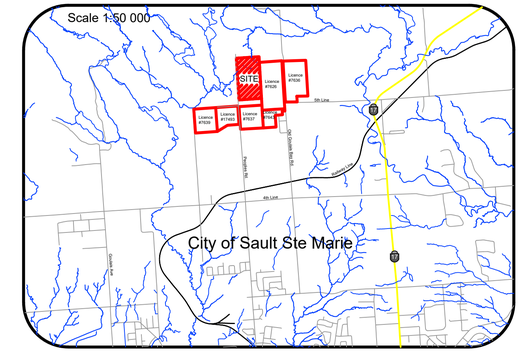
LEGEND

Boundary

Excavation Setback

Scale 1:2000m

0 50m 100m 200m



Ministry of Natural Resources Approval

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This site plan is prepared under the supervision of J.W. (Jim) Clark who is a qualified person approved in writing under Section 8(4) of the Aggregate Resources Act to prepare and certify site plans.

Signature

Pioneer Construction Inc.

Signature

Date

NO.	DATE	AMENDMENT DESCRIPTION	APPROVED

Drawing by :	*Aaron Craig*
Revisions by:	*Jessica Sheppard*
Revisions by:	
Revisions by:	
Checked by:	*Jim Clark*

City Pit & Quarry Satellite Imagery

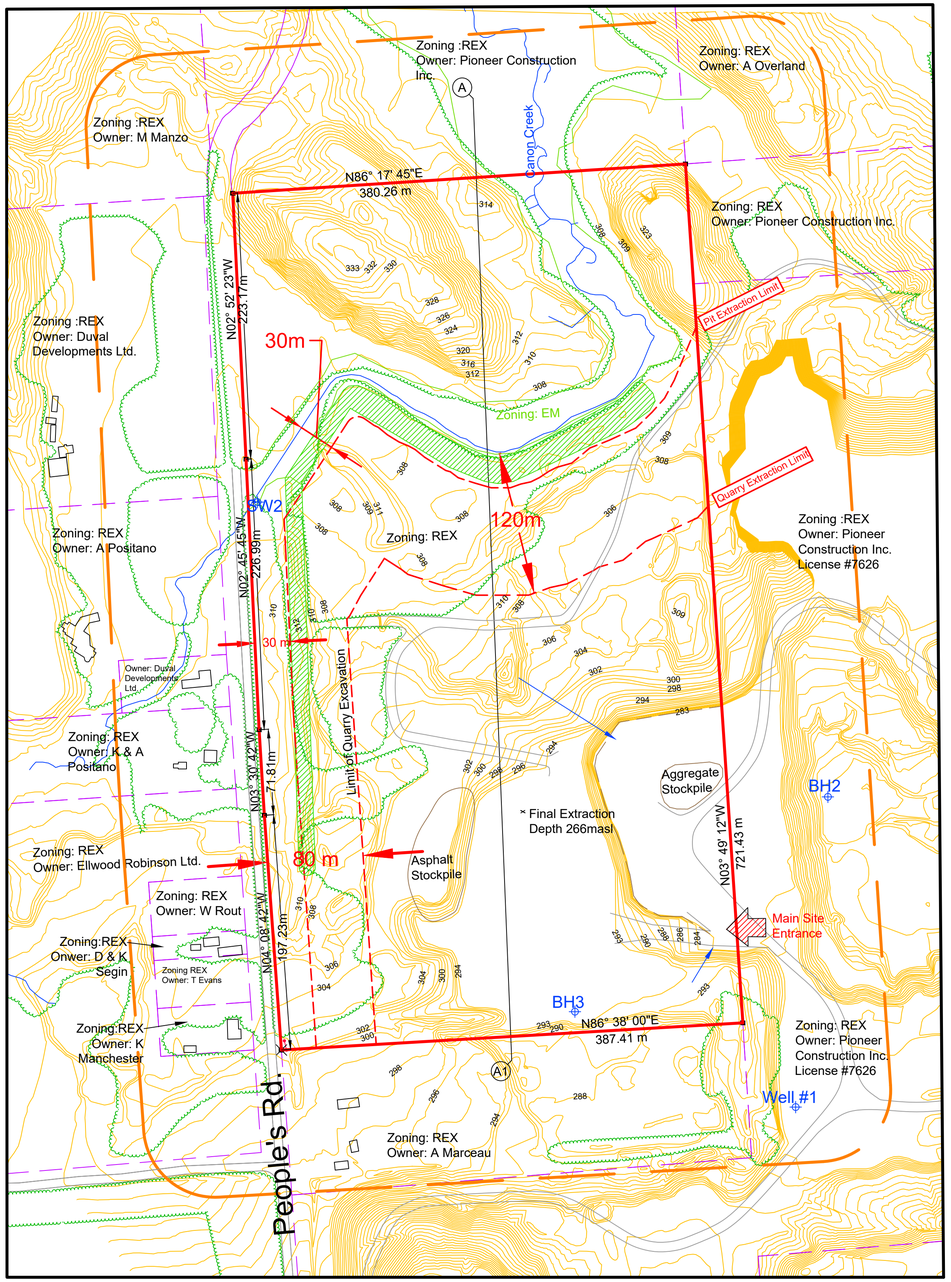
1708 - 1756 Peoples Road
Sec. 12 Pt. SE$\frac{1}{4}$
RP1R9833 Parts 1 to 6 & RP 19831 Part 1
City of Sault Ste. Marie, ON

