergent portion of Wetland A was dominated by non-native species (80-85%) with minor inclusions of common native species (10-15%).

The forested portion of Wetland A was dominated by the common native tree species of box elder and green ash. The shrub layer of this portion of Wetland A was dominated by the non-native species of glossy buckthorn and the common native species of slippery elm (*Ulmus rubra*) and box elder saplings. The herbaceous understory was generally sparse to moderately covered with the common native species of poison ivy (*Toxicodendron radicans*), calico aster (*Symphyotrichum lateriflorum*), and the non-native species of moneywort (*Lysimachia nummularia*), generally in equal distribution. The tree layer of the forested portion of Wetland A was dominated by common native species while the shrub and herbaceous layers were generally equal in distribution of non-native and native species. Overall, Wetland A was dominated by native wetland species, estimated at 75%. Primary wetland hydrology indicators, such as surface water, a high-water table, soil saturation, and oxidized rhizospheres on living roots were observed throughout Wetland A. Soils within Wetland A were comprised of mucky loams and muck and appeared to be in a natural state. These hydrological indicators show Wetland A is likely in contact with groundwater to some depth.

The emergent portion of Wetland A is directly connected to the unnamed intermittent watercourse that flows from Wetland A. Flow within this watercourse was slow and clear on the day of the site inspection, indicating water filtration processes are active through this wetland. However, natural variations in the local ground water elevations likely dictate when this watercourse flows; thus, it is ASTI's opinion that the watercourse flows during high groundwater elevation

periods and may not during lower periods. The unnamed watercourse exhibited a sandy to slightly mucky bed on-site and appeared to be channelized outside the Property boundary, being directed through a ditch system to the east side of Old Orion Court to the east of the Property. The unnamed watercourse is small in width, averaging an estimated 1-3 feet from bank to bank on-site.

Wetland A and the unnamed watercourse are a portion of a larger riparian wetland system associated with Stony Creek and, therefore, is in contact with other wetlands and watercourses along its route that are a part of the City's ecological and natural drainage system. Wetland A and the unnamed watercourse are a headwater portion of a riparian system that exhibits significant area outside the Property (estimated at greater than 20 acres in size) that is highly varied in an ecological sense and, thus, has potential to provide extensive wildlife habitat, although not likely on-site.

Review of historic aerial photography dating to the 1960s indicates Wetland A has been persistent for decades. Based on these factors, it is ASTI's opinion that Wetland A and the unnamed watercourse are of medium ecological quality and of high function.

- 3. Use Permit Required (§126-561).** This Section establishes general parameters for activities requiring permits, as well as limitations on nonconforming activity. This review of the Current Plans has been undertaken in the context of those general parameters, as well as the specific requirements listed below.
- a. On-site wetland boundaries appear to be shown accurately on the Current Plans. Wetland A is regulated by the City under the City's Wetland and Watercourse Protection Ordinance and likely regulated by the EGLE under Part 303 because it is directly connected to the unnamed intermittent watercourse on-site that is a tributary of Stony Creek, which meets the definition of a stream under Part 301 and Article IV. ASTI reminds the applicant that wetland delineations are only considered valid by the City and EGLE for three years.
 - b. The Current Plans show that 0.09 acres (3,920 ft²) of wetland impacts will occur from the construction of the proposed access from Maplehill Road to the north, from the construction of a portion of the on-site northern parking area, and from the construction of a wetland overlook deck. This is an increase of 871ft² of wetland impacts from the previous submittal. Per previous input from the City, the increase in wetland impacts is from the re-design of the parking lot to allow for a 20-foot wide landscape buffer at the southern property boundary. This larger landscape buffer was designed to increase the visual buffer of the development for the benefit of the surrounding citizenry per their concerns as stated to the City. These wetland impacts will bisect Wetland A; however, the Current Plans depict that a culvert from the northern remaining portion of Wetland A will be installed that is to direct hydrologic flow to the remaining southern portion of Wetland A. This action should ensure the current hydrologic

flow from the northern portion of Wetland A and as well as run-off from Maplehill Road will continue to flow through Wetland A and the on-site unnamed watercourse. The design of the access drive represents the minimization of impacts to Wetland A by placing the drive through the smallest portion of Wetland A available for the drive, and the impacts are very small. Additionally, the wetland overlook deck will be constructed be 4.5 feet above ground level and will only cover approximately 20 square feet of on-site wetland. Therefore, ASTI recommends the City allow for these impacts. *However, as required in the previous site plan review, revised plans must indicate all impacts to Wetland A in square feet.*

