



**October 18, 2024**

**Duivenvoorden Haulage Limited  
Aggregate Pit Expansion – Stormwater Management Brief  
WMI File No.: 20-636  
NVCA ID #: 42204**

Duivenvoorden Haulage Ltd. is proposing to apply for a Class 'A' License (Category 3 – Pit Above Water) under the Aggregate Resources Act, for a pit expansion. The license would permit aggregate extraction to expand north onto the 437202 4th Line (Phases 2-4), Township of Melancthon property and include a strip of 437138 4<sup>th</sup> Line between the municipal right-of-way and the existing pit (Phase 1). The area subject for the pit expansion (licensed area) is 45 hectares (111.1 acres), with a proposed extraction area of 34.5 hectares (85.2 acres). The proposed pit expansion area is referred to as the "site" in the context of this brief.

As required by the Nottawasaga Valley Conservation Authority (NVCA) pre-consultation comments, dated June 23, 2020, and through continued correspondence with the NVCA (email dated Nov. 11, 2020 & comments letter dated Oct. 20, 2021), this letter has been prepared by WMI & Associates Limited in support of the proposed aggregate pit expansion from a stormwater management perspective. Comments for this project have been received and reviewed with this letter updated to reflect the proposed revisions.

The proposed expansion of the pit does not include an increase in impervious area as it is simply the expansion of an existing earthworks operation.

Upon investigation of the existing drainage conditions associated with the site (pit expansion area), it was determined that there is no existing stormwater outlet due to existing topography. As indicated on the attached Drainage Plan (**FIG1**), all contributing runoff from external lands enters 437202 4<sup>th</sup> Line from the west and north with the majority of the runoff being in the form of concentrated flow from the southwest and northwest corners. All internal and external runoff ultimately concentrates and infiltrates into the native soils at the low point located just east and north of the middle of 437202 4<sup>th</sup> Line. The external runoff from the southwest runs into an existing wetland feature located at the southwest corner of 437202 4<sup>th</sup> Line prior to reaching the area proposed for pit expansion. Runoff from the wetland is only anticipated to discharge into the site when the wetland surcharges.

As indicated by Dufferin County's GIS mapping, aerial imagery clearly illustrates the low area (surfacing ponding visible) while Google Maps imagery taken at a different time shows the same area as being cropped, further suggesting that all site runoff ultimately infiltrates into the native soils.

In the proposed condition, existing drainage patterns and infiltration will remain as in the existing condition. In order to extract the aggregate on-site while maintaining existing drainage patterns, all earthworks will ensure sufficient conveyance to and space for, stormwater ponding and infiltration as in the existing condition.

The stormwater drainage for the pit expansion will be managed to suit the proposed phasing as per the Operational Plan prepared by Innovative Planning Solutions (IPS) and the aggregate extraction activities. The drainage through the site in the proposed condition will follow the contours of the proposed pit floor with an elevation of 507 masl (meters above sea level) at the northwest corner of the site to 497 masl at the southeast property boundary. The proposed sequencing of the stormwater drainage and erosion and sediment controls shall be as follows:

- Prior to any construction or pit expansion, silt fence is to be installed along the east limit of the existing wetland between the wetland and pit expansion Phases 1 & 2.
- Topsoil and overburden will be stripped and placed from Phase 1 of the pit expansion and utilized, including any portion of the Phase 2/3 topsoil/overburden if required, to construct the entire berm along the south perimeter of phase 1 and east perimeter of Phases 1, 2 & 3.
- Phase 2 of the pit expansion will be constructed similar to Phase 1 noted above. With the exception of the lowered/extraction areas, all internal and external drainage including excess runoff from the wetland, will flow into the existing low-lying region of the site within Phase 3 during the aggregate extraction of Phases 1-2 as is in the existing condition.
- Prior to construction of Phase 3 a cut-off swale along the western limits of Phase 3 and north of the existing wetland will be constructed. This cut-off swale will intercept the external drainage from west of Phase 3 and from the wetland. Similarly, another cut-off swale will be constructed along the north and east limits of Phase 3. Both cut-off swales will convey external runoff to the south and ultimately discharge into the previously extracted phase (Phase 2).
- The removal of aggregate from Phases 1-2 (from the south towards the north) will generally direct the stormwater drainage to the previous phases / existing pit where it will minimize impacts to extraction operations and be temporarily stored within the property limits prior to being infiltrated into the native soils as is in the existing condition.