Licensee: Pioneer Construction Inc.
1 Ceasar Road.
Sudbury, ON P3E 5P3

Sheet 1 of 4

LEGEND

- Boundary
- Excavation Setback
- Parcel Lines
- 275 Contour with Elevation (mASL)
- 120m Area of Influence
- River/Stream
- Road
- Lake or Pond
- Profile Line
- Direction of Drainage
- Treeline
- Berm
- Existing Buildings
- Existing Excavation Face



Scale 1:2500m 0 100 200 Meters

Existing Features

1.1.12 Licenced Area 27.8 ha.
Area to be Extracted 17.6 ha

1.1.10 Site Plan References:
Site Plan for City Gravel Pit No. 2 (City Pit), The Corporation of the City of Sault Ste Marie
Geowarehouse
MNR Maps
Bing Maps
Pioneer Drone Flight July 28 2020

1.1.16 There are several residential buildings located to the west of the site within 120 metres as shown on these site plans.

1.1.17 Access to the site is through Pioneer Construction Inc.'s existing licenced pit to the east. There is access to the site from Peoples Road that is secured by a gate.

1.1.18 The main internal haul roads are shown on these site plans and will be relocated from time to time.

1.1.19 The established groundwater table is variable. According to the Level 2 Hydrogeological Study Report completed by WSP November 2020, the groundwater level ranges from approximately 307-309masl at SW2 to 254-258masl at Well #1.

1.1.20 There is no existing surface water drainage or drainage facilities located on with 120 metres of the site. Water from the site drains naturally.

1.1.21 There is an existing fence located along the western side of the site where it abuts Peoples Road.

1.1.22 Existing tree coverage is sparse as shown on these site plans.

1.1.23 There are existing stockpiles of topsoil/ overburden located throughout the site.

1.1.24 Existing aggregate stockpiles are shown on these site plans. There is a stockpile of asphalt to be recycled.

1.1.25 There is no existing scrap on the site.

1.1.26 There are no existing fuel storage areas on the site.

1.1.27 There is a creek running through the north section of the site. A 30 metre setback is established to protect this creek. No quarry operations will take place within 120m of this creek.

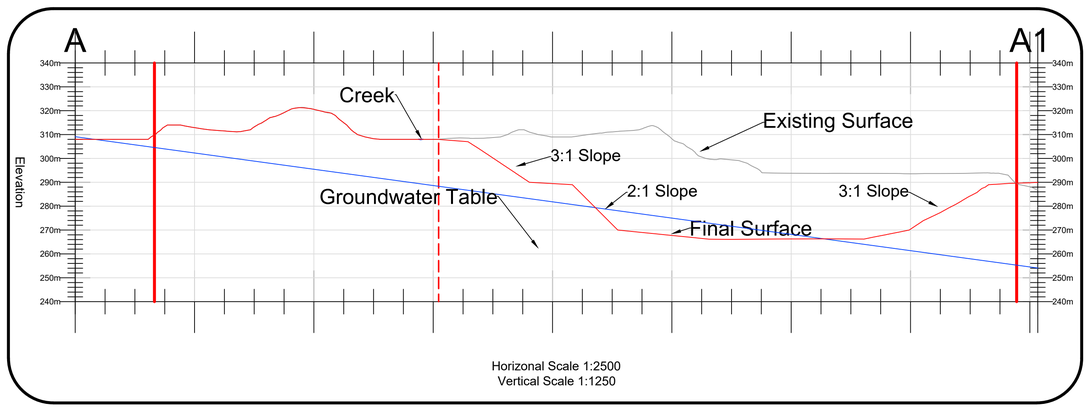
1.1.28 There are several residences and a hydro line located to the west of the site within 120 metres.

