ENVIRONMENTAL IMPACT STUDY
Wasaga Riverwoods
River Road West
Town of Wasaga Beach
Updated September 2022

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

September 13, 2022
RS# 2019-013

Walter Zhou
Wasaga Riverwoods Homes Inc.
via email to: wzhou@wasagariverwoods.ca

SUBJECT: Environmental Impact Study
Part Lot 27, Concession 8 in the Geographic Township of Flos
Town of Wasaga Beach
County of Simcoe

Dear Mr. Zhou,

RiverStone Environmental Solutions Inc. is pleased to provide you with the attached report. This report represents an update to RiverStone's Environmental Impact Study (Feb 2020) and has been prepared to reflect agency review comments and minor updates resulting from a revised site plan concept. The conclusions of RiverStone's original EIS report remain unchanged, while additional supplementary materials, including a Wetland Offsetting Plan, have been provided under separate cover and cited herein.

Please contact us if there are any questions regarding the report, or if further information is required.

Best regards,

RiverStone Environmental Solutions Inc.

Report prepared by:

Bev Wicks, Ph.D.
Senior Ecologist / Principal

Craig Mann, H.B.Sc.F., Dipl. IFRM.
Ecologist / ISA Arborist

ENVIRONMENTAL ASSESSMENT NON-TECHNICAL SUMMARY

Type of Study Environmental Impact Study (EIS)		**Date** September 13, 2022
Project Manager Bev Wicks	**Civic Address** Part Lot 27, Concession 8 in the Geographic Township of Flos Town of Wasaga Beach	**Development Proposed** Plan of Condominium
	Planning Authorities Town of Wasaga Beach, County of Simcoe, Nottawasaga Valley Conservation Authority	**Proponent** Wasaga Riverwoods Homes

Report Summary

The purpose of this study is to address municipal and provincial requirements pertaining to the protection of significant natural heritage features (i.e., Provincially Significant Wetlands, Habitat of Endangered and Threatened Species, Significant Wildlife Habitat, etc.) and NVCA-regulated natural heritage features (i.e. unevaluated wetland) in relation to a development application in the Town of Wasaga Beach. Based on both desktop and on-site investigations, RiverStone has determined that:

- Wetland areas mapped by MNRF and NVCA do not represent the current conditions of the subject property; however, a wetland feature was confirmed on site. Development will result in removal of a 0.3 ha area of unevaluated wetland, for which a compensation and offsetting plan has been prepared (separate cover).
- Features with limited potential to function as Habitat for Endangered and Threatened Species were identified; however, potential habitat functions were determined to be limited.
- Provided that RiverStone's recommended measures outlined in **Section 4.2** are implemented in full, we anticipate that the impacts of minor wetland removal can be mitigated through an offsetting exercise. We do not anticipate any negative impacts to identified significant natural heritage features on the subject property or adjacent lands.

To ensure that the identified features of conservation interest are adequately protected, RiverStone has put forward a series of mitigation recommendations in **Section 4.2** of this report which are reiterated below.

RECOMMENDATIONS

Significant Wetlands

- **Development and site alteration should be located proximate to existing development on adjacent lands and the footprint be limited to the extent possible.**
- **A comprehensive Sediment and Erosion Control Plan be developed to address the potential for material to migrate off the subject property when soils are exposed during construction.**
- **A stormwater management report be developed to ensure that the water balance is maintained to surrounding wetlands. Additionally, the water quality and quantity of the stormwater is to be maintained.**

- **All aggregate material stored on site is to be contained by heavy-duty sediment fencing.**
- **The sediment fencing must be constructed of heavy material and solid posts to ensure its integrity and be properly installed (trenched in) to maintain its integrity during inclement weather events.**
- **Regular inspection and monitoring will be necessary to ensure that the structural integrity and continued functioning of the sediment control measures is maintained (i.e., proper installation is not the only action necessary to satisfy the mitigation requirements).**
- **Inspections of sediment and erosion control measures should be completed within 24 hours of the onset of a storm event.**
- **Sediment control measures must be maintained in good working order until vegetation has been established on the exposed soils.**
- **Offloading of construction materials and aggregate should be completed during fair weather.**
- **Best Management Practices should be utilized with all machinery and fill being imported to the subject property to ensure that material and tracks are free from invasive species (e.g., *Rhamnus cathartica*, *Phragmites australis*, etc.).**
- **Machinery should arrive on site in clean condition and is to be checked and maintained free of fluid leaks.**
- **Minimize fuels and chemicals stored onsite and ensure a spills management plan and the associated spill response equipment is available on-site at all times for implementation in the event of a spill of deleterious material.**

Other Wetlands

- **A permit be obtained from the NVCA under Section 28 of the Conservation Authorities Act to permit Development, Interference within Wetlands (O.Reg. 172/06).**
- **An Ecological Offsetting Plan be prepared and enacted as per the NVCA Draft Guidelines for Achieving Net Gains through Ecological Offsetting (May 2021 Draft).**
- **Stormwater management/Low Impact Development opportunities be reviewed to maintain existing infiltration and drainage patterns to the extent possible.**

Significant Areas of Natural and Scientific Interest (ANSI)

- **The development area be located at the front of the subject property proximate to existing development on adjacent lands.**
- **Vegetation removal and other site disturbances are to be limited to the development area. The remaining vegetation on the subject property is to remain in its current state.**
- **A comprehensive Sediment and Erosion Control Plan be developed to address the potential for material to migrate off the subject property when soils are exposed during construction.**

Habitat of Endangered and Threatened Species

- **All land clearing and vegetation removal be completed outside of the active season for Eastern Hog-nosed Snakes (i.e., removal is to occur between November 1 and April 15).**
- **Development and site alteration should be located proximate to existing development on adjacent lands and the footprint be limited to the extent possible.**
- **Vegetation removal and other site disturbances are to be limited to the development area. The remaining vegetation on the subject property is to remain in its current state (Figure 3).**

Significant Wildlife Habitat

- **Tree clearing and vegetation removal only occur in the fall, winter, or early spring (from October 15 to April 15). This timeframe is outside of the maternal roosting period for bat species in Ontario.**
- **Vegetation removal should be restricted during the migratory nesting season, April 15 and August 31 each year. In the event that tree clearing must occur during this period, a qualified professional should complete a nest survey for the area where tree clearing is proposed. If nesting birds are found, tree clearing should wait until the birds have fledged.**

Table of Contents

List of Figures

List of Appendices

1 BACKGROUND

RiverStone Environmental Solutions Inc. (hereafter "RiverStone") was retained by Wasaga Riverwoods Homes Inc. to prepare an Environmental Impact Study (EIS) for a property located on River Road West in the Town of Wasaga Beach (hereafter "subject property", **Figure 1**). The subject property is 1.04 ha in area and is legally described as Part Lot 27, Concession 8 in the Geographic Township of Flos, Town of Wasaga Beach; the property is currently undeveloped.

Historically, the subject property received draft plan approval for a residential townhouse development as part of a larger residential development application for the lands located to the south of the property. Currently, the subject property is designated Residential on Schedule A-7 of the Town of Wasaga Beach Official Plan (Consolidation February 2016).

Schedule D of the Town's Official Plan identifies a portion of the subject property as part of an Area of Natural and Scientific Interest (ANSI), and a provincially significant wetland (PSW) occurs on lands to the south (**Figure 1**). The Ministry of Natural Resources and Forestry (MNRF) has mapped a deer wintering area on a portion of the subject property and on adjacent lands (**Figure 1**). Mapping available from the Nottawasaga Valley Conservation Authority (NVCA) identifies the entirety of the subject property as being within their regulated area.

It is RiverStone's understanding that this EIS is required as part of an application to construct a new residential condominium with associated parking and amenity areas. Through consultation with NVCA, the scope of this EIS includes: 1) vegetation inventory and delineation of ecological land classification (ELC) units, 2) assessment of Significant Wildlife Habitat (SWH), 3) assessment of features that may function as habitat for Endangered and Threatened Species within the subject property and adjacent lands, 4) assessment of other candidate significant/key natural heritage features, and 5) assessment and delineation of features regulated under Section 28 of the *Conservation Authorities Act* (e.g., wetlands).

2 APPROACH AND METHODS

The approach and methods used to carry out this EIS are detailed in this section. Broadly speaking, this includes:

1. Gathering background biophysical information for the, subject property, and adjacent lands (~120 m from the subject property boundaries) to become familiar with existing natural feature mapping and species of conservation interest occurrences prior to the site investigation.
2. Conducting site investigations to field-verify the presence or absence and boundaries of wetland communities, habitat for Endangered or Threatened species, SWH, etc. identified during background information gathering.
3. Determining the potential for negative impacts associated with implementation of the proposed development and ways that these negative impacts can be mitigated via avoidance, minimization, and/or compensation measures.
4. Providing an assessment of conformance of the proposed development with applicable municipal, provincial, and federal environmental policies pertaining to the scope required for this study.

2.1 Information Sources used to Assess Site Conditions

Background biophysical information related to the subject property, and adjacent lands was collected from a variety of sources. This includes:

- **Town of Wasaga Beach Official Plan** (Office Consolidation February 2016) for natural heritage feature mapping, including:
  - Schedule A-7 Land Use Plan
  - Schedule D Natural Heritage System
  - Schedule G Wellhead Protection Areas and Vulnerable Aquifer Areas
- **County of Simcoe Official Plan** (Approved December 29, 2016) for natural feature mapping, including:
  - Schedule 5.1 Land Use Designations
  - Schedule 5.2.2 Streams and Evaluated Wetlands
  - Schedule 5.2.3 Areas of Natural and Scientific Interest
- **MNRF Natural Areas Mapping and Natural Heritage Information Centre (NHIC) database** regarding information on occurrences of species at risk (SAR) and provincially tracked species (squares: 17NK7830, 17NK7930, 17NK7829, 17NK7929, accessed January 8, 2020, at: https://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US
- **Nottawasaga Valley Conservation Authority (NVCA) Interactive Mapping** to identify potential features of conservation interest on the subject property and determine whether NVCA's regulated area extends onto the subject property (accessed January 8, 2020 at https://maps.simcoe.ca/NVCA/).
- **Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005** (Cadman et al. 2007) regarding birds that were documented to be breeding in the vicinity of the subject property during the 2001–2005 period (square: 17NK73 accessed at: http://www.birdsontario.org/atlas/squareinfo.jsp).
- **Atlas of the Mammals of Ontario** (Dobbyn 1994) regarding records of mammals in the vicinity of the subject property.

2.2 Site Investigations

The background biophysical information gathered as outlined in **Section 2.1** helped to direct field data collection activities associated with site investigations carried out in 2019. Field data collection was focused on: 1) vegetation inventory and delineation of ecological land classification (ELC) units, 2) assessment of Significant Wildlife Habitat (SWH), 3) assessment of features that may function as habitat for Endangered and Threatened Species within the subject property and adjacent lands, 4) assessment of other candidate significant/key natural heritage features, and 5) assessment and delineation of regulated wetland features.

Table 1. Site investigations and primary tasks.

Date	Primary Task(s)	Staff
April 22, 2019	Breeding Amphibian Survey, Snag/Cavity Tree Assessment, General site review, Incidental Observations	W. Barbour
May 26, 2019	Breeding Bird Survey#1, Vegetation Survey, ELC, Incidental Observations, Assessment of SWH	W. Barbour
June 20, 2019	Breeding Bird Survey #2, Deploy Bat Acoustic Equipment, Wetland mapping, Incidental Observations	W. Barbour
July 8, 2019	Retrieve Acoustic Equipment, Habitat Assessment for Eastern Hog-nosed Snake, Assessment of SWH	G. Cunnington
September 12, 2019	ELC mapping and wetland assessment, Assessment of SWH	W. Barbour
September 20, 2019	Wetland boundary mapping	G. Cunnington C. Mann
October 3, 2019	Site walk with NVCA (Mike Francis) to review wetland boundaries.	G. Cunnington C. Mann

Evidence for the presence of a species (or use of an area by a species) was determined from visual and/or auditory documentation (e.g., song, call) and/or observation of nests, tracks, burrows, browse, skins, and scats (where applicable). Natural features of conservation interest (e.g., SAR habitat, etc.) were digitized and delineated in the field with a high accuracy GPS. Features of interest were photographed, and all information collected was catalogued for future reference. Representative photographs detailing on-site conditions are provided in **Appendix 1**.

2.2.1 Habitat-based Approach

RiverStone's primary approach to site assessment is habitat-based. This means that our field investigations first focus on evaluating the potential for features within an area of interest to function as habitat for species considered potentially present, rather than searching for live specimens. An area is considered potential habitat if it satisfies several criteria, usually specific to a species, but occasionally characteristic of a broader group (e.g., several turtles of conservation interest use sandy shorelines for nesting, numerous fish species use areas of aquatic vegetation for nursery habitat). Physical attributes of a site that can be used as indicators of its potential to function as habitat for a species include structural characteristics (e.g., physical dimensions of rock fragments or trees, water depth), ecological community (e.g., meadow marsh, rock barren, coldwater stream), and structural connectivity to other habitat features required by the species. Species-specific habitat preferences and/or affinities are determined from status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Cadman et al. (2007), published and unpublished documents, and direct experience.

In instances where a habitat-based assessment is deemed insufficient to draw conclusions regarding presence/absence and/or it is concluded that a particular species risks being adversely impacted by proposed development activities, RiverStone explores further species-specific assessments (e.g., Whip-poor-will call surveys, acoustic surveys for Bats, etc.) in accordance with applicable standard methods and protocols.

2.2.2 Geology, Soils, and Drainage

Geology is a significant factor in the formation of soil, the physical characteristics of a watershed, and ultimately surface water quality. The bedrock and overlying deposits influence surface runoff and infiltration, directly influencing the nutrient balance of receiving water bodies. Knowledge of the existing terrain in a study area is important in understanding how a property and its associated natural environment will respond to development pressures. The geophysical setting of this property was ascertained using OBMs, soils mapping, aerial photography, and the on-site investigation.

2.2.3 Vegetation Communities

All-natural vegetation communities on the subject property were mapped according to Ecological Land Classification (ELC) community tables (Lee et al., 1998). ELC defines ecological units or communities based on bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect), and corresponding vegetation. Use of the system permits biologists and other land managers to use a common language to describe vegetation communities, which in turn facilitates the identification of communities likely to support features or functions of conservation interest. The ELC system is an organizational framework that can be applied at different scales. The ecological units most useful for site-specific evaluations are ecosites and vegetation types (also known as ecoelements). Vegetation types are the finest level of resolution in the ELC system and are recurring patterns found in the plant species assemblages that are associated with a particular ecosite (Lee et al. 1998).

The boundaries of wetland communities were delineated on-site in accordance with the "50% wetland vegetation" rule specified by the Ontario Wetland Evaluation System (OWES).

2.2.4 Wildlife

2.2.4.1 Anuran Calling Surveys

Anuran calling surveys were conducted in 2019 in accordance with the Marsh Monitoring Program for Surveying Amphibians (Bird Studies Canada 2009). This protocol involves the completion of three (3) surveys, one per month between April and June for 30 minutes sometime between sunset and midnight. Appropriate weather conditions include no or very light precipitation and wind speed ≤3 on the Beaufort wind scale. As the subject property is located within the central region (between the 43rd and 47th parallels), each survey must occur during the second half of the month (i.e., April 15-30, May 15-31, and June 15-30). A total of two (2) anuran calling stations (**Figure 2**) were established by RiverStone and situated systematically across the subject property to cover potential anuran breeding habitats. Each station was surveyed for at least three (3) minutes with successive surveys relying on the persistence of suitable habitat conditions as a trigger.

2.2.4.2 Breeding Birds Surveys

Breeding bird surveys were conducted in 2019 in accordance with the Ontario Breeding Bird Atlas (OBBA) protocol (Bird Studies Canada et al. 2001). Surveys were conducted within the appropriate season (May 24–July 10), time of day (between dawn and 5 hours after dawn), and weather conditions (no rain, wind speed ≤3 on the Beaufort Wind Scale). A total of two (2) point count stations were surveyed in 2019 (**Figure 2**) with each survey event occurring for a minimum duration of 10 minutes at each station.

