Day & Ross Inc.

5494, 5500 and 5510 Boundary Road

ENVIRONMENTAL IMPACT STATEMENT UPDATE

CIMA+ file number: A001395A
1 October 2024 – Review 001

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ENVIRONMENTAL IMPACT STATEMENT UPDATE

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Confidentiality and Ownership

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The following individuals have been involved in the study and writing of the report as technical experts within the project team:

Name	Discipline
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Michelle Lavictoire	Senior Biologist/Senior Project Manager (B.Sc., M.Sc.), Technical Reporting and Final Review
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Amal Siddiqui	Biologist (B.Sc., M.F.C), Technical Reporting
Tessa Robertson	Project Administrative Assistant (B.A.), Formatting
Jake Zientek	Junior Technician (GDipFW Tech), Background Review and Field Work

Register of issues			
Issue No.	Reviewed by	Date	Description of the review
001	ML	2024-09-27	Address Comments from Novatech

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List of Acronyms

DFO	Fisheries and Oceans Canada
EIS	Environmental Impact Statement
ESA	*Endangered Species Act, 2007*(Provincial)
FWCA	*Fish and Wildlife Conservation Act, 1994* (Federal)
NHIC	Natural Heritage Information Centre
MBCA	*Migratory Bird Convention Act, 1994* (Federal)
MECP	Ministry of Environment, Conservation and Parks
MNRF	Ministry of Natural Resources and Forestry
SAR	Species at Risk (in this report they refer to species that are provincially or federally listed as endangered or threatened and receive protection under ESA or SARA)
SARA	*Species at Risk Act* (Federal)
SWH	Significant Wildlife Habitat
TCR	Tree Conservation Report

List of Definitions

SRank Definitions

S1 Critically Imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.

S2 Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

S3 Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 Apparently Secure; uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure; Common, widespread, and abundant in the nation or state/province.

? Inexact Numeric Rank—Denotes inexact numeric rank

SNA Not Applicable – A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

S#B Breeding

S#N Non-Breeding

SARA Status Definitions

END Endangered: a wildlife species facing imminent extirpation or extinction.

THR Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

SC Special Concern: a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

SARO Status Definitions

END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.

THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

SC Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

1. Introduction

Day & Ross Inc. (the Proponent) is proposing to construct a truck transport facility otherwise referred to as a cross-dock facility at 5494, 5500 and 5510 Boundary Road in Navan, Ontario. For the purposes of this report "Site" refers to these three properties and "Project" refers to the construction of the truck transport facility otherwise referred to as a cross-dock facility and activities associated with its construction and operation.

An Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) for this development was submitted on May 3, 2021. That submission included the original Environmental Impact Statement (EIS) / Tree Conservation Report (TCR) prepared by Holly Bickerton and the EIS – Fisheries Component prepared by Bowfin Environmental Consulting (Bowfin). The EIS/TCR included information from Bowfin with respect to turtle surveys and headwater drainage feature assessments. The most recent of these reports are both dated November 9, 2021 (Bickerton, 2021; Bowfin, 2021). The City of Ottawa has since noted that the OPA is no longer required and has approved the ZBA (Agriculture and Rural Affairs Committee May 2, 2024). The previously completed environmental reports (Bickerton, 2021; Bowfin, 2021) were approved in support of the ZBA. Since Bowfin merged with CIMA+ in 2022, the proponent has now engaged CIMA+ to document the ZBA Amendment and update the avoidance and mitigation measures.

1.1 Purpose

The purpose of this report is to document the changes to the site plan, and to update the avoidance and mitigation measures to current guidelines, to document the discussions with the City on the rezoning as well as addressing the specific comments raised during the pre-consultation meeting. The report is divided into three (3) parts, introduction (including review of changes), and an updated avoidance and mitigation measures. A review and update to the potential endangered or threatened species and their habitats is found in Appendix A. The new Site Plan is included in Appendix B.

1.2 Summary of Project Activities

The proponent owns three (3) parcels; 5494, 5500 and 5510 Boundary Road. All are in part of Lot 1, Concession 9, of the City of Ottawa, former Township of Gloucester. The Site was largely disturbed and filled (compacted aggregates) from previous land use activities. The Project's activities will be restricted to these three properties; there are no off-site temporary laydown yards etc. As described in the EIS – Fisheries Component (Bowfin, 2021) and EIS/TCR (Bickerton, 2021), the development will include the following activities:

- Construction of an access to the Site from Boundary Road:

  - Installation of a fish friendly culvert
  - Potential for minor clearing of vegetation
- Construction of trucking and cross dock facilities
  - Clearing of vegetation and grading of Site.
  - Realignment and rehabilitation of Pond 1 and Feature 5

As noted above, the ZBA was adopted (Zoning By-Law 2024-238), the Site Plan (dated September 24, 2024) submitted for approval depicts the zoning boundaries of the development and is included in Appendix B.

The recently adopted Zoning By-law rezoned most of the subject lands to Rural General Industrial Zone to permit the truck transport terminal and cross dock facility land uses. In addition, rezoning was completed to capture the proposed realignment of a relocated headwater, shown on the Site Plan, along the northern limit of the site to Open Space – O1R Zone, and additionally provided relief from Section 69 - Setback from Watercourses on the subject lands and a portion of the neighboring property to the north. Included within the rezoned Open Space – O1R Zone is a setback from the wetland on the neighbouring property to the south. The proposed development is required to maintain the setbacks as set-out in the zoning amendment (Agriculture and Rural Affairs Committee May 2, 2024). This has been accomplished and is depicted on the Site Plan found in Appendix B.

2. Avoidance And Mitigation Measures

The following list of avoidance and mitigation measures follows current best practices as per the Protocol for Wildlife Protection during Construction (City of Ottawa, 2022) and are based on the updated understanding of areas of impacts as restricted by the Site Plan. As mentioned above and in the approved EIS and EIS-Fisheries Component reports, there is little clearing of vegetation and almost all of the Site was previously cleared and backfilled with compacted aggregates from previous land use activities. The natural habitats in the adjacent lands are protected by the agreed upon setbacks.

Note that the list of measures below need to be read in their entirety as measures in one sub-section may also apply to other sub-sections.

2.1 Endangered and Threatened Species

There has been no change to the potential to impact protected endangered or threatened species as a result of the updated site plan. All impacts still require the same avoidance and mitigation measures. Advice from the Ministry of Environment, Conservation and Parks (MECP) discussed in the EIS (Bickerton, 2021) remain applicable, however the newer timing windows from MECP (MECP, no date) have been applied. The Barn Swallow discussed in the EIS (Bickerton, 2021) is no longer protected, and Black Ash is now added to the list as an endangered species. While the list in Appendix A includes Eastern Whip-poor-will, this species will no longer be protected as of February 1, 2025, and there is no clearing of potential breeding habitat for this species, and this Project's activities will not indirectly (i.e., sensory disturbances during construction) affect any potential habitat offsite during the breeding season of 2024 (after which the species and its habitat will no longer receive protection under the ESA).

General:

- Endangered and threatened species are protected and cannot be harmed, harassed, or killed and in some cases their habitats are also protected. These individuals will only be handled by qualified person and only if the individual is in imminent threat of harm. An authorization under the ESA 2007 would be required to handle individuals that are not in imminent threat of harm.
- If a Species at Risk (SAR) enters the work area during the construction period, any work that may harm the individual is to stop immediately and the supervisor will be contacted. No work will continue until the individual has left the area.
- Should an individual be harmed or killed then work will stop, and the MECP will be contacted immediately.
- Educate staff and contractors on the potential for SAR to be in the area and their significance, with a particular emphasis on the SAR listed as potentially occurring on the Site or in adjacent lands (Appendix A)
- If a SAR is encountered, this information will be provided to the Natural Heritage Information Centre (NHIC) (Report rare species (animals and plants) | Ontario.ca).
- No later than 1 year prior to construction, complete a review of this report to ensure that no new SAR or changes to legislation have occurred. This will ensure that ESA is not accidentally contravened and provide the opportunity to contact MECP for advice, should it be warranted.

SAR Turtles: Review of online data sources indicate show sightings within 2 km of the Site, however, Natural Heritage Information Centre (NHIC) was contacted there are no new sightings since the EIS was completed (Bickerton, 2021). Basking surveys were completed for

Blanding's Turtles in 2021 and no endangered or threatened species were observed. Bickerton (2021) concluded that no Blanding's Turtle habitat was present. Since this species can move far distances, avoidance and mitigation measures have been added for turtles.

- Implement a strict speed limit of 15 km/h for vehicles during construction and operations. The speed limit is to be posted.
- Sediment fencing along the edge of the work areas can be used for temporary exclusion fencing during construction. These will be properly countersunk and maintained to ensure that no turtles cannot get into the site. This sediment fencing is, at a minimum, to include the three (3) sides of the property (the north, west and south edges of the work area). The provinces guidelines for fencing will be followed (https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing) and will include the j-hook turnarounds.
- Prior to impacting the headwater or ponds, ensure that a qualified biologist or wildlife technician completes a salvage for fauna after the exclusion fencing is installed and prior to commencing work.
- Infilling or alteration of the headwaters is recommended to occur outside of the hibernation period (typically November 1-March 31) (MECP, no date).
- Educate construction workers of the potential for Blanding's Turtles to be present and that this is a protected species from harm and injury under the provincial Endangered Species Act (ESA). Be sure to inform workers that there is a high potential for the species to occur in this area.
- Educate workers, that this species is known to travel far from aquatic habitats and as such, they are to perform a daily sweep of the work area when they first arrive on-site during the active turtle season (typically April 1-October 31 (MECP, no date); timing affected by weather conditions).
- Additional fencing is recommended around any stockpiles that might provide suitable nesting substrate (i.e. gravel, soil) to help prevent turtles from nesting in the work area. Should suspected Blanding's Turtle nesting occur, then stop all work and contact MECP or a biologist to follow appropriate procedures.
- During clearing of vegetation, contractors are to be informed that they should be aware of wildlife and if any are observed, they should be given the opportunity to leave the area. If a turtle is observed:
  - All work that may harm the individual must stop and the worker should notify their supervisor.
  - Try to take a photograph but do not chase the turtle in order to do so.
  - Turtles encountered on-site cannot be harmed or harassed.
  - Turtles should be allowed to leave the area on their own.