1.1.29 The existing working face is shown on these site plans. No existing rehabilitated areas.

1.1.30 There is no processing equipment located on the site.

1.1.31 There is a berm located along the west side of the site approximately 3 metres before the setback area as shown on these site plans. There is also a berm located in the northern setback area between the excavation setback and the creek.

1.1.32 An existing cross-section is shown on page 2 of 4 of these site plans and runs from north to south.



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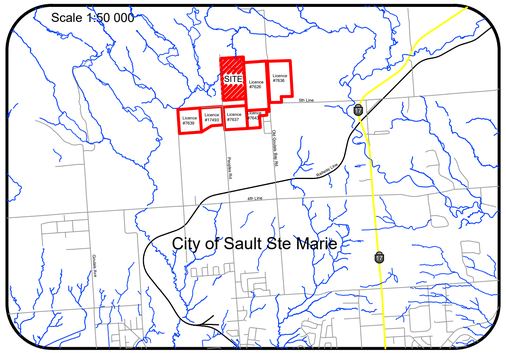
Vertical Scale 1:1250



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Signature

Pioneer Construction Inc.

Signature

Date

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Drawing by :	*Aaron Craig*
Revisions by:	*Jessica Sheppard*
Revisions by:	
Revisions by:	
Checked by:	*Jim Clark*

City Pit & Quarry Existing Features

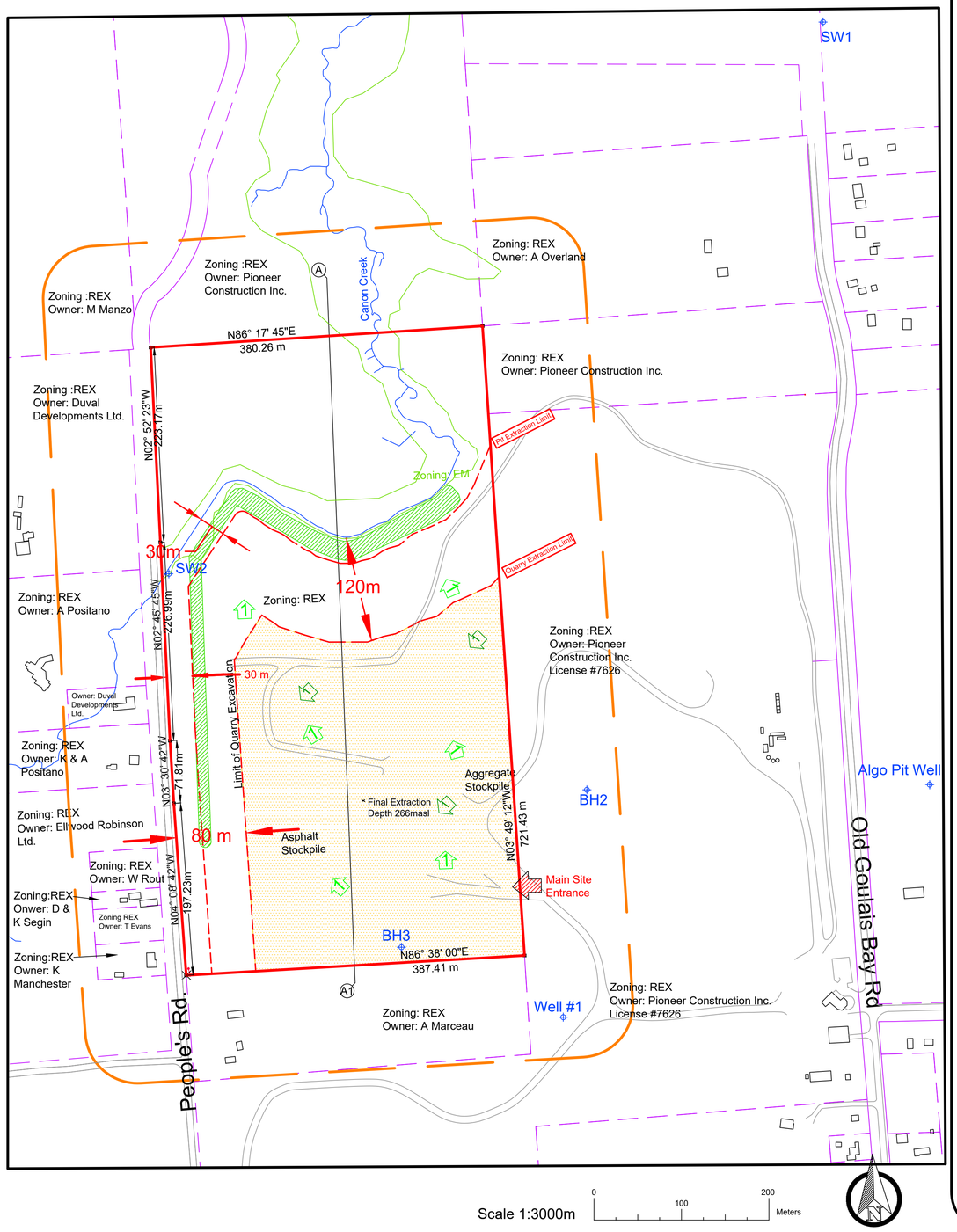
1708 - 1756 Peoples Road
Sec. 12 Pt. SE$\frac{1}{4}$
RP1R9833 Parts 1 to 6 & RP 19831 Part 1
City of Sault Ste. Marie, ON