2.2.4.3 Bat Maternal Roost Habitat Surveys and Acoustic Monitoring

Targeted surveys for bats focused on identifying the presence of maternal roosts. Surveys followed the protocols outlined in OMNR (2010a) and (OMNR 2011) as modified by Parry Sound District MNRF (MNRF 2016 Draft). Vegetation mapping using ELC was used to guide the completion of onsite surveys (Protocol Step 1). Snags/cavity tree surveys were conducted during leaf off conditions and scoped based on vegetation mapping prepared in 2019 (Protocol Step 2). Acoustic surveys were then completed within the subject property; however, as snag/cavity tree surveys did not yield any areas with significant numbers of snags, acoustic survey equipment was placed in areas where some snags were documented as well as in proximity to where development was proposed (Protocol Step 3). Acoustic equipment (Wildlife Acoustics SM4, Full Spectrum) was placed at two (2) sites from June 20 to July 8, 2019 (**Figure 2**). Timing of surveys corresponded with the roosting period for maternal colonies as outlined in (COSEWIC 2013). Acoustic monitoring was completed between sunset and sunrise each day using a SM3BAT digital song meter (Wildlife Acoustics) and an ultrasonic microphone (SMM-U1). Weather conditions were fair throughout the survey period (Protocol Step 4). Where acoustic surveys resulted in the identification of SAR Woodland Bats, detailed mapping of snag/cavity trees surrounding the area of use by SAR bats were completed to inform discussions with MNRF (Protocol Step 5).

2.3 Identification of Natural Features of Conservation Interest

"Natural features of conservation interest" represent natural heritage features and habitats that have recognized status within the relevant planning jurisdiction in which an activity is proposed. The appropriate process for identifying such features is outlined below.

2.3.1 Significant Wetlands

The presence or absence of Significant Wetlands on or adjacent to the subject property was ascertained via assembly and review of relevant background information sources (per **Section 2.1**) and was further based on communications with MNRF.

2.3.2 Areas of Natural and Scientific Interest (ANSI's)

The presence or absence of ANSI's on or adjacent to the subject property was ascertained via assembly and review of relevant background information sources (per **Section 2.1**) and was further based on communications with MNRF.

2.3.3 Fish Habitat

The presence or absence of fish habitat was ascertained via assembly and review of relevant background information sources per **Section 2.1**) and the results of targeted and habitat-based assessments on-site.

Generally, where watercourses are encountered, they are assessed for several important characteristics, including the physical dimensions of the channel, substrates, invertebrates, thermal regime, groundwater sources and adjacent vegetation. These details allow a given watercourse to be characterised and considered on the basis of requirements in the Township and County Official Plans. These requirements relate to the buffer width and vegetation requirements. Wetlands can also be considered habitat for fish where there is suitable open water.

2.3.4 Habitat of Endangered and Threatened Species

Properly assessing whether an area is likely to contain species of conservation interest for the purposes of determining whether a proposed development could have a negative impact is becoming more difficult as the number of listed species increases. Approaches that depend solely on documenting the presence of individuals of a species in an area almost always underrepresent the biodiversity actually present because of the difficulty of observing species that are usually rare and cryptic.

Given these difficulties, and the importance of protecting habitats of Endangered and Threatened species, RiverStone's primary approach to site assessment is habitat-based. This means that our field investigations focus on evaluating the potential for features within an area of interest to function as habitat for species considered potentially present, rather than searching for live specimens. An area is considered potential habitat if it satisfies a number of criteria, usually specific to a species, but occasionally characteristic of a broader group (e.g., several turtles use sandy shorelines for nesting). Physical attributes of a site that can be used as indicators of its potential to function as habitat for a species include structural characteristics (e.g., physical dimensions of rock fragments or trees, water depth), ecological community (e.g., meadow marsh, rock barren), and structural connectivity to other habitat features required by the species. Species-specific habitat preferences and/or affinities are determined from status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Cadman et al. (2007), published and unpublished documents, and direct experience.

For the purposes of this assessment, Endangered and Threatened Species are those that are listed as *Endangered* or *Threatened* on the Species at Risk in Ontario List and are afforded protection by s.9 and s.10 of the Provincial *Endangered Species Act, 2007*.

The results of our habitat-based assessments for Endangered and Threatened species as well as descriptions of the methodology and rationale employed are provided in **Appendix 2**.

2.3.5 Significant Wildlife Habitat

The Provincial Policy Statement (PPS) protects SWH from development and site alteration unless it can be demonstrated that no negative impacts on the feature or its function will occur. As outlined in the SWH Technical Guide (OMNR 2000) and supporting Ecoregion Criteria Schedules (OMNRF 2015a, 2015b, 2015c), SWH is composed of four principal components:

1. Seasonal Concentration Areas of Animals;
2. Rare Vegetation Communities or Specialized Habitats;
3. Habitat of Species of Conservation Concern; and
4. Animal Movement Corridors.

The process for identifying SWH is outlined in s. 9.2.3 of the *Natural Heritage Reference Manual* (OMNR 2010b). **Step 1** requires the answers to two questions:

A. Does the development proposed involve a trigger for significant wildlife habitat; and
B. Has any confirmed significant wildlife habitat been identified.

Triggers for significant wildlife habitat (question A) are outlined in s.9 of the Natural Heritage Reference Manual {OMNR, 2010 #2473} and include:

- Creation of more than three (3) lots through either consent or plan of subdivision;
- Changes in land use, not including the creation of a lot, that require approval under the Planning Act;
- Shoreline consent along a large inland lake, small inland lake or large river that is within 120 m along the shoreline of an existing lot of record or lot described in an application for subdivision or consent; and,
- Construction for recreational uses (e.g., golf courses, serviced playing fields, serviced campgrounds, and ski hills) that require large-scale modification of terrain, vegetation or both.

If the development proposed involves a trigger (question A), the assessment of SWH proceeds to **Step 2**.

Confirmed SWH (question B) are areas that have been identified in existing planning documents (e.g., Official Plans) or by the MNRF. Where confirmed SWH is present, and the development proposed does not involve a trigger (question A), the assessment of SWH proceeds to **Step 4**.

Where

Step 2 of the SWH assessment involves undertaking a more thorough analysis of features, functions, and habitats on the subject property *via* ELC (see **Section 2.2.3**). The list of ELC Ecosite codes generated for the subject property is compared to those codes considered candidate SWH in the relevant Ecoregion Criterion Schedule (*i.e.* 5E, 6E, or 7E) in **Step 3**. Where a positive match between an ELC Ecosite and candidate SWH exists, the area is considered candidate SWH.

In **Step 4**, two options are available for candidate or confirmed SWH:

1. the area may be protected without further study, or
2. the area may be evaluated to ascertain whether confirmed SWH is present. Evaluation may involve generating more detailed maps of vegetation cover or conducting surveys of the wildlife population within the candidate SWH including reproductive, feeding, and movement patterns.

If the area is confirmed SWH, the final step in the process (**Step 5**) is the completion of an impact assessment to demonstrate that no negative impacts to the confirmed SWH or its function will occur. The impact assessment process is assisted by SWH Mitigation Support Tool (OMNRF 2014).

RiverStone employed the approach as outlined above (i.e. **Steps 1-5**) in assessing the potential for SWH to exist on the subject property. Technical results of our assessment are provided in **Appendix 3**, with additional discussion in **Section 3.5.4**.

2.4 Impact Assessment and Mitigation Measures

To carry out an ecological assessment of potential impacts associated with implementation of the proposed development, RiverStone employs the following approach:

1. *Predict* impacts to existing biophysical features and functions on site based on the proposed development plan (from construction to post-completion), including both direct (e.g.,

vegetation clearance, etc.) and indirect (e.g., light pollution, encroachment post-development, etc.) impacts.

2. *Evaluate the significance* of predicted impacts to existing biophysical features and functions based on their spatial extent, magnitude, timing, frequency (how often), and duration (how long).
3. *Assess the probability or likelihood* that the predicted impacts will occur at the level of significance expected (i.e., high, medium, low probability).

In instances where the potential for negative impacts exists, relevant mitigation measures are offered to avoid, minimize, and/or compensate for such impacts. RiverStone's impact assessment and recommended mitigation measures are provided in **Section 4.**

2.5 Assessment of Conformance with Applicable Environmental Policies

There are several relevant environmental policies (e.g., statutes, regulations, plans, guidance documents, etc.) that apply to the subject property and proposed development considered herein, which are listed below. An assessment of the proposed development's conformity with these policies is offered in **Section 4.2.5**.

- Town of Wasaga Beach Official Plan (Consolidation February 2016)
- County of Simcoe Official Plan (Approved December 29, 2016)
- Provincial *Conservation Authorities Act*, R.S.O. 1990, c. C.27, including:
    - O. Reg. 172/06 – Nottawasaga Valley Conservation Authority: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses
- Provincial Policy Statement, 2014, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13, including:
    - Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (OMNR 2010c)
- Provincial *Endangered Species Act* (ESA), S.O. 2007, c. 6, including:
    - O. Reg. 230/08 – Species at Risk in Ontario List
    - O. Reg. 242/08 – General (i.e. "Exemption Regulation")
- Federal *Migratory Birds Convention Act*, S.C. 1994, c. 22, including:
    - Migratory Birds Regulations.
- Federal *Fisheries Act*, R.S.C. 1985, c. F-14, amended on 2019-08-28 including:
    - *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*, S.O.R/2013-191
    - Fish and Fish Habitat Protection Policy Statement (August 2019)

3 BIOPHYSICAL FEATURES AND FUNCTIONS

3.1 General Site Conditions

The subject property is located on the south side of River Road West in the western portion of the Town of Wasaga Beach (**Figure 1**). The property is bordered by a condominium development to the west, an undeveloped residential lot to the east, and undeveloped lands to the south. Currently the subject property is vacant but shows signs of previous human activity. Historic groundwater monitoring wells are present on the subject property, and evidence of historic earthworks or clearing is present in a linear strip extending south from River Road West. This historic activity has resulted in the creation of a low cleared area that traverses the wetland community on the property. The clearing would appear to have been completed historically to permit access for the equipment required to install the monitoring wells. The rear of the property is generally in a natural state and slopes towards the front of the lot. The area surrounding much of the subject property consists primarily of residential and commercial properties or land that has been approved for residential development; however, lands to the southwest are dominated by portions of Wasaga Beach Provincial Park.

3.2 Physiographic Setting

The subject property is situated within the Lake Simcoe Lowlands physiographic region (Chapman and Putnam 1984). The Simcoe Lowlands encompasses over 2,800 km^2 of low-lying land draining into Georgian Bay (Nottawasaga Bay) and Lake Simcoe. These lands were flooded by Lake Algonquin at the terminus of the previous ice age approximately 10,000 years ago. The subject property and adjacent lands are mapped as a broad sand plain that developed on wave-washed deposits near the shoreline of Lake Algonquin.

According to elevations from Ontario Base Mapping, the subject property generally slopes to the north towards River Road West. No watercourses were observed on the subject property; however, the drainage ditch located along the southern side of River Road West appears to outlet onto the front of the subject property during periods of high flow. This additional surface water contribution may have resulted in changes to the extent of wetland on the subject property. Given the slopes on the subject property, surface runoff generally flows from south to north across the lot. During onsite investigations, RiverStone staff noted a dug drainage feature that extends along the eastern edge of the subject property and appears to be part of the stormwater management system constructed as part of the adjacent condominium development. This drainage feature outlets into the ditch along River Road West which drains to the north through a culvert under the road.

3.3 Vegetation Communities

Existing vegetation communities within the subject property and the site were assessed during the on-site investigation. A desktop exercise was undertaken to map vegetation community boundaries using background information sources and current aerial photographs; the mapped vegetated communities were ground-truthed and refined during the site investigation. Vegetation community mapping in accordance with Lee et al. (1998) is provided in **Figure 2**. Where wetlands were encountered, RiverStone delineated the boundaries of these features within the subject property per the OWES “50% wetland vegetation” rule.

3.3.1 Terrestrial Communities

3.3.1.1 FOM - Mixed Forest

The south portion of the subject property is higher and drier than the northern portion with a vegetation community that reflects these conditions. The size of trees and composition of the community in the southern portion of the subject property suggest that the area was historically cleared with young early succession trees present. Due to the proximity of the adjacent wetland community, a good portion of this community is in transition, with species present that occur in both upland and wetland habitat. The hydrology of this community has likely been altered through the digging of drainage ditches through the adjacent wetland community and along the wetland community boundary. Species present in canopy include: Green Ash (*Fraxinus pennsylvanica*), Red Maple (*Acer rubrum*), Trembling Aspen (*Populus tremuloides*), Balsam Fir *(Abies balsamea*), Red Oak (*Quercus rubra*), American Beech (*Fagus grandifolia*), Black Cherry (*Prunus serotina*), American Elm (*Ulmus Americana*), and White Birch (*Betula papyrifera).* Species present in the shrub and groundcover layers include: Canada Mayflower (*Maianthemum canadense*), Bracken Fern (*Pteridium aquilinum*), Sensitive Fern (*Onoclea sensibilis*), Ostrich Fern (*Matteuccia struthiopteris*), Lady Fern (*Athyrium filix-famina ssp angustum*), Western Poison Ivy (*Toxicodendron rydbergii*), Blue Cohosh (*Caulophyllum thalictroides*) and, Pennsylvania Sedge (*Carex pensylvanica*).

3.3.2 Wetland Communities

3.3.2.1 SWM – Mixed Swamp

The portion of the subject property that fronts onto River Road West is dominated by facultative and obligate wetland vegetation and is best classified as Mixed Swamp with Balsam Fir (*Abies balsamea*) being the most abundant conifer species. The community canopy is composed of a mixture of coniferous and deciduous trees that include Green Ash (*Fraxinus pennsylvanica),* Trembling Aspen (*Populus tremuloides*), Red Maple (*Acer rubrum*), White Birch (*Betula papyrifera*), Balsam Fir, Eastern White Cedar (*Thuja occidentalis*), and Eastern White Pine (*Pinus strobus*). Additional species found in the shrub and groundcover layers include Choke Cherry (*Prunus virginiana var. virginiana*), cattail species (*Typha sp*.), Spotted Jewelweed (*Impatiens capensis*), Poison Ivy (*Toxicodendron radicans*), Common Milkweed (*Asclepias syriaca*), Pennsylvania Sedge (*Carex pensylvanica*), Royal Fern (*Osmunda regalis var. spectabilis*), and Sensitive Fern (*Onoclea sensibilis*).

Based on the composition of small, early successional trees and the presence of visibly cut stumps, it is RiverStone's opinion that the site has been mostly or completely cleared of woodland cover in the past. This community shows evidence of other historical disturbance and modification, with a dug drainage ditch along the back of the community, two parallel dug ditches extending from River Road West through the central portion of the community, a roadside ditch along River Road West, and a drainage ditch along the east property boundary. Drainage from the wetland is generally directed to the north and northeast via the ditches with water flowing under River Road West via concrete box culvert. The dug ditches have likely had an influence on the hydrology and the vegetation composition of this community. The historic modifications within and adjacent to the property have likely degraded and reduced the overall form and function of this feature.

The location and extent of wetlands on the subject property was mapped by RiverStone ecologists in 2019. Following RiverStone's onsite assessment, staff met with an NVCA ecologist on site (October 3, 2019) to review and confirm the boundaries of the wetland community. Mapping provided on **Figure 2**

represents the confirmed boundaries of the wetland feature. The measured area of the wetland feature on the subject property is 0.326 ha.

3.4 Wildlife

3.4.1 Anurans

A total of two (2) anuran species were recorded during anuran calling surveys completed by RiverStone in 2019. Spring Peeper (*Pseudacris crucifer*) was recorded during the initial survey at Station 2 only with no calling anurans detected at Station 1 (**Figure 2**). American Toad (*Anaxyrus americanus*) were heard during site visits completed in late May; however, no formal surveys were completed after the initial survey on April 22 as no areas of standing water were present on the subject property until fall. Overall anuran abundance and diversity was low on the subject property.

3.4.2 Breeding Birds

3.4.2.1 Breeding Bird Surveys

Breeding bird surveys in accordance with the OBBA were undertaken by RiverStone in 2019. A total of sixteen (16) bird species were recorded during the breeding bird surveys. The assemblage and abundance of birds recorded during the OBBA surveys generally reflects the prevailing structure and composition of on-site vegetation communities. Bird species that breed and forage in deciduous forests and swamps were generally the most widely documented, and included: American Robin (*Turdus migratorius*), Black-capped Chickadee (*Poecile atricapillus*), Pileated Woodpecker (*Dryocopus pileatus*), Blue Jay (*Cyanocitta cristata*), Belted Kingfisher (*Megaceryle alcyon*), Common Grackle (*Quiscalus quiscula*), Chipping Sparrow (*Spizella passerina*), Grey Catbird (*Dumetella carolinensis*), House Sparrow (*Passer domesticus*), House Wren (*Troglodytes aedon*), Common Yellowthroat (*Geothlypis trichas*), Chestnut-sided Warbler (*Setophaga pensylvanica*), and Song Sparrow (*Melospiza melodia*). No significant bird species were recorded during the OBBA surveys. This is consistent with data provided in the historic EIS prepared by Draycott Environmental Inc. (2005).