  - It is also important that the individual be watched, from afar, to ensure that it does not enter an area where it may come to harm.
  - If an individual has been impacted, the supervisor should contact MECP (and if applicable the project biologist) immediately.
- Revegetation plans, to occur within the Open Space zoning, include the restoration of the pond and planting native vegetation.

SAR Birds: The EIS included breeding bird surveys, and no SAR birds were observed breeding on the Site. Consultation with MECP indicated that timing of the infilling of Pond 3 could take place outside of the breeding bird period (Bickerton, 2021). No nests were found on Site and the on-Site habitat was classed as foraging habitat. The Project's activities will have little in the way of clearing of vegetation. The pond and headwaters on the north side of the Site will be relocated and enhanced.

- The active season for SAR bird species provided by the province is now listed as between April 1 and August 31. This would leave the month of September available for infilling of the pond as September is both outside of the hibernation period for turtles and the nesting season for SAR birds. If this is too restrictive, then alternatives will be discussed with MECP.
- No impacts to federal SAR bird nests, or their eggs is permitted under the federal Species at Risk Act (SARA). If a federally listed bird SAR nest is encountered, then work must stop until the young have fledged. If the nest/young have been harmed, then Environment Canada must be notified immediately for guidance.
- No impacts to provincial SAR bird nests or their eggs is permitted under the provincial ESA. If a provincially listed bird SAR is encountered, then work must stop and MECP must be contacted (sarontario@ontario.ca).
- Should a nest be discovered, stop all work that may disturb the birds (i.e. that cause the adults to fly off the nest) and contact a biologist or MECP or Environment Canada, as appropriate for the species.
- Revegetation plans, to occur within the Open Space zoning, include the restoration of the pond and planting native vegetation.

Bats: The EIS indicated that no SAR bat habitat would be impacted (Bickerton, 2021). This adheres to recent discussions with MECP on these species where they indicated that MECP does not need to be approached if the timing window below can be adhered to.

- Educate contractors by informing them that most bats in Ontario are protected.
- Remove trees (>10 cm in diameter) between October 1 and March 31 (Bat active season is currently assumed to be April 1 to September 30 for woodland species). If this is not

possible, conduct an exit survey no earlier than 2-days prior to cutting them down. If the exit survey identifies bats, contact MECP or a biologist for additional guidance.

Plants: Butternuts were not located on this property (Bickerton, 2021).

- A Butternut inventory and assessment must be completed prior to clearing any vegetation. Butternut inventories have a 2-year shelf-life, and the timing of the inventory should reflect this period. Note that as guidelines can be updated from time to time, the most recent guidelines and Ontario Regulations should be followed (at the time of writing, the O. Reg for Butternuts is 830/21). Butternut inventories must be completed between May 15-August 31.
- Assessment of Black Ash will be undertaken prior to construction.
- Educate contractors by informing them that butternuts are protected.

2.2 Significant Wildlife Habitat/Wetlands/Woodlands/Tree Protection

There is no change from the EIS with respect to significant wildlife habitat (SWH) and linkages.

- Respect the setbacks established during the ZBA approved by City Council as these are intended to protect the significant wildlife habitat, woodlands and wetland functions of the surrounding properties.
  - The nearest impermeable surface is 45 m from the wetland, which includes 30 m of open space zoning (see landscaping plan) plus 15 m grassed swale. The minimum of a 30m setback as per the City's Policy is met.
  - The original EIS assumed significance of the wetland in the adjacent lands to the north. As such, it being officially recognized as a provincially significant wetland does not affect the EIS evaluation and the 30 m setback will provide sufficient protection to the wetland's form and function. No change to the EIS evaluation.
  - South Nation Conservation will be contacted as required as per O. Reg. 42/06 (wetland and watercourse).
  - See the Stormwater Management Report that indicates that the development will not have a negative hydrologic impact to the PSW. There is no municipal storm sewer fronting the development. A perimeter ditch system is proposed to be developed to outlet to the existing Boundary Road ditch; as such, no runoff from the site will be conveyed to the PSW, the realigned headwater feature, or the wetland to the south. Stormwater flows from the site to the roadside ditch will be controlled through inlet control devices and a dry pond at the north and south ditch outlets to ensure release rates remain the same pre- and post-development. Additionally, the size of the perimeter ditch system ensures that runoff does not pool in parking areas during the 2-year event and spills directly into the roadside ditch.

- Ensure that appropriate wildlife exclusion fencing is installed. That described under the SAR turtle section will be effective for SWH.
- Prior to impacting the headwater or ponds, ensure that a qualified biologist or wildlife technician completes a salvage for fauna after the exclusion fencing is installed and prior to commencing work.
- Complete infilling of the ponds during the turtle active season to facilitate relocation and minimize disturbance during overwintering.
- Almost all breeding birds are protected under the Migratory Bird Convention Act (MBCA) and/or Fish and Wildlife Conservation Act (FWCA). The only species not protected are: American crow, brown-headed cowbird, common grackle, house sparrow, red-winged blackbird, and starling. It is prohibited to destroy or disturb an active nest of other birds, or to take or handle nests, eggs, or nestlings. In this part of Ontario, the newer SAR timing window is April 1 to August 31. Outside of this timing window, it is considered unlikely that birds would be nesting. Note, there are some birds (birds of prey, herons etc.) that do begin nesting earlier in the year. It should also be noted, that if an active nest is present before or after the above dates, that it is still protected.
- There is a potential for ground nesting birds (i.e., killdeer) to be present during construction. These prefer to nest on bare soil or gravel areas. Perform regular walks of the cleared areas looking for ground nesters. If any are present, contact a biologist for guidance.
- Work during the daytime hours to prevent light disturbances. If lighting is required, ensure that it is full cut off and illuminates the work area (avoiding the natural features such as the pond and headwaters and adjacent forests/wetlands) and minimizing illumination of the sky.
- Ensure that all equipment have the appropriate mufflers to reduce noise disturbances.
- Almost all reptiles are protected by the FWCA. If a turtle nest is suspected, then flag a 10 m buffer to protect the nest. Contact MECP (for Endangered or Threatened species) and the Ministry of Natural Resources and Forestry (MNRF) (all other species, including those listed as special concern).
- Do not flag bird nests, as it attracts predators.
- Do not raise or lower the existing grade within the CRZ of a tree on adjacent lands. The critical root zone is equal to 10x the diameter-at-breast-height of the individual tree.
- The edge of the property should be clearly delineated on the site plans.
- Install Tree Protection Fencing prior to commencement of construction activities, and retain fencing until construction activities have been completed, as per City of Ottawa's Tree Protection (By-law No. 2020-340), Part VI.
- Tree protection fencing shall be at least 1.2 m in height and installed in such a way that the fence cannot be altered.

- Signage will be posted every 15-20 m along the protective fencing that indicates:
  - Fencing is to protect trees
  - Fencing is not to be removed
  - Fence is to be maintained until construction is complete
- Do not place any material or equipment within the critical root zone (10x the diameter-at-breast-height) (CRZ) of a tree.
- Surface runoff is to be directed to the stormwater management facilities on Site.
- Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.
- Do not attach any signs, notices, or posters to trees.
- Do not damage the root system, trunk, or branches of any tree. If any roots are encountered during excavation while working outside the CRZ, they should be cut off cleanly with sharp pruning tools rather than allow them to be torn by large equipment; clean cuts will help to minimize decay and entry points for disease.
- All exposed roots of trees to be retained should be covered in a minimum of 5 cm of firm soil within 24 hours of exposure.
- If root pruning is implemented, the crown of the tree should be reduced proportionately under the direction of a Certified Arborist or Registered Forester, to decrease wind sail. Pruning should be kept to thinning cuts (no major limb removal), and crowns should be monitored, and maintenance carried out for two (2) years after root pruning to remove any dieback under the direction of a Certified Arborist or Registered Forester.
- If branches are likely to hang in the way of passing equipment, the branches should be pruned by a Certified Arborist or Registered Forester to avoid tearing and undue injury to the tree.
- Refer to the Landscape Plan (Novatech, 2024) for a list of types and species of proposed native plantings.

2.3 Fish and Fish Habitat

Under the *Fisheries Act*, works below the high-water mark requires Fisheries and Oceans Canada (DFO)'s review unless they are listed as a standard Code of Practice (CoP) and no SAR are present. In this case, there are no SAR present, and DFO will be consulted. The avoidance and mitigation measures from the EIS-Fisheries (Bowfin, 2021) has been updated.

Planning

- Submit a Request for Review to DFO prior to completing any works that affect the fish habitat (road ditch, Features 1a, 2, and 5 (including the connected ponds)); Ensure that spring velocities (1:2) through the new road ditch culvert allows for fish passage.

- Ensure that the same quantity and quality of water continues to reach the same waterbodies post-construction as pre-construction.
- Site instruction will be provided to contractor to highlight the fish habitat findings (road ditch, Features 1a, 2, and 5 (including the connected ponds)). These areas must be clearly demarcated on construction drawings.
- Construction of the outlet drain from the dry pond to the road ditch, is to be scheduled to occur during dry conditions (if a rain event is scheduled to occur, the work will be postposed) and designed to prevent fish from accessing the stormwater management facility.
- All works associated with the relocation of fish habitat must occur during the in-water work window (July 1 to March 14, inclusive).

Erosion and Sediment Control

- An erosion and sediment control plan will be developed by Novatech and implemented by the contractor prior to any work within 30 m of fish habitat.
  - Provide regular maintenance to the erosion and sediment control measures during construction. Contractor shall be responsible for ensuring that the erosion and sediment control measures are maintained and will monitor the water clarity downstream of the work site throughout the day and during rain events. Water quality is to meet the Canadian Water Quality Guidelines for the Protection of Aquatic Life. Monitoring for visible plumes outside of the work area is to be undertaken.
  - At a minimum, the erosion and sediment control plan will include the installation of sediment fencing, above the high-water mark.
  - Additional materials (i.e. rip rap, filter cloth and silt fencing) will be readily available in case they are needed promptly for erosion and/or sediment control.
- Suspend activities that cause muddy environments during periods of heavy rains.
- Any stockpiles of soil or fill material will be stored as far as possible from the fish habitat or channels leading to fish habitat (minimum 30 m).
- The erosion control measures will not be removed until the banks are stabilized (i.e., <20% exposed soil).
- Where banks/riparian area (area within 30 m of channel) have been stabilized by seeding and/or planting, monitor the revegetation to ensure that the vegetation becomes fully established (at least 80% cover required).
- Where possible, limit clearing of vegetation to trimming and leave the stump and lower 60 cm of the tree trunk in place (for shoreline stabilization).

