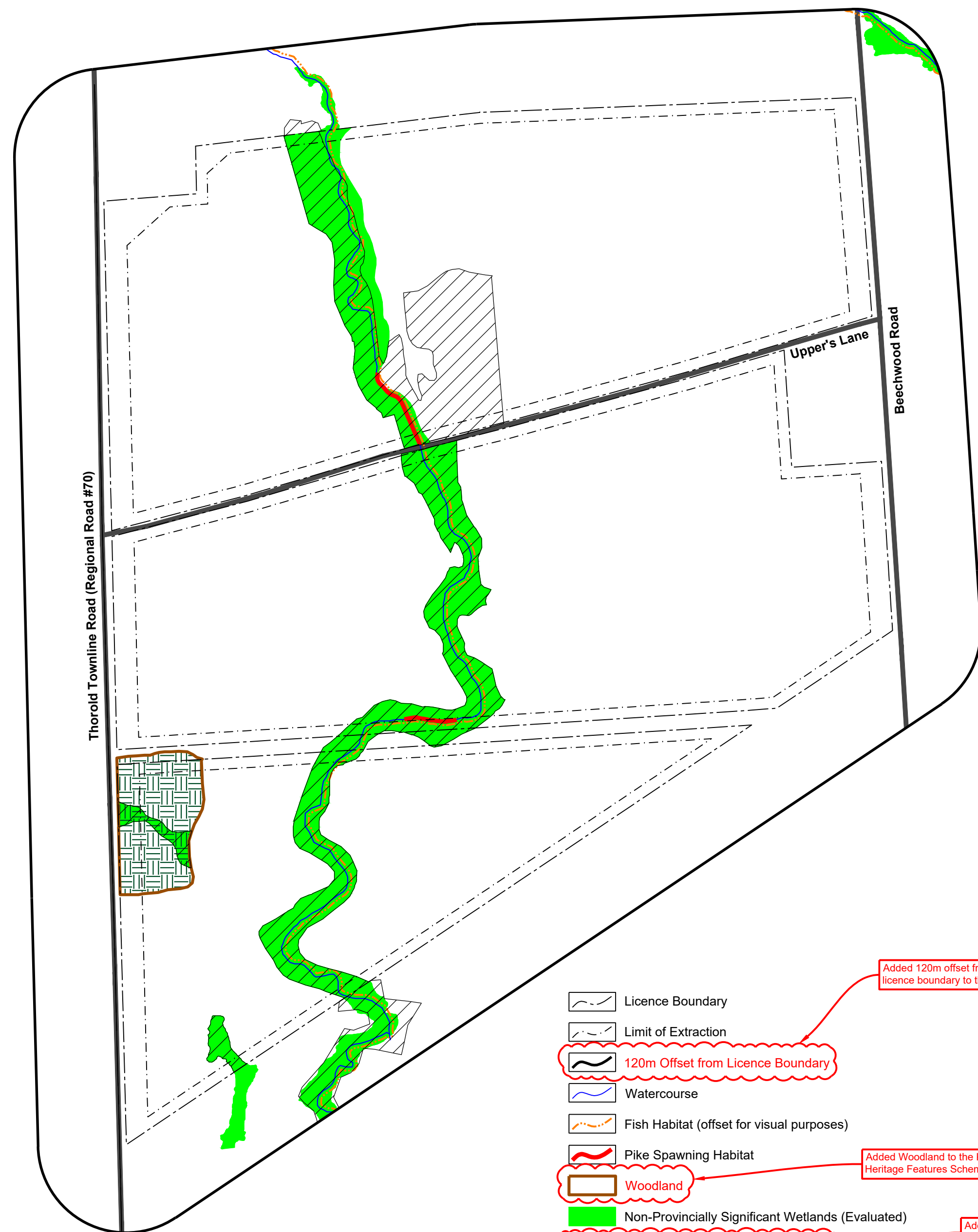
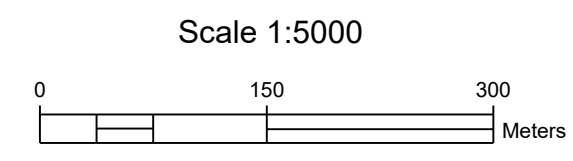


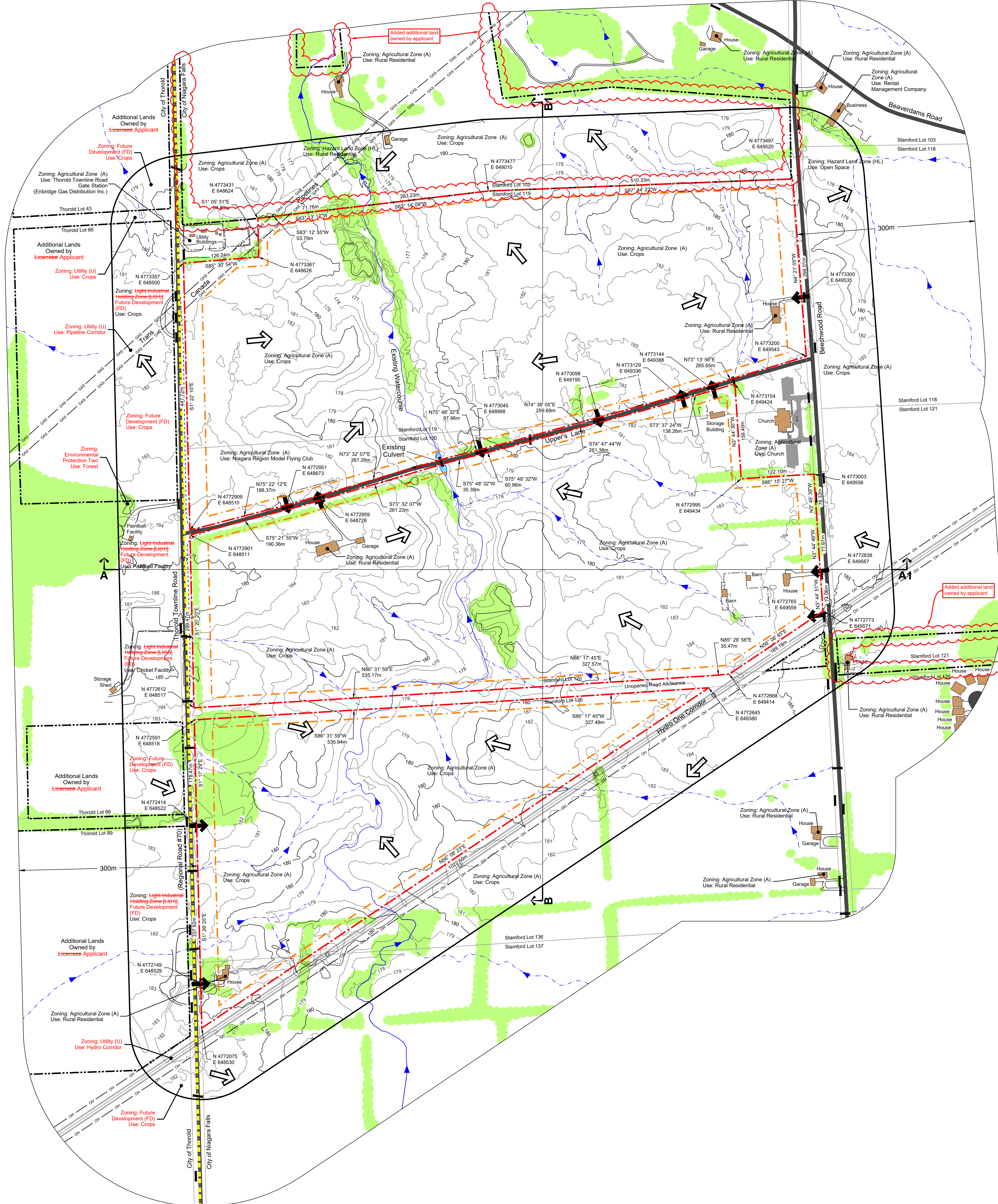
- A. General**
- This Site Plan is prepared under the Aggregate Resources Act for a Class A Licence for a quarry below the ground water table.
 - Areas to be licensed: 103.6 ha. (±256.0 ac.)
Areas to be extracted: 89.1 ha. (±220.2 ac.)
- B. References**
- Contour information was obtained from a topographic survey prepared by TEC Engineering (formerly Remshaw (Canada) Limited) using October 2016 and February 2017 aerial photography and is displayed in one metre intervals. Elevations shown are in metres above sea level (masl).
 - Topographic information was obtained from numerous sources including Ontario Geomatics (and Information Ontario), Google Earth Pro aerial photography captured on July 18, 2018 and field investigations for technical reports.
 - All topographic features and structures are shown to scale in Universal Transverse Mercator (UTM) with North American Datum 1983 (NAD83), Zone 17 (metre), Central Meridian 81 degrees west coordinate system.
 - Property boundaries were obtained from a Plan of Survey prepared by Matthew, Cameron, Heywood-Kerry T. Howe Surveying Ltd. dated April 5, 2012. Other property boundaries were established using Municipal Property Assessment Corporation (MPAC) parcel fabric data.
 - Zoning categories on or within 120 metres of the licence boundary are from the City of Niagara Falls Zoning By-Law No. 79-200 (Schedules A3 and A4 - Consolidation April 2015) and the City of Thorold Zoning By-Law No. 60-2019 (Schedules A8 and A13 - dated May 2019).
 - Land use information on or within 120 metres of the licence boundary has been compiled from October 2016 orthophotography, site visits and water well survey data.
- C. Groundwater**
- The maximum predicted water table is 184.9 masl and the contact aquifer potentiometric contours range between 176.0 and 184.9 masl (as per WSP's "Proposed Upper's Quarry - Maximum Predicted Water Table Report", dated October 2021).
- D. Drainage**
- Existing surface water drainage on and within 120 metres of the licence boundaries are by overland flow in the direction shown by arrows on the plan view.
- E. Site Access and Fencing**
- There are two (2) existing site accesses on Thorold Townline Road, six (6) existing site accesses on Upper's Lane, and three (3) existing site accesses on Beechwood Road.
 - Post and wire fencing (unless otherwise noted) exists in the locations shown on the plan view.
- F. Significant Features**
- All significant natural features on and within 120 metres of the licence boundary are shown on the Key Natural Heritage Features Schematic on this drawing.
 - All significant human-made features on and within 120 metres of the licence boundary are shown on the plan view.