3.4.3 Bats

Snags/cavity tree surveys were completed in 2019 during leaf off conditions for all treed vegetation communities within the subject property. Results of these surveys indicate that densities of snag/cavity trees are low across the subject property with less than 10 snags/ha that are greater than 25 cm (DBH).

RiverStone completed acoustic monitoring surveys at two (2) locations within the subject property in 2019. Acoustic detectors were deployed in areas with the highest density of snags or cavity trees to increase the likelihood of documenting bat species. Locations of the equipment deployed are provided on **Figure 2**. Acoustic detections of "bat passes" are often used as a measure of relative abundance of bats (Miller 2001). Based on this, overall abundance of bats in the subject property was found to be quite low (**Table 2**). No species of Endangered Bats were detected during the acoustic monitoring; however, sufficient numbers of Big Brown Bats and Silver-Haired Bats were detected at Station 2 (**Table 2**) to suggest that Bat Maternity Roosting Habitat (Significant Wildlife Habitat) is present.

Table 2. Results of acoustic surveys for bats in 2019. See **Figure 2** for the location of surveys stations.

Survey Station	Start Date	End Date	Species Detection (# passes)
Bat 1	June 20 (PM)	July 8 (AM)	Big Brown (4) Silver-Haired (4)
Bat 2	June 20 (PM)	July 8 (AM)	Big Brown (29) Hoary (3) Silver-Haired (32)

3.5 Natural Features of Conservation Interest

As part of completing the background review, RiverStone reviewed the applicable Schedules of the County of Simcoe Official Plan (December 2016) and the Town of Wasaga Beach Official Plan (Office Consolidation February 2016). The County of Simcoe Official Plan identifies the subject property as being with the Settlement Area of Wasaga Beach (Schedule 5.1); no streams or evaluated wetlands (Schedule 5.2.2) were identified on the subject property; however, an Areas of Natural and Scientific Interest (ANSI, Schedule 5.2.3) is present along the rear of the lot. **Table 3** summarizes the status of natural features of conservation interest within the subject property.

As per Schedule D (Natural Heritage System) of the Town of Wasaga beach Official Plan, no portions of the subject property have been identified as part of the Natural Heritage System, or a Provincially Significant Wetland Complex: while difficult to decern, it does appear that a portion of an ANSI is present along the rear of the property. As the subject property is located within a settlement area, no Significant Woodlands have been identified on the subject property.

Additionally, as RiverStone's site inspection did not identify any watercourses or aquatic communities, the subject property does not contain any feature that could be considered fish habitat or valleylands.

Table 3. Summary of natural features of conservation interest on or adjacent to the subject property

Features of Conservation Interest	Status of Feature of Conservation Interest on the Subject Property	Status of Feature of Conservation Interest on Lands Adjacent to the Subject Property
Significant Wetlands	*Absent*.	*Present*. See **Section 3.5.1**.
Significant Woodlands	*Absent*.	*Absent*.
Significant Valleylands	*Absent*.	*Absent*.
Significant Areas of Natural and Scientific Interest (ANSI)	*Present*. See **Section 3.5.2**.	*Present*. See **Section 3.5.2**.
Habitat of Endangered and Threatened Species	*Present*. See **Section 3.5.3**.	*Present*. See **Section 3.5.3**.
Significant Wildlife Habitat	*Present*. See **Section 3.5.4**.	*Present*. See **Section 3.5.4**.
Fish Habitat	*Absent*.	*Absent*.

[1] - Shaded rows denote features of conservation interest for which negative impacts stemming from implementation of the proposed development plan are possible.

3.5.1 Significant Wetlands

According to mapping available from Land Information Ontario, a portion of the Wasaga Beach (WB1) Provincially Significant Wetland (PSW) is located to the south of the subject property (**Figure 2**). This portion of the PSW has been classified as a swamp with other units of this PSW being located within the larger landscape (see **Figure 1**). While wetland communities are present on the subject property, none of these have been mapped as significant by the province or local authorities. Through communications with staff at the Midhurst District MNRF office, RiverStone understands that the boundaries of this portion of the PSW have not been field verified and are based largely on mapping completed by the province in the 1970s and 80s.

3.5.2 Significant Areas of Natural and Scientific Interest (ANSI)

The Wasaga Dunes Life Science ANSI is present along the rear of the subject property (**Figure 2**). This provincially significant ANSI is primarily associated with Wasaga Beach Provincial Park and adjacent lands located south of River Road. This ANSI incorporates the contiguous raised beaches, transverse dunes, parabolic dunes and Nipissing/post-Nipissing lagoons present in the landscape (NVCA 2005). Ecological communities within the ANSI include an assemblage of fire-adapted communities such as dry oak-pine forests, sand barrens and small, prairie-like meadows are associated with the dune areas (NVCA 2005).

3.5.3 Habitats of Endangered and Threatened Species

See **Appendix 2** for a detailed technical description of RiverStone's habitat-based assessment for species of conservation interest on the site and adjacent lands. Based on the assembly and review of background information cited in **Section 2.1**, a total of thirteen (13) Endangered and Threatened species had the potential to occur on the subject property. Based on a desktop and on-site assessment of features that could function as habitat for these species, one (1) Endangered and Threatened species had the potential to be negatively impacted by the proposed development. General and foraging habitat for Eastern Hog-nosed Snake was present across the subject property. Impacts to Eastern Hog-nosed Snake and their habitat are considered below in **Section 4.2.4**.

3.5.4 Significant Wildlife Habitat

The development application proposed (i.e., plan of condominium) represents a trigger for the assessment of SWH (see question A in **Section 2.3.5**). Additionally, based on the results of the review of background sources outlined in **Section 2.1**, MNRF has identified a deer wintering yard on portions of the subject property and adjacent lands. The identified deer wintering yard represents confirmed SWH (see question B in **Section 2.3.5**). Based on this information, an assessment of SWH is required.

The results of RiverStone's desktop, habitat-based, and targeted assessments of potential features and communities that could function as SWH per provincial policies is provided in **Appendix 3**. Three (3) communities or features with the potential to be identified as SWH were identified. Based on the initial steps of our desktop analysis, eight (8) special concern species had the potential to occur on the subject property. Following review of the aerial photographs and onsite assessments, two (2) special concern species had the potential to use features found on or adjacent to the subject property.

The following SWH features or communities have the potential to be impacted by the proposed development application considered herein. An impact assessment is provided for each SWH feature in **Section 4.2.5**.

- Seasonal Concentration Areas of Animals
  - Bat Maternity Roosting Colony
  - Deer Yarding Areas
- Specialized Habitat for Wildlife
  - Amphibian Breeding Habitat (Woodland)
- Special Concern Species
  - Eastern Wood-pewee (*Contopus virens*)
  - Wood Thrush (*Hylocichla mustelina*)

3.5.5 Fish and Fish Habitat

Based on the results of RiverStone's background and onsite assessments, no features with the potential to function as fish habitat were identified.

4 IMPACT ASSESSMENT AND RECOMMENDATIONS

4.1 Proposed Development Plan

It is RiverStone's understanding that the current landowners are seeking approvals to construct an 86-unit condominium complex with associated parking. The condominium building is proposed to be located at the front of the subject property, adjacent to River Road West. A new parking area is proposed to be constructed to the south of the condominium building and extend toward the rear of the property. The western portion of the subject property will remain in its current natural condition and provide a functional buffer between development and the significant natural heritage features associated with Wasaga Beach Provincial Park. A copy of the proposed development plan is provided in **Appendix 4**. RiverStone has illustrated the development plan graphically alongside natural feature mapping on **Figure 3**.

4.2 Impact Assessment

Based on the results of RiverStone's assessment of features of conservation interest in **Section 3**, in concert with the proposed development plan illustrated in **Figure 3**, features of conservation interest that may be impacted by the proposed development plan include: habitat of Endangered and Threatened species, SWH, and unevaluated wetland. RiverStone has also assessed the potential for impacts to other natural features and functions that warrant consideration during implementation of the proposed development (e.g., bird nests). The potential for negative impacts on these natural features is discussed below.

4.2.1 Significant Wetlands

As outlined in **Section 3.5.1**, a portion of the Wasaga Beach PSW is located on lands to the south of the subject property. At its closest point, the PSW is greater than 30 m from the rear of the subject property. Given the location of the PSW in relation to the subject property, direct impacts to this feature are unlikely as a result of the proposed development; however, there is potential for indirect effects. In this case, indirect impact to the PSW may include, changes to the hydroperiod as a result in changes to surface runoff patterns, a decrease in water quality within the wetland feature, and changes to adjacent vegetation communities. To address the potential for these indirect impacts to the adjacent PSW, RiverStone recommends:

- **Development and site alteration should be located proximate to existing development on adjacent lands and the footprint be limited to the extent possible.**
- **A comprehensive Sediment and Erosion Control Plan be developed to address the potential for material to migrate off the subject property when soils are exposed during construction.**
- **A stormwater management report be developed to ensure that the water balance is maintained to surrounding wetlands. Additionally, the water quality and quantity of the stormwater is to be maintained.**
- **All aggregate material stored on site is to be contained by heavy-duty sediment fencing.**
- **The sediment fencing must be constructed of heavy material and solid posts to ensure its integrity and be properly installed (trenched in) to maintain its integrity during inclement weather events.**
- **Regular inspection and monitoring will be necessary to ensure that the structural integrity and continued functioning of the sediment control measures is maintained (i.e., proper installation is not the only action necessary to satisfy the mitigation requirements).**
- **Inspections of sediment and erosion control measures should be completed within 24 hours of the onset of a storm event.**
- **Sediment control measures must be maintained in good working order until vegetation has been established on the exposed soils.**
- **Offloading of construction materials and aggregate should be completed during fair weather.**
- **Best Management Practices should be utilized with all machinery and fill being imported to the subject property to ensure that material and tracks are free from invasive species (e.g., *Rhamnus cathartica*, *Phragmites australis*, etc.).**
- **Machinery should arrive on site in clean condition and is to be checked and maintained free of fluid leaks.**
- **Minimize fuels and chemicals stored onsite and ensure a spills management plan and the associated spill response equipment is available on-site at all times for implementation in the event of a spill of deleterious material.**

4.2.2 Wetlands

As described in **Section 3.3.2**, the wetlands on the subject property appear to receive concentrated runoff from the ditch located along the south side of River Road West. This water may result in an increased hydroperiod and may have facilitated the historic expansion of wetlands on the subject property. Results of the targeted surveys completed on the subject property identified low avian and anuran species diversity within the wetland community present on site. Factors such as proximity of the wetland feature to River Road West, and historic development activities on lands adjacent, have likely reduced the quality and function of the wetland community. Based on the results of RiverStone's assessment, the wetland present on the subject property appears to have limited ecological value that is

primarily associated with minor flood attenuation. Pertaining to wetlands and the removal of these features on the subject property, RiverStone recommends:

- **A permit be obtained from the NVCA under Section 28 of the Conservation Authorities Act to permit Development, Interference within Wetlands (O.Reg. 172/06).**
- **An Ecological Offsetting Plan be prepared and enacted as per the NVCA Draft Guidelines for Achieving Net Gains through Ecological Offsetting (May 2021 Draft) (see submission under separate cover).**
- **Stormwater management/Low Impact Development opportunities be reviewed to maintain existing infiltration and drainage patterns to the extent possible.**

4.2.3 Significant Areas of Natural and Scientific Interest (ANSI)

The subject property is located in the northeastern portion of the Wasaga Dunes Life Science ANSI (**Figure 1**); only a small portion of this feature is present along the rear of the lot (**Figure 2**). As outlined in **Section 3.5.2**, the ANSI was established due to the presence of fire-adapted communities including dry oak-pine forests, sand barrens and small, prairie-like meadows that are associated with the dune areas of Wasaga Beach. Dune formations are absent from the subject property. Additionally, the raised beach ridge topography also associated with the ANSI are not well defined on the subject property. Vegetation communities on the subject property do not contain any of the rare or unique communities for which this ANSI was identified. Based on the lack of features on the subject property for which this ANSI was identified, there is a low likelihood that development will result in negative impacts to the function and integrity of the ANSI feature. To further reduce the potential for impacts, RiverStone recommends:

- **The development area be located at the front of the subject property proximate to existing development on adjacent lands.**
- **Vegetation removal and other site disturbances are to be limited to the development area. The remaining vegetation on the subject property is to remain in its current state.**
- **A comprehensive Sediment and Erosion Control Plan be developed to address the potential for material to migrate off the subject property when soils are exposed during construction.**

4.2.4 Habitat of Endangered and Threatened Species

As noted in **Section 3.5.3** and **Appendix 2**, features on the subject property have limited potential to function as habitat for Endangered or Threatened species. The one species with the potential to be present on the subject property is Eastern Hog-nosed Snake. This species is known to occur in the Town of Wasaga Beach, however, results of a recent multi-year study of Eastern Hog-nosed Snakes in Wasaga Beach (completed by RiverStone) did not identify any individuals within the large block of contiguous forest associated with the provincial park located on adjacent lands. Given the cryptic nature of this species, it is possible that individuals persist within this portion of the Town. However, based on the results of RiverStone's on-site assessments, there is a low likelihood that this species hibernates on the subject property, as the low-lying topography and the high water table would not support this function. The wetland on the subject property may provide foraging habitat; however, given the limited abundance of anurans documented during onsite assessments, the quality of the foraging habitat is deemed low. Additionally, the extent of forest cover on the subject property and

limited openings in the canopy reduces the potential that shedding habitat is present on the subject property. Finally, the subject property is not located between areas of quality or specialised habitat for this species suggesting that it is unlikely that the subject property contains movement corridors for Eastern Hog-nosed Snake. Given the lack of specialized habitat features on the subject property, the site would appear at best to provide general habitat for this species. Considering the habitat quality and the low likelihood that this species will be present on the subject property, RiverStone provides the following recommendations to reduce the likelihood that this species will be impacted by the proposed development.

- **All land clearing and vegetation removal be completed outside of the active season for Eastern Hog-nosed Snakes (i.e., removal is to occur between November 1 and April 15).**

- **Development and site alteration should be located proximate to existing development on adjacent lands and the footprint be limited to the extent possible.**

The proposed land use changes will result in disturbance to the natural features located on the subject property. Consequently, the ecological function of these areas will be adversely affected. The following measures are recommended to reduce adverse effects of development on the property's natural features and functions:

- **Vegetation removal and other site disturbances are to be limited to the development area. The remaining vegetation on the subject property is to remain in its current state (Figure 3).**

4.2.5 Significant Wildlife Habitat

The MNRF has mapped a deer wintering area on portions of, and adjacent to, the subject property; therefore, confirmed SWH is present within this area. RiverStone completed a habitat-based assessment of SWH features on the subject property in accordance with the Ecoregion 6E Criteria Schedules (OMNRF 2015b). Based on the results of RiverStone's SWH assessment (see **Appendix 3**) the following SWH features were identified.

4.2.5.1 Seasonal Concentration Areas of Animals

Bat Maternal Colonies

Based on the acoustic monitoring results there is potential maternal roosting habitat for bats classified as Special Concern in the forested communities on the subject property. The species included in this designation are the Big Brown Bat (*Eptesicus fuscus*) and Silver-haired Bat (*Lasionycteris noctivagan*).

Pregnant and lactating females will move from roost to roost each morning in responses to changes in thermal conditions and prey (insect) availability. Areas containing a high density of snags increases the chances of use by Endangered Bats as these areas provide a variety of microhabitat conditions. Changes within the forest community adjacent to maternal roosts have the potential to reduce the suitability of a given snag or cavity tree by changing the extent of shading by adjacent trees, which can result in changes to thermal conditions within the roost. Additionally, as roosting trees inherently exhibit some level of decay, removal of trees surrounding roosts may increase the potential for wind-throw of both the roost itself and surrounding trees, thereby damaging or destroying the habitat feature.