- Once work is completed, stabilize using native vegetation. Where possible, this should include native trees and shrubs as per the landscaping plan (to be developed at detailed design).

Fish and Fish Habitat Protection/Fish Passage

- Any work planned for existing fish habitat (i.e., Feature 5 and its ponds, the road ditch) will be completed in an isolated area and in the dry.
- A license to collect fish for scientific purposes will be obtained from the Ministry of Natural Resources prior to any fish relocation efforts.
- Fish (and other aquatic fauna) will be removed from the isolated work areas by a qualified biologist/technologist. The salvage will need to be repeated if the work area becomes flooded.
- Minimize the size of temporary in-water work areas.

Contaminant and Spill Management

- Machinery working near or in-water should have vegetable based hydraulic fluids.
- All equipment working in or near the water must be well maintained, clean and free of leaks. Maintenance on construction equipment such as refueling, oil changes or lubrication would only be permitted in a designated area located at least 30 m from the shoreline, in an area where erosion and sediment control measures and all precautions have been made to prevent oil, grease, antifreeze or other materials from inadvertently entering the ground or the surface water flow.
- Emergency spill kits will be located on site. The crew will be fully trained on the use of clean-up materials to minimize impacts of any accidental spills. The area would be monitored for leakage and in the unlikely event of a minor spillage, the project manager would stop the activity, and corrective measures would be implemented.
- If a spill occurs:
  - Stop all work
  - Spills are to be immediately reported to the MECP Spills Action Centre (1800 268-6060). Note that under the *Fisheries Act,* deleterious substance includes sediments.
  - Clean-up measures are to be appropriate and are not to result in further harm to fish/fish habitat.
  - Sediment-laden water will be removed and disposed of appropriately.
- No construction debris will be allowed to enter the watercourse.
- Following the completion of construction, all construction materials will be removed from Site.

2.4 Other

- Machinery will be cleaned prior to arriving on-Site to prevent the potential spread of invasive species. Invasive species on site (i.e., Common Reed, buckthorn, honeysuckle) should be removed as appropriate for the species. See Ontario Invasive Plants Website for guidance https://www.ontarioinvasiveplants.ca.
- Dust suppression should consist of water.

3. Conclusions

The proponent's planners and engineers (Novatech) have ensured that the proposed Site Plan respects the boundaries to the developable work area as established during the ZBA.

Prior to construction, the following would be required:

- Consultation with DFO prior to any impacts to the fish habitat (request for review process anticipated).
- Since SAR policies can change, the need to communicate with MECP will be confirmed closer to the time of construction.
- Complete flora SAR inventories no earlier than 2-years prior to construction (as they have a shelf-life of 2-years):
  - Butternut inventory and assessment during appropriate time of year (assessments are to be completed between May 15-August 31).
  - Black Ash inventory and assessment to be completed during the appropriate time of year (assessments are to be completed between June 1 and October 1).
- As a condition of Site Plan Approval, review and update the list of avoidance and mitigation measures, as needed, at the time of construction.

It is our recommendation that the avoidance and mitigation measures are followed. We recommend that butternut and black ash be reviewed as a condition of approval before construction and any requirements from DFO, SNC, and MECP be required as a condition of approval before construction.

I trust that this report will meet your requirements. Should you have any questions or comments, please contact Michelle Lavictoire at michelle.lavictoire@cima.ca.

4. Study Limitations and Constraints

CIMA+ completed diligent and reasonable research in conducting this evaluation, with respect to recognized laws and standards of practice. The facts presented in this report are strictly limited to the period of investigation. Conclusions are based on available information and documents, observations made during Site investigations, and communications with various contacts. Interpretation is therefore limited to this data.

CIMA+ is not responsible for erroneous conclusions due to voluntary abstention or the non-availability of pertinent information. Any opinion expressed in relation to legal or regulatory conformity is technical and should not be, in any case, considered legal advice.

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A

Appendix A
Review of Potential Endangered or Threatened Species

Endangered and Threatened Species and their Habitat

Endangered and threatened Species at Risk (SAR) are protected under the provincial *Endangered Species Act, 2007*. The federal *Species at Risk Act* (SARA) applies only to fish species on private land. Most birds, including SAR, also receive protection from *Migratory Bird Convention Act, 1994,* and/or *Fish and Wildlife Conservation Act, 1997*. Together, provincially, and federally protected species are referred, herein, as SAR. The lands within the study area include provincial and private lands and as such, the evaluation of presence was complete following the province's guidelines.

A list of potential endangered and threatened species was compiled using various sources. The NHIC database provides information available to the public on those SAR documented as occurring within the general area. It should be noted that not all information for all species is available to the public. Furthermore, the absence of a record does not necessarily indicate that the species is absent from the area. The purpose of the NHIC database is to help determine what species may occur within the project area. The background review included looking at the list of birds observed as part of the Ontario Breeding Bird Atlas (OBBA) and any SAR species listed on these lists were considered as potentially occurring within the subject lands. Added to this list were species that often occur within the general area based on personal experience or observations. The resulting list includes 12 SAR: 1 reptile (Blanding's Turtle), 5 birds (Eastern Whip-poor-will, Bank Swallow, Chimney Swift, Bobolink, and Eastern Meadowlark), 4 mammals (Little Brown Myotis, Northern Myotis, Eastern Small-Footed Myotis, and the Tri-colored Bat), and 2 plants (Butternut and Black Ash) (Table 1). Note that following site investigations, this list of species and potential occurrence of them or their habitat was reviewed and adjusted.

For some species, the federal and/or provincial governments provide guidelines on what habitats should receive automatic protection. This is usually based on distances from known sightings or suitable habitat. Federally, the habitat is typically classed based on function and provincially it is either regulated or general habitat. Regulated habitat has detailed description and is prescribed in an Ontario Regulation. General habitat often splits the habitat needs into up to three categories, listed as Categories 1-3 with 1 being the most sensitive to disturbances. Note the exception with Butternuts where Category 1 individuals are least sensitive. In the table below, the candidate SAR for the Site are listed along with their habitat needs. Where guidance is provided by the government, this is used, to evaluate whether to bring the species forward to assessment. When there is no guidance available, the available literature is used to evaluate the suitability of the habitat on-site for that species.

Common Name	Scientific Name	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Preferred Habitat Guidelines	Evaluation	Brought Forward (Yes/No)
REPTILES							
Blanding's Turtle	Emydoidea blandingii	S3	THR	END	Shallow water, large marshes, shallow lakes, or similar water bodies (COSEWIC, 2016). Federal guidelines use a 2 km distance and bases the automatic protection on the occupancy and suitability of the habitat for nesting, overwintering and functional habitat (ECCC, 2018). Provincial guidelines provide general habitat protection to suitable habitat within 2 km of an occurrence when certain conditions are met (MECP, 2019).	Record of an occurrence within 2 km in 2008 (NHIC). Surveys in 2021 did not find any Blanding's Turtles. Species is anticipated to be present in general area but none found on Site following basking turtle surveys. Avoidance and mitigation measures. Included here.	Yes
BIRDS							
Least Bittern	*Ixobrychus exilis*	S4B	THR	THR	Freshwater marsh habitat with dense vegetation (Sandilands, 2005; COSEWIC, 2009a). Nests are typically in cattail marshes, near edge or openings but they have been found in other emergents and occasionally in willow (Woodcliff, 2007). Recovery strategy states that the species must have permanent marsh/shrub swamps and a mosaic of tall and robust herbaceous or woody vegetated with open water areas and natural regime water levels (ECCC, 2014). The open water areas can be shallow (10-50cm) (OMNRF, 2016). Movements within this suitable habitat can extend within a 500m radius of the nest (ECCC, 2014). and are usually found in those that are larger than 5 ha (COSEWIC 2009; OMNRF, 2014). The province does not currently have any guidance on the general habitat requirements of this species.	No suitable marsh habitat is present in the surveyed area. This species is not brought forward for this project.	No
Eastern Whip-poor-will	Antrostomus vociferus	S4B	THR	THR	Rock or sand barrens with scattered trees, savannahs, old burns, or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations (COSEWIC, 2009). The province's General Habitat Description outlines Category 1-3 requirements, which are described in Section 6. Provincial guidelines provide general habitat protection to suitable habitat within 500 m of an occurrence when certain conditions are met (MECP 2019).	The forested areas within 500m of site. This species is considered potentially occurring. However, this species will no longer be protected as of February 1, 2025, prior to the next nesting season. This project does not include any removal of woodland.	No
Chimney Swift	Chaetura pelagica	S4B, S4N	THR	THR	Cities, towns, villages, rural, and wooded areas. This species rarely utilizes trees; they prefer trees greater than 50 cm in diameter and that are within 1 km of waterbodies (COSEWIC 2007). Provincially, this species' protected habitat consists of Category 1 habitat, which is a human-made nesting/roosting feature or natural nesting/roosting tree cavity, as well as the area within 90 m of the natural tree cavity (MECP, 2017). No Category 2 or 3 habitats are outlined for this species (MECP, 2017).	This species has not been recorded in the ABBO squares of the general area; the nearest recorded occurrences (breeding evidence: possible) are Squares 18TVR52 to the west and 18TVR72 to the east. Potentially could use structures on site. Not identified as present in the EIS (Bickerton, 2021). And none were observed as incidentals by Bowfin. This species is considered absent.	No