Licensee: Pioneer Construction Inc.
1 Ceasar Road.
Sudbury, ON P3E 5P3

Sheet 2 of 4

LEGEND

- Boundary
- Excavation Setback
- Lot/Concession Line
- 275 Contour & Elevation (mASL)
- Monitoring Well
- 120m Area of Influence
- River/Stream
- Road
- Lake or Pond
- Profile Line
- Direction of Drainage
- Treeline
- Berm
- Direction of Pit Operations
- Direction of Quarry Operations
- Newly Licensed Area (2020)



Scale 1:3000m

Operational Features

1.2.1 The pit will be developed from the southeast corner proceeding in a north-westerly direction. The quarry will be developed from the northeast corner, proceeding in a south-westerly direction. Operational phases may vary from that shown due to quantity, quality of material, or market demand. Pit and Quarry extraction may occur concurrently. Material may be blended from other locations in the pit or quarry to obtain the required specifications for material.

1.2.2 Topsoil, subsoil and.or overburden will be stockpiled at various locations within the boundary of the license area. These stockpiles of topsoil and overburden will be removed and stockpiled for use in final rehabilitation.

1.2.3 There will be a maximum of 4 lifts. Height will vary based on equipment used.

1.2.4 The main internal haul roads are shown on these site plans.

1.2.5 Entrance/exit from the site will be through the adjacent existing pit/quarry located to the east of the site.

1.2.6 The established groundwater table is variable. According to the Level 2 Hydrogeological Study Report completed by WSP November 2020, the groundwater level ranges from approximately 307-309masl at SW2 to 254-258masl at Well #1.

1.2.7 There are no proposed water diversions or points of discharge to surface water.

1.2.8 No fencing is proposed. The existing fencing along Peoples Road will be maintained.

1.2.9 There are no proposed buildings or structures.

1.2.10 There are existing stockpiles of overburden/topsoil shown on these site plans. Topsoil, subsoil and/or overburden will be stockpiled at various locations within the boundary of the license area. New stockpiles will not be closer than 30m to the license boundary of the site and 90m to a boundary that abuts land used for residential purposes.

1.2.11 Proposed stockpiles of aggregate will be adjacent to the working face and may be located within 30m of abutting licenses with common boundary agreements.

Recycling of inert material asphalt and cured concrete will be permitted on this site.

Recyclable asphalt materials will not be stockpiled within:

a. 30m of any water body or man-made pond; or

b. 2m of the surface of the established water table.

Any rebar and other structural metal must be removed from the recycled material during processing and placed in designated scrap pile on site which will be removed on an on-going basis.

Removal of recycled aggregate is to be ongoing.

1.2.12 There are no proposed scrap locations. Any scrap encountered will be removed from the site on a regular basis.

1.2.13 There are no proposed fuel storage areas. Portable fuel tanks may be used.

1.2.14 Area to be extracted: 17.6 ha.

1.2.15 Setbacks are located 30 metres for pit excavation and 80m for quarry excavation from the west boundary of the site and 30 metres for pit excavation and 120 for quarry excavation from the centre line of the creek running through the north end of the site. No setbacks are located along the south or east boundaries of the site.