Habitat for bats is prevalent throughout much of the Town of Wasaga Beach. Where portions of the municipality are predominantly forested, habitat for maternal roosting bats is not limited. In order to

mitigate impacts to bats that may be utilizing portions of the forest communities on the subject property for maternal roosting, RiverStone recommends the following:

- **Tree clearing and vegetation removal only occur in the fall, winter, or early spring (from October 15 to April 15). This timeframe is outside of the maternal roosting period for bat species in Ontario.**

Deer Yarding Areas

According to the Significant Wildlife Habitat Technical Guide (OMNR 2000), areas where animals congregate on a seasonal or life cycle basis can be considered significant wildlife habitat (SWH); this includes wintering yards for white-tailed deer. According to the guide, not all yards are considered significant, in the context of the PPS, each yards' significance relates to its overall function. For example, small yards may not be considered SWH where there are other large yards in the vicinity, while in other areas small yards are significant where they support a smaller wintering population in the absence of large yards. In deer wintering yards, core areas (Stratum 1) function as the main shelter, feeding and movement areas, while the adjacent lands function as potential movement corridors to other feeding areas, particularly when snow depth is low or moderate. For areas to function as wintering yards, sufficient thermal cover in the form of conifer stands is required.

The MNRF has mapped a deer wintering yard that covers the area within the Town of Wasaga Beach that is primarily occupied by the Provincial Park (**Figure 1**). The mapped deer wintering yard is associated with approximately 75% of the subject property (**Figure 2**). Our assessment found little evidence of browse by deer on existing vegetation suggesting that while deer may be present in the larger landscape, they are not actively using the subject property as wintering habitat. Additionally, given the proximity of the subject property to the forest edge, the potential for quality thermal cover to be present is limited. Based on a review of the larger landscape, the forest community located to the west of the subject property that is associated with the Provincial Park appears to provide higher quality thermal cover due to the higher density of conifer cover. Based on this assessment, RiverStone is of the opinion that it is unlikely that development of the subject property will result in a negative impact on deer wintering habitat.

4.2.5.2 Specialized Habitats for Wildlife

Amphibian Breeding Habitat (Woodland)

The results of targeted surveys for calling anurans on the subject property identified generally low species diversity and limited quality habitat. However, features are present within the woodland on the subject property that have the potential to function as breeding habitat for amphibians. Woodland pools that provide breeding habitat for amphibians on the subject property are primarily located in the western 'leg' of the property and on adjacent lands to the south and southwest. As the proposed development is located away from these features, RiverStone does not anticipate any impacts to significant woodland amphibian breeding habitat on the subject property or adjacent lands.

4.2.5.3 Habitat of Species of Conservation Concern

Eastern Wood-pewee (Contopus virens) and Wood Thrush (Hylocichla mustelina)

Eastern Wood-pewee breed in open forest communities that have limited understory (COSEWIC 2012a). This species is most abundant in intermediate to mature aged forests; however, the size of

individual forest patches has not been identified as a factor in determining habitat use. The presence of perches (i.e., dead branches) within forests that can be used for foraging is required for this species to utilize a given forest patch (COSEWIC 2012a).

Wood Thrush are typically found in mature deciduous and mixed forest communities containing well-developed understory layers. Wood Thrush preferentially select areas of contiguous forest; however, this specie may be found in smaller forest patches where conditions are suitable. This species typically selects Sugar Maple or American Beech saplings as nest sites (COSEWIC 2012b).

Given the extent of possible nesting habitat for both Wood-pewee and Wood Thrush within the subject property and surrounding landscape negative impacts to these species are not anticipated. Avoidance of vegetation removal during the active nesting season for these and other avian species will further reduce the potential for negative effects arising from the proposed development. RiverStone recommends:

- **Vegetation removal should be restricted during the migratory nesting season, April 15 and August 31 each year. In the event that tree clearing must occur during this period, a qualified professional should complete a nest survey for the area where tree clearing is proposed. If nesting birds are found, tree clearing should wait until the birds have fledged.**

5 CONFORMANCE WITH APPLICABLE ENVIRONMENTAL POLICIES

The following sections summarize the municipal, provincial, and federal environmental policies that may apply to the proposed development plan and describe how the recommendations provided in this EIS will ensure the development plan conforms with these policies (where applicable).

5.1 Town of Wasaga Beach Official Plan (Office Consolidation February 2016)

The Town's OP is a legal document prepared as required under section 14.7(3) of the *Planning Act*. The OP sets out goals, objectives, and policies that direct and manage land-use and future development activities and their effects on the social and natural environment of the municipality. Provided herein is a description of relevant environmental and natural heritage policies contained within the Town's OP and an assessment of how the proposed development plan conforms with such policies.

Section 13 of the Town's OP contains the Natural Heritage Policies, including those which protect significant wetlands and the Habitat of Endangered and Threatened Species (policy 13.1.2). Additionally, Section 13 provides direction related to the identified Natural Heritage System within the Town limits. As outlined in **Section 3.6** of this report, the subject property is not located within the Natural Heritage System and as such the policies outlined in s.13.3 and s.13.4 of the Town's OP do not apply to this application.

The Town's OP does provide specific direction regarding Habitat of Endangered and Threatened Species (policy 13.4.9.2). The impact assessment contained in **Section 4.2** of this report, and contingent on the implementation of RiverStone's recommendations in full, indicates that the proposed development of the subject property is consistent with relevant environmental and natural heritage protection policies of the Town's OP that relate to the Habitat of Endangered and Threatened Species.

5.2 County of Simcoe Official Plan (Approved December 29, 2016)

The County of Simcoe OP provides recommendations for promoting a sustainable natural environment. Section 3.3.15 of the OP puts forth policies to protect significant wetland and habitat of Endangered species and Threatened species as well as lands adjacent to these features. Additionally, Section 3.3.15(iii) of the OP indicates that unevaluated wetlands greater than 2 ha will be considered locally significant. Wetland communities on the subject property are less than 2 ha in size.. Based on the results of RiverStone's on-site investigations (**Section 3)**, and the resulting impact assessment (**Section 4.2**), the development proposed for the subject property will not impact any provincially or locally significant wetland communities and will be consistent with the County OP policies that relate to wetland and habitat of Endangered and Threatened species.

5.3 Provincial Policy Statement, pursuant to the Planning Act, R.S.O. 1990, c. P. 13

The Provincial Policy Statement (PPS) is promulgated under the *Planning Act* and provides direction to municipalities on matters of provincial interest related to land-use planning. Municipal OP's must be consistent with the PPS.

> **2.1.5** *Development* and *site alteration* shall not be permitted in:
>
> b) significant woodlands in Ecoregions 6E and 7E;
> c) significant valleylands in Ecoregions 6E and 7E;
> d) significant wildlife habitat;
> e) significant areas of natural and scientific interest;
>
> ...unless it has been demonstrated that there will be no *negative impacts* on the natural features or their *ecological functions.*

Based on the results of RiverStone's background review and assessment of the subject property, and contingent on the implementation of the recommendations outlined in **Section 4.2** of this report, the development as proposed is consistent with s.2.1.5 of the PPS.

> **2.1.6** *Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial* and *federal requirements.*

As per **Section 3.5.5** no features with the potential to function as fish habitat were identified on the subject property.

> **2.1.7** *Development* and *site alteration* shall not be permitted in *habitat of endangered species and threatened species* except in accordance with provincial and federal requirements.

As discussed in **Section 4.2**, and provided RiverStone's recommended mitigation measures are implemented in full, there is no expectation that proposed development will result in negative impacts to Habitat of Endangered and Threatened Species. As such, RiverStone can confirm that the proposed development plan is consistent with s.2.1.7 of the PPS.

5.4 Nottawasaga Valley Conservation Authority Regulation 172/06, pursuant to the *Conservation Authorities Act*, R.S.O. 1990, c. C.27

NVCA's regulatory jurisdiction extends to areas within and adjacent to valley and stream corridors, hazard lands (e.g., floodplains, steep slopes, etc.), watercourses, and wetlands as provided under O. Reg. 172/06 of the *Conservation Authorities Act*. Based on the assessment of features of conservation interest within the subject property and adjacent lands in **Section 3**, RiverStone has identified one (1) wetland feature that would fall under this regulation. The development as proposed will result in the removal of the wetland community on the subject property. Therefore, a permit from NVCA under O. Reg. 172/06 is required to permit the proposed development to proceed. Following consultation with NVCA, RiverStone is of the understanding that proposed wetland removals may be permitted subject to submission and approval of a compensation and offsetting plan, as outlined in **Section 4.2.2.** Such a plan has been prepared and submitted under separate cover for consideration by NVCA.

5.5 Provincial *Endangered Species Act*, S.O. 2007, c. 6

The *Endangered Species Act* (ESA) protects designated Endangered and Threatened species in Ontario from being killed, harmed, or harassed (s. 9) or having their habitat damaged or destroyed (s. 10). The protection afforded to Endangered and Threatened species "habitat" is defined as follows (s. 2[1])

> *(a) with respect to a species of animal, plant or other organism for which a regulation made under clause 55 (1) (a) is in force, the area prescribed by that regulation as the habitat of the species, or*
>
> *(b) with respect to any other species of animal, plant or other organism, an area on which the species depends, directly or indirectly, to carry on its life processes, including life processes such as reproduction, rearing, hibernation, migration or feeding,*
>
> *and includes places in the area described in clause (a) or (b), whichever is applicable, that are used by members of the species as dens, nests, hibernacula or other residences; ("habitat").*

A detailed assessment of potential Endangered and Threatened species and their habitat on the subject property is provided in **Section 3.5.3** and **Appendix 2**. Provided that RiverStone's recommended measures outlined in **Section 4.2.4** are implemented in full, the proposed development plan is anticipated to be consistent with the ESA.

5.6 Federal *Migratory Birds Convention Act, 1994* (MBCA)

Section 6 of the Migratory Birds Regulations under the MBCA makes it an offence to "disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird."

Restricting clearing of vegetation for the proposed development to times outside of the period April 15 to August 31, will prevent contravention of Section 6 of the regulations.

If development and site alteration is going to occur during this period, a nest survey should be conducted by a qualified avian biologist prior to commencement of construction activities to identify and locate active nests of migratory bird species covered by this Act. If a nest is located or evidence of breeding noted, then a mitigation plan should be developed to address any potential impacts on migratory birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying construction activities until the conclusion of the nesting season.

6 CONCLUSIONS

Based upon the findings presented in this report and contingent upon the implementation of the recommendations made herein, it is RiverStone's conclusion that the proposed development plan can avoid and/or mitigate any negative impacts to significant/key natural heritage features and/or regulated natural heritage features present on the subject property. Where impacts are anticipated (e.g., impacts to wetlands), these will be addressed through a formal compensation process with the NVCA. This conclusion is contingent on the recommendations provided in **Section 4.2** of this report being incorporated into the development plans and/or site plan agreements for the subject property.

7 REFERENCES

Bird Studies Canada. 2009. (February, 2009). Marsh Monitoring Program Participant's Handbook for Surveying Amphibians. 13 pp.

Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. 2001. Ontario breeding bird atlas: guide for participants.

Cadman, M. D., D. A. Sutherland, G. G. Beck, D. Lepage, and A. R. Couturier. 2007. Atlas of the Breeding Birds of Ontario, 2001–2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, Ontario Nature, Toronto.

Chapman, L. J. and D. F. Putnam. 1984. The physiography of Southern Ontario, Third Edition. Ontario Geological Survey Special Volume 2.

COSEWIC. 2012a. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp. .

COSEWIC. 2012b. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Ottawa. ix + 46 pp. pp.

COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subflavus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp. .

Dobbyn, J. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists. Toronto.

Lee, H. T., W. D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurray. 1998. Ecological land classification for Southern Ontario: first approximation and its application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch.

Miller, B. W. 2001. A method for determining relative activity of free flying bats using a new activity index for acoustic monitoring. Acta Chiropterologica **3**:93-105.

NVCA. 2005. Town of Wasaga beach Natrual Heritage System Dune Outlier Study. Prepared by D. Featherstone, S. Anderson, and L. Moran. 35 pp + app.

OMNR. 2000. Significant wildlife habitat technical guide. Fish and Wildlife Branch (Wildlife Section) and Science Development and Transfer Branch, 151 pp. + 18 appendices.

OMNR. 2010a. Bats and bat habitats: guidelines for wind power projects. 25 pp.

OMNR. 2010b. Natural heritage reference manual for natural heritage policies of the provincial policy statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp.

OMNR. 2010c. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second edition. Toronto: Queen's Printer for Ontario.

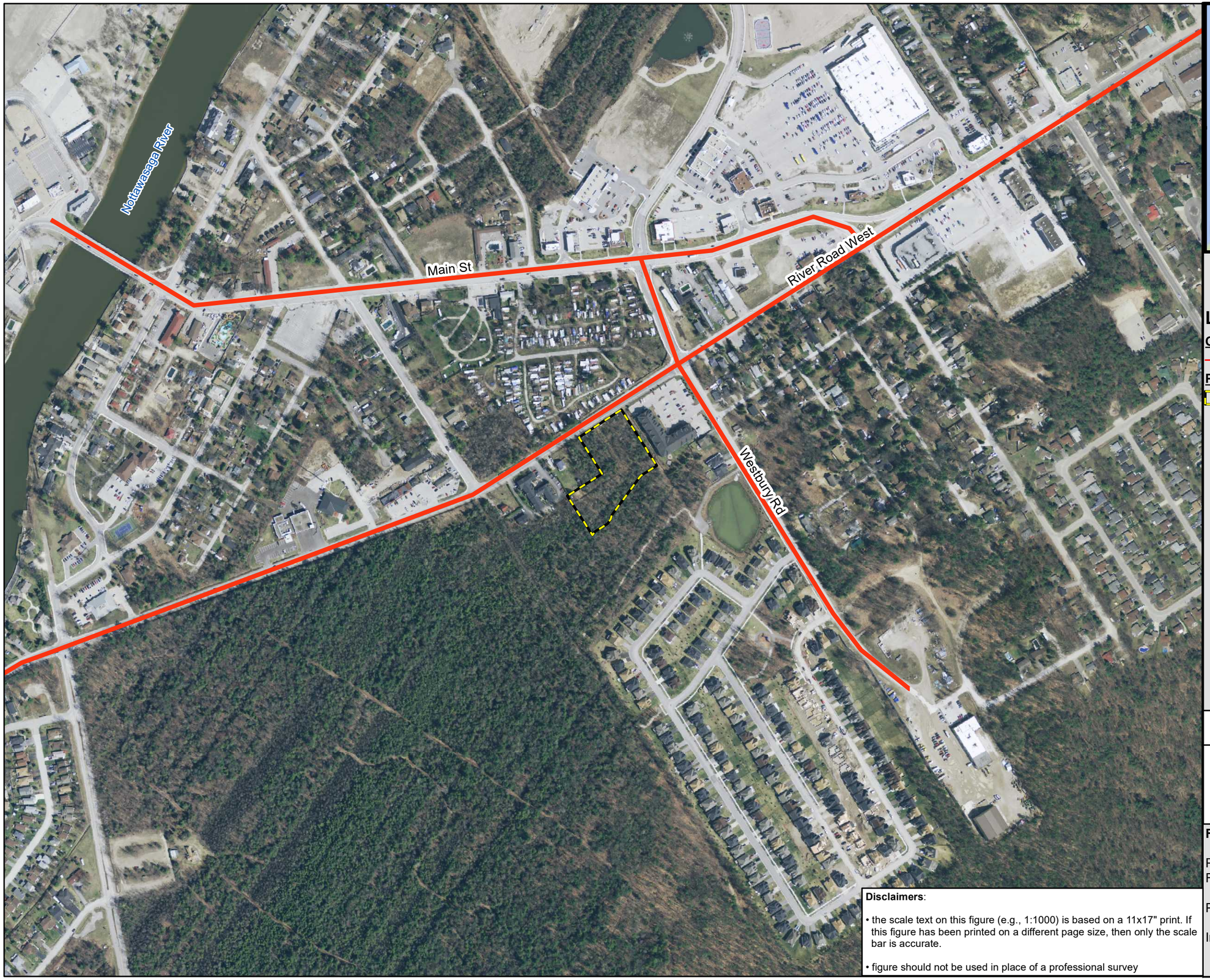
OMNR. 2011. Bats and bat habitats: guidelines for wind power projects. Second Edition. 24 pp.

OMNRF. 2014. Significant Wildlife Habitat Mitigation Support Tool. Ontario Ministry of Natural Resources and Forestry. 533 pp.

OMNRF. 2015a. Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E.

OMNRF. 2015b. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.

OMNRF. 2015c. Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E.



N

Legend

Ontario Base Mapping (OBM)

Roads

Planning Boundaries

Subject Property

Orthorectified aerial photo - spring 2013

Scale	RS Project No.	Date Last Updated	By
1:5,000	2019-013	Jul 13, 2021	JG

0 75 150 Metres

RiverStone Environmental Solutions Inc.