Common Name	Scientific Name	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Preferred Habitat Guidelines	Evaluation	Brought Forward (Yes/No)
Loggerhead Shrike	Lanius ludovicianus	S2B	END	END	Breeding habitat is characterized by open areas such as pastures, prairie grasslands, and agricultural fields. Nesting sites are small shrubs and trees, usually those with thorns or dense interiors (COSEWIC, 2014). The federal recovery strategy states that the species critical habitat is all suitable habitat patches in which confirmed or probable breeding evidence was observed between 2004-2008 (ECCC, 2010) OR two such observation were made in differing years between 1999-2003 as well as suitable habitat patches of which >50% fall within a 400 m radius of the observation/s. Provincially, the species' critical habitat is the 200 m surrounding a nesting site (Category 1) and 200 m surrounding the Category 1 habitat (Category 2) (MECP, 2017).	The Site consisted primarily of compacted aggregate fill. No suitable habitat on site. Not identified as present in the EIS (Bickerton, 2021). And none were observed as incidentals by Bowfin. It is considered absent.	No
Bank Swallow	Riparia riparia	S4B	THR	THR	This species nests within vertical banks, with a preference for sand-silt substrate. Nesting sites more likely near open upland habitats. (COSEWIC, 2013). Provincially, the species protected habitat is the 50 m in front of a breeding colony's bank face and all suitable foraging habitat within 500 m (MECP, 2015).	Searches for nesting habitat within the Site did not locate any nests (Bickerton, 2021). Individuals were observed flying overhead and may use the Site for forwarding (Bickerton, 2021). EIS listed Site as Category 3 habitat. Impacts to Pond 3 were to be restricted to inactive season (Bickerton, 2021). That timing window is now April 1 to August 31. Brought forward for avoidance and mitigation measures. If this cannot be adhered to, while protecting turtles, then it will be discussed with MECP.	Yes
Bobolink	Dolichonyx oryzivorus	S4B	THR	THR	Primarily in forage crops, and grassland habitat. It is sensitive to edge effects, size of habitat and areas with dense shrub vegetation or a litter layer deeper than a few centimeters (COSEWIC, 2010). Provincially, this species' protected habitat is the area extending 60 m from the nest as well as the 300 m of suitable habitat around the nest (MECP, 2013).	The Site consisted primarily of compacted aggregate fill. No suitable habitat on site. Not identified as present in the EIS (Bickerton, 2021). And none were observed as incidentals by Bowfin. It is considered absent.	No
Eastern Meadowlark	Sturnella magna	S4B	THR	THR	Typically require larger grasslands but have been known to breed in habitats that were 1 ha in the United States. Usually, this species' defended territories consist of 2.8-3.2 ha of uncut meadow or field (OMNR, 2014). Personal observations of successful nesting habitat for this species in Eastern Ontario have not found any successful nesting pairs in habitats that were less than 5 ha, which is estimated to be this species' approximate area requirement (COSEWIC, 2011). Provincially, this species protected habitat is the area extending 100 m from the nest as well as the 300 m of suitable habitat around the nest (MECP, 2013).	The Site consisted primarily of compacted aggregate fill. No suitable habitat on site. Not identified as present in the EIS (Bickerton, 2021). And none were observed as incidentals by Bowfin. It is considered absent.	No
MAMMALS							
Little Brown Myotis	*Myotis lucifugus*	S4	END	END	Females establish summer maternity colonies, often in buildings or large-diameter trees. Foraging occurs over water, along waterways, and forest edges. Overwinter in cold and humid hibernacula (caves/mines) (COSEWIC, 2013). Critical habitat has not yet been defined by the province.	No suitable hibernacula present in the area (no crevices or entrances to bedrock). No suitable maternity roost habitat is present within or adjacent to the Site for Eastern Small-footed Myotis.	Yes

Common Name	Scientific Name	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Preferred Habitat Guidelines	Evaluation	Brought Forward (Yes/No)
						There remains the potential for woodland bats to utilize adjacent lands for maternity or day-roots. As such, the four bat species are brought forward for avoidance and mitigation measures.	
Northern Myotis	Myotis septentrionalis	S3	END	END	Older (late successional or primary forests) with large interior habitat and snags that are in the mid-stage of decay. They prefer intact interior habitat and are sensitive to edge habitats (Menzel et al. 2002, Broders et al. 2006, SWH 6E Ecoregion Criterion Schedule). Critical habitat has not yet been defined by the province.	No suitable hibernacula present in the area (no crevices or entrances to bedrock). No suitable maternity roost habitat is present within or adjacent to the Site for Eastern Small-footed Myotis. There remains the potential for woodland bats to utilize adjacent lands for maternity or day-roots. As such, the four bat species are brought forward for avoidance and mitigation measures.	Yes
Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	No Status	Roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. The recovery strategy for the eastern small-footed myotis indicates that the preferred maternity habitat of this species consists of open rock habitats and that it doesn't use old buildings. In the winter, these bats hibernate, most often in caves and abandoned mines (Humphrey, 2017). Critical habitat has not yet been defined by the province.	No suitable hibernacula present in the area (no crevices or entrances to bedrock). No suitable maternity roost habitat is present within or adjacent to the Site for Eastern Small-footed Myotis. There remains the potential for woodland bats to utilize adjacent lands for maternity or day-roots. As such, the four bat species are brought forward for avoidance and mitigation measures.	*Yes*
Tri-colored Bat	*Perimyotis subflavus*	S3?	END	END	Females establish summer maternity colonies, often in buildings or large-diameter trees. Foraging occurs over water, along waterways, and forest edges. Overwinter in cold and humid hibernacula (caves/mines). (COSEWIC, 2013). Critical habitat has not yet been defined by the province.	No suitable hibernacula present in the area (no crevices or entrances to bedrock). No suitable maternity roost habitat is present within or adjacent to the Site for Eastern Small-footed Myotis. There remains the potential for woodland bats to utilize adjacent lands for maternity or day-roots. As such, the four bat species are brought forward for avoidance and mitigation measures.	*Yes*
VASCULAR PLANTS							
Butternut	*Juglans cinerea*	S2?	END	END	Found in a variety of habitat types but grows best on well-drained fertile soils in shallow valleys and on gradual slopes (COSEWIC, 2017). The federal recovery strategy does not outline critical habitat for this species. Provincially, butternuts are assessed and categorized based on the amount of canker. These categories are outlined in Section 6.	Suitable habitat and site are well within the range for this species. Inventories valid for 2-years. Species is brought forward for further investigations closer to construction period.	Yes
Black Ash	*Fraxinus nigra*	S4	END (As of Jan 25, 2024)	No Status	Swamps, bogs, and riparian areas, occasionally poorly drained upland areas (COSEWIC 2018).	Suitable habitat and site are well within the range for this species. Inventories valid for 2-years. Species is brought forward for further investigations closer to construction period.	Yes

Table Updated: August 2024

B

Appendix B
Site Plan and Landscape Plan

1 A001 EXISTING KEY PLAN
SCALE N/A

LEGEND

- PROPERTY LINE
- YARD SETBACK
- 8ft HIGH CHAIN FENCE, REFER TO LANDSCAPE
- FIRE HYDRANT
- CB CATCH BASIN - SEE CIVIL
- MH MANHOLE - SEE CIVIL
- MAIN ENTRANCE/EXIT
- GARBAGE ENCLOSURE C/W 2m HIGH OPAQUE SCREEN
- UP EXISTING UTILITY POLE
- AN EXISTING ANCHOR
- EXTERIOR LIGHT POLE REFER TO ELEC.
- T.W.S.I.
- BR BIKE RACK FOR 4 BIKES 0.6 x 1.8 m SPACE PER BIKE
- FP FLAG POLE, REFER TO LANDSCAPE
- LANDSCAPED AREA REFER TO LANDSCAPE PLAN
- CONCRETE PAD AND SIDEWALK
- ASPHALT
- 6m WIDE FIRE ROUTE, REFER TO CIVIL
- PAVERS REFER TO LANDSCAPE PLAN
- LOADING SPACE PER ZBL, SECTION 113, TABLE 113B
- DC NEW DEPRESSED CURB
- NEW CURB
- B IN-GROUND BOLLARD, REFER TO DETAIL 1/A002
- BH BLOCK HEATER, REFER TO DETAIL 2/A002
- R RECEPTACLE, REFER TO DETAIL 1/A003
- C CONDUIT STUB UP FOR FUTURE ELEC. EQUIPMENT
- EV CHARGER, REFER TO DETAIL 11/A002

SIGNAGE LEGEND:

REFER TO SPEC SECTION 10 14 54 TRAFFIC SIGNAGE

- NO TRESPASSING
- FR FIRE ROUTE
- BF BARRIER-FREE PARKING
- ST STOP SIGN

PAINTED SIGN LEGEND:

REFER TO SPEC SECTION 32 17 23 PAINTING TRAFFIC LINES AND MARKINGS

- WHITE PAINTED BARRIER-FREE PARKING SYMBOL AND PARKING LINES
- WHITE PAINTED CAR PARKING LINES
- WHITE PAINTED SYMBOL FOR ELECTRIC CAR CHARGING STATION

PROJECT INFORMATION

TOPOGRAPHICAL PLAN INFORMATION:
SURVEY PROPERTY BOUNDARIES TAKEN FROM TOPOGRAPHICAL PLAN OF PART OF LOT 1 CONCESSION 9, GEOGRAPHIC TOWNSHIP OF GLOUCESTER; CITY OF OTTAWA, WEST OF BOUNDARY ROAD, PIN 04324-0177 AND PIN 04324-0161, PER PLAN 4R-13964

PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
DATED AUGUST 15, 2018

SITE ZONING AS PER OTTAWA ZONING BY-LAW 2008-250 SITE DESIGNATION
RG - RURAL GENERAL INDUSTRIAL ZONE
AREA "D" OF SCHEDULE 1, CITY OF OTTAWA

OWNER
DAY & ROSS INC.
358 MAIN STREET
HARTLAND, NB
E7P 1C6

SURVEYOR
ANNIS, O'SULLIVAN, VOLLEBEKK LTD
14 CONCOURSE GATE, SUITE 500
NEPEAN, ON
K2E 7S6

CIVIL ENGINEER
NOVATECH
240 MICHAEL COWPLAND DRIVE, SUITE 200
OTTAWA, ON
K2M 1P6

ARCHITECT
N45 ARCHITECTURE INC.
ROBERT MATTHEWS
71 BANK STREET, 7TH FLOOR
OTTAWA, ON
K1P 5N2

BUILDING CLASSIFICATION:
THE BUILDING IS CLASSIFIED AND DESIGNED TO CONFORM TO THE ONTARIO BUILDING CODE 2020

OCCUPANCY:
GROUP F DIVISION 2 - UP TO 2 STOREYS, SPRINKLERED (3.2.2.72.)
GROUP D - UP TO 3 STOREYS, SPRINKLERED (3.2.2.54.)