- G. Aggregate Related Site Features**
- There are no existing aggregate operations or features within the licence boundaries such as stationary or portable equipment, stockpiles, recyclable materials, scrap, fuel storage, haul roads, berms or excavation faces.
- H. Technical Reports - References**
- Upper's Quarry, Acoustic Assessment Report, RWDI, August 2, 2023 January 11, 2024.
 - Agricultural Impact Assessment for Upper's Quarry, Colville Consulting Inc., October September 2021.
 - Upper's Quarry, Air Quality Assessment, RWDI Air Inc., July 12 - 2023 December 2023.
 - Archaeological Assessments:
 - Stage 1 Archeological Resource Assessment of Walker Aggregates Proposed South Niagara Quarry, Part of Lots 102, 119, 120, 136 & 137, Archeological Services Inc., December 2008.
 - Stage 1-2 Archeological Assessment of Part 9784 Upper's Lane, Part of Lots 119 & 120, Archeological Assessments Ltd., November 3, 2005.
 - Stage 2-3 Archeological Assessment, Part of Lots 102, 119, 120, 136 & 137, Archeological Assessments Ltd., November 21, 2012.
 - Stage 1-2 Archeological Assessments, Upper's Quarry Additional Lands, Part of Lots 1198, 120, Archeological Research Associates Ltd., April 20, 2020.
 - Stage 3 Mitigation of Development Impacts, Final Excavation Report, Walker XI (AgGT-411), Upper's Quarry, Archeological Research Associates Ltd., May 28, 2021.
 - Stage 4 Mitigation of Development Impacts, Final Excavation Report, Walker XI (AgGT-176), Upper's Quarry, Archeological Research Associates Ltd., July 22, 2021.
 - Blast Impact Analysis, Upper's Quarry, Exploitech, August 2023 April 2024.
 - Cultural Heritage Impact Assessment Report, Proposed Upper's Quarry, MHBC, October 2021.
 - Economic Benefits Analysis, Prism, February 2023 April 2024.
 - Level 2 Water Study Report and Response to JART Hydrogeological Comments, WSP, October 3-2022 April 26, 2024.
 - Maximum Predicted Water Table Report, WSP, October 2021.
 - Upper's Quarry, Niagara Level 1 and Level 2 Natural Environment Technical Report and Environmental Impact Study, Stanlec, April 2024 June 2024.
 - Planning Justification Report and Summary Statement, MHBC, August 2023 April 2024.
 - Traffic Impact Study and TIS Addendum, Upper's Quarry, TYLin, March 23, 2023.
 - Visual Impact Assessment, Proposed Upper's Quarry, MHBC, October 2021 April 2024.

Key Natural Heritage Features Schematic



- Licence Boundary
 - Limit of Extraction
 - 120m Offset from Licence Boundary
 - Watercourse
 - Fish Habitat (offset for visual purposes)
 - Pike Spawning Habitat
 - Woodland
 - Non-Provincially Significant Wetlands (Evaluated)
 - Significant Wildlife Habitat - Mammals
 - MNRFP - Mapped Deer-Wintering Congregation Area Significant Wildlife Habitat - Non-SAR but Habitat Seasonal Concentration Area
- Added 120m offset from the licence boundary to the legend
- Added Woodland to the Key Natural Heritage Features Schematic
- Added Significant Wildlife Habitat - Mammals to the Key Natural Heritage Features Schematic



- Legal Description**
- Part of Lots 119, 120, 136 & 137
City of Niagara Falls (Geographic Township of Stamford)
Regional Municipality of Niagara
- Licence Boundary
 - Limit of Extraction
 - Additional Lands Owned by License Applicant
 - Municipal Boundary
 - Contours with Elevation (Metres above sea level (MASL))
 - Public Road
 - Fence (1.2m post & wire fence unless otherwise noted)
 - Watercourse (Direction of flow indicated by arrows)
 - Surface Drainage Feature (Direction of flow indicated by arrows)
 - Water Feature
 - Wooded Area
 - 120m Offset From Licence Boundary
 - Parcel Fabric
 - Trans Canada Pipeline Easement
 - Hydro One Easement
 - Existing Site Access
 - Direction of Surface Drainage
 - Existing Culvert
 - Building/Structure
 - Cross Sections

Site Plan Acronyms

- ARA - Aggregate Resources Act
- MNRF - Ministry of Natural Resources and Forestry
- MHSTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
- MECP - Ministry of the Environment, Conservation and Parks
- MGCS - Ministry of Government and Consumer Services
- DFO - Department of Fisheries and Oceans Canada
- ECA - Environmental Compliance Approval
- BMP - Best Management Practices Plan
- PTTW - Permit to Take Water
- MASL - Metres above sea level
- TCPL - Trans Canada Pipeline
- ROW - Right of way
- HMA - Hot mix asphalt
- PWQO - Provincial Water Quality Objectives
- MISA - Municipal Industrial Strategy for Abatement
- TSS - Total Suspended Solids
- NCD - North Channel Design

Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By
1	January 2022	Added Key Natural Heritage Features Schematic and Section 'F' to the site plan notes	C.P.
2	August 2023	Updated site plan to incorporate JART and MNRF comments	C.P.
3	April 4, 2024	Updated site plan to incorporate JART and MNRF comments	C.P.
4	June 2024	Updated site plan to incorporate JART and MNRF comments	C.P.

MHBC
PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE
113 COLLIER STREET, BARRE, ON, LAM 1H2 | P: 705.728.0445 F: 705.728.2010 | WWW.MHBCPLAN.COM

MHBC Stamp
Debra Walker
Is authorized by the Ministry of Northern Development, Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of the Environmental Protection Act, R.S.O. 1990, c. 19, to prepare and certify site plans.

MHBC Stamp
Christopher Poole
Is authorized by the Ministry of Northern Development, Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of the Environmental Protection Act, R.S.O. 1990, c. 19, to prepare and certify site plans.

Applicant
walker aggregates
Walker Aggregates Inc.
2800 Thorold Townline Road
P.O. Box 100
Thorold, Ontario
L2V 3Y8

Project
Upper's Quarry

MNRF Licence Reference No. **626562**

Applicant's Signature

Plan Scale: 1:3000 (Arch E)

Date: **April 4, 2024 June 2024**

Drawn By: C.P. File No. **9811V**

Checked By: D.W.

File Name: **Existing Features**

Drawing No. **1 of 6**

File Path: N:\9811V - Walker Upper Quarry Drawings\Site Plan\CAD\9811V - Site Plan.dwg

A. General

- 1. Area to be licensed
2. Prior to the commencement of extraction operations, the licence holder shall enter into an agreement with the appropriate road authority to ensure that the following is completed and/or secured to the satisfaction of the appropriate road authority:
2.1. City of Niagara Falls
2.1.1. Road widening with a width of 2.34 metres along the entire length of frontage of the subject lands along Beechwood Road to be dedicated to the City of Niagara Falls.
2.1.2. Road widenings are to be dedicated prior to the commencement of quarry operations.
2.1.3. Notwithstanding the above, only the road widening along Beechwood Road is required to be dedicated to the City of Niagara Falls should the Upper Lane Right of Way be acquired by the licensee.
2.2. Niagara Region and City of Niagara Falls:
2.2.1. The required entrance improvements, road improvements, and dedication of road widenings (to Thorold Townline Road, Beechwood Road and Upper Lane) shall be completed to the satisfaction of the applicable road authorities the Regional Municipality of Niagara and the City of Niagara Falls and in part in general accordance with the figures titled "Upper Lane Conceptual Intersection Design" and "Upper Lane Vehicle Movement Diagram" provided on Drawing 4 of 6.

- 3. The maximum amount of aggregate to be removed from this site in any calendar year is 1,800,000 tonnes.
4. In the event that Walker obtains permission from the City of Niagara Falls to extract the road allowances, the licensee may apply to the MNR/FC to amend the licence and site plan to expand the licence boundary to include the road allowances directly adjacent to the licence boundary in the Upper Lane area and the road allowance between Lots 130 and 136. An expansion to the licence boundary for this purpose will not require a new licence under Section 7 of the Aggregate Resources Act (ARA).
4. All technical reports have taken into consideration the potential removal of the road allowance(s).
5. Table 1 on this drawing identifies the number of sensitive receptors within 500 metres of the licence boundary and the distance from the licence boundary to each receptor.

