WENTWORTH CIVIL
ENGINEERS LLC
177 West Town Street
Lebanon, Connecticut 06249
Tel. (860) 642-7255
Fax. (860) 642-4794
Email: Wes@WentworthCivil.com

December 22, 2020

Joanna Shapiro, Wetlands Agent
Town of Somers, CT
Via email: jshapiro@somersct.gov

Re. Wetlands Report
Gingras Development
Soapstone Estates
Eleanor Road - Somers, CT

Dear Joanna:

Per your request, I am writing to you in regards to the onsite wetlands located on the above referenced site. Gingras Development is proposing a 25 unit residential development on the property located at the northerly terminus of Eleanor Road.

Field work for this assessment was conducted by this office throughout November of 2020.

Existing Conditions

The site consists of approximately 22.57 acres of land located on the east side and northerly end of Eleanor Road. The site is moderately to gently sloping and predominantly drains to a large wetland system located in the center of the site. Soils on the westerly side of the parcel (area to be developed) consist of Merrimac and Manchester sandy loams. The eastern side of the wetlands is steeper and consists of Charlton-Chatfield very rocky soils, 0-15% slopes.

The site is wooded with areas in the western uplands showing that the site was partially cleared within the past 20 years. The majority of the uplands and wetlands are vegetated with mixed hardwoods and softwoods. These species include red maple, birch, beech, cedar, cherry and white pine. The

understory ranges from sparsely to thickly vegetated and consists of saplings, pole wood, shrubs and herbaceous and vine species including burning bush, silky dogwood, speckled alder, winterberry, raspberries, fox grape, greenbrier, princess pine, bittersweet and poison ivy. There is Bermuda grass, sedges and sphagnum moss also present within the wetlands areas.

Wetlands

The onsite wetland system is a gently sloping red maple swamp. A small seasonal watercourse runs southerly through the wetlands and under a culvert in Eleanor Road and ultimately to Gulf Stream on the southerly side of CT Route 190. The wetlands soils are a Walpole sandy loam, 0-3% slopes. This area has a heavy tree canopy that has kept the underlying shrub layer somewhat sparse.

Wetland Functions and Values

The onsite wetland was inspected to determine wetland functions and values utilizing the Army Corps of Engineers methodology as outlined in 'The Highway Methodology Workbook Supplement'. This methodology utilizes eight wetland functions:

- Groundwater recharge and discharge
- Flood flow alteration and storage
- Fish and shellfish habitat
- Sediment, toxicant and pathogen retention
- Nutrient removal, retention and transformation
- Production export
- Sediment and shoreline stabilization
- Wildlife habitat

The methodology recognizes four wetland values:

- Recreational value
- Educational and scientific value
- Uniqueness and heritage value
- Threatened and endangered species habitat

This wetland exhibited the following wetland functions:

- Groundwater recharge and discharge – exhibits both depending on seasonal groundwater conditions. Discharge during wetter months and recharge of precipitation during drier times
- Flood flow alteration and storage – high function – wetland topography is very flat and slows down flows from higher runoff upland areas. Heavy sedge and tree hummocks dissipate energy and provide large areas of storage

- Fish and shellfish habitat – minimal – watercourse is very small and seasonal in nature
- Sediment, toxicant and pathogen retention – moderate function – wetlands receive runoff from developed uplands and are very suitable for this function. However, abutting uplands consist of relatively low density development. Contributing overland runoff is primarily sheet flow and shallow concentrated flow through upslope woodlands
- Nutrient removal, retention and transformation– moderate function - wetlands receive runoff from developed uplands and are very suitable for this function. However, abutting uplands consist of relatively low density development. Contributing overland runoff is primarily sheet flow and shallow concentrated flow through upslope woodlands
- Production export –numerous tree, shrub and herbaceous species present as food source for wildlife. Berries, seeds and small animals provide for larger birds and mammals
- Sediment and shoreline stabilization - minimal – no shoreline present
- Wildlife habitat – good for many reptile, birds, mammals and amphibian species

Wetlands values include:

- Potential recreational value – aesthetics and easy access due to moderate level of understory
- Potential scientific and educational value – moderate as the area is undisturbed. However there will be no public access on this property
- Uniqueness and heritage value – somewhat low – though this wetland is an important part of the ecosystem, it does not possess highly unique features or known heritage
- Threatened and endangered species habitat – potential habitat for threatened and endangered species, but area is not shaded on the CT DEEP Natural Diversity Database mapping.

<u>Potential Impacts to Wetlands and Watercourse</u>

The majority of the site will remain woodland. Clearing for development will occur in moderately to gently sloping area. Soils in these upland areas are loamy sands – these soil types tend to infiltrate rain water and do not produce high amount of silty sediments during construction.

Wetlands and watercourse direct impacts -minimal direct impacts are proposed as part of the proposed development – rip rap apron at detention basin outle.

Impacts to uplands review areas -

Red maple swamp – all activities have been designed to minimize impacts to this wetland system, both short and long term. Short term impacts have been minimized via a site specific erosion and sedimentation control plan. Potential for erosion to the down slope wetlands area is minimal. Long term impacts have been minimized through the use of low impact development designs which include maximizing overland flow of runoff, large open spaces of highly permeable and gently sloping sandy soils, minimizing impervious areas by clustering housing and treating the first 1" rainfall design storm (water quality volume) via a stormwater quality basin. Peak flow attenuation is also provided by the stormwater basin for design storms with frequencies of 2 through 100 year events.

Erosion and Sedimentation Control Measures:

Site specific erosion and sedimentation control plans have been prepared for this project. The project is proposed to be constructed in two phases to minimize the amount of area and time of exposure during construction. All onsite controls have been designed in accordance with the 2002 CT Guidelines for Soil Erosion and Sediment Control handbook and CT DEEP guidelines.

Potential Short Term Impacts:

All plans and best management practices should be adhered to during construction to minimize short term impacts to wetlands and watercourses. This will ensure protection of the wetlands and watercourses throughout the construction project. All plans have been designed to minimize short term impacts to wetlands and watercourses.

Potential Long Term Impacts:

The proposed residential use is low impact by nature relative to other more intense land uses. The proposed plans have been designed to minimize long term impacts to wetlands and watercourses.

Wetland hydrology will not be significantly impacted by this development. The primary source of groundwater for the onsite wetland comes from the easterly direction. There is a large side hill in this direction sloping towards this wetland with soil types with a restrictive layer that directs a majority of the groundwater to this wetland. Onsite

development will leave in place large expanses of wooded and grassy open spaces that will also continue to feed the wetlands hydrology, even during drier seasons.

Feasible Alternatives

The Somers Inland Wetlands Commission has made a ruling that this application does not meet the requirements of a significant activity to the onsite wetlands and watercourses. Therefore, the burden of a prudent and feasible alternative analysis does not fall on the applicant.

Historic Applications and Approvals on this Property – Impervious Area

This site has been the subject of past similar applications for development. In 2006, approval was granted by both the Somers Inland Wetlands Commission and Planning and Zoning Commission for a very similar development involving age restricted housing. Changes in regulations have allowed the current application to move forward without restriction on age and health code has allowed more units to be developed. The area of impervious area has increased slightly from 77,652 sf (7.89% of total site) in 2006 to 88,210 sf (8.97% of total site) under the current proposal. Put another way, the current application will retain 91.03% of the site (20.97 acres) as wooded, grassy and landscaped open space.

It is my professional opinion that the plans as presented are adequate to protect the onsite wetlands and watercourses.

Please do not hesitate to contact me if you have any comments or questions.

Sincerely,

Wesley J. Wentworth
P.E., Soil Scientist