BUILDING STATISTICS:
NUMBER OF STOREYS = 1
THE BUILDING IS SPRINKLERED

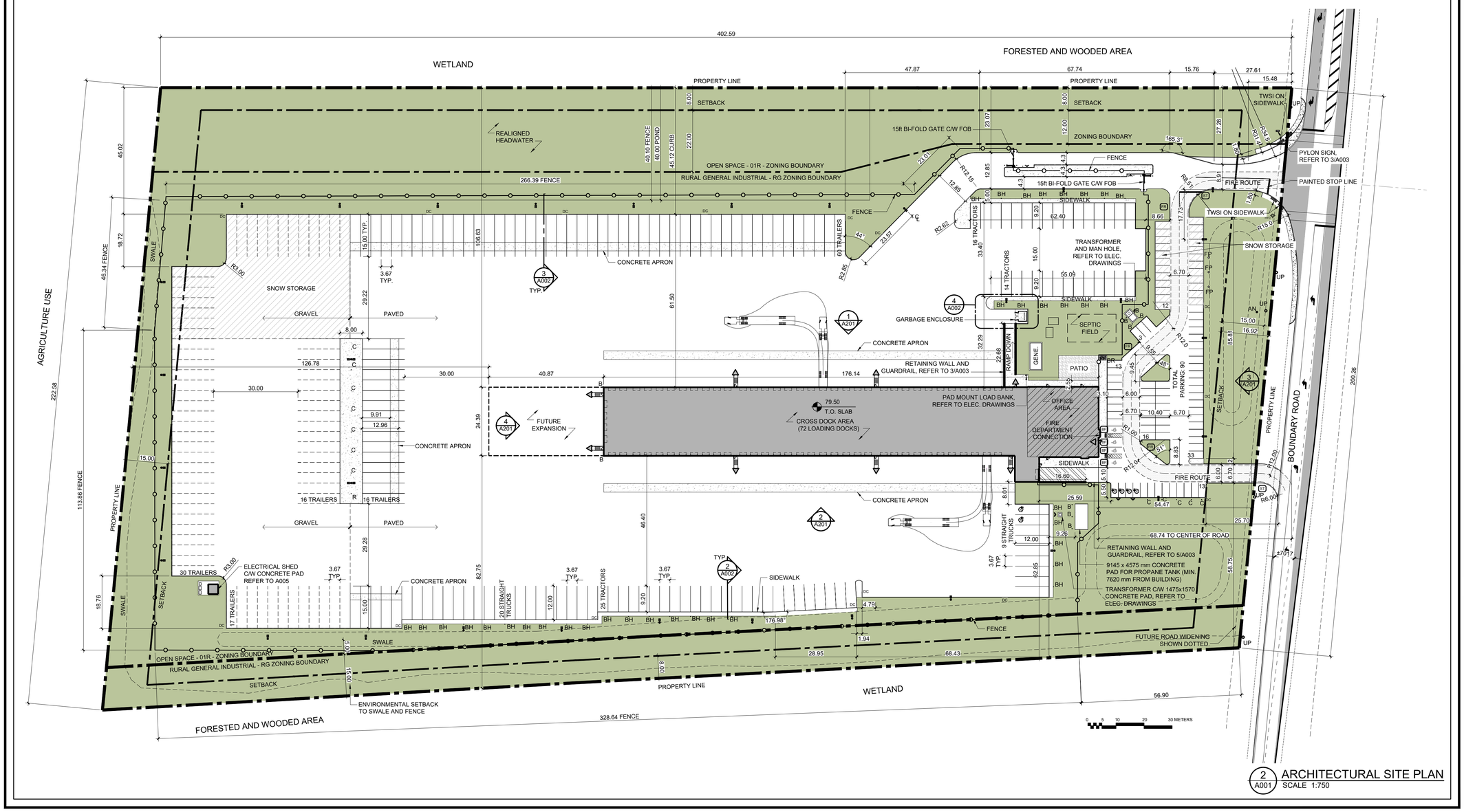
NUMBER OF ACCESS ROUTES REQUIRED = 1
NUMBER OF ACCESS ROUTES PROVIDED = 2

CONSTRUCTION TYPE = NON-COMBUSTIBLE CONSTRUCTION

ZONING INFORMATION

NOTE: ALL ZONING DEFINITIONS AND REQUIREMENTS AS PER CITY OF OTTAWA ZONING BY-LAW 2008-250

ZONING MECHANISM	REQUIRED	PROVIDED
ADDRESS	5494-5510 BOUNDARY ROAD GLOUCESTER, ON	TRUCK TRANSPORT TERMINAL AND CROSS DOCK
DEFINITION	RG RURAL GENERAL INDUSTRIAL ZONE	
MIN.LOT WIDTH	30 m	200 m
MIN. LOT AREA	4, 000 m^2	31,969.7 m^2
MIN. FRONT YARD SETBACK	15 m	54.47 m
MIN. CORNER SIDE SETBACK	12 m	N/A
MIN. INT. SIDE YARD SETBACK	8 m	62.9 m
MIN. REAR YARD SETBACK	15 m	167.7 m
MAX. LOT COVERAGE	50%	14%
MAX. BUILDING HEIGHT	15 m	±10 m
MIN. WIDTH OF LANDSCAPING	1.5 m	MIN. 3 m
STANDARD PARKING SPACE	2.6m x 5.2m (max 3.1m wide)	2.6m x 5.2m
ACCESSIBLE PARKING SPACE	3.6m x 5.2m	3.4m x 5.2m (TYPE A), 2.4 x 5.2m (TYPE B)
PARKING REQUIREMENTS AREA D: RURAL	46 OFFICE: 2.4 / 100 m^2 G.F.A CROSS DOCK: 0.8 / 100 m^2 G.F.A	90
BARRIER-FREE PARKING	3	2 (TYPE A) + 2 (TYPE B)
LOADING SPACES	1 (MIN. 3.5 m WIDE x 7 m LONG)	72
BICYCLE PARKING RATE	3 (1 / 2000 m^2 of G.F.A.)	4
GROSS FLOOR AREA		- m^2 (- s.f)
BUILDING AREA (FOOTPRINT)		4,400 m^2 (47,360 s.f)
OFFICE AREA		642 m^2 (6,910 s.f)
CROSS DOCK AREA		3,758 m^2 (40,450 s.f)



2 A001 ARCHITECTURAL SITE PLAN
SCALE 1:750

no.	revision	date
03	ISSUE FOR SITE PLAN CONTROL APPLICATION	24 SEPT 2024
02	ISSUE FOR 60% SUBMISSION	15 AUG 2024
01	ISSUE FOR 30% SUBMISSION	27 JUNE 2024

N45 ARCHITECTURE INC.
71 Bank Street, 7th Floor - Ottawa, Ontario, K1P 5N2
tel. 613.224.0095 fax 613.224.9811

DAY & ROSS
5494-5510 BOUNDARY ROAD
GLOUCESTER, ON

Project North / True North

seal: ONTARIO ASSOCIATION OF ARCHITECTS — ROBERT C. MATTHEWS — LICENCE 2966

drawing title: SITE PLAN

scale	drawn by
AS SHOWN	DL
date	checked by
FEB 2024	RM
project number: 22-765	drawing number: A001

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES.

DO NOT SCALE DRAWINGS

revision: 03

CITY PLAN NO. XXXX

CITY'S FILE NUMBER: D07-XX-XX-XXXX

PLANT LIST

Reforestation Mix

%	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Coniferous Trees						
5%	24	*Abies balsamea*	Balsam Fir	0.60m Ht	PT	2.0m O.C.
5%	24	*Larix laricina*	Tamarack	0.60m Ht	PT	2.0m O.C.
5%	24	*Pinus banksiana*	Jack Pine	0.60m Ht	PT	2.0m O.C.
5%	24	*Pinus strobus*	Eastern White Pine	0.60m Ht	PT	2.0m O.C.
5%	24	*Thuja occidentalis*	Eastern White Cedar	0.60m Ht	PT	2.0m O.C.
Deciduous Trees						
10%	49	*Acer rubrum*	Red Maple	1.20m Ht	PT	2.0m O.C.
5%	24	*Acer saccharum*	Sugar Maple	1.20m Ht	PT	2.0m O.C.
10%	49	*Betula papyrifera*	Paper Birch			
5%	24	*Celtis occidentalis*	Hackberry	1.20m Ht	PT	2.0m O.C.
5%	24	*Juglans cinerea*	Butternut	1.20m Ht	PT	2.0m O.C.
5%	24	*Juglans nigra*	Black Walnut	1.20m Ht	PT	2.0m O.C.
5%	24	*Ostrya virginiana*	Ironwood	1.20m Ht	PT	2.0m O.C.
2%	10	*Populus balsamifera*	Balsam Poplar	1.20m Ht	PT	2.0m O.C.
3%	15	*Populus deltoides*	Eastern Cottonwood			
2%	10	*Populus grandidentata*	Largetooth Aspen	1.20m Ht	PT	2.0m O.C.
3%	15	*Populus tremuloides*	Trembling Aspen	1.20m Ht	PT	2.0m O.C.
10%	49	*Prunus serotina*	Black Cherry	1.20m Ht	PT	2.0m O.C.
5%	24	*Quercus rubra*	Red Oak	1.20m Ht	PT	2.0m O.C.
5%	24	*Tilia americana*	Basswood	1.20m Ht	PT	2.0m O.C.

Sandy Buffer Mix

%	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Deciduous Shrubs						
10%	40	*Amelanchier humilis*	Low Shadbush	0.60m Ht	PT	2.0m O.C.
10%	40	*Amelanchier canadensis*	Shadblow Serviceberry	0.60m Ht	PT	2.0m O.C.
10%	40	*Ceanothus americanus*	New Jersey Tea	0.60m Ht	PT	2.0m O.C.
10%	40	*Diervilla lonicera*	Northern Bush Honeysuckle	0.60m Ht	PT	2.0m O.C.
15%	59	*Prunus pumila*	Sand Cherry	0.60m Ht	PT	2.0m O.C.
10%	40	*Rhus typhina*	Staghorn Sumac	0.60m Ht	PT	2.0m O.C.
10%	40	*Rhus aromatica*	Fragrant Sumac	0.60m Ht	PT	2.0m O.C.
15%	59	*Rosa blanda*	Meadow Rose	0.60m Ht	PT	2.0m O.C.
10%	40	*Symphoricarpos alba*	Snowberry	0.60m Ht	PT	2.0m O.C.