B. Hours of Operation

Table with 4 columns: Activity, Monday to Friday, Saturday, Sunday. Rows include Drilling, extraction (at working face), Blasting, Aggregate processing at mobile crusher plant, Asphalt plant operations, Internal hauling of aggregate and/or recycled material, From working face (shot rock) to mobile crusher plant, From mobile crusher plant/stockpiles to asphalt plant, Aggregate and recycling shipping to and/or from the quarry, Maintenance, Conveyer to the mobile crusher plants.

No operations shall occur on Statutory Holidays except as noted below. A response to emergencies is not limited by the hours of operation shown on this plan. Despite any restrictions to the hours of operation on this site plan, the licensee may operate at any time to respond to an emergency as per Ontario Regulation 244/97, subject to amendments from time to time.

C. Proposed Entrances/Exits and Fencing

- 1. For the Mid Extraction Area:
a. All traffic for operations will enter and exit the Mid Extraction Area from Upper's Lane using a main entrance/exit in the location generally shown on the plan view.
2. For the South Extraction Area:
a. Material will be transported to the Mid Extraction Area for processing via a conveyor over the unopened road allowance between Lots 120 and 136. Limited traffic required for operations will enter and exit the South Extraction Area via a crossing over the unopened road allowance between Lots 120 and 136, subject to approval from the City, in the location generally shown on the plan view.
3. For the North Extraction Area:
a. All traffic for operations will enter and exit the North Extraction Area from Upper's Lane using a main entrance/exit in the locations generally shown on the plan view.

D. Drainage and Siltation Control

- 1. Silt fencing/control control measures will be installed within the Watercourse Realignment Transition Area prior to extraction in each extraction area and along the easterly and northerly limits of Phase 1B after the watercourse realignment is completed.

E. Site Preparation

- 1. All existing structures within the licence boundary shall be demolished or removed (and any associated residential entrances closed) prior to extraction in the extraction area. Prior to extracting or demolishing a building, all necessary Permits shall be obtained by the City in accordance with the Ontario Building Code Act, to the satisfaction of the Building Services Division and the Fire Prevention Division.
2. Timber resources (if any) will be salvaged for use as saw logs, fence posts and fuel wood where appropriate. Stumps and brush cleared will be burned (with applicable permits), used for shoreline habitat enhancement or mulched for use in progressive rehabilitation.
3. Areas of the site will be stripped of topsoil/overburden in stages in accordance with the phases. Topsoil and overburden will be stripped and stored in berms and/or stockpiles wherever feasible.
4. Topsoil and overburden shall be placed in perimeter acoustic/visual berms, pond construction, watercourse realignment or used immediately for progressive rehabilitation in this licence or existing Licence Numbers 11175 and 4437 (see Section N Variations from Control and Operation Standards on this drawing).
5. Excess topsoil and overburden not required for immediate use in berms or rehabilitation may be temporarily stockpiled on the quarry floor. Topsoil and overburden stockpiles shall be located within the limit of extraction and remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.
6. Temporary topsoil and overburden stockpiles which remain for more than one year shall have their slopes vegetated to control erosion. Seeding shall not be required if these stockpiles have vegetated naturally in the first year.

F. Setbacks, Berms and Screening

- 1. Setbacks are as shown on the plan view. Excavation will occur within the extraction setback area along the west and northwest area of the licensed boundary to accommodate grading required for the realignment of the existing watercourse. Furthermore, areas within the setbacks will be accessed as necessary to perform general site servicing, maintenance (berming, fencing etc.) and progressive rehabilitation. See Section N Variations from Control and Operation Standards on drawing 2 of 6.
2. Locations and heights for all acoustic/visual berms are provided on the plan view. All proposed berms shall be constructed in accordance with the "Typical Acoustic Berm Detail" (on this drawing), "Typical Visual Berm Detail" (on drawing 4 of 6) and, more specifically, berms adjacent to Beechwood Road will be constructed in accordance with "Typical Berm - Adjacent to Beechwood Road Detail" (on this drawing). Where the proposed berm transects the existing watercourse along the north perimeter, a culvert shall be installed in accordance with DFO requirements. Culverts will also be installed under berms, where necessary, to maintain existing drainage to and from off-site and to the existing watercourse. All proposed berms will be vegetated with non-invasive plant species and maintained to control erosion. Temporary erosion control will be implemented as required.
3. Perimeter acoustic berms may be removed for final rehabilitation in the final Phase when they are no longer required for noise attenuation.
4. Any natural treed buffer areas in the setbacks will be maintained where feasible subject to berm requirements.

G. Site Dewatering

- 1. Surface water will be discharged from the sump areas to the existing watercourse until the watercourse is realigned to the location of Phases 1B and 2B. Once the watercourse realignment has been completed, surface water will be discharged from the sumps to the realigned watercourse in Phase 1B.
2. Sump: During quarry development, a portable submersible pumps will be installed in each Initial Sinking Cut Area for the purpose of dewatering to maintain a dry working area and/or aggregate washing. Water will be pumped from the sumps to a pond where it is either used for aggregate washing or discharged to the existing watercourse. The sumps shall be relocated (as required) within each extraction area during the operational life of the quarry.

H. Extraction Details

- 1. The extraction sequence is outlined on drawing 3 of 6.
2. The proposed maximum depth of extraction is indicated by the spot elevations shown on the plan view. Extraction shall proceed to a maximum depth of approximately 42 m below ground surface (ranging in elevation from 141 msl in the southwest to 149 msl in the northeast portions of the site), corresponding to the geologic base of the Giesepf Subzone of the Lockport Group.
3. For the "Watercourse Realignment Transition Area", the maximum depth of extraction is approximately 1 metre (down to an elevation of 174 msl) and any extraction in the "Watercourse Realignment Transition Area" shall be completed as part of site preparation (construction of compensatory ponds). No drilling or blasting shall be permitted in the "Watercourse Realignment Transition Area".
4. Internal haul road locations shall vary as extraction progresses and will be located on the quarry floor with the exception of at grade crossings.
5. Blasted aggregate will be transported back to the mobile crusher plant and processing area on the quarry floor for processing and shipping.
6. An offscale house and weigh scale will be established on site. A maintenance shop and shed(s) may be constructed on site. Portable office/storage trailers and structures associated with fuel storage may be brought onto the site for temporary periods for uses associated with quarry activity. All structures shall remain 30 metres from the licence boundary / Trans Canada Pipeline easement or 90 metres from the licence boundary if the boundary abuts land that is used for residential purposes or is restricted to residential use by the Zoning By-law at the time the licence is issued.
7. Aggregate stockpiles (including recycled material) shall be located within the limits of extraction and remain a minimum of 30 metres from the licence boundaries (except where the licence boundaries abut Upper's Lane and the unopened road allowance - See Section N Variations from Control and Operation Standards on this drawing) and 90 metres from a property with a residential use.

I. Equipment and Processing

- 1. A portable processing plant (including primary, secondary and tertiary crushing and screening units) will be permitted within the North and Mid Extraction Areas inclusive.
2. Processing shall be located within the limit of extraction and remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.

- 3. During the sinking cuts and early phases of operation, the primary crusher will be integrated into a single processing plant located near the working face. In later phases, the primary crusher will split from the single integrated plant and start to follow the working face. The processing plant, which contains the secondary and tertiary crushers, shall be placed in the location identified on the Extraction Sequence Schematic on drawing 3 of 6 during each stage of extraction. The processing plant will be located at varying elevations, beginning at the top of rock during the sinking cut portion of operations, and moving to the final batch and then the final quarry face as space becomes available. See note A.3. on drawing 4 of 6 for additional information.
4. Once processing has progressed to Phase 2A, a hot mix asphalt (HMA) batch plant facility shall be established on the quarry floor (in the location shown on the plan view) in Phase 1A. The HMA batch plant shall remain in the location shown on the plan view for the life of the quarry until extraction is complete and shall be removed during progressive rehabilitation.
5. In Phase 4, the portable processing plant shall require additional shielding in accordance with note A.5 on drawing 4 of 6.
6. A wash plant and temporary wash ponds may be established and located to move together with the portable processing plant, subject to permit approval from MECP.
7. Equipment to be used onsite may include, but shall not be limited to:
a. Working Face - 1 silenced rock drill, 1 loader;
b. Processing - 1 portable processing plant including crushers, screeners, and stackers; 2 loaders (at stockpiles);
c. Asphalt - 1 asphalt plant, 2 loaders, 1 compressor vent, 1 dust controller blower (motor and stack), elevator motor, conveyor motor, over motor, pug mill (door and motor);
d. Conveyer(s);
e. Generator(s) (diesel-fueled); and
f. Rock trucks, haul trucks, shipment trucks and fuel trucks.
8. Wash ponds (and sump(s)) may be permitted in accordance with Environmental Compliance Approval or Permit to Discharge Water Contaminants. The pond(s) and sump(s) will move throughout operations and as extraction progresses horizontally and vertically.
9. Equipment used for construction of the perimeter berms/barriers, overburden stripping, rehabilitation, the new watercourse corridor, as well as other quarry related construction projects will be utilized on site.

J. Frequency / Timing of Blasts

- 1. Prior to blasting being permitted within the 300 metre setback of the Trans-Canada Pipeline, identified as "Trans-Canada Blasting Buffer Area" on this Plan, the licensee shall address the requirements of notes D.5 on drawing 4 of 6.
2. All blast monitoring reports shall be retained by the licensee for a period of seven years after each blast and made available upon request for audit purposes. See Section N on drawing 4 of 6 for detailed blasting requirements.