Disclaimers:

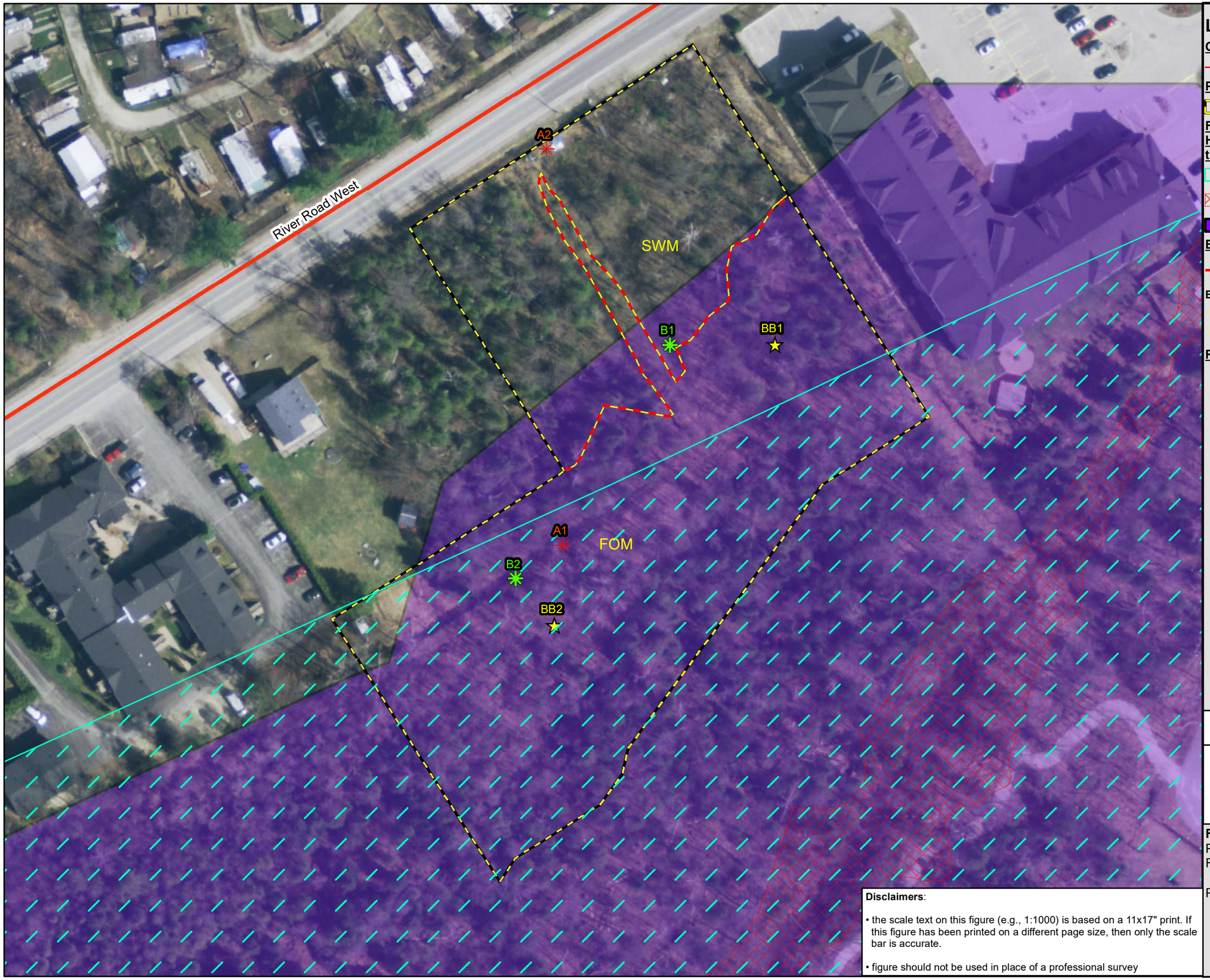
- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey

Figure 1. Location Of Subject Property.

Part Lot 27, Concession 8, Geographic Township of Flos, Town of Wasaga Beach

Prepared for: Wasaga Riverwood Homes Inc.

Inset: General Location Of Subject Propoerty.



Legend

Ontario Base Mapping (OBM)

- Roads

Planning Boundaries

- Subject Property

Features with Recognized High Natural Heritage Value - Identified by the Province or the Relevant Approval Authorities

- Wasaga Dunes, Life Science ANSI
- Wasaga Beach (WB1) Provincially Significant Wetland
- Deer Wintering Areas (MNRF)

Biophysical Features+Functions-RiverStone

- Wetland Boundary Agreed to by NVCA during October 2019 Site Walk

Ecological Communities

- FOM: Mixed Forest
- SWM: Mixed Swamp

RiverStone Survey Stations

- Amphibian Station
- Bat Monitoring Station
- Breeding Bird Station

N

Orthorectified aerial photo - spring 2013

Scale	RS Project No.	Date Last Updated	By
1:750	2019-013	Jul 13, 2021	JG

0 10 20 Metres

RiverStone Environmental Solutions Inc.

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey

Figure 2. Existing Conditions.
Part Lot 27, Concession 8, Geographic Township of Flos, Town of Wasaga Beach

Prepared for: Wasaga Riverwood Homes Inc.

Legend

Ontario Base Mapping (OBM)

- Roads

Planning Boundaries

- Subject Property
- Storm Water Easement

Biophysical Features+Functions-RiverStone

Tree Inventory

- Retain (Woodland)
- Retain (Wetland)
- Remove
- Boundary (Woodland)
- Boundary (Wetland)
- Remove (Wetland)
- Remove (Woodland)

Measures Recommended by RiverStone to Prevent and/or Reduce Impacts

- Tree Protection Fencing
- Area To Remain In Natural State

Proposed Development and Site Alteration

- Limit Of Disturbance

Site Plan Courtesy Of
Wasaga Riverwoods Homes Inc.

Orthorectified aerial photo - spring 2013

Scale	RS Project No.	Date Last Updated	By
1:500	2019-013	Jul 13, 2021	JG

0 7.5 15 Metres

RiverStone Environmental Solutions Inc.

Disclaimers:

- the scale text on this figure (e.g., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
- figure should not be used in place of a professional survey

Figure 3. Proposed Development And Tree Protection Plan.

Part Lot 27, Concession 8, Geographic Township of Flos, Town of Wasaga Beach

Prepared for: Wasaga Riverwood Homes Inc.

Appendix 1. Select Photos from the Site Investigations

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

Photo 1. Roadside ditch fronting subject property along River Road West (April 22, 2019).

Photo 2. Drainage swale located along eastern edge of subject property (April 22, 2019).

Photo 3. Historic clearing for equipment access through wetland on subject property (April 22, 2019).

Photo 4. Historic clearing for equipment access through wetland on subject property (July 8, 2019).

Photo 5. Monitoring well present on western portion of subject property (April 22, 2019).

Photo 6. Monitoring well present on eastern portion of subject property (July 8, 2019).

Photo 7. Area of historic clearing for access in central portion of subject property (April 22, 2019).

Photo 8. Area of historic clearing for access in central portion of subject property (May 26, 2019).

Photo 9. Vernal pool located on western portion of subject property (April 22, 2019).

Photo 10. Larger vernal pools present on lands to the south of the subject property (May 26, 2019).

Photo 11. Swamp wetland community present in northern portion of the subject property (September 20, 2019).

Photo 12. Swamp wetland community present in northern portion of the subject property (September 20, 2019).

Appendix 2. Habitat Based Assessment of Endangered and Threatened Species

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

Habitat-based Approach

Properly assessing whether an area is likely to contain Endangered or Threatened species for the purposes of determining whether a proposed development is likely to have a negative impact is becoming more difficult as the number of listed species increases. Approaches that depend solely on documenting the presence of individuals of a species in an area almost always underrepresent the biodiversity actually present because of the difficulty of observing species that are usually rare and well camouflaged. Given these difficulties, and the importance of protecting habitats of Endangered and Threatened species, RiverStone's primary approach to site assessment is habitat-based. This means that our field investigations focus on *evaluating the potential for features within an area of interest to function as habitat for species considered potentially present*, *rather than searching for live specimens*. An area is considered potential habitat if it satisfies a number of criteria, usually specific to a species, but occasionally characteristic of a broader group (e.g., several turtles use sandy shorelines for nesting, multiple bat species use dead or dying trees for roosting habitat). Physical attributes of a site that can be used as indicators of its potential to function as habitat for a species include structural characteristics (e.g., physical dimensions of rock fragments or trees, water depth), ecological community (e.g., meadow marsh, rock barren), and structural connectivity to other habitat features required by the species. Species-specific habitat preferences and/or affinities are determined from status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Cadman et al. (2007), published and unpublished documents, and direct experience.

Table 1 provides RiverStone's desktop screening and on-site assessment for Endangered and Threatened species. RiverStone measures species- and feature-specific distances from the boundaries of proposed lots or development area(s)—rather than from the boundary of the significant natural heritage feature—and refers to this area as *adjoining lands* (AL). Evaluating the likelihood of species' presence and the potential for negative impacts using this approach ensures that the Adjacent Lands test of the PPS will be met.

For the purposes of RiverStone's assessment, the *subject property* as shown in **Figure 1** is referred to as the Area of Interest (AOI) and the adjoining lands (AL) extents were measured from the boundaries of the AOI.

Common Name[1]	Scientific Name	Step 1 (Desktop): Rationale for considering	Step 2 (Desktop): Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from aerial photography and other information sources indicate that potential habitat or communities might be present? Area of Interest (AOI)	Step 2 (Desktop): Adjoining Lands (AL)	Step 3 (On Site): Potential and/or confirmed habitat documented during on-site assessment: Area of Interest (AOI)	Step 3 (On Site): Adjoining Lands (AL)	Step 4: Is there potential for the species, its habitat, or ecological community to be negatively impacted by the activities that would be permissible within the AOI?
Endangered & Threatened (Provincially): status from Species at Risk in Ontario List (O Reg 230/08); updated January 2018							
Eastern Hog-nosed Snake	*Heterodon platirhinos*	NHIC	YES, species is known to be present within large forested areas within the Town of Wasaga Beach.	YES, species is known to be present within large forested areas within the Town of Wasaga Beach.	YES, suitable foraging and general habitat is present for this species.	YES, species is known to be present within large forested areas within the Town of Wasaga Beach.	YES.
Eastern Whip-poor-will	*Caprimulgus vociferus*	OBBA	NO, suitable openings in the canopy are absent.	YES, both natural and anthropogenic openings in canopy could provide suitable breeding and foraging habitat.	NO, majority of property is forested with openings in canopy limited to the wetland communities.	NO, although areas with the physical characteristics necessary to function as habitat are present, these areas are not within a distance that would be impacted by development whtin the AOI.	NO, see step 3.
Bobolink	*Dolichonyx oryzivorus*	OBBA	NO, suitable grassland or agricultural communities are absent.	NO, suitable grassland or agricultural communities are absent.	NO, suitable grassland or agricultural communities are absent.	NO, suitable grassland or agricultural communities are absent.	NO, see steps 2 and 3.
Chimney Swift	*Chaetura pelagica*	OBBA	NO, dark sheltered hollow vertical structures (chimneys, smoke stacks, silos, large trees with cavities and rock crevices) suitable for nesting or roosting are absent.	NO, dark sheltered hollow vertical structures (chimneys, smoke stacks, silos, large trees with cavities and rock crevices) suitable for nesting or roosting are absent.	NO, dark sheltered hollow vertical structures (chimneys, smoke stacks, silos, large trees with cavities and rock crevices) suitable for nesting or roosting are absent.	NO, dark sheltered hollow vertical structures (chimneys, smoke stacks, silos, large trees with cavities and rock crevices) suitable for nesting or roosting are absent.	NO, see steps 2 and 3.
Barn Swallow	*Hirundo rustica*	OBBA	NO, man-made or natural structures suitable for nesting are absent.	NO, man-made or natural structures suitable for nesting are absent.	NO, man-made or natural structures suitable for nesting are absent.	NO, man-made or natural structures suitable for nesting are absent.	NO, see steps 2 and 3.
Eastern Meadowlark	*Sturnella magna*	OBBA	YES, suitable grassland or agricultural communities are present.	YES, suitable grassland or agricultural communities are present.	NO, suitable grassland or agricultural communities are absent.	NO, suitable grassland or agricultural communities are absent.	NO, see steps 2 and 3.
Bank Swallow	*Riparia riparia*	OBBA	YES, man-made or natural structures suitable for nesting may be present.	YES, man-made or natural structures suitable for nesting may be present.	NO, man-made or natural structures with suitable open faces that are prefered by Bank Swallow for nesting are absent.	NO, man-made or natural structures with suitable open faces that are prefered by Bank Swallow for nesting are absent.	NO, see step 3.
Eastern Small-footed Myotis	*Myotis leibii*	range map	NO, potential habitat not present; no talus slopes or table rocks suitable for roosting anticipated.	NO, potential habitat not present; no talus slopes or table rocks suitable for roosting anticipated.	NO, potential habitat not observed; no talus slopes or table rocks suitable for roosting observed.	NO, potential habitat not present; no talus slopes or table rocks suitable for roosting are likely to be present.	NO, see steps 2 and 3.
Little Brown Bat	*Myotis lucifugus*	range map	YES, dark sheltered hollow vertical structures (e.g., large trees with cavities or rock crevices) suitable for gestating or roosting may be present.	YES, dark sheltered hollow vertical structures (e.g., large trees with cavities or rock crevices) suitable for gestating or roosting may be present.	NO, while suitable trees for roosting were identified, this species was not documented during acoustic surveys completed in June 2019.	YES, dark sheltered hollow vertical structures (e.g., large trees with cavities or rock crevices) suitable for gestating or roosting may be present.	NO, likelihood of negative impacts is low potential habitat for species is located away from proposed development area.
Northern Long-eared Bat	*Myotis septentrionalis*	range map	YES, dead or partially-decayed trees with crevices beneath exfoliating/peeling bark may be present.	YES, dead or partially-decayed trees with crevices beneath exfoliating/peeling bark may be present.	NO, while suitable trees for roosting were identified, this species was not documented during acoustic surveys completed in June 2019.	YES, dead or partially-decayed trees with crevices beneath exfoliating/peeling bark are present.	NO, likelihood of negative impacts is low potential habitat for species is located away from proposed development area.
Tri-colored Bat	*Perimyotis subflavus*	range map	YES, trees suitable for roosting and open-canopy areas suitable for foraging (e.g., riparian and/or early successional communities) may be present.	YES, trees suitable for roosting and open-canopy areas suitable for foraging (e.g., riparian and/or early successional communities) may be present.	NO, trees with suitable 'whitches broom' clusters of dead leaves not observed and species was not detected during acoustic surveys completed in June 2019.	YES, trees suitable for roosting may be present and there are open-canopy areas suitable for foraging (e.g., riparian and/or early successional communities).	NO, likelihood of negative impacts is low potential habitat for species is located away from proposed development area.
Butternut	*Juglans cinerea*	range map	YES, difficult to rule out without on-site assessment.	YES, difficult to rule out without on-site assessment.	NO, species was not observed.	NO, species was not observed.	NO, see step 3.
Lake Sturgeon	*Acipenser fulvescens*	NHIC	NO, no large waterbodies or watercourses are present.	NO, while Georgian Bay and the Nottawasaga River are present in the larger landscape and are known to contain this species, they are not located within a distance that would be impacted by the development proposed within the AOI.	NO, no large waterbodies or watercourses are present.	NO, while Georgian Bay and the Nottawasaga River are present in the larger landscape and are known to contain this species, they are not located within a distance that would be impacted by the development proposed within the AOI.	NO, see steps 2 and 3.

[1]Shaded rows denote species or communities for which negative impacts have been deemed possible.

Appendix 2: Table 1. Results of desktop screening and on-site assessment for Endangered and Threatened species.

Common Name[1]	Scientific Name	Step 1 (Desktop): Rationale for considering	Step 2 (Desktop): Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from aerial photography and other information sources indicate that potential habitat or communities might be present? Area of Interest (AOI)	Step 2 (Desktop): Adjoining Lands (AL)	Step 3 (On Site): Potential and/or confirmed habitat documented during on-site assessment Area of Interest (AOI)	Step 3 (On Site): Adjoining Lands (AL)	Step 4: Is there potential for the species, its habitat, or ecological community to be negatively impacted by the activities that would be permissible within the AOI?
Piping Plover	*Charadrius melodus*	NHIC	NO, AOI lacks open sand areas, beaches, or sandspits.	NO, while open beaches and sandy shorelines are present in the larger landscape they are not located within a distance that would be impacted by development within the AOI.	NO, AOI lacks open sand areas, beaches, or sandspits.	NO, while open beaches and sandy shorelines are present in the larger landscape they are not located within a distance that would be impacted by development within the AOI.	NO, see steps 2 and 3.