- 4. Use Permit Approval Criteria (§126-565).** This Section lists criteria that shall govern the approval or denial of an application for a Wetland Use Permit. The following items must be addressed on a revised and dated Wetland Use Permit application and additional documentation submitted for further review:
 - a. A Wetland Use Permit from the City and likely a Part 303 permit from EGLE will be required for this project as proposed on the Current Plans. However, the applicant should contact EGLE to confirm this assertion.
- 5. Natural Features Setback (§21.23).** This Section establishes the general requirements for Natural Features Setbacks and the review criteria for setback reductions and modifications.
 - a. The Current Plans now show all on-site Natural Features Setback areas and proposed impacts to these areas in linear feet on Sheet C3, which is to ASTI's satisfaction.
 - b. The applicant has requested a waiver of all Natural Features Setback requirements from the City associated with the Current Plans. The final decision on waiving Natural Features Setback requirements for this development will ultimately be decided by the City, and ASTI will review any future site plans accordingly based on that decision.

Natural Features Setback areas on-site were comprised of shrubby upland dominated by the non-native species of honeysuckle (*Lonicera tatarica*), autumn olive (*Elaeagnus umbellata*), and glossy buckthorn (*Frangula alnus*), as well as areas of maintained lawn dominated by Kentucky blue grass (*Poa pratensis*), other common lawn species, and the common native species of box elder (*Acer negundo*). The total tree canopy was approximately 25% in this area, and the shrub layer was thick. The invasive species garlic mustard (*Allaria petiolata*) dominated the herbaceous layer. The on-site Natural Features Setback was dominated by invasive and adventive species (approximately 80% total coverage) and, therefore, low in ecological quality and function. However, it does provide at least minimal buffering to Wetland A and should be preserved and enhanced where possible.

Please note that the Natural Features Setback area in the extreme southwest of the site is not involved with the development per the Current Plans. If this area is shown to be impacted on future plans, ASTI will include an assessment on that area.

- c. The Current Plans show that 318 linear feet of permanent impacts to Natural Features Setback will occur from the construction of the proposed parking lot, the two northernmost buildings, and from the construction of the proposed wetland overlook deck. ASTI recognizes that design standards from the City to allow for adequate parking must be implemented into the development and, thus, ASTI recommends the City allow for the parking lot impacts. ASTI also recommends the City allow for the proposed impacts to the Natural Features Setback associated with the two northmost buildings and the sidewalk along Maplehill Road as they are of low ecological quality and function. Lastly, ASTI recommends the City allow for the Natural Features Setback impacts associated with the wetland overlook deck; the Natural Features Setback in this area is generally comprised of mowed lawn area and is of low ecological quality and function. Moreover, only 15 feet of impacts are proposed for construction of the deck.
- d. Previous reviews have indicated that revised plans should show that all remaining Natural Features Setback areas be seeded with a native wetland edge seed mix and any proposed plantings within these areas be of native stock (*i.e.*, no cultivars). These actions will preserve more Natural Features Setback area that should exhibit higher native species, which will all increase the buffering capability of the Natural Features Setback for Wetland A. The Current plans indicate that "NATURAL" plantings will be used per City requirements; the landscape plan has remained essentially unchanged from the previous review. *Revised plans must indicate that "Native Michigan Plantings" will be installed within the Natural Features Setback and that cultivars will not be used within these areas. Moreover, the Current Plans still do not show that a native wetland edge seed mix will be installed within the remaining area of Natural Features Setback (as applicable). This all must still be shown on revised plans.*
- e. The Current Plans show that approximately 30 linear feet of Natural Features Setback will be permanently impacted from the construction of the proposed on-site detention pond in the southern portion of the site.

This action would qualify for an exception to the Natural Features Setback ordinance provided that: (1) a prior written notice is given to the City Engineer and written consent is obtained from the City Mayor prior to work commencing; (2) the work is conducted using best management practices (BMPs) to ensure flow and circulation patterns and chemical and biological characteristics of wetlands are not impacted; and (3) such that all impacts to the aquatic environment are minimized. BMPs must be implemented during the construction phase of the proposed project and any temporarily impacted areas must be

restored to original grade with original soils or equivalent soils and seeded with a City-approved seed mix. This is all noted on the Current Plans to ASTI's satisfaction.

RECOMMENDATION

As stated in the previous review, ASTI recommends the City approve the Current plans *only on the condition that the items in Comments 3.b and 5.e are addressed on plans to be submitted to the City for final approval.*

Respectfully submitted,

ASTI ENVIRONMENTAL

Kyle Hottinger
Wetland Ecologist
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