K. Fuel Storage

- 1. Fuel storage tanks will be located in close proximity to the main processing plant (or in an alternative location subject to approval by the MNR/FC). Fuel storage tanks shall be installed and maintained in accordance with Technical Standards and Safety Act, 2000, Liquid Fuels Handling Code, 2000 and Liquid Fuels Regulation Reg. 21/01.
2. All fuel tanks shall be double sided or placed in containment facilities large enough to hold the tanks maximum volume.
3. Fuel trucks shall be used to transfer fuel to on-site equipment in accordance with the Liquid Fuels Handling Code, 2000.
4. A Spills Contingency Plan shall be prepared and implemented prior to site preparation. The Spills Contingency Plan shall be available on site, submitted to the City of Niagara Falls Fire Services Department, and all employees and contractors shall be informed and required to comply with this plan. The location of on site fire routes, as well as any other emergency operation plans for the quarry, will be included in this plan.

L. Spills Plan

- 1. In case of an accidental spill of petroleum products, the following contingency plan will be activated:
a. The Ministry of Environment, Conservation and Parks (MECP) (see address and phone number below) and surrounding landowners will be notified.
b. For a leakage or spill, immediate action will be taken to stop it. At the same time, measures will be taken to prevent recurrence. These measures may include building a berm or construction of a dike, for instance.
c. The quarry operator shall commence recovery procedures by collecting the spilled substance into containers.
d. The soil in the area affected by the spill or leak shall be removed and disposed of at a location prescribed by the MECP.

Ministry of Environment, Conservation and Parks
Niagara District Office
Garden City Tower 9th Floor Suite 15
301 St. Paul Street
St. Catharines, Ontario
L2R 1P4
Spills Action Centre: 1-800-268-6000

M. Scrap and Recycling

- 1. Scrap may be stored on-site and shall be removed on an on-going basis.
2. Scrap shall only include material generated directly as a result of the aggregate operation such as refuse, debris, scrap metal, lumber, discarded machinery, equipment and motor vehicles.
3. All fluids shall be drained from any discarded equipment, machinery or motor vehicle prior to storage and disposed of in accordance with the Environmental Protection Act.
4. Scrap shall not be stored within 30 metres of any body of water or the licence boundary and shall be kept in close proximity to the main processing plant.
5. The importation of concrete and asphalt for recycling and recycling of asphalt, concrete, porcelain and glass shall be permitted on-site as an ancillary use to aggregate operation.
6. Recyclable asphalt materials shall not be stockpiled within:
6.1. 30 metres of any waterbody or man-made pond; or
6.2. 2 metres of the ground established water table.
7. The storage and processing area for recyclable concrete and asphalt materials shall be kept within, or in close proximity to, the main processing plant and shall be stored separately on the quarry floor and within the extraction area limit: Asphalt Plant Area identified on the plan view of this drawing. Recyclable material shall be stored separately on the quarry floor.
8. Rebar or other structural metal shall be separated from recyclable aggregate material during processing and placed in a designated scrap pile on-site which shall be removed on an on-going basis.
9. Recycled aggregate shall be removed on an on-going basis.
10. Recycling activities shall not interfere with the operational phases of the site or with rehabilitation.
11. Once the site is depleted, no further importation of recyclable material shall be permitted.
12. Once final rehabilitation has been completed and approved in accordance with the site plan, all recycling operations shall cease.
13. The site shall be kept in an orderly condition.

N. Variations from Control and Operation Standards

Table with 4 columns: No., Variation, Rationale, Standard (if 19). Row 1: Extraction shall occur within 30 metres but no closer than 15 metres from the Upper's Lane road allowance and the unopened road allowance between Lots 120 and 136. Row 2: In addition, extraction may occur: Within the 15 metre setback from the Upper's Lane road allowance and the unopened road allowance between Lots 120 and 136. Row 3: Perimeter acoustic berms may be removed for final rehabilitation in the final Phase when they are no longer required for noise attenuation. Row 4: Any natural treed buffer areas in the setbacks will be maintained where feasible subject to berm requirements. Row 5: A portion of the quarry face shall remain vertical. See Rehabilitation Plan, drawing 5 of 6.

O. Trans Canada Pipeline (TCP/L)

- 1. The licensee shall notify TCP/L if it intends to blast within 300 metres of their right-of-way (easement). No blasting shall occur until written consent is obtained from TCP/L.
2. Any other work (other than blasting) within 30 metres of TCP/L's right-of-way requires written consent from TCP/L.
3. Crossing of the TCP/L right-of-way with vehicles is not permitted without written consent from TCP/L.
4. No material extraction shall be permitted within 40 30 metres of TCP/L's right-of-way without written consent from the Canada Energy Regulator (CER) formerly NEB or National Energy Board.
5. No buildings or structures shall be constructed anywhere on the TCP/L's right-of-way. Permanent buildings and structures shall be located a minimum of 7 metres from the edge of the TCP/L easement. Temporary or accessory buildings shall be located a minimum of 3 metres from the edge of the right-of-way.
6. A minimum setback of 7 metres from the nearest portion of a TCP/L pipeline right-of-way shall also apply to any parking area or loading area, including any parking spaces, loading spaces, stacking spaces, bicycle parking spaces, and any associated drive aisle or driveway.

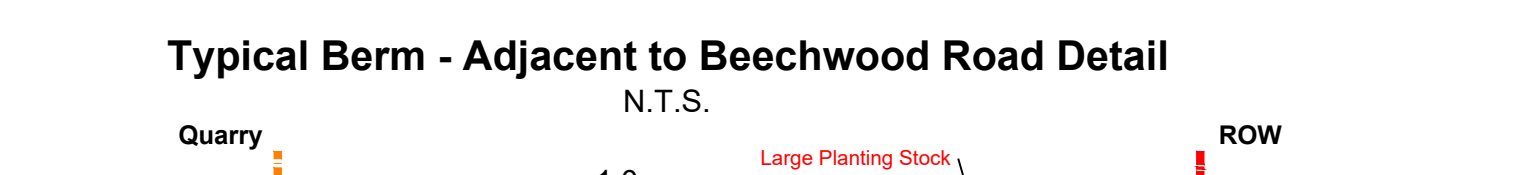
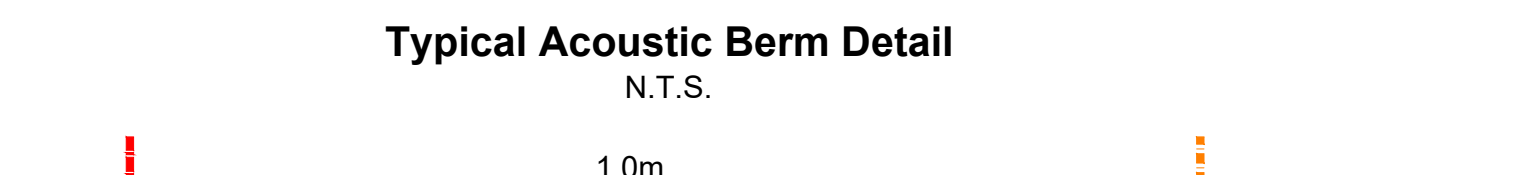
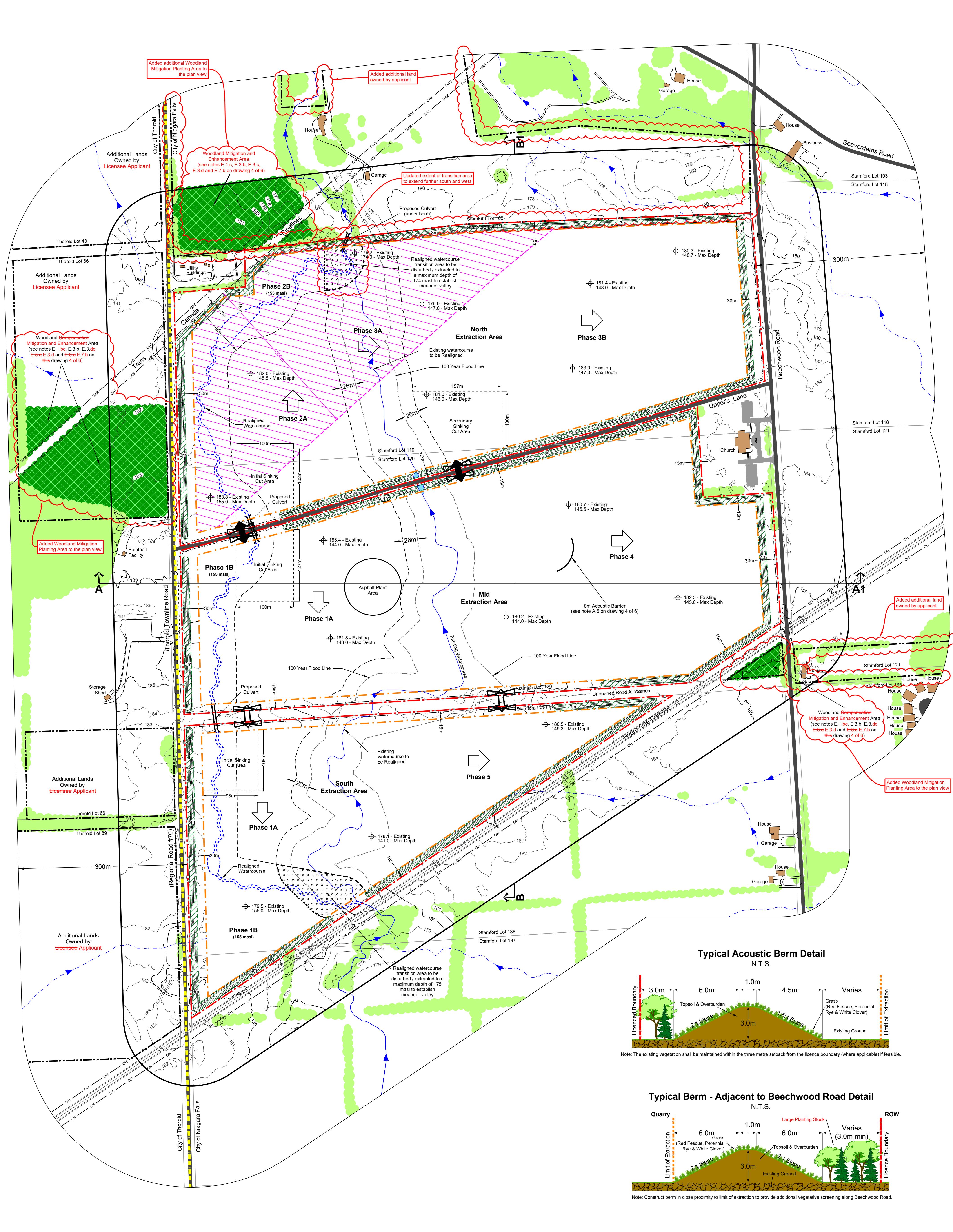