Based on the above, we request that this letter be received by the NVCA and Township in support of the proposed expansion of DHL's existing aggregate pit located on the 4<sup>th</sup> Line in the Township of Melancthon.

Respectfully submitted,

**WMI & Associates Limited**

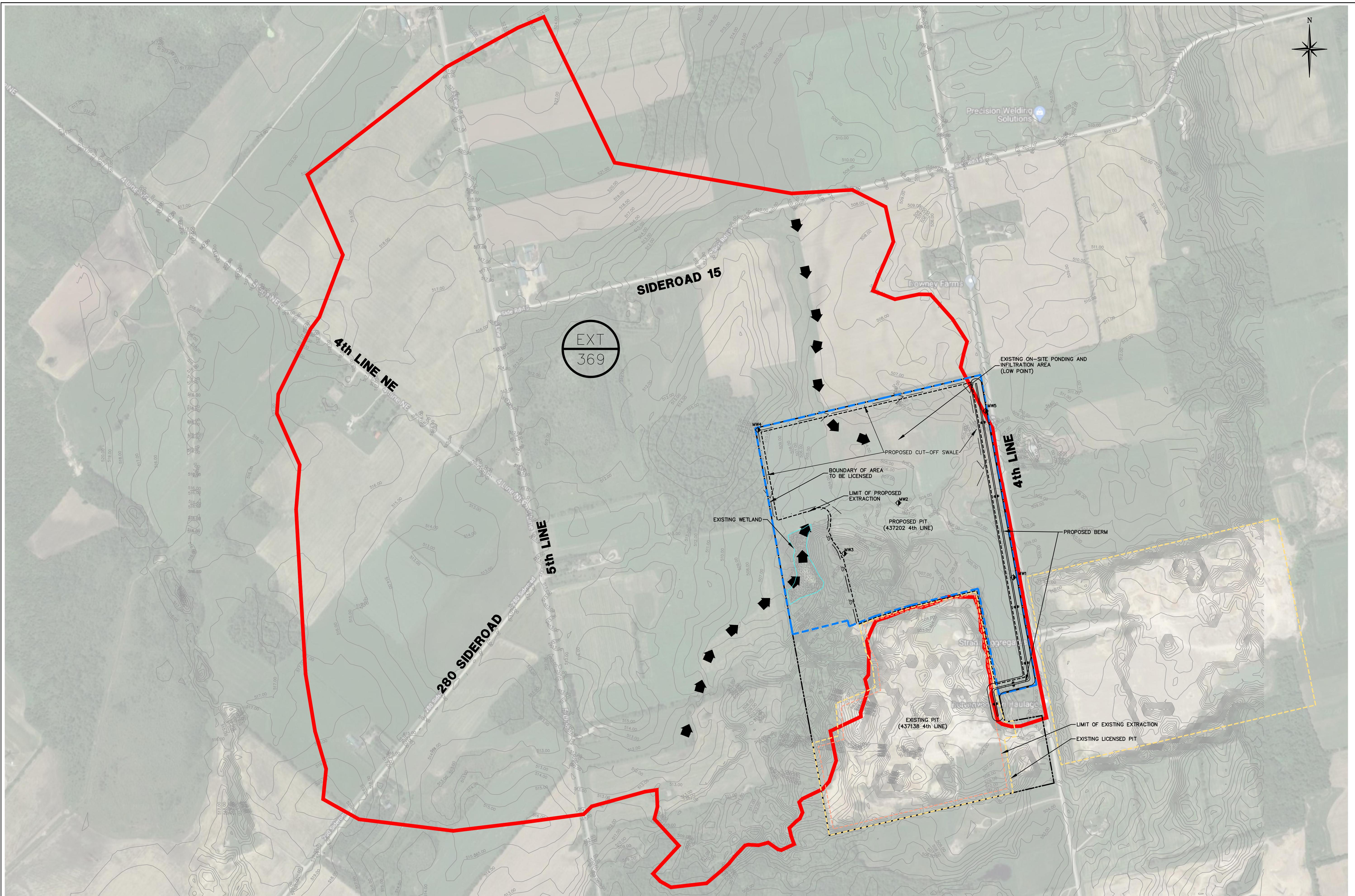


Andrew Windrem, C. Tech



Jeremy W. Lightheart, P. Eng.