[1]Shaded rows denote species or communities for which negative impacts have been deemed possible.

Appendix 3. Assessment of Significant Wildlife Habitat

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Seasonal Concentration Areas of Animals			
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water during Spring (mid March to May) Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterflow, these are not considered SWH unless they have spring sheet water available.	CUM1 , CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, coastal inlest, and watercourses used during migration. Sewage treatment Ponds and storm water Ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. These habitats have an abundance food supply (mostly aquatic invertebrates and vegetation in shallow water)	MAS1 , MAS2, MAS3, SAS1, SAM1, SAF1 , SWD1 , SWD2, SWD3, SWD4, SWD5, SWD6, SWD7	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Shorebird Migratory Stopover Areas	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH.	BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1 , MAM2, MAM3, MAM4, MAM5	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Raptor Wintering Areas	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Raptor wintering sites (hawk/owl) need to be >20 ha with a combination of forest and upland. Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands Field area of the habitat is to be wind swept with limited snow depth or accumulation. Eagle sites have open water, large trees and snags available for roosting.	<u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW. <u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	NO,while the assessment area does contain forest communities, suitable upland or large river communities are absent suggesting that this category of SWH is not present.
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites are not SWH. The locations of bat hibernacula are relatively poorly known.	Bat Hibernacula may be found in these ecosites: CCR1, CCR2, CCA1, CCA2. (Note: buildings are not considered to be SWH).	NO, the ELC ecosite(s) associated with this category of SWH are not present.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). Maternity roosts are not found in caves and mines in Ontario Maternity colonies located in Mature (dominant trees > 80yrs old) deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees Female Bats prefer wildlife trees (snags) in early stages of decay, class 1-3 . Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD, FOM, SWD, SWM.	YES, while the results of snag cavity tree surveys did not identify significant densities of these features (i.e., > 10/ha), results of acoustic monitoring detected both Big Brown Bats and Silver-haired Bats at Station 2 (see **Figure 2**) indicating that this SWH category is likely present within the forest community found on the subject property.
Turtle Wintering Areas	For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO. Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as overwintering habitat.	NO, the assessment area did not contain approriate wetland communties for turtle wintering.
Reptile Hibernaculum	For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures.	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice and Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1, FOC3.	NO, the assessment area does not contain steep slopes, lacks piles of loose rock and areas of rock crevices that may provide suitable hibernation habitat for snakes.
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, sandy hills, borrow pits, steep slopes, and sand piles that are undisturbed or naturally eroding that is not a licensed/permitted aggregate area. Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. Does not include a licensed/permitted Mineral Aggregate Operation.	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1.	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Colonially - Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. Most nests in trees are 11 to 15 m from ground, near the top of the tree.	SWM2, SWM3, SWM5, SWM6, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7, FET1.	NO, large stick nests were not identified during on site assessments.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Colonially - Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns are on islands or peninsulas (natural or artificial) associated with open water, marshy areas, lake or large river (two-lined on a 1;50,000 NTS map). Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6, MAS1 – 3, CUM, CUT, CUS	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Migratory Butterfly Stopover Areas	A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario. The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south. The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes.	Combination of ELC Community Series; need to have present one Community Series from each landclass: <u>Field:</u> CUM, CUT, CUS <u>Forest:</u> FOC, FOD, FOM, CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	NO, the assessment area is not located within 5 km of Lake Ontario.
Landbird Migratory Stopover Areas	Woodlots need to be > 10 ha in size and within 5 km of Lake Ontario. If multiple woodlands are located along the shoreline of those woodlands <2 km from Lake Ontario are more significant. Sites have a variety of habitats; forest, grassland and wetland complexes. The largest sites are more significant. Woodlots and forest fragments are important habitats to migrating birds, these features location along the shore and located within 5 km of Lake Ontario are Candidate SWH.	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD.	NO, while the assessment area and surrouding landscape contain the required woodlot/forest communities, these are not located within 5 km of Lake Ontario.
Deer Yarding Areas	Deer wintering areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. The Core of a deer yard (Stratum I) is located within Stratum II and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual". -Woodlots with high densities of deer due to artificial feeding are not significant.	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2, CUP3, FOD3, CUT	YES, the rear of the assessment area has been identified as a deer yard by the OMNRF.
Rare Vegetation Communities			
Cliffs and Talus Slopes	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris	Any ELC Ecosite within Community Series: TAO, TAS, TAT, CLO, CLS, CLT	NO, the ELC ecosite(s) associated with this category of SWH are not present.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Sand Barren	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little or no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.	ELC Ecosites: SBO1, SBS1, SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always < 60%.	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Alvar	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars may be complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plant. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover.	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2 Five Alvar Indicator Species: 1) Carex crawei, 2) Panicum philadelphicum, 3) Eleocharis compressa, 4) Scutellaria parvula, 5) Trichostema brachiatum These indicator species are very specific to Alvars within Ecoregion 6E	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Old Growth Forest	Old Growth forests are characterized by exhibiting the greatest number of old-growth characteristics, such as mature forest with large trees that has been undisturbed. Heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Forest Community Series: FOD, FOC, FOM, SWD, SWC, SWM	NO, while the assessent area does contain forest communities, the trees within these communities are not of sufficient size to indicate the presence of old growth forest.
Savannah	A Savannah is a tallgrass prairie habitat that has tree cover between 25–60%.	TPS1, TPS2, TPW1, TPW2, CUS2	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Tallgrass Prairie	Tallgrass Prairie is an open vegetation with less than < 25% tree cover, and dominated by prairie species, including grasses.	TPO1, TPO2	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Other Rare Vegetation Community	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M. The OMNRF/NHIC will have up to date listing for rare vegetation communities.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	NO, the ELC ecosite(s) associated with this category of SWH are not present.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Specialized Habitats for Wildlife			
Waterfowl Nesting Area	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. Upland areas should be at least 120 m wide so that predators such as raccoons, skunks, and foxes have difficulty finding nests. Wood Ducks, Bufflehead, Common Goldeneye and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4 Note: includes adjacency to provincially Significant Wetlands	NO, while wetland communities are present within the assessment area, the small size and low water levels suggest that the area is unsuitable for waterfowl nesting.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands.	NO, stick nests were not documented in the assessment area.
Woodland Raptor Nesting Habitat	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer. In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3.	NO, stick nests were not documented in the assessment area. Trees with cavities suitable to function as nesting habtiat for owls were not documented.
Turtle Nesting Areas	Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, BOO1	NO, the ELC ecosite(s) associated with this category of SWH are not present. Additionally, the extent of forest cover limits light transmission to the soil surface futher reducing the likelihood of this SWH being present.
Seeps and Springs	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species.	Seeps/Springs are areas where groundwater comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	NO, watercoureses or areas of groundwater upwellings were not documented in the assessment area.
Amphibian Breeding Habitat (Woodland)	Presence of a wetland or pond >500 m^2 (about 25 m diameter) within or adjacent (within 120m) to a woodland (no minimum size). The wetland, lake or pond and surrounding forest, would be the Candidate SWH. Some small wetlands may not be mapped and may be important breeding pools for amphibians. Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	YES.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Amphibian Breeding Habitat (Wetlands)	Wetlands and pools (including vernal pools) >500 m^2 (about 25 m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. Bullfrogs require permanent water bodies with abundant emergent vegetation.	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	NO, while wetland communities are present within the assessment area, the small size and low water levels suggest that the area is unsuitable as breeding habitat for amphians that use wetland communities for breeding. Based on conditions observed during onsite assessments, the wetland community likely freezes soild during the winter limiting its ability to provide habitat for anurans that require permanent water to carry out their life cycle.
Area-Sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. Interior forest habitat is at least 200 m from forest edge habitat.	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD.	NO, interior forest habitat is not present within the assessment area.
Habitat for Species of Conservation Concern (not including Endangered or Threatened Species)			
Marsh Bird Breeding Habitat	Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, FEO1, BOO1. For Green Heron: All SW, MA and CUM1 sites.	NO, wetland communities suitable for marsh bird breeding are not present in the assessment area.
Open Country Bird Breeding Habitat	Large grassland areas (includes natural and cultural fields and meadows) >30 ha Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e., no row cropping or intensive hay or livestock pasturing in the last 5 years). Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.	CUM1, CUM2	NO, the ELC ecosite(s) associated with this category of SWH are not present.
Shrub/Early Successional Bird Breeding Habitat	Large field areas succeeding to shrub and thicket habitats >30 ha in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e., no row-cropping, haying or livestock pasturing in the last 5 years). Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or lightly grazed pasturelands.	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2. Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	NO, the ELC ecosite(s) associated with this category of SWH are not present.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Ecoregion 6E	Candidate Significant Wildlife Habitat	ELC Ecosites	Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from available information sources and on-site assessment indicate that candidate SHW might be present?
Terrestrial Crayfish	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed.	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SWD, SWT, SWM, CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.	NO, while appropriate habitat for this species is located on the subject property, no terrestrial crayfish chimneys were observed.
Special Concern and Rare Wildlife Species	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or Provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. All plant and animal element occurrences (EO) within a 1 or 10 km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy	See RiverStone's description of potential habitat for Special Concern and provincially rare species in **Table 2**
Animal Movement Corridors			
Amphibian Movement Corridors	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule.	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat for these species (see above).	NO, given the large amount of roads around the subject property and poor wetland conditions, there is a low likelihood that the assessment area contains movement corridors for amphibians.
Deer Movement Corridors	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH (see above). A deer wintering habitat identified by the OMNRF as SWH will have corridors that the deer use during fall migration and spring dispersion. Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges).	NO, while the larger landscape is known to contain deer, defined trails used by deer were not noted on the subject property. Additionally, deer are unlikley to move through the assessment area as it is not located between habitat patches.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

Common Name[1]	Scientific Name	Step 1 (Desktop): Rationale for considering	Step 2 (Desktop): Do site-specific attributes (e.g., ecological system and landscape configuration) assessed from aerial photography and other information sources indicate that potential habitat or communities might be present? Area of Interest (AOI)	Step 2 (Desktop): Adjoining Lands (AL)	Step 3 (On Site): Potential and/or confirmed habitat documented during on-site assessment Area of Interest (AOI)	Step 3 (On Site): Adjoining Lands (AL)	Step 4: Is there potential for the species, its habitat, or ecological community to be negatively impacted by the activities that would be permissible within the AOI?
Special Concern (Provincially): status from Species at Risk in Ontario List (O Reg 230/08); updated June 2016							
Northern Map Turtle	*Graptemys geographica*	Herp Atlas	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, see steps 2 and 3.
Snapping Turtle	*Chelydra serpentina*	Herp Atlas	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, suitable wetland and/or aquatic communities are absent.	NO, see steps 2 and 3.
Olive-sided Flycatcher	*Contopus cooperi*	OBBA	NO, suitable habitat consisting of conifer forest along forest edge with approriate perches area absent from AOI.	NO, suitable habitat consisting of conifer forest along forest edge with approriate perches area absent from AL.	NO, suitable habitat consisting of conifer forest along forest edge with approriate perches area absent from AOI.	NO, suitable habitat consisting of conifer forest along forest edge with approriate perches area absent from AL.	NO, see steps 2 and 3.
Common Nighthawk	*Chordeiles minor*	OBBA	YES, both natural and anthropogenic openings in canopy could provide suitable breeding and foraging habitat.	YES, both natural and anthropogenic openings in canopy could provide suitable breeding and foraging habitat.	NO, the small size of subject proerty, area of standing water, heavey use by walkers and a roadway through the open area, reduce the likelyhodd of this species using this area.	No, surrounding ares consists of vegetated and hardens surfaces, unliky to be used by this species.	NO, see step 3.
Golden-winged Warbler	*Vermivora chrysoptera*	OBBA	NO, early successional vegetation communities with the physical structure necessary to provide breeding habitat are absent.	NO, early successional vegetation communities with the physical structure necessary to provide breeding habitat are absent.	NO, early successional vegetation communities with the physical structure necessary to provide breeding habitat are absent.	NO, early successional vegetation communities with the physical structure necessary to provide breeding habitat are absent.	NO, see steps 2 and 3.
Eastern Wood Pewee	*Contopus virens*	OBBA	YES, early successional vegetation communities with the physical structure necessary to provide breeding habitat may be present.	YES, early successional vegetation communities with the physical structure necessary to provide breeding habitat may be present.	YES, suitable forested communities are present.	YES, suitable forested communities are present.	YES.
Wood Thrush	*Hylocichla mustelina*	OBBA	NO, areas with well-developed understorey within deciduous and/or mixed forest are absent.	NO, areas with well-developed understorey within deciduous and/or mixed forest are absent.	YES, while limited, areas of forest with well developed understory are present.	YES, areas with well-developed understorey within deciduous and/or mixed forest are present.	YES.
Grasshopper Sparrow	*Ammodramus savannarum*	OBBA	NO, open grasslands, hayfields, pasture, alvars and grain crops are absent from the subject property.	NO, open grasslands area are absent from the subject property.	NO, open grasslands, hayfields, pasture, alvars and grain crops are absent from adjacent lands.	NO, open grasslands, hayfields, pasture, alvars and grain crops are absent from the subject property.	NO, see steps 2 and 3.
Monarch	*Danaus plexippus*	OBBA	YES, both natural and anthropogenic openings in canopy could provide suitable breeding and foraging habitat.	YES, both natural and anthropogenic openings in canopy could provide suitable breeding and foraging habitat.	NO, open-canopy areas did not support primary food source of species, i.e., Milkweed	NO, open-canopy areas did not support primary food source of species, i.e., Milkweed	NO, see step 3.

[1]Shaded rows denote species or communities for which negative impacts have been deemed possible.

Appendix 4. Proposed Development Plan

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

RIVERWOODS HOMES

RIVER ROAD WEST WASAGA BEACH

No.	Date:	Issued/Revision:	By
3	SEPT. 1/22	REISSUED FOR SPA	HW
2	MAR 22/22	REISSUED FOR SPA	HW
1	AUG 26/20	ISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

COVER

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A0
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

1 SITE PLAN
1 : 400

SITE STATISTICS

ZONING CATOGORY: DOWNTOWN CORE
LOT AREA: 9886.4 m² (2.44 ACRE)

NET LOT AREA: 9678.5 m² (2.39 ACRE)

	PERMITTED / REQUIRED	PROPOSED / PROVIDED
BUILDING AREA		1,337.48 M² (14,396 SF)
GROSS FLOOR AREA		6,492.16 M² (69,881 SF)
LOT COVERAGE	75% MAX.	13.8%
LANDSCAPE AREA	30% MIN.	45.77%
BUILDING HEIGHT	4 STOREYS MAX.	5 STOREYS (18.17m)
LOT FRONTAGE	25m MIN.	69.32m
LOT AREA	1,000m² MIN.	9,678.5m²
FRONT YARD	0m MIN.	1.22m
INTERIOR YARD	1.2m MIN.	5.96m / 12.08m
REAR YARD	7.5m MIN.	48.56 m
AMENITY SPACE	1BD: 14X5=70 M² 1BD+DEN & 2BD: 56X10=560 M² **TOTAL: 630 m²**	249 m² (INDOOR) 397 m² (OUTDOOR) **TOTAL: 646 m²**
RESIDENTIAL UNITS		1-BEDROOM: 14 UNITS 1-BEDROOM + DEN: 33 UNITS 2-BEDROOM: 23 UNITS **TOTAL: 70 UNITS**
DENSITY	74 UNITS/HECTARE MAX.	72 UNITS/HECTARE
LOCKERS		70
PARKING	RESIDENCE: 88 SPACES (1.25 SPACE/UNIT)	88 SPACES
	VISITOR: 11 SPACES (0.15 SPACE/UNIT)	11 SPACES
	TOTAL 99 SPACES	99 SPACES
	BARRIER-FREE: 5 SPACES	5 SPACES
BICYCLE PARKING	**18 SPACES** (0.25 SPACE/UNIT)	**18 SPACES**

LEGEND

- FS — FIRE ROUTE SIGN
- FIRE DEPARTMENT CONNECTION
- MEN DOOR (ENTRANCES & EXITS)
- XXX.XX — PROPOSED GRADING
- MH — MANHOLES
- LIGHT STANDARD
- CB — CATCH BASIN
- FH — FIRE HYDRANT
- XX — INDICATE NUMBER OF PARKING SPACES
- ACCESSIBLE PARKING SPACES