Table 1: Sensitive Receptors Within 500m of the Licence Boundary. Columns include Receptor, Address, Distance, Receptor, Address, Distance, Receptor, Address, Distance, Receptor, Address, Distance. Lists various residential addresses and distances from the quarry.

Legal Description

Part of Lots 119, 120, 136 & 137
City of Niagara Falls (Geographic Township of Stamford)
Regional Municipality of Niagara

Legend section containing symbols and descriptions for Licence Boundary, Limit of Extraction, Additional Lands Owned by Licensee Applicant, Municipal Boundary, Contours with Elevation, Public Road, Fence, Watercourse, Surface Drainage Feature, Watercourse - Realigned, 100 Year Floodline, Water Feature, Wooded Area, Woodland Mitigation and Enhancement Area, Watercourse Realignment Transition Area, 120m Offset From Licence Boundary, Trans Canada Blasting Buffer Area, Parcel Fabric, Trans Canada Pipeline Easement, Hydro One Easement, Entrance / Exit, Limited Service Access, Gate, Culvert, General Direction of Excavation & Boundary, Berm, Building/Structure, Spot Elevation, Cross Sections.

Site Plan Acronyms

- 1. ARA - Aggregate Resources Act
2. MNR/FC - Ministry of Natural Resources and Forestry
3. MHSTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
4. MECP - Ministry of the Environment, Conservation and Parks
5. MGCS - Ministry of Government and Consumer Services
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13. HMA - Hot mix asphalt
14. PWQO - Provincial Water Quality Objectives
15. MISA - Municipal Industrial Strategy for Abatement
16. TSS - Total Suspended Solids
17. NCD - North Channel Design

Site Plan Amendments

Table with 4 columns: No., Date, Description, By. Shows a list of amendments with dates and descriptions.

Site Plan Revisions (Pre-Licensing)

Table with 4 columns: No., Date, Description, By. Shows a list of pre-licensing revisions with dates and descriptions.

MHBC logo and contact information: 113 COLLIER STREET, BARRE, ON, LAM 1H2 | P: 705.728.0405 F: 705.728.2010 | WWW.MHBCAL.COM

MHBC Stamp section with signatures of Debra Walker and Christopher Poole, including their roles and dates.

Walker Aggregates logo and contact information: Walker Aggregates Inc., 2800 Thorold Townline Road, P.O. Box 100, Thorold, Ontario L2V 3Y8

Project name: Upper's Quarry

MNR/FC Licence Reference No. 626562 and Applicant's Signature section.

Plan Scale: 1:3000 (Arch E) and Date: April 4, 2024 June 2024. Includes Drawn By (C.P.), File No., and Checked By (D.W.).

File Name: Operational Plan

Drawing No. 2 of 6

File Path: N:\0408111V - Walker Upper Quarry Drawings\Site Plan\CAD\8111V - Site Plan.dwg

A. General

- 1. Phases do not represent any specific or equal time period.
- 2. The direction of extraction will be in accordance with the General Direction of Excavation (shown on the plan view) unless otherwise authorized by MNR. Notwithstanding the operational and rehabilitation notes, demand for certain products, blending of materials or Water Study Contingency measures may require minor deviations in the extraction and rehabilitation sequence. Any major deviations from the operations sequence shall require approval from the MNR. The maximum combined disturbed area which includes the processing plant, berms, stockpiles, fill pond, active extraction area and area being stripped for the next area of extraction within the licence boundary identified on this Drawing but excludes the area of Phase 1A in the Mid Extraction Area needed for the continued operation of the asphalt plant for the life of the quarry. Concurrent extraction of phases is permitted for blending purposes provided that the overall maximum combined disturbed area identified in each Stage of the Extraction Sequence Schematic on this drawing is not exceeded. 40 hectares to ensure progressive rehabilitation of the site is being undertaken as required by the Site Plan.
- 3. Progressive and final rehabilitation will be completed in direct correlation to the development of the quarry as the extraction limits are reached and enough area is available to ensure that rehabilitation activities will not interfere with the production, stockpiling and processing of aggregate materials.

B. Initial Site Preparation

- 1. A Conservation Easement shall be placed on the lands identified as Woodland Mitigation Planting Areas (off-site) that are situated outside of the licence area and such Easement shall be registered on the lands prior to the commencement of Phase 1 (1A and 1B) to secure protection of the lands for restoration purposes in perpetuity.
- 2. Generally, site preparation in Phases 1 and 2 is not limited to:
 - a. Constructing the main entrance and cross over(s) in accordance with entrance permit approvals
 - b. Establishing fencing around licensed boundary (see Section N Variations from Control and Operation Standards on drawing 2 of 6)
 - c. Removal of trees and existing buildings (in accordance with all site plan requirements and applicable regulations)
 - d. Proceed with stripping of overburden/topsoil from Phase 1 and, if necessary, Phase 2
 - e. Construction of berms/acoustic barriers within the perimeter setback of the licence boundary (as shown on the plan view).
- 3. Initiate plantings in Woodland Mitigation Planting Area (off-site) in accordance with the Rehabilitation Plan. Off-site plantings will be completed in the Woodland Mitigation Planting Areas (off-site) prior to the removal of the wooded south of the proposed road allowance in Phases 1A and 1B.
- 4. Install water management and erosion and sediment control measures (silt fencing) in accordance with note D.1 on this drawing and note E.1.03 on drawing 4 of 6.
- 5. Commence portable crushing/screening plant set up. The plant shall operate in accordance with Section A on drawing 4 of 6 for all Phases.

C. Phase 1 (1A and 1B)

- 1. Commence extraction in the 'Initial Sinking Cut Area' identified in the Mid and South Extraction Area (see plan view for location).
 - 2. Phase 1A shall be extracted in up to three (3) lifts to a depth ranging between 140 masl and 145 masl.
 - 3. Phase 1B shall be extracted in one (1) to two (2) lifts to a depth of 155 masl.
 - 4. A portable pump shall be utilized as necessary in the Mid Extraction Area and the South Extraction Area to discharge water to a man-made pond for aggregate washing or to a sediment forebay before being discharged to the existing watercourse. During heavy rainfall events (25 mm or more), the pump will be deactivated as necessary to prevent flooding along the watercourse downstream of the site. The discharge pond and forebay locations will move with the quarry face until the final quarry depth is reached. At this point, a permanent sump will be established in each extraction area.
 - 5. During Phase 1, a new watercourse channel shall be constructed along the east side of Thorold Townline Road (within Phase 1B) for the eventual realignment of the existing watercourse. As resource extraction is completed in Phase 1B, this area will be filled with clay overburden material from on-site to an elevation ranging between 173 to 178 masl. The new watercourse and riparian wetland channel shall be constructed, designed and vegetated in accordance with DFO's authorization and this Rehabilitation Plan (drawing 5 of 6).
 - 6. As extraction reaches the final quarry floor, and there is sufficient separation from the quarry floor working areas in Phase 1A, a 2:1 slope along the easterly and northerly limit of Phase 1B shall be backfilled with either: (i) overburden stockpiled on-site; (ii) overburden in Phase 2; or (iii) material imported from Licence Numbers 11175 & 4437.
 - 7. Commence site preparation of Phase 2.
- D. Phase 2 (2A & 2B)**
- 1. Commence extraction in the 'Initial Sinking Cut Area' identified in the North Extraction Area (see plan view for location).
 - 2. Phase 2A shall be extracted in up to three (3) lifts to a depth ranging between 141 masl to 145 masl.