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**Notes:**

- Unless noted otherwise, the measurements and distances shown on this drawing are shown in meters.
- Do not scale drawings.
- It is the contractor's responsibility to verify all dimensions, levels and datums on site and report any discrepancies or omissions to WMI & Associates Ltd. prior to construction.
- This drawing is to be read and understood in conjunction with all other relevant documents applicable to this project.
- This drawing is the exclusive property of WMI & Associates Ltd. and the reproduction of any part of this document without prior written consent is strictly prohibited.



No.	Issue / Revision	Date
1	1ST SUBMISSION	DEC. 15, 2020
2	2ND SUBMISSION - NVCA COMMENTS	MAY 24, 2024
3	3RD SUBMISSION	OCT. 18, 2024

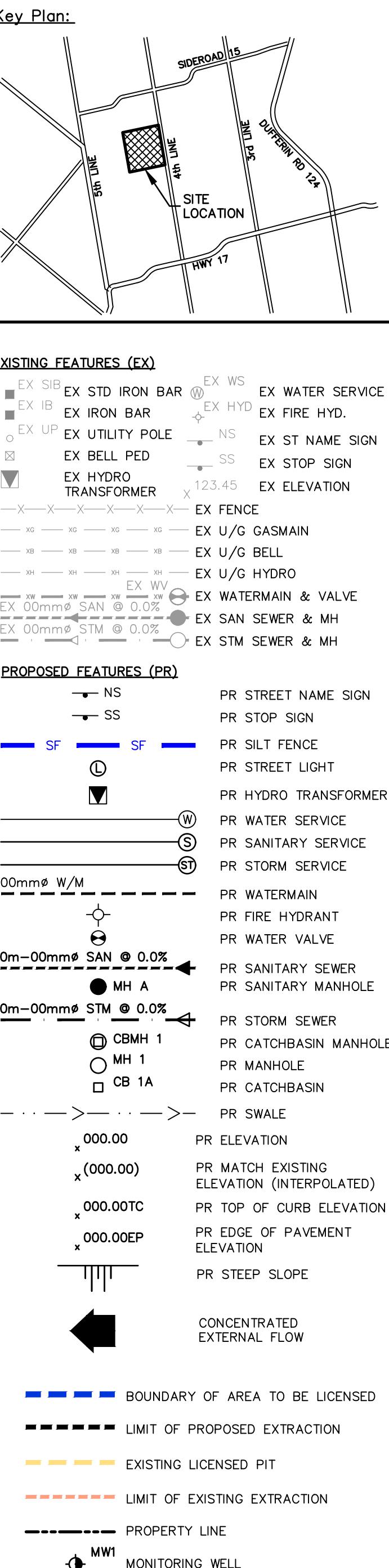
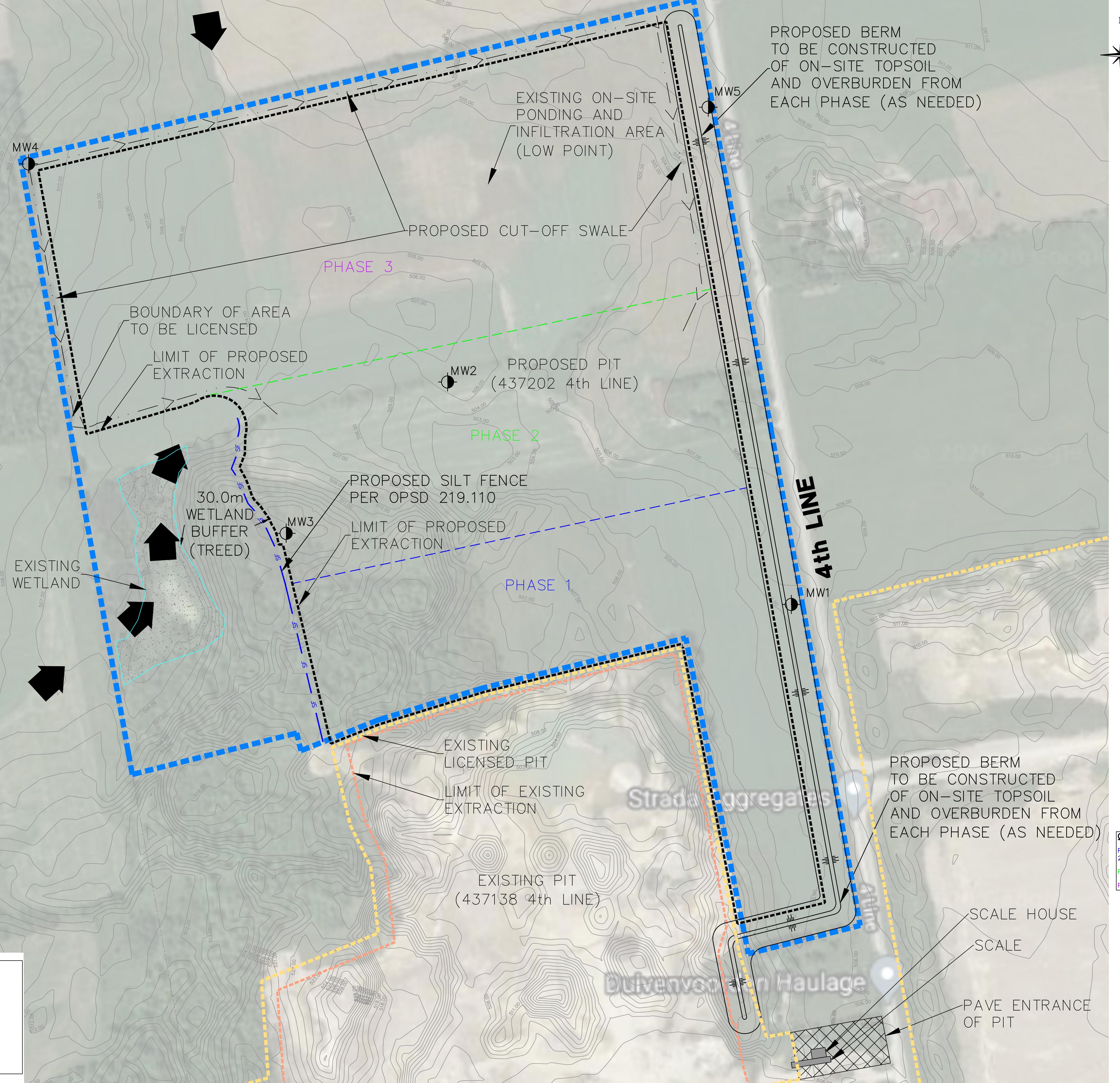
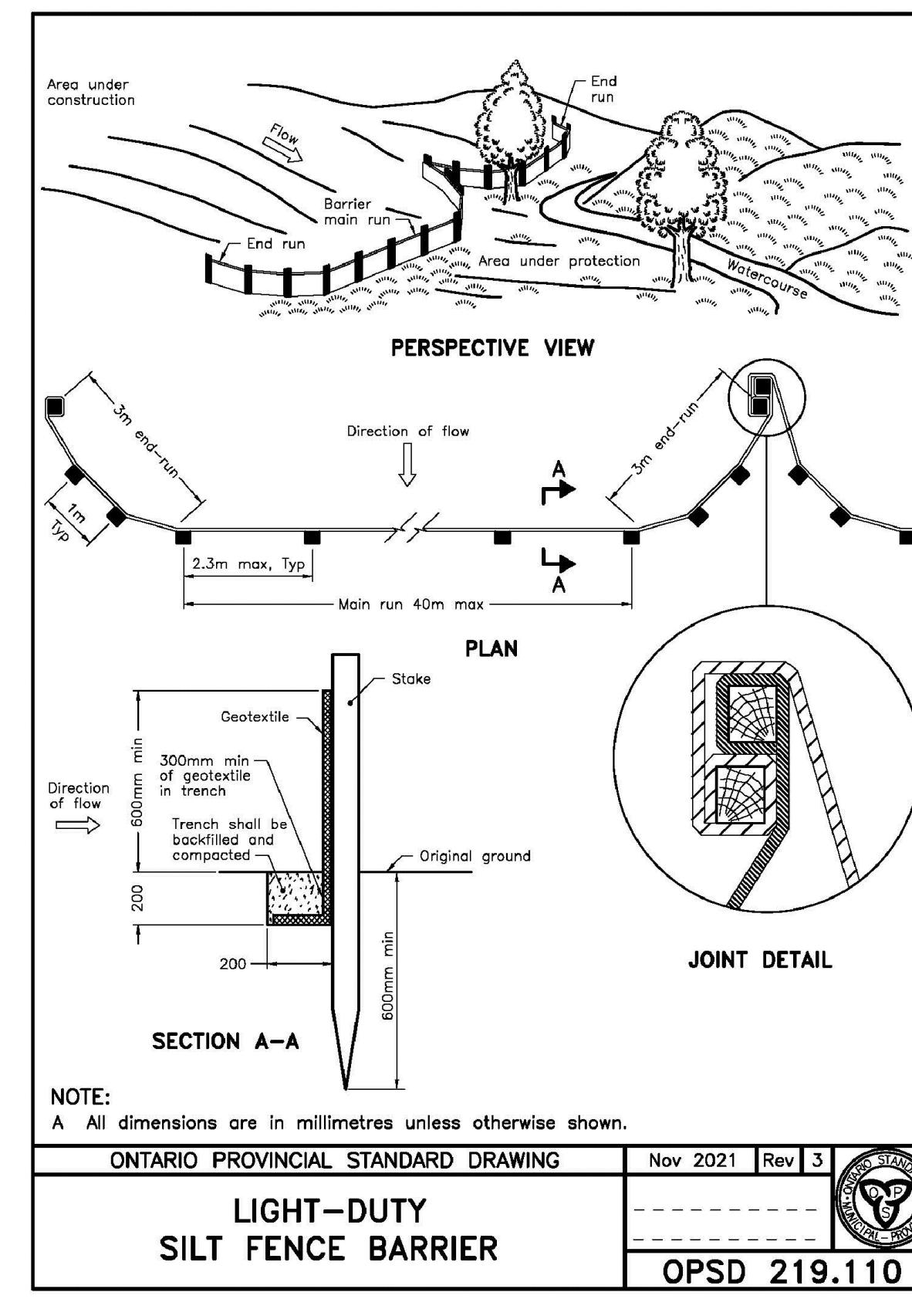
**DHL PIT**  
**DRAINAGE PLAN**