No.	Date:	Issued/Revision:	By
9	SEPT. 1/22	REISSUED FOR SPA	HW
8	MAR 22/22	REISSUED FOR SPA	HW
7	OCT 20/21	ISSUED FOR REVIEW	HW
6	NOV 23/20	REISSUED FOR SPA	HW
5	AUG 26/20	ISSUED FOR SPA	HW
4	MAY 06/20	ISSUED FOR REVIEW	HW
3	APR. 08/20	ISSUED FOR REVIEW	HW
2	AUG. 08/18	ISSUED FOR REVIEW	HW
1	AUG. 03/18	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

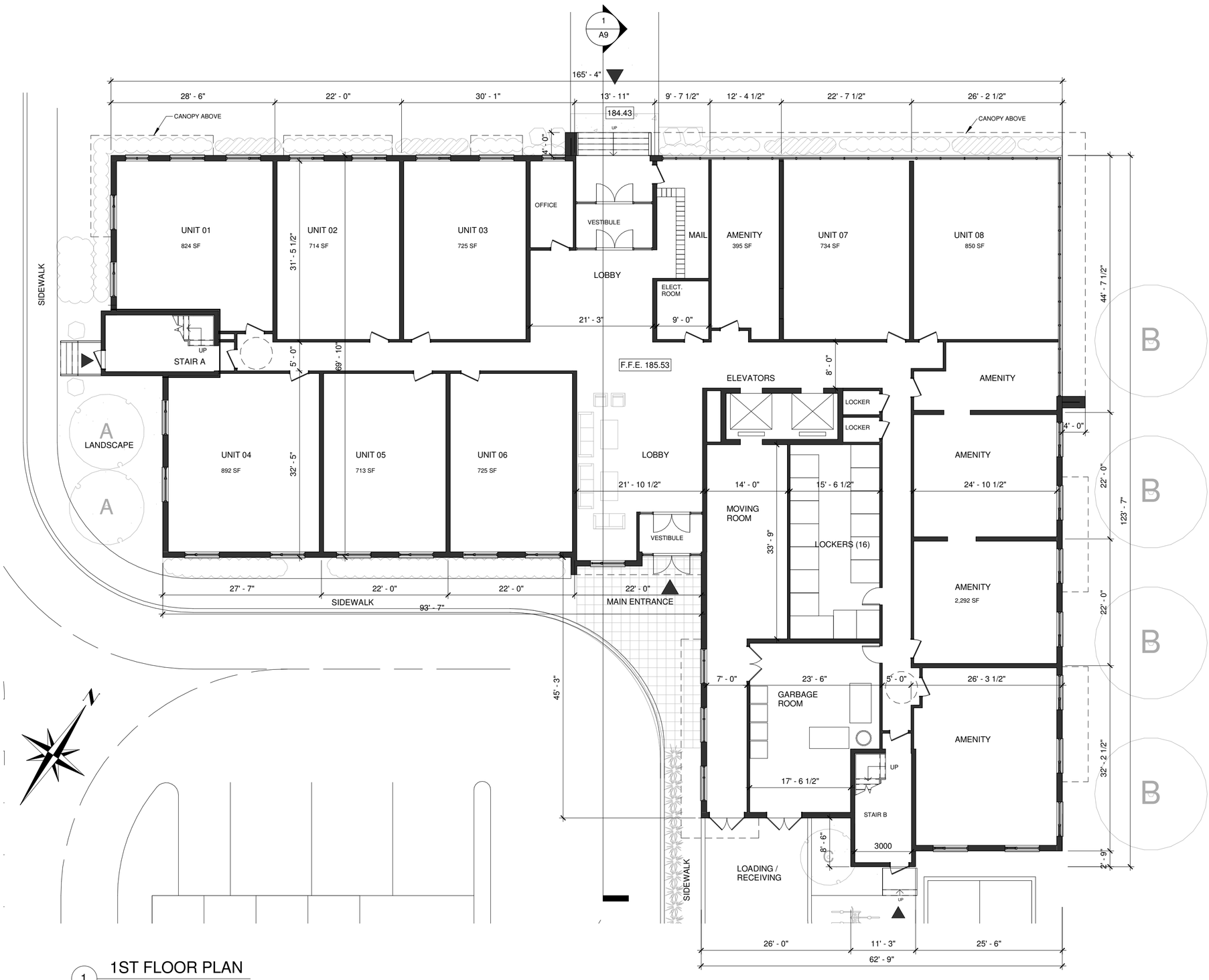
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

SITE PLAN

Date JUNE 2019	Project No : 18026
Scale : As indicated	
Drawn by : JW	Drawing No : A1
Checked by : HW	

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 1ST FLOOR PLAN

1 : 150

No.	Date:	Issued/Revision:	By
5	SEPT. 1/22	REISSUED FOR SPA	HW
4	MAR 22/22	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

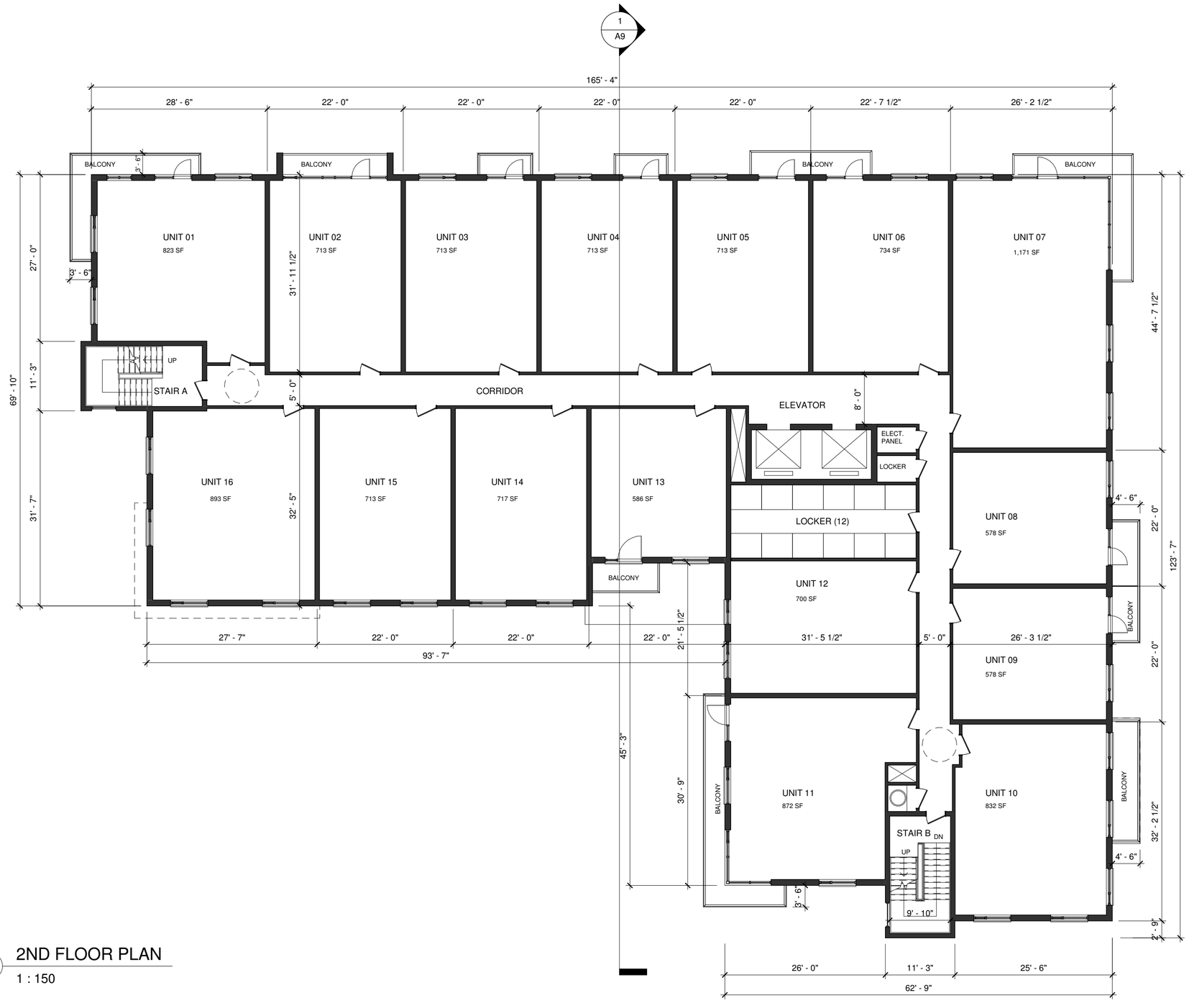
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

1ST FLOOR PLAN

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A2
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 2ND FLOOR PLAN

1 : 150

No.	Date:	Issued/Revision:	By
5	SEPT. 1/22	REISSUED FOR SPA	HW
4	MAR 22/22	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

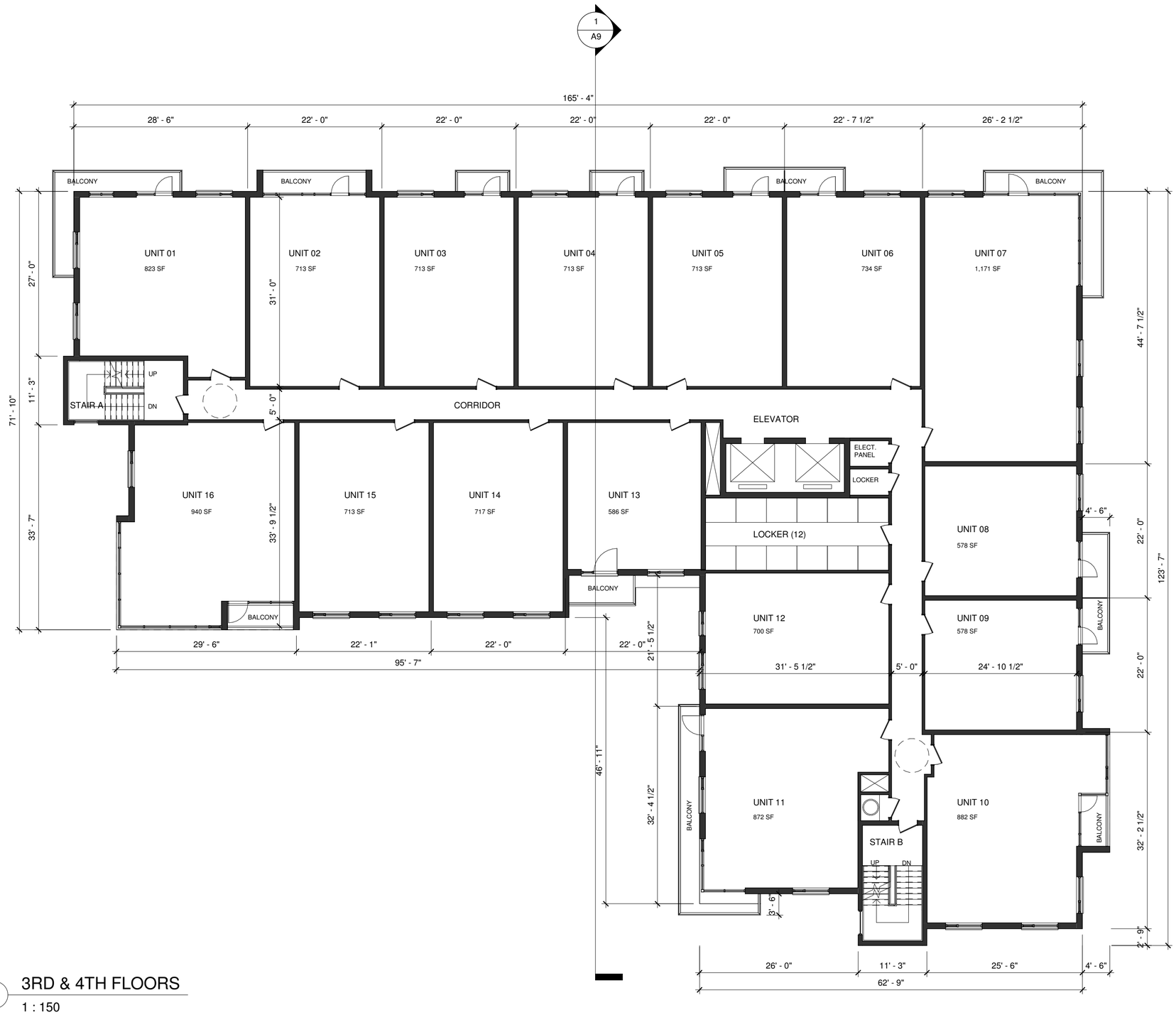
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

2ND FLOOR PLAN

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A3
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 3RD & 4TH FLOORS

1 : 150

No.	Date:	Issued/Revision:	By
5	SEPT. 1/22	REISSUED FOR SPA	HW
4	MAR 22/22	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

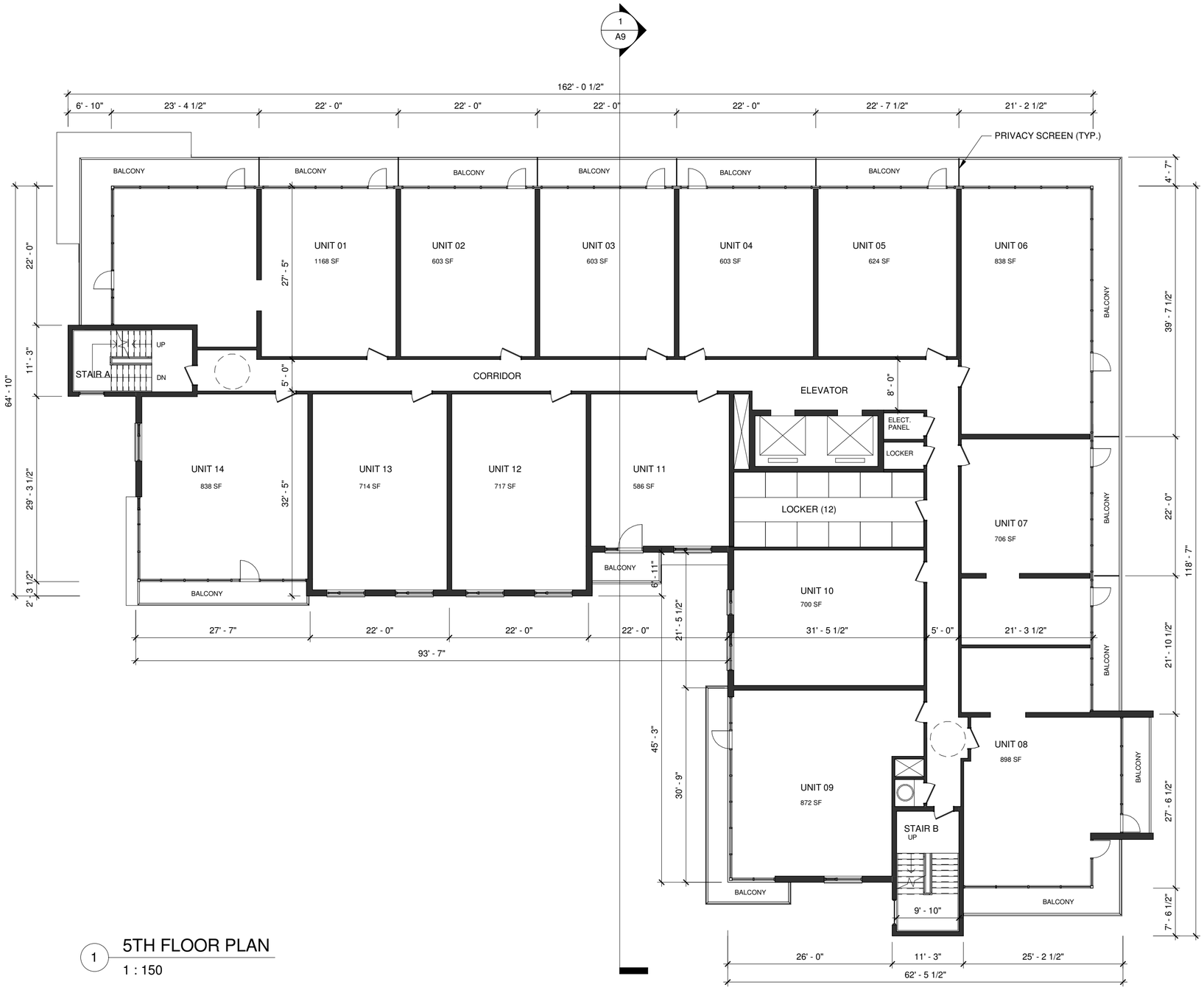
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3RD & 4TH FLOORS