- 3. Phase 2B shall be extracted in one (1) to two (2) lifts to a depth of 155 masl.
- 4. A portable pump shall be utilized as necessary to discharge water to a man-made pond for aggregate washing or to a sediment forebay before being discharged to the existing watercourse. During heavy rainfall events (25 mm or more), the pump will be deactivated as necessary to prevent flooding along the watercourse downstream of the site. The discharge pond and forebay locations will move with the quarry face until the final quarry depth is reached. At this point, a permanent sump will be established.
- 5. Similar to Phase 1, the new watercourse channel shall be constructed within Phase 2 running along the east side of Thorold Townline Road (Phase 2B) for the eventual realignment of the existing watercourse. As resource extraction is completed in Phase 2B, this area will be filled with clay overburden material from on-site to an elevation ranging between 173 to 178 masl. The new watercourse and riparian wetland channel will be constructed, designed and vegetated in accordance with DFO authorization and Rehabilitation Plan (drawing 5 of 6).
- 6. As extraction reaches the final quarry floor, and there is sufficient separation from the quarry floor working areas in Phase 2A, a 2:1 slope along the easterly and northerly limit of Phase 2B shall be backfilled with either: (i) overburden stockpiled on-site; (ii) overburden in Phase 3B; or (iii) either material imported from Licence Numbers 11175 and/or 4437 (subject to drawing 5, note C.7) or with overburden in Phase 4.
- 7. Commence site preparation of Phase 3.

E. Phase 3 (3A & 3B)

- 1. Proceed with stripping of overburden/topsoil.
- 2. Prior to undertaking any works within Phase 3A that may result in any serious harm to fish, according to 35(1) of the Fisheries Act, the Licensee shall obtain a Fisheries Act Authorization from the Department of Fisheries and Oceans (DFO) and shall fulfil any other conditions required by the DFO as stated on its authorization. Once obtained, a copy of the Fisheries Act Authorization shall be provided to the MNR. Once the watercourse has been realigned to the satisfaction of DFO, stripping of overburden and topsoil can proceed in Phase 3A.
- 3. In the event that watercourse relocation has not been approved or completed, extraction in Phase 3B may proceed before extraction in Phase 3A.
- 4. In the event that Phase 3B is extracted before Phase 3A, a portable pump shall be utilized as necessary to discharge water to a man-made pond for aggregate washing or to a sediment forebay before being discharged to the existing watercourse. During heavy rainfall events (25 mm or more), the pump will be deactivated as necessary to prevent flooding along the watercourse downstream of the site. The discharge pond and forebay locations will move with the quarry face until the final quarry depth is reached. At this point, a permanent sump will be established.
- 5. Phase 3A and 3B shall be extracted in up to three (3) lifts to a depth ranging between 145 masl to 149 masl. Extraction will proceed in an easterly direction, moving gradually from north to south.
- 6. Once the existing watercourse has been realigned, stripping and extraction in Phase 3A may proceed.
- 7. Complete progressive rehabilitation of new watercourse and riparian wetland channel in accordance with Rehabilitation Plan (drawing 5 of 6).
- 8. Continue progressive rehabilitation of the quarry perimeter where limits of extraction have been reached and there is sufficient separation from the quarry floor working areas.
- 9. Commence site preparation of Phase 4.

F. Phase 4

- 1. Proceed with stripping of overburden/topsoil.
- 2. Commence Phase 4 extraction in an easterly direction, moving gradually from north to south.
- 3. Phase 4 shall be extracted in up to three (3) lifts to a depth ranging between 142 masl in and 147 masl.
- 4. Continue progressive rehabilitation of the quarry perimeter where limits of extraction have been reached and there is sufficient separation from the quarry floor working areas.

G. Phase 5

- 1. Proceed with stripping of overburden/topsoil.
- 2. Commence Phase 5 extraction in an easterly direction, moving gradually from north to south.
- 3. Phase 5 shall be extracted in up to three (3) lifts to a depth ranging between 140 masl and 143 masl.
- 4. Continue progressive rehabilitation of the quarry perimeter where limits of extraction have been reached and there is sufficient separation from the quarry floor working areas.

H. Final Phase

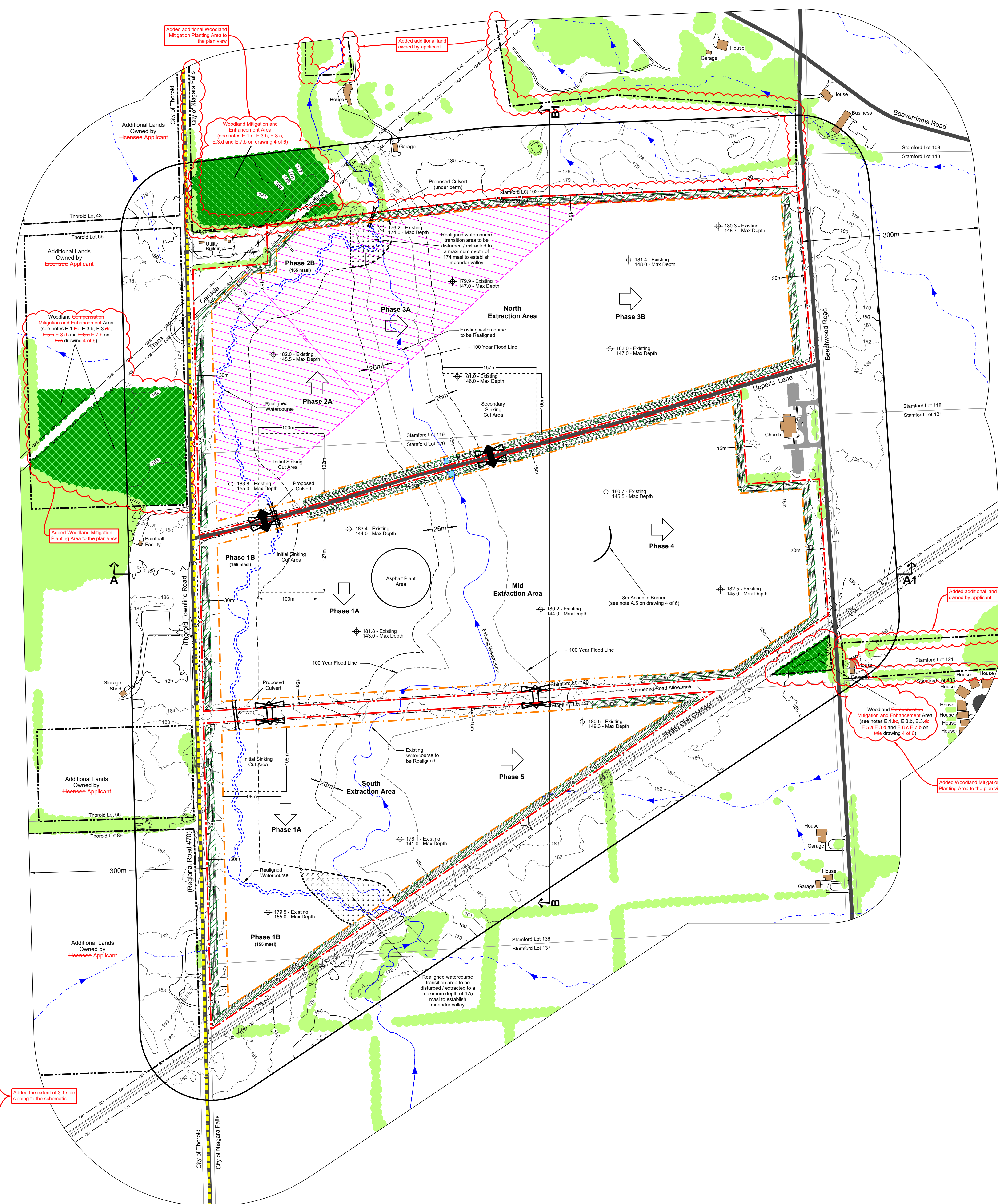
- 1. Complete extraction of any remaining resource in the extraction limit near the entrance in Phase 1A and 1B (e.g. ramp).
- 2. As part of the final operations of the site, remove office/scale house and scales, asphalt plant, recycled asphalt material and any other equipment and scrap from the site.
- 3. Continue and complete with final rehabilitation of the site. Complete quarry face backfilling on the remaining quarry faces as identified on drawing 5 of 6.

Extraction Sequence Schematic
Scale 1:7500



Off-site plantings to be initiated as part of Site Preparation and completed prior to Phase 1

Undisturbed Site Preparation Under Extraction Progressive and Final Rehabilitation



Legal Description

Part of Lots 119, 120, 136 & 137
City of Niagara Falls (Geographic Township of Stamford)
Regional Municipality of Niagara

Legend

- Licence Boundary
- Limit of Extraction
- Additional Lands Owned by Licensee Applicant
- Municipal Boundary
- Contours with Elevation (Metres above sea level (MASL))
- Public Road
- Fence (1.2m post & wire fence unless otherwise noted)
- Watercourse (Direction of flow indicated by arrows)
- Surface Drainage Feature (Direction of flow indicated by arrows)
- Watercourse - Re-aligned (Statute, 2020)
- 100 Year Floodline
- Water Feature
- Wooded Area
- Woodland Mitigation and Enhancement Area (see notes E.1, E.2, E.3, E.4, E.5, E.6 and E.7 on drawing 4 of 6)
- Watercourse Realignment Transition Area
- 120m Offset From Licence Boundary
- Trans Canada Blasting Buffer Area (See Note D.3 on drawing 4 of 6)
- Parcel Fabric
- Trans Canada Pipeline Easement
- Hydro One Easement
- Entrance / Exit
- Limited Service Access (For Phases 1A, 1B and 5 in South Extraction Area)
- Gate
- Culvert
- General Direction of Excavation & Boundary
- Berm (Top - House Allocation Berm, Bottom - Visual Berm)
- Building/Structure
- Spot Elevation (Metres above sea level (MASL)) (Top - Existing, Bottom - Maximum Depth of Extraction)
- Cross Sections (A1)

- Site Plan Acronyms**
- ARA - Aggregate Resources Act
 - MNR - Ministry of Natural Resources and Forestry
 - MHSTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
 - MECP - Ministry of the Environment, Conservation and Parks
 - MGCS - Ministry of Government and Consumer Services
 - DFO - Department of Fisheries and Oceans Canada
 - ECA - Environmental Compliance Approval
 - BMP - Best Management Practices Plan
 - PTTW - Permit to Take Water
 - MASL - Metres above sea level
 - TCPL - Trans Canada Pipeline
 - ROW - Right of way
 - HMA - Hot mix asphalt
 - PWQO - Provincial Water Quality Objectives
 - MISA - Municipal Industrial Strategy for Abatement
 - TSS - Total Suspended Solids
 - NCD - North Channel Design

Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By
1	January 2022	Revised note C.1 and hatched watercourse realignment area.	C.P.
2	August 2023	Updated site plan to incorporate JART and MNR comments	C.P.
3	April 4, 2024	Updated site plan to incorporate JART and MNR comments	C.P.
4	June 2024	Updated site plan to incorporate JART and MNR comments	C.P.