1.2.16 The final elevation of the site will be 266m+/- a.s.l.

1.2.17 Use of portable processing equipment may be used and located near the working face as required. No processing equipment will be used within 342m of the closest house along the western boundary.

1.2.18 There are no additional berms proposed. There are existing berms shown on these site plans.

1.2.19 Existing berms shown on these site plans are allowed to vegetate naturally and will be used for final rehabilitation.

1.2.20 Operations will consist of normal pit and quarry extraction. Equipment to be used on the site will include, but not be limited to: Mobile (self-propelled) - excavators, loaders, crushers, dozers and trucks. Portable and Non Portable Plants - asphalt plant, redi-mix plant, aggregate processing plant, screening plant, stackers, conveyors, power plant, feed bins, brushing plant, tool trailer and washing plant. Plants may move throughout the site in proximity of the extraction face.

1.2.21 There are no proposed tree screens. The existing tree screen along Peoples Road will be maintained.

1.2.22 The hours of operations will be from 7am to 11pm excluding Sundays and Statutory Holidays.

1.2.23 Trees and stumps shall be removed from site, burned with applicable permits, or stockpiled, or chipped to use in rehabilitation.

1.2.24 Cross-sections are located on pages 2 of 4.

1.2.25 Variances from operational standards are as follows:

1. A fence will only be located along the western boundary of the site, along People's Rd.
2. Setbacks are removed from the south and east boundary with common boundary agreements. Quarry operations setbacks are 80m along the western boundary and 120m from the creek in the northern section of the site.
3. Aggregate stockpiles may be located within 30 metres of the boundary of the site along the common boundary to the east of the site.
4. The topsoil, subsoil and overburden are in inseparable layers and therefore will be stored together, allowed to re-vegetate naturally and be saved for rehabilitation.

Base on Recommendations of Consultant Reports - **ONLY APPLICABLE TO NEWLY LICENSED AREA(2020)**:

5. Avoid clearing of vegetation between May 1 and July 31.
6. If snapping turtles are discovered on site, fence the active extraction area to exclude them. If a nest is discovered during excavation. Cease work in that area, report to MNRF and have a biologist survey site for additional nests.
7. Prior to clearing a new area, the area must be surveyed by a qualified biologist to ensure Species At Risk (SARs) are not present. If SARs are found to be present, details on measures to be taken are outlined in the Natural Environmental Level 1 and Level 2 Reports (Pinchin 2020).
8. Processing carried out within the Newly Licensed Area, will require that a noise mitigation berm be constructed around the operating equipment, as recommended by GHD's Acoustic Assessment Report (2020).
9. In order to alleviate flooding conditions upstream, excess surface water within Canon Creek will be allowed to discharge to the pit and re-infiltrate in to the groundwater system.

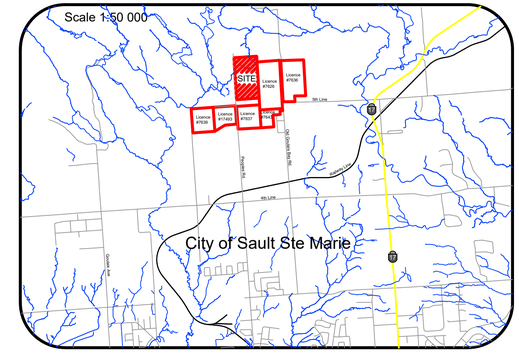
1.2.26 Blasting will occur as needed and will comply with all applicable regulations and standards.

1.2.27 Annual Extraction Limit: 195 350 tonnes.

1.2.28 Continuous water level monitoring will be conducted using dataloggers at the following locations. Periodic manual measurements will be taken at all monitoring locations during data downloads. An annual report will be prepared to summarize the annual monitoring program results, and annual extraction activities. Monitoring wells indicated on site plans.

Monitoring Wells

Well Name	Easting	Northing	Comment
Algo Pit Well	703,654	5,162,346	Located outside of 120m area of influence
SW1	703,532	5,163,218	Located outside of 120m area of influence
SW2	702,784	5,162,587	
Well # 1	703,235	5,162,340	
BH2	703,262	5,162,340	
BH3	703,050	5,162,160	



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Date

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Drawing by :	*Aaron Craig*
Revisions by:	*Jessica Sheppard*
Revisions by:	
Revisions by:	
Checked by:	*Jim Clark*

City Pit & Quarry Operational Features

1708 - 1756 Peoples Road
Sec. 12 Pt. SE$\frac{1}{4}$
RP1R9833 Parts 1 to 6 & RP 19831 Part 1
City of Sault Ste. Marie, ON