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A4
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 5TH FLOOR PLAN
1 : 150

No.	Date:	Issued/Revision:	By
6	SEPT. 1/22	REISSUED FOR SPA	HW
5	MAR 22/22	REISSUED FOR SPA	HW
4	NOV 23/20	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

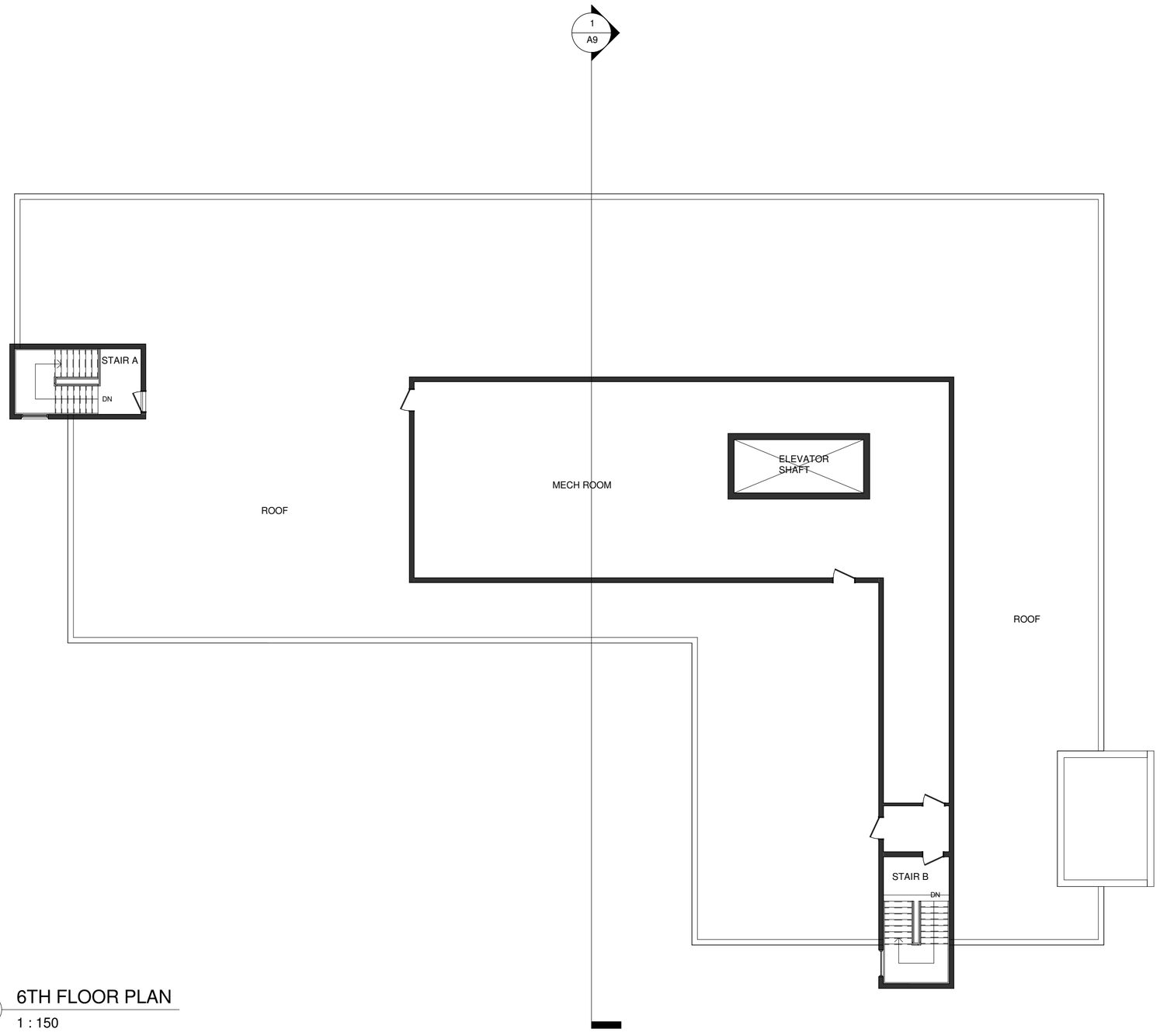
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

5TH FLOOR PLAN

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A5
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 6TH FLOOR PLAN
1 : 150

No.	Date:	Issued/Revision:	By
6	SEPT. 1/22	REISSUED FOR SPA	HW
5	MAR 22/22	REISSUED FOR SPA	HW
4	NOV 23/20	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

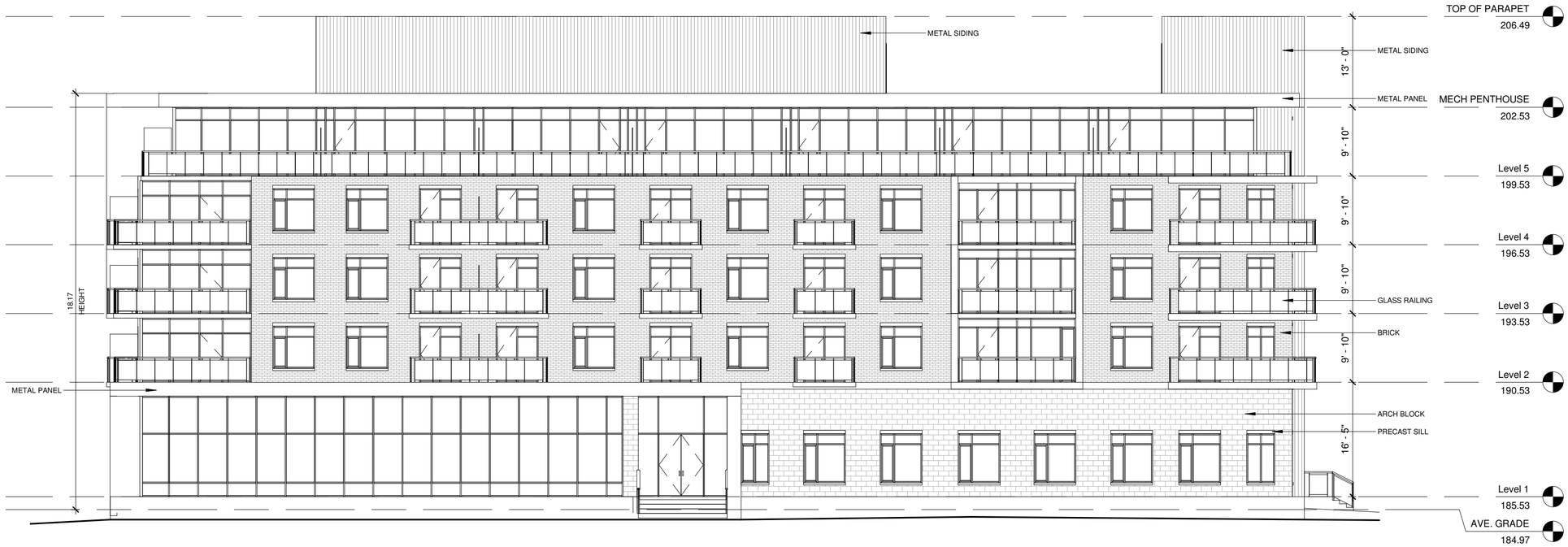
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

MECH PENTHOUSE PLAN

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A6
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 NORTH ELEVATION
1 : 150

2 SOUTH ELEVATION
1 : 150

No.	Date:	Issued/Revision:	By
5	SEPT. 1/22	REISSUED FOR SPA	HW
4	MAR 22/22	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

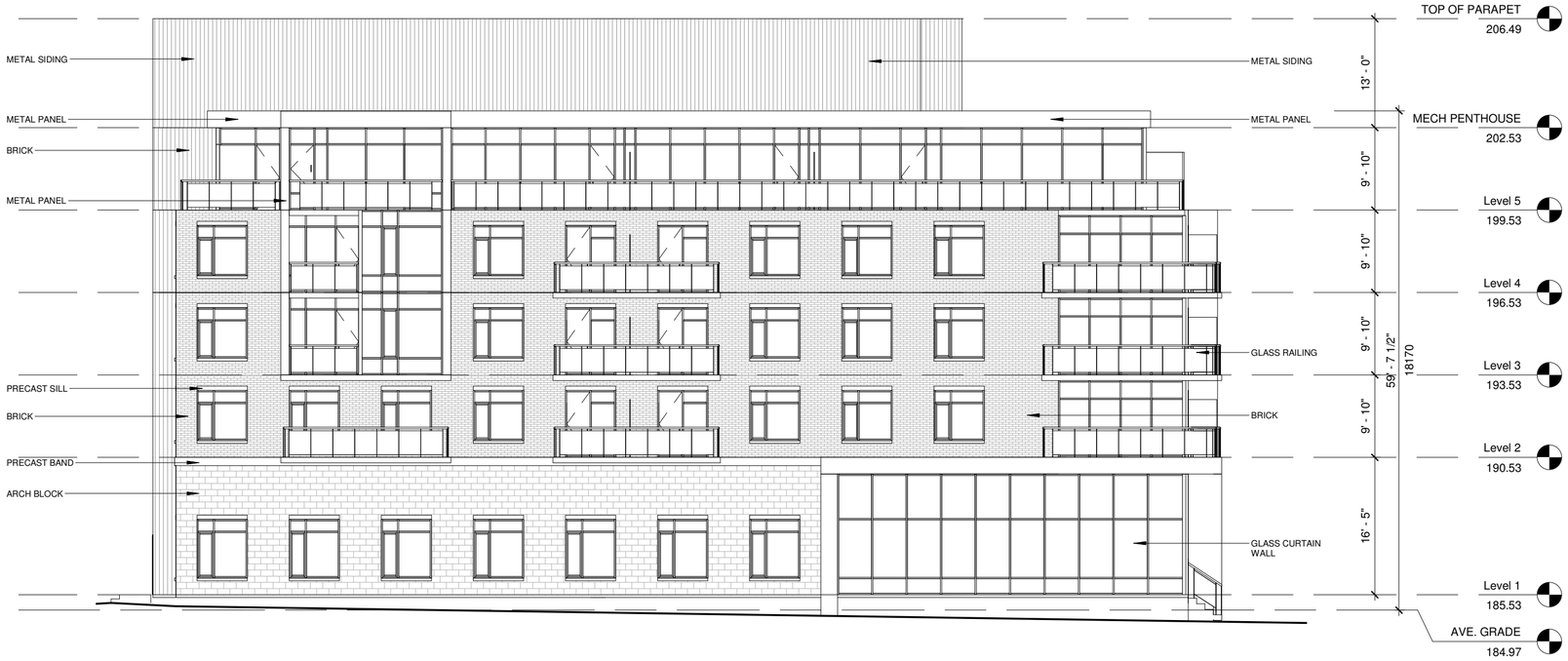
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

NORTH & SOUTH ELEVATIONS

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A7
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 EAST ELEVATION

1 : 150

2 WEST ELEVATION

1 : 150

No.	Date:	Issued/Revision:	By
5	SEPT. 1/22	REISSUED FOR SPA	HW
4	NOV 23/20	REISSUED FOR SPA	HW
3	AUG 26/20	ISSUED FOR SPA	HW
2	MAY 06/20	ISSUED FOR REVIEW	HW
1	APR. 08/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

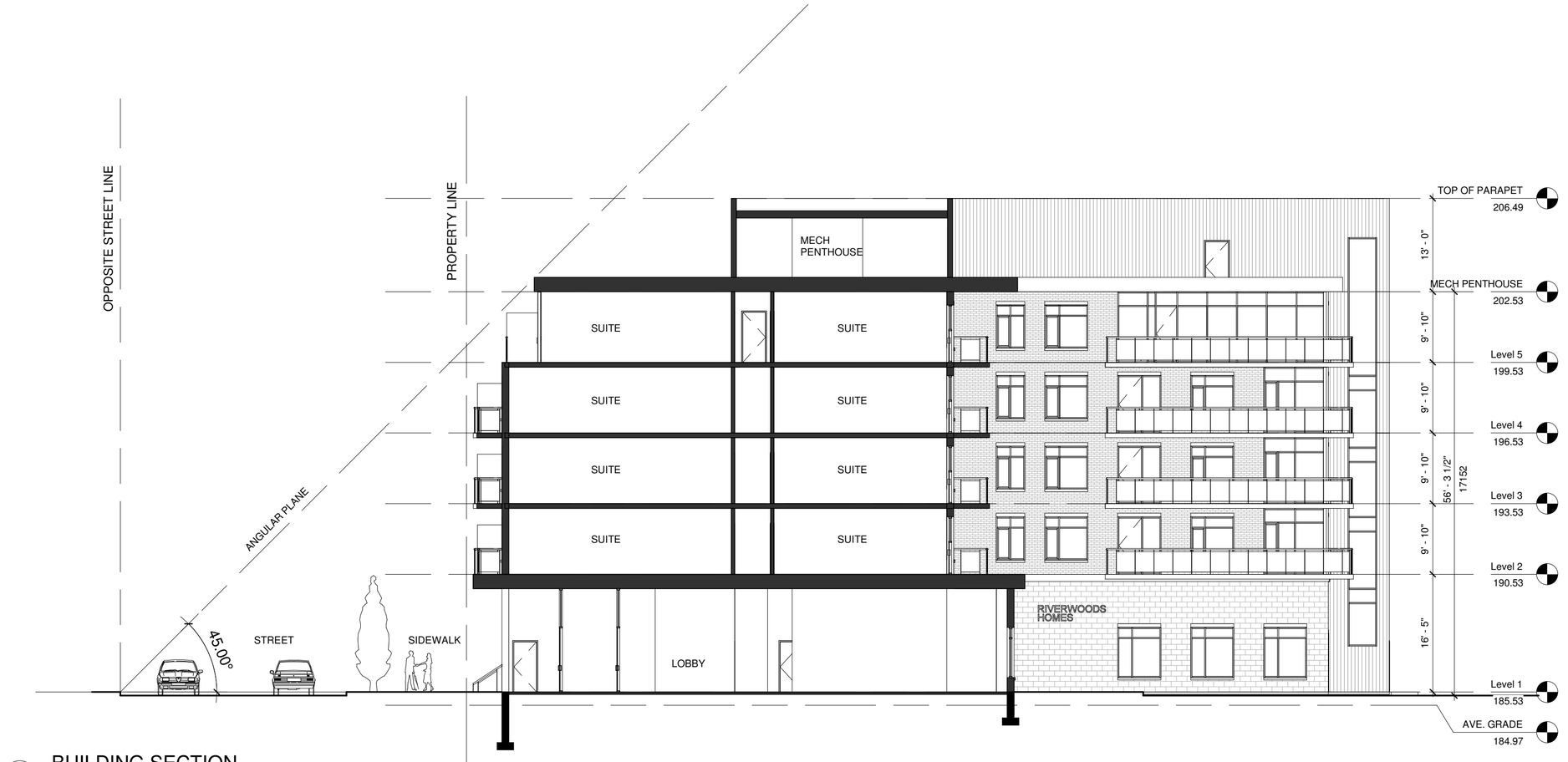
RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

EAST & WEST ELEVATIONS

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A8
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt



1 BUILDING SECTION

1 : 150

No.	Date:	Issued/Revision:	By
4	SEPT. 1/22	REISSUED FOR SPA	HW
3	NOV 23/20	REISSUED FOR SPA	HW
2	AUG 26/20	ISSUED FOR SPA	HW
1	MAY 06/20	ISSUED FOR REVIEW	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

BUILDING SECTION

Date	JUNE 2019	Project No :	18026
Scale :	1 : 150		
Drawn by :	Author	Drawing No :	A9
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date JUNE 2019	Project No : 18026
Scale :	
Drawn by : Author	Drawing No : A11
Checked by : Checker	

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A12
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A13
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A14
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A15
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt

No.	Date:	Issued/Revision:	By
2	SEPT. 1/22	REISSUED FOR SPA	HW
1	MAR 22/22	REISSUED FOR SPA	HW

AND Architecture Inc.
3950 14th Ave. Suite 609
Markham, ON L3R 0A9
T: 905-604-6960
E: info@andarchitectureinc.com
www.andarchitectureinc.com

Project :

RIVERWOODS HOMES

RIVER ROAD WEST
WASAGA BEACH, ON

Drawing Name :

3D VIEW

Date	JUNE 2019	Project No :	18026
Scale :			
Drawn by :	Author	Drawing No :	A16
Checked by :	Checker		

C:\Users\AND\Documents\Wasaga Riverwoods Homes - CURRENT 5-STOREY_JUE.rvt