MHBC
PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
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MHBC Stamp

Debra Walker
Is authorized by the Ministry of Northern Development, Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of Ontario Regulation 244/97 to prepare and certify site plans.

Christopher Poole
Is authorized by the Ministry of Northern Development, Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of Ontario Regulation 244/97 to prepare and certify site plans.

Applicant

walker aggregates
Walker Aggregates Inc.
2800 Thorold Townline Road
P.O. Box 100
Thorold, Ontario
L2V 3Y8

Project

Upper's Quarry

MNR Licence Reference No. **626562**

Applicant's Signature

Plan Scale: 1:3000 (Arch E)

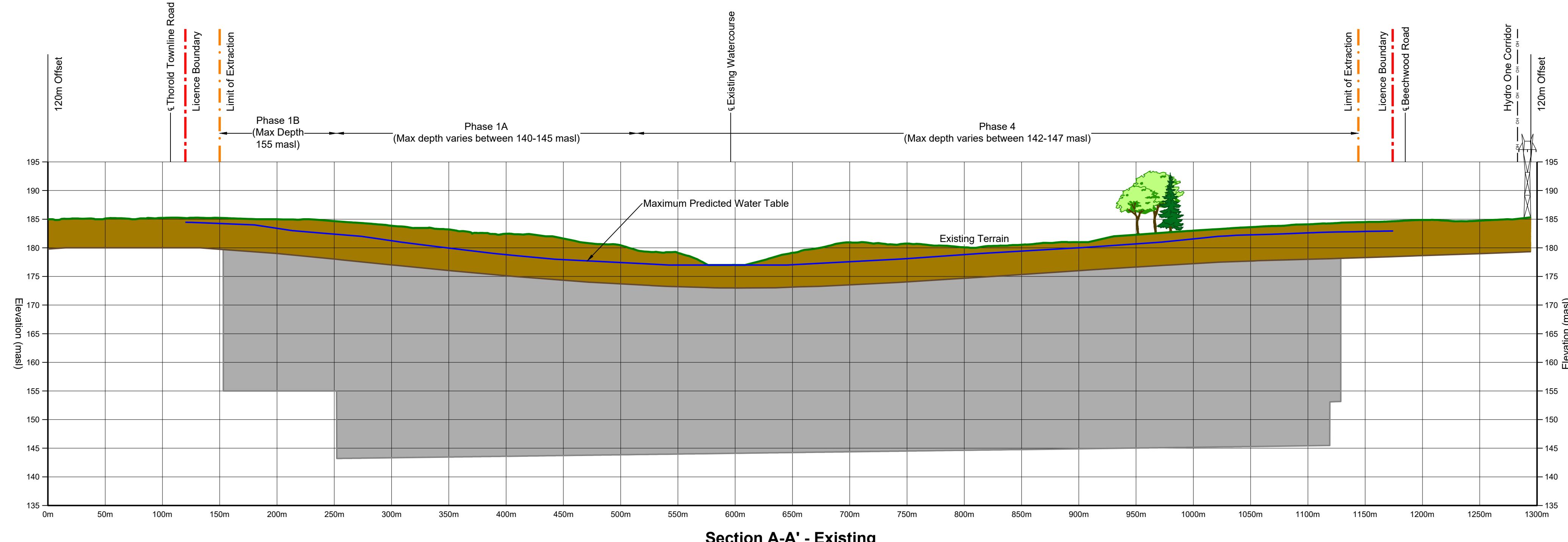
Date **April 4, 2024 June 2024**

Drawn By **C.P.** File No. **9811V**

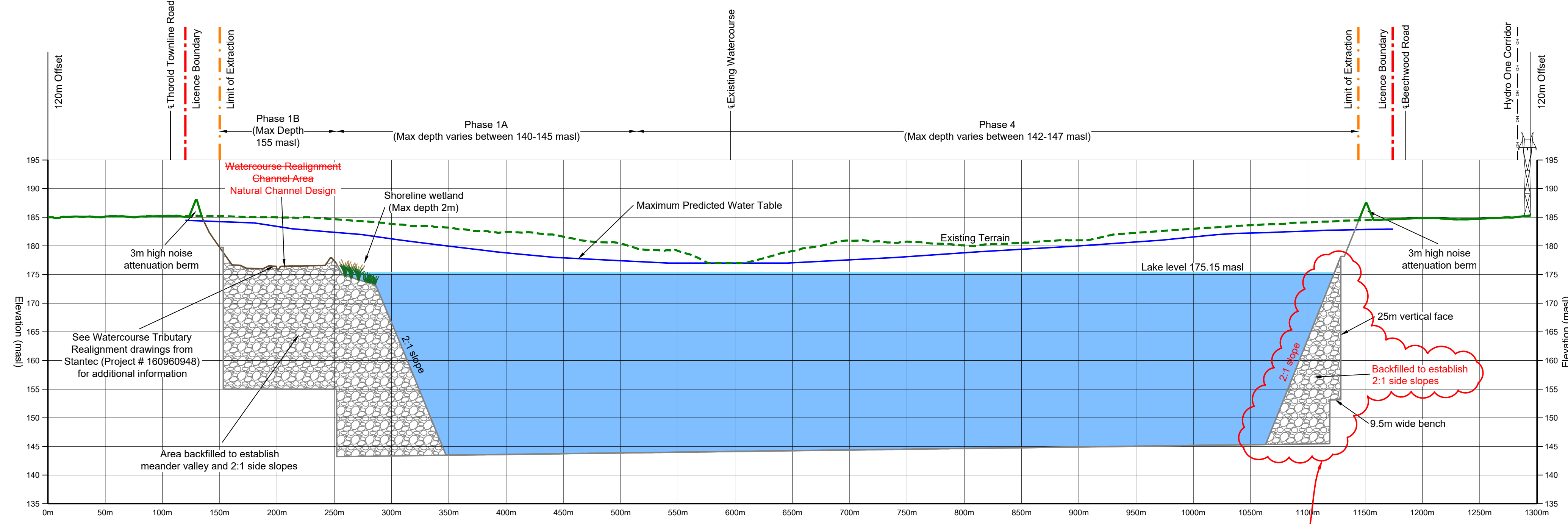
Checked By **D.W.**

File Name **Extraction Sequence**

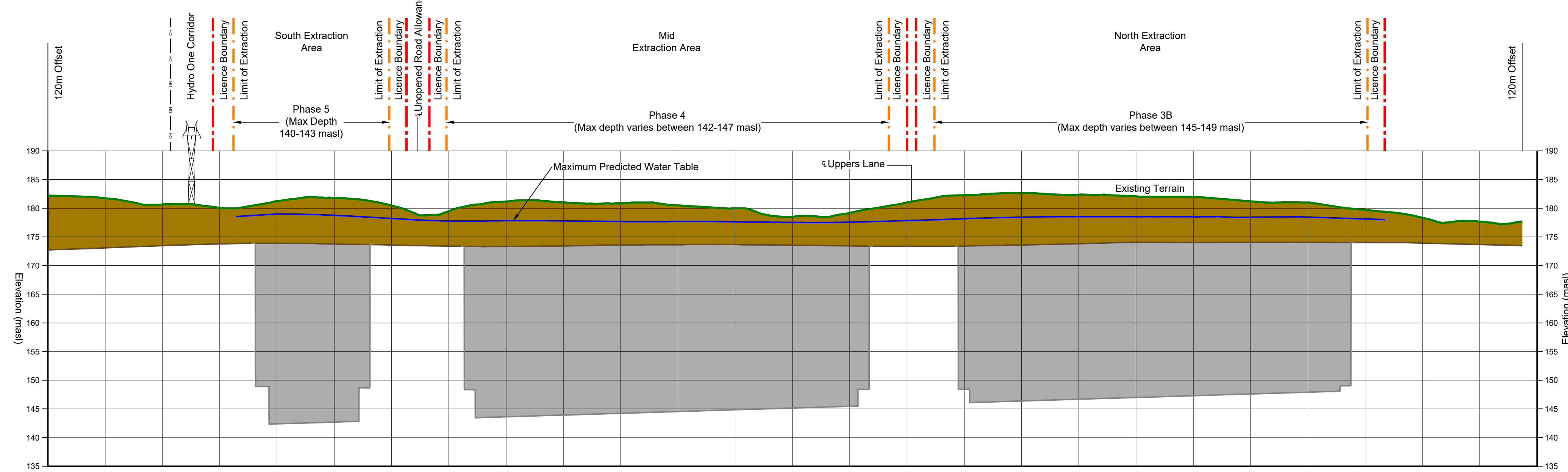
Drawing No. **3 of 6**



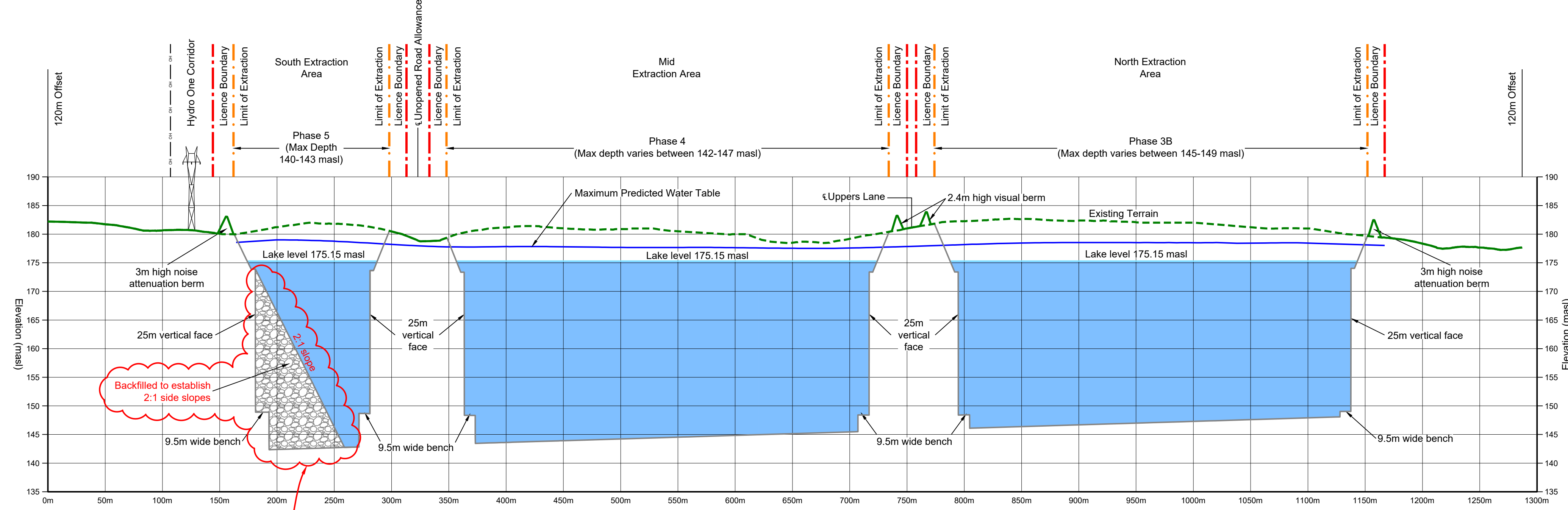
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Horizontal - 1:2500
Vertical - 1:500



Section A-A' - Rehabilitation
Horizontal - 1:2500
Vertical - 1:500

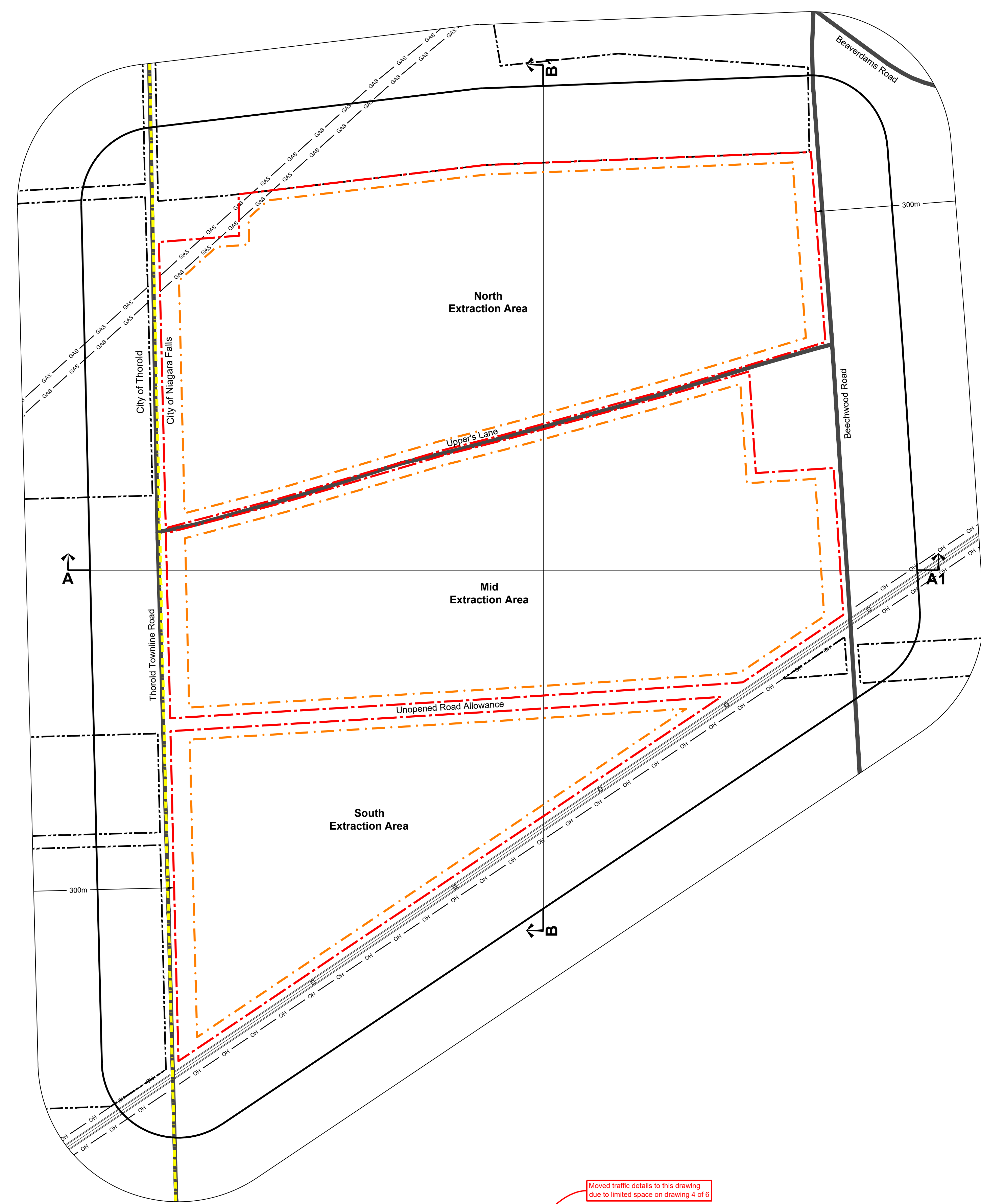


Section B-B' - Existing
Horizontal - 1:2500
Vertical - 1:500



Section B-B' - Rehabilitation
Horizontal - 1:2500
Vertical - 1:500

Cross Section Key Map
Scale 1:4000



- Legal Description**
Part of Lots 119, 120, 136 & 137
City of Niagara Falls (Geographic Township of Stamford)
Regional Municipality of Niagara
- Legend**
- Licence Boundary
 - Limit of Extraction
 - Additional Lands Owned by Licence Applicant
 - Municipal Boundary
 - 120m Offset From Licence Boundary