Dry Shrub Mix

%	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Deciduous Shrubs						
10%	21	*Aronia melanocarpa*	Black Chokeberry	0.60m Ht	PT	2.0m O.C.
10%	21	*Ceanothus americanus*	New Jersey Tea	0.60m Ht	PT	2.0m O.C.
10%	21	*Diervilla lonicera*	Northern Bush Honeysuckle	0.60m Ht	PT	2.0m O.C.
10%	21	*Physocarpus opulifolius*	Common Ninebark	0.60m Ht	PT	2.0m O.C.
10%	21	*Rhus typhina*	Staghorn Sumac	0.60m Ht	PT	2.0m O.C.
10%	21	*Rhus aromatica*	Fragrant Sumac	0.60m Ht	PT	2.0m O.C.
10%	21	*Rosa blanda*	Meadow Rose	0.60m Ht	PT	2.0m O.C.
10%	21	*Rubus occidentalis*	Black Raspberry	0.60m Ht	PT	2.0m O.C.
10%	21	*Rubus odoratus*	Flowering Raspberry	0.60m Ht	PT	2.0m O.C.
10%	21	*Symphoricarpos alba*	Snowberry	0.60m Ht	PT	2.0m O.C.

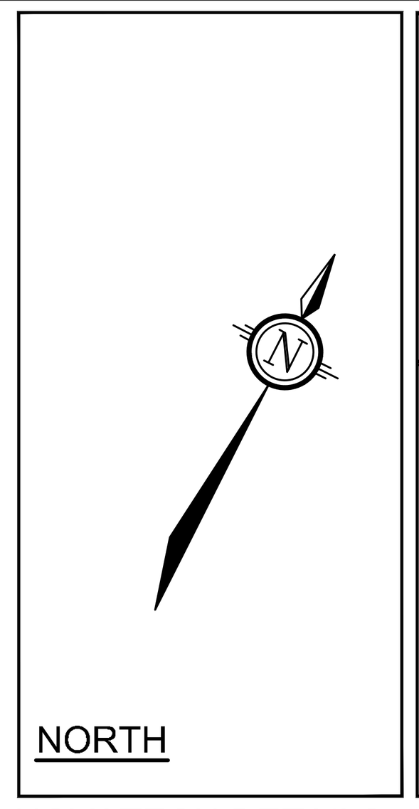
Wetsoils Shrub Mix

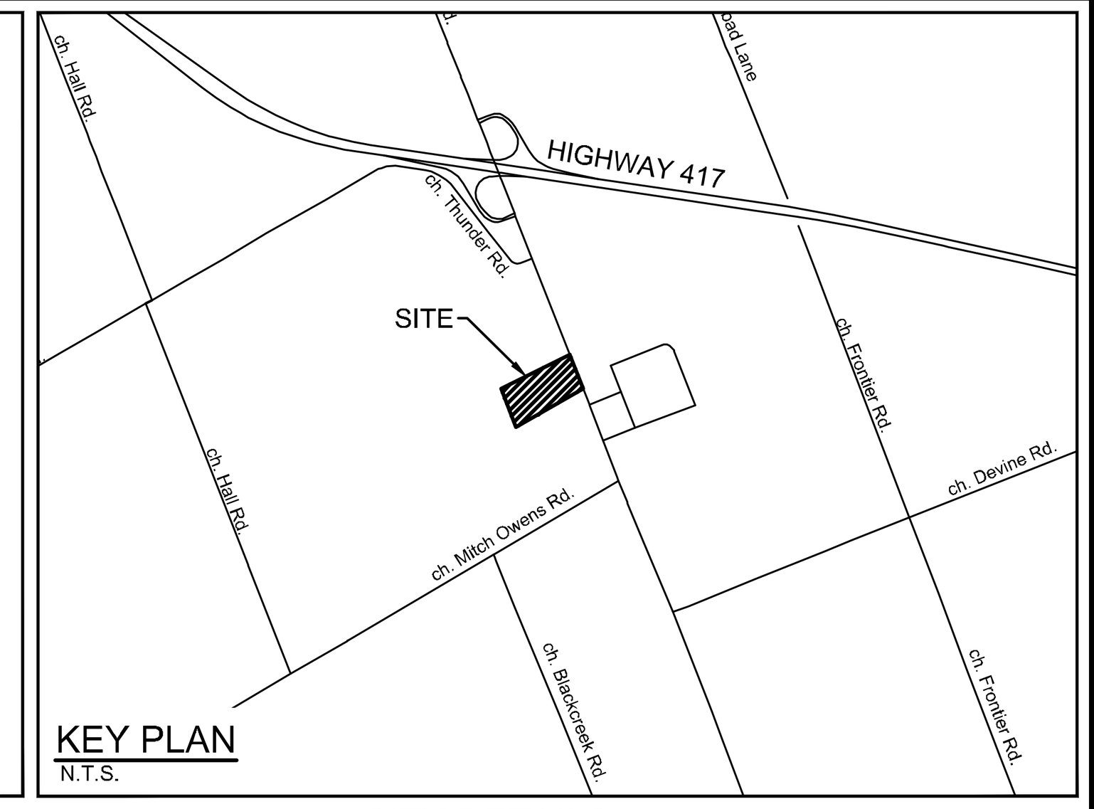
%	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Deciduous Shrubs						
10%	41	*Alnus incana ssp. rugosa*	Speckled Alder	0.60m Ht	PT	2.0m O.C.
10%	41	*Betula populifolia*	Gray Birch	0.60m Ht	PT	2.0m O.C.
10%	41	*Cephalanthus occidentalis*	Buttonbush	0.60m Ht	PT	2.0m O.C.
5%	20	*Cornus alternifolia*	Pagoda Dogwood	0.60m Ht	PT	2.0m O.C.
5%	20	*Cornus racemosa*	Grey Dogwood	0.60m Ht	PT	2.0m O.C.
10%	41	*Cornus sericea*	Red Osier Dogwood	0.60m Ht	PT	2.0m O.C.
10%	41	*Myrica gale*	Sweet Gale	0.60m Ht	PT	2.0m O.C.
5%	20	*Salix eriocephala*	Heart-Leaved Willow	0.60m Ht	PT	2.0m O.C.
5%	20	*Salix discolor*	Pussy Willow	0.60m Ht	PT	2.0m O.C.
10%	41	*Salix petiolaris*	Slender Willow	0.60m Ht	PT	2.0m O.C.
10%	41	*Spiraea alba*	White Meadowsweet	0.60m Ht	PT	2.0m O.C.
10%	41	*Viburnum lentago*	Nannyberry	0.60m Ht	PT	2.0m O.C.

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND	SPACING
Coniferous Trees						
ABA	6	*Abies balsamea*	*Balsam Fir*	200cm Ht	WB	As Shown
LL	9	*Larix laricina*	Tamarack	200cm Ht	WB	As Shown
PM	6	*Picea mariana*	Black Spruce	200cm Ht	WB	As Shown
PNS	8	*Pinus strobus*	Eastern White Pine	200cm Ht	WB	As Shown
TO	9	*Thuja occidentalis*	Eastern White Cedar	200cm Ht	WB	As Shown
TCS	1	*Tsuga canadensis*	Eastern Hemlock	200cm Ht	WB	As Shown
Deciduous Trees						
ARN	2	*Acer rubrum 'Northwood'*	Northwood Red Maple	50mm Cal	WB	As Shown
AR	2	*Acer rubrum*	Red Maple	50mm Cal	WB	As Shown
AES	4	*Acer saccharum*	Sugar Maple	50mm Cal	WB	As Shown
AEG	2	*Aesculus glabra*	Ohio Buckeye	45mm Cal	WB	As Shown
AXB	1	*Amelanchier x grandiflora 'Ballerina'*	Ballerina Serviceberry	50mm Cal	WB	As Shown
BAL	3	*Betula alleghaniensis*	Yellow Birch	50mm Cal	WB	As Shown
BP	2	*Betula papyrifera*	Paper Birch	50mm Cal	WB	As Shown
COV	4	*Carya ovata*	Shagbark Hickory	50mm Cal	WB	As Shown
CEL	2	*Celtis occidentalis*	Hackberry	50mm Cal	WB	As Shown
GTI	3	*Gleditsia triacanthos var. inermis 'Impcole'*	Imperial Honeylocust	50mm Cal	WB	As Shown
GDI	3	*Gymnocladus dioicus*	Kentucky Coffee Tree	50mm Cal	WB	As Shown
JN	2	*Juglans nigra*	Black Walnut	50mm Cal	WB	As Shown
MORU	3	*Morus rubra*	Red Mulberry	60cm 2g	PT	As Shown
PGD	2	*Populus grandidentata*	Largetooth Aspen	40mm Cal	WB	As Shown
PTR	2	*Populus tremuloides*	Trembling Aspen	40mm Cal	WB	As Shown
PS	1	*Prunus serotina*	Black Cherry	50mm Cal	WB	As Shown
QA	2	*Quercus alba*	White Oak	50mm Cal	WB	As Shown
QM	3	*Quercus macrocarpa*	Burr Oak	50mm Cal	WB	As Shown
TA	3	*Tilia americana*	Basswood	50mm Cal	WB	As Shown
Deciduous Shrubs						
Axv	13	*Aronia x prunifolia 'Viking'*	Viking Black Chokecherry	60cm Ht	PT	80cm O.C
Pon	26	*Physocarpus opulifolius 'Nanus'*	Dwarf Ninebark	60cm Ht	PT	100cm O.C
Rag	10	*Rhus aromatica 'Gro-Low'*	Gro-Low Fragrant Sumac	60cm Ht	PT	160cm O.C
Sni	2	*Salix nigra*	Black Willow	60cm Ht	PT	As Shown
Ornamental grasses						
ckf	6	*Calamagrostis acutiflora 'Karl Foerster'*	Karl Foerster Feather Reed Grass	1g	PT	45cm O.C

LEGEND

- 3-D1 — DETAIL SHEET # EG. L1, L2, ETC. — NOVATECH OR CITY DETAIL NUMBER SEE LIST FOR CODE
- PROPERTY LIMIT
- PROPOSED CONCRETE
- PROPOSED PAVERS
- PROPOSED SEED MIX (VARIOUS)
- PROPOSED SANDY BUFFER MIX
- PROPOSED WET SHRUB MIX
- PROPOSED DRY SHRUB MIX
- PROPOSED REFORESTATION
- PROPOSED DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- KEY / ## — SPECIES (SEE PLANT LIST) / QUANTITY
- CHAIN LINK FENCE WITH TURTLE FENCE
- CHAIN LINK FENCE
- TURTLE FENCE
- BOULDER CLUMP
- L — BASKING LOGS
- W — ROOT WAD





KEY PLAN
N.T.S.

NOVATECH DETAILS

Found on Sheet L2.