Client:  
Duivenvoorden Haulage Ltd.  
3425 9th Line  
Innisfil, Ontario  
L9S 3Z6

WMI & Associates Limited  
119 Coller Street  
Barrie, Ontario  
L4M 1H5  
Ph 705-797-2027  
www.wmiengineering.ca

Drawn By AW Checked By JW Drawing No. FIG1

Scale 1:5000 Project No. 20-636



**CONSTRUCTION PHASING**

PHASE 1 – INSTALL SILT FENCE, STRIP TOPSOIL & OVERTURNED PHASE 1, 2, 3 (AS REQUIRED) TO CONSTRUCT ENTIRE BERM.

PHASE 2 – STRIP TOPSOIL & OVERTURNED.

PHASE 3 – STRIP TOPSOIL & OVERTURNED, INSTALL CUT-OFF SWALES.

**DRAWING REFERENCE NOTES:**

1. BASE MAPPING AND TOPOGRAPHIC INFORMATION FROM DIGITAL OBM AND AIR PHOTO ANALYSIS PROVIDED BY GOOGLE EARTH 2018 EUROPA TECHNOLOGIES
2. PROPERTY BOUNDARY PREPARED BY RODNEY GREYER, OLS, DATED JANUARY 20, 2019.
3. OPERATIONAL PLAN PREPARED BY IPS

**CAUTION**  
**CONTRACTOR TO DETERMINE**  
**LOCATION OF EXISTING UTILITIES**  
**PRIOR TO CONSTRUCTION.**

REGISTERED PROFESSIONAL  
J.W.LIGHTHEAR  
100140403  
OCT. 18, 2024  
PROVINCE OF ONTARIO

A large, empty rectangular frame with a thick black border, centered on a white background. The frame is divided into two equal halves by a vertical black line. The top half contains a faint, thin black line pattern that resembles a grid or a series of diagonal lines. The bottom half is completely blank.

No.	Issue
1	2N
2	TH

## DHL PIT

Client:  
uivenvoorden Haulage Ltd.  
425 9th Line  
Innisfil, Ontario  
N0L 1Z0



WMI & Associates Limited  
119 Collier Street  
Barrie, Ontario  
L4M 1H5  
Ph 705-797-2027  
[www.wmiengineering.ca](http://www.wmiengineering.ca)

Drawn By CJ	Checked By JWL	Drawing No. ESQ
Scale 1:2000	Project No. 20-636	