 - Public Road
 - Trans Canada Pipeline Easement
 - Hydro One Easement
 - Cross Sections

- Legend - Cross Sections**
- Licence Boundary
 - Limit of Extraction
 - Existing Grade - Undisturbed
 - Existing Grade - Removed / Altered
 - Berm
 - Maximum Predicted Water Table (See note A.2 on drawing 5 of 6)
 - Quarry Floor / Face
 - Topsoil and/or Overburden
 - Aggregate Available for Extraction
 - Backfilled
 - Lake or Pond
 - Hydro Corridor

Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By
1	January 2022	Updated site plan per feedback from MNRF and completed minor housekeeping	C.P.
2	August 2023	Updated site plan to incorporate JART and MNRF comments	C.P.
3	April 4, 2024	Updated site plan to incorporate JART and MNRF comments	C.P.
4	June 2024	Updated site plan to incorporate JART and MNRF comments	C.P.

MHBC
PLANNING
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& LANDSCAPE
ARCHITECTURE
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Applicant
walker aggregates
Walker Aggregates Inc.
2800 Thorold Townline Road
P.O. Box 100
Thorold, Ontario
L2V 3Y8

Project
Upper's Quarry

MNRF Licence Reference No.
626562

Applicant's Signature
Date: **April 4, 2024 June 2024**
Drawn By: **C.P.** File No.: **9811V**
Checked By: **D.W.**

Plan Scale: (Arch E)
Horizontal: 1:2500
Vertical: 1:500

File Name
Cross Sections

Drawing No.
6 of 6

File Path
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See Section F on drawing 4 of 6 for Traffic Report Recommendations

TMIG
UPPERS QUARRY - THOROLD TOWNLINE ROAD
UPPERS LANE CONCEPTUAL INTERSECTION DESIGN
OPTION 1: SOUTHBOUND SLIP AROUND LANE

TMIG
UPPERS QUARRY - THOROLD TOWNLINE ROAD
UPPERS LANE VEHICLE MOVEMENT DIAGRAM
QUARRY TRUCK INBOUND AND OUTBOUND MANOEUVRES