D1. Standard Deciduous Tree Planting
D2. Standard Coniferous Tree Planting
D3. Shrub and Perennial Planting
D4. Shrub Naturalization
D5. Reforestation in Grass
D6. Root Wad
D7. Basking Log
D8. Creek Channel
D9. Bike Layout
D10. Turtle Fence

CITY DETAILS

Related details from City of Ottawa Standard Tender Documents Volume No. 2 Standard Detail Drawings.

F9. Chainlink Fence

SC4. Typical Concrete Sidewalk in Boulevard
SC5. Sidewalk Construction Joints

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

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NOT FOR CONSTRUCTION

No.	REVISION	DATE	BY
2.	ISSUED FOR SITE PLAN APPLICATION	OCT 2/24	RGJ
1.	ISSUED FOR 60% SUBMISSION	AUG 16/24	RGJ

SCALE 1:500

DESIGN	CHECKED	DRAWN	CHECKED	APPROVED
KEW	RGJ	KEW	RGJ	RGJ

FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
5494-5510 BOUNDARY ROAD

DRAWING NAME
LANDSCAPE PLAN

PROJECT No. 118168
REV: REV # 1
DRAWING No. 118168-L

D07-00-00-0000

PLANB1.DWG - 1000mmx707mm
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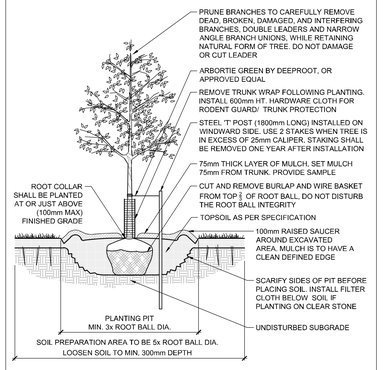
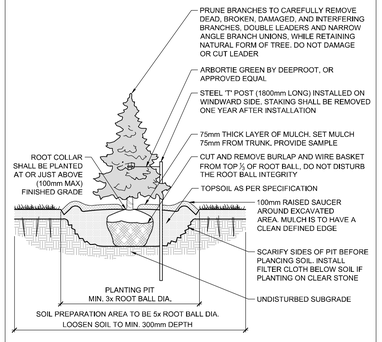
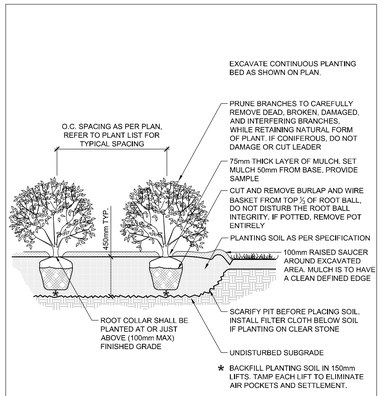


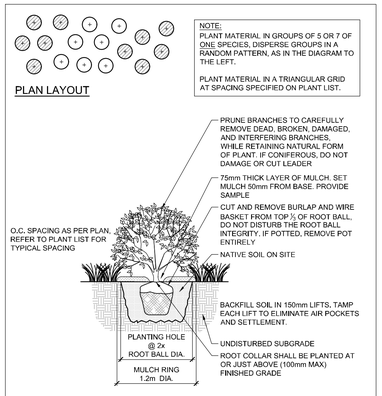
STANDARD DECIDUOUS TREE PLANTING — D1



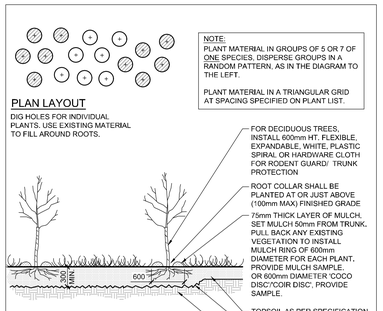
STANDARD CONIFEROUS TREE PLANTING — D2



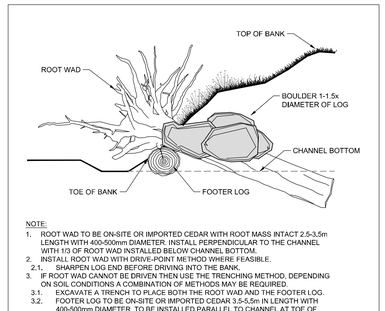
SHRUB AND PERENNIAL PLANTING — D3



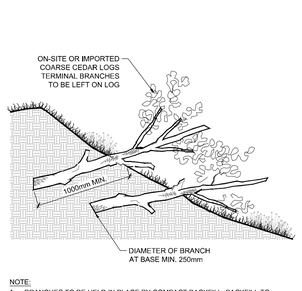
SHRUB NATURALIZATION — D4



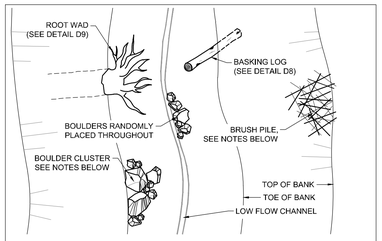
REFORESTATION IN GRASS — D5



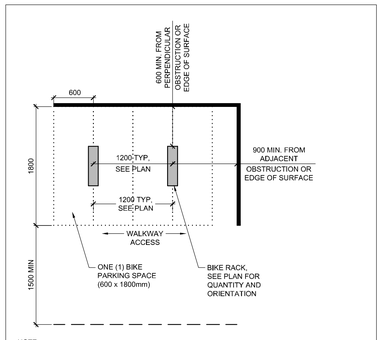
ROOT WAD — D6



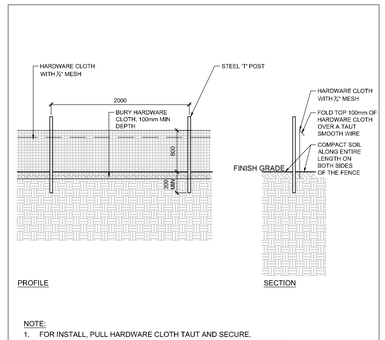
BASKING LOG — D7



CREEK CHANNEL — D8



BIKE LAYOUT — D9



TURTLE FENCE — D10

ESTIMATED CANOPY COVERAGE AT MATURITY

SIZE OF TREE	AVERAGE MATURE SPREAD	CANOPY COVERAGE PER TREE (m2)	QUANTITY OF TREES	TOTAL CANOPY COVERAGE (m2)
Deciduous - Small/Column (<7.5m tall)	5m	20	1	20
Deciduous - Medium (7.5-14m tall)	10m	79	7	550
Deciduous - Large (14m+ tall)	15m	177	42	7422
Coniferous	5m	20	39	766
PROPOSED TOTAL CANOPY COVERAGE (m2):				8757
PROPOSED REFORESTATION PLANTING (m2):				1350
TOTAL SITE AREA (m2):				**84,894**
EST. CANOPY COVERAGE (%):				**12%**
Area of a circle = $(r \times r) \times \pi$				
Canopy coverage per tree calculation: (average mature spread/2) x (average mature spread/2) x π				

Planting bed no.	Available Soil Area (sq m)	Available Soil Volume (cu m)	No. of trees proposed				Existing trees	Total No. of trees	Min. required Soil volume total (cu m)
			Small/ Column ($25m^3$)	Medium ($30m^3$)	Large ($35m^3$)	Evergreen ($30m^3$)	(Large) ($35m^3$)		
Planting bed 1	30140.00	45,210.00		5	35	36		76	2075.00
Planting bed 2	2193.00	3,289.50		1	7	3		11	310.00
Planting bed 3	58.00	87.00	1	1				2	45.00
Planting bed 4	1267.00	1,900.50						0	0.00
Planting bed 5	46.00	69.00						0	0.00

REALIGNED HEADWATER

1. Depth of realigned headwater to be 0.5m to 1m depth of water.

GENERAL

1. Read and interpret this drawing/ drawing set in conjunction with all the contract details and specifications, including related civil, utility, structural, architectural, mechanical, electrical, environmental, geotechnical, and survey information.
2. The Contractor is to determine the exact location, size, material, and elevation of all existing utilities prior to commencing construction. Protect and assume responsibility for all existing utilities regardless of being shown on the drawings.
3. It is essential to use the plans and details in conjunction with the specifications and notes.
4. Do not scale drawings. Work to dimensions only.
5. Protect all existing and retained vegetation for the duration of construction according to the contract details and specifications.
6. Reinstate all areas and items damaged or disturbed, beyond the Limit of Work, because of construction activities, including but not limited to construction staging areas, haul roads, stockpile areas, etc. to the satisfaction of the Consultant. Unless otherwise noted, Contractor is to reinstate all areas to pre-construction condition or better to the satisfaction of the Contract Administrator.

PLANTING

1. Plant material to be No. 1 Grade and is to comply with Canadian Standards for Nursery Stock (latest edition) published by the Canadian Nursery Landscape Association.
2. Use structurally sound plant material with strong fibrous root system free of disease, defects, and injuries. Use trees with straight trunks, well and characteristically branched for species. Obtain approval from consultant of plant material at source prior to digging. All trees and shrubs to be container grown, potted. W/B or B/B, as indicated on Plant List. Bare root plants are only acceptable for certain species and as approved by the Landscape Architect.
3. Plant material substitutions are not be permitted without the written approval from the Consultant, **with 48 hours notice**, prior to shipping plant material.
4. Plant locations are schematic / approximate only. **Contractor is to stake out locations on site for approval by the Landscape Architect prior to installation.**
5. The illustrated number of plants shown in the Planting Plan supersedes the estimated number in the Plant List. Contractor to report any discrepancies to the Landscape Architect prior to installation. Contractor will assume full responsibility if the Landscape Architect is not notified.
6. Ensure trees are thoroughly watered following planting. Monitor material and ensure adequate moisture until acceptance.
7. In heavy clay or poorly drained soils, set root ball with root collar 75-100mm higher than finished grade.
8. Approved topsoil depths are as follows:
   a. Plant Beds - **450mm** continuous depth. Applies to shrubs, perennials, vines, and groundcovers.
   b. Sod/ Seed Areas - **100mm** depth.
   c. Reforestation - **300mm** depth.
9. Sod to be No. 1 Kentucky Bluegrass Sod grown from minimum mixture of 3 Kentucky Bluegrass cultivars. Quality and source are to comply with Canadian Standards for Nursery Stock, Section 17, (latest edition) published by the Canadian Nursery Landscape Nursery Landscape Association.
10. Apply the following mineral fertilizer unless soil tests show other requirements:
    a. Plant Beds - (8-32-16), i.e. 8% Nitrogen, 32% Phosphorus, 16% Potash per manufacturer specifications.
    b. Sod Areas - (8-32-16), i.e. 8% Nitrogen, 32% Phosphorus, 16% Potash at a rate of 350kg/ha.
12. Where applicable, for any plant areas with a mix of species/ cultivars notes, Contractor is to cluster like plants in groups of 3-5 and evenly distribute these in the noted area.