Licensee: Pioneer Construction Inc.
1 Ceasar Road.
Sudbury, ON P3E 5P3

Sheet 3 of 4

LEGEND

- Boundary
- Excavation Setback
- Parcel Lines
- 275 Contour with Elevation (mASL)
- 120m Area of Influence
- River/Stream
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- Lake or Pond
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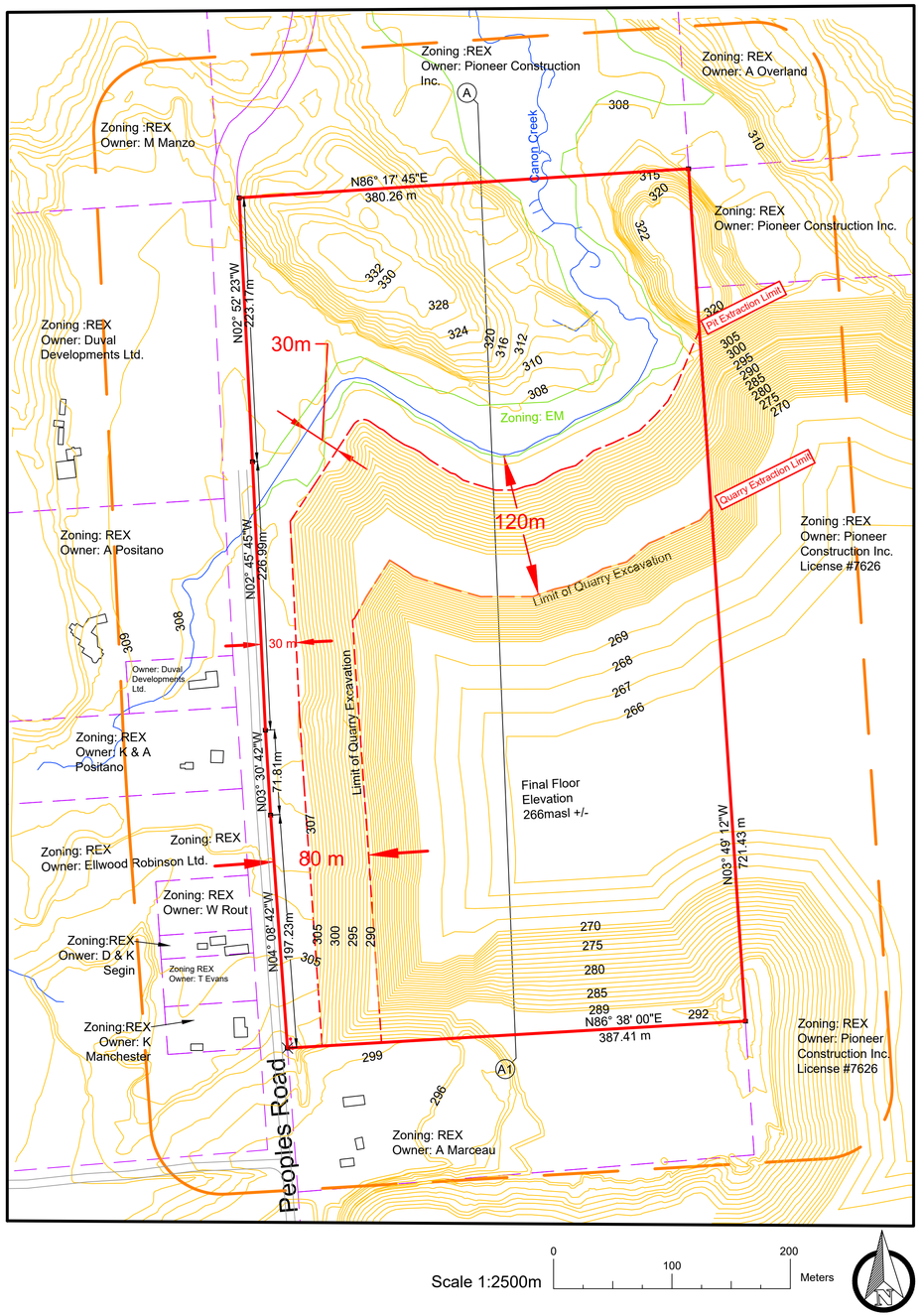
- Treeline
- Existing Buildings



Scale 1:2500m 0 100 200 Meters

Progressive Rehabilitation