SEED MIX AND APPLICATION

For areas steeper than 3:1, Contractor to apply erosion control blanket. Erosion control blanket to be machine woven mats made from natural wood, coco or cotton fiber, or combination depending on manufacturer, with stitching between two photo-degradable natural organic fiber nettings. Submit products for approval by Consultant. OPSS 804 applies except as may be amended and extended herein.

All Seed Mixes and Nurse Crop to be determined.

SEED - WETLAND HABITAT
Seed mix for wetland restoration.

PICKSEED: WETLAND HABITAT MIX
Seeding Rate: 22-25 kg/ha

Rate	Botanical Name	Common Name
10%	*Andropogon gerargii*	Big Blue Stem
1%	*Asclepias incarnata*	Swamp Milkweed
1%	*Aster puniceus*	Purplestem Aster
3%	*Carex crinitia*	Fringe Sedge
5%	*Carex scoparia*	Blunt Broom Sedge
2%	*Carex stipata*	AWL Sedge
23%	*Carex vulpinoidea*	Fox Sedge
2%	*Desmodium canadense*	Showy Tick Trefoil
21%	*Elymus virginicus*	Virginia Wild Rye
2%	*Eupatorium maculatum*	Spotted Joe Pye Weed
2%	*Eupatorium perfoliatum*	Boneset
3%	*Euthamia gramminifolia*	Grassleaf Goldenrod
3%	*Helenium autumnale*	Sneezeweed
2%	*Heliopsis helianthoides*	Ox Eye Sunflower
1%	*Monarda fistulosa*	Wild Bergamot
5%	*Panicum virgatum*	Switchgrass
10%	*Sorghastrum nutans*	Indian Grass
4%	*Verbena hastata*	Blue Vervain

SEED - EASTERN ECOTYPE PK LOT MIX
Stabilizes slopes greater than 3:1.

PICKSEED: EASTERN ECOTYPE PK LOT MIX
Seeding Rate: 22-25 kg/ha

Rate	Botanical Name	Common Name
1%	*Agrostis perennans*	Autumn Bentgrass
15%	*Andropogon gerardii*	Big Bluestem
25%	*Elymus virginicus*	Virginia Wild Rye
6%	*Panicum virgatum*	Switchgrass
35%	*Schizachyrium scoparium*	Little Bluestem
18%	*Sporobolus cryptandrus*	Sand Dropseed

SEED - RETENTION AREA
Used to stabilize soils in retention basins.

PICKSEED: RETENTION MIX
Seeding Rate: 22-25 kg/ha

Rate	Botanical Name	Common Name
15%	*Agrostis hyemalis*	Ticklegrass
15%	*Agrostis perennans*	Autumn Bentgrass
20%	*Carex vulpinoidea*	Fox Sedge
20%	*Elymus virginicus*	Virginia Wild Rye
5%	*Juncus tenuis*	Path Rush
25%	*Panicum clandestinum*	Deer Tongue

SEED - SLOPE MIX
Stabilizes slopes greater than 3:1.

PICKSEED: SLOPE MIX
Seeding Rate: 22-25 kg/ha

Rate	Botanical Name	Common Name
2%	*Agrostis hyemalis*	Ticklegrass
2%	*Agrostis perennans*	Autumn Bentgrass
2%	*Chamaecrista fasciculate*	Partidge Pea
16%	*Elymus canadensis*	Canadian Wild Rye
9%	*Elymus virginicus*	Virginia Wild Rye
20%	*Lolium multiflorum*	Annual Ryegrass
4%	*Panicum virgatum*	Switchgrass
2%	*Rudbeckia hirta*	Black-Eyed Susan
18%	*Schizachyrium scoparium*	Little Bluestem
25%	*Sorghastrum nutans*	Indian Grass

CONSTRUCTION

1. All general site information and conditions are compiled from Consultant field notes and plans provided by the Owner and are supplied for information purposes only; it is the responsibility of the Contractor to verify the accuracy of all the information obtained from this plan.
2. Together with all Subcontractors involved, the Contractor is to examine all surfaces or conditions relating to the work, in order to determine the acceptability of such surfaces or conditions for the work to commence. Notify the Contract Administrator in writing of conditions which could be detrimental to installation and do not commence work until instructed by the Contract Administrator. The commencement of work implies Contractor acceptance of the conditions.
3. Contractor to check and report any discrepancies before commencing work. No responsibility is borne by the Consultants for subsurface conditions.
4. Contractor to check and verify all dimensions and quantities on site and report any errors or omissions to the Consultant.
5. Contractor is responsible for all fees arising from the completion of works conveyed by these drawings, details, and specifications.
6. Carry out all construction in accordance with the most current provincial and municipal standards and specifications.
7. Contractor to coordinate all access and protect the public and users of the site with appropriate control fence and supervision throughout the construction period, to the satisfaction of the Consultant.
8. Contract Administrator is to approve access point(s) prior to mobilization.
9. A Contractor flagman is required to direct all deliveries of machinery or materials to the site.
10. Contractor to coordinate and schedule all work with other trades and contractors. Contractor is to notify Contract Administrator of any schedule difficulties.
11. Contractor responsible for the removal and off-site disposal of all materials as required to facilitate new construction. Store all items and materials identified by the Consultant for salvage at a location on site as identified by the Consultant. Excavate and remove from site any contaminated material. Dispose all contaminated material at a licensed landfill facility.
12. Maintain site in a clean and orderly state for the duration of construction; perform all work in accordance with the Occupational Health and Safety Act. Remove all excess materials, packaging, and debris from the site.
13. Contractor is responsible to take all necessary measures to control dust on the project site and to the satisfaction of the Contract Administrator.
14. Contractor is responsible for all layout for construction purposes.
15. Contractor is to protect all iron bars. Replace any disturbed bars by Owner at the Contractor expense.
16. The Contractor is to notify the Contract Administrator upon completion of the required works to schedule an inspection for acceptance.

GRADING

1. Contractor is to verify accuracy of existing topography and survey and report any discrepancies to the Contract Administrator. Commencement of grading is to constitute acceptance of site conditions; no claims for extras will be entertained thereafter.
2. Strip topsoil, organic matter, or deleterious material from all areas of the site designated for hard landscaping, or the construction of structures. Strip topsoil to its full depth, exercising caution not to mix topsoil with subsoil.
3. Provide drainage as indicated in grading plan. Round all tops and toes of slopes, smoothly. Compact all areas to 95% standard proctor density unless otherwise noted.
4. Contractor to excavate to accommodate hard surface and ensure proper depth of excavation as specified on related drawings, contract details and specifications.
5. Match existing grades at limit of work.
6. Ensure positive surface drainage of all areas within the limit of work, whether indicated or not, and prevent ponding.
7. Refer to geotechnical recommendations (if available) prepared by Geotechnical Engineer for subsurface conditions and construction recommendations. Claims for conditions that could have been ascertained by review of geotechnical report will not be considered.
8. The Geotechnical Engineer is to inspect compacted subgrade prior to placement of granular material.
9. Sub-excavate and replace any soft areas evident from compaction with suitable material that is frost compatible with the existing soils as recommended by the Geotechnical Engineer.
10. Remove from site all excess excavated material unless instructed otherwise by Consultant.
11. Slopes, unless otherwise noted:
    a. Walkways - maximum 12:1 slope (do not exceed 2% cross slopes).
    b. Asphalt and concrete surfaces - minimum 1.0% slope; maximum 5% slope.
    c. Sod/ Seed Areas and Plant Beds - minimum 2% slope; maximum 33% slope.
    d. Swales - Flat-bottomed per Contract drawings and specification, with maximum side slopes of 3:1 and a minimum slope of 8:1.
12. New surfaces are to have smooth, safe, and seamless transition of materials, where construction of proposed surfaces adjoins existing materials. This is applicable for all surfaces soft and hard.

PRODUCT INFORMATION

Install products as per manufacturer specifications. Shop drawings required.

PAVERS
Edge of pavers to receive edge restraint.
- Melville 80 Paver by Permacon
  Location: Patio Area
  Size: ALL
  Pattern: Modular
  Colour: Range Scandina Grey

GATE
- FoldSmart XT Speedgate by Wallace Perimeter Security
  Panel Height: 1.8m (6')
  Width: 4.57m (15')
  Panel Infill: Vertical Picket Infill
  Optional: Barb Wire Anti-Climb Edge
  Finish: Hot Dipped Galvanized Steel

SITE FURNITURE
Fasten all site furnishing to surface with stainless steel anti-vandal anchors.
- Bike Rack by Maglin
  Product Number: MBR-0100-00003
  Mounting Type: Surface Mount
  Colour: Black
- 210 Cluster Seating by Maglin
  Product Number: MTB-0210-00064
  Material: Thermally Modified Ash Wood
  Colour: Black
  Mounting Type: Surface Mount
  Option: Umbrella Mount

Flag Pole by Ottawa Flag Shop
  Material: Aluminum
  Finish: Satin
  Top: Rotating cap or ball
  Flag Assembly: for 3' flags, 3' x6' flags included (not custom)
  Option: One piece, cone tapered, internal halyard chain, stainless steel cable and hardware, retaining ring and weight, door lock and key, tilt anchor and shoe base
  Instructions: Ottawa Flag Shop will mark and locate, install anchor cage in concrete base, assemble deliver and erect flag poles, NOTE TO CONTRACTOR - 2 to 3 MONTH LEAD TIME REQUIRED. PLAN ACCORDINGLY.

NOTE:
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1.	ISSUED FOR 60% SUBMISSION	AUG 16/24	RGJ

SCALE

DESIGN KEW
CHECKED RGJ
DRAWN KEW
CHECKED RGJ
APPROVED RGJ

FOR REVIEW ONLY

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Ottawa, Ontario, Canada K2M 1P6
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Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
5494-5510 BOUNDARY ROAD

DRAWING NAME
DETAILS

PROJECT No. 118168
REV REV # 1
DRAWING No. 118168-L

D07-00-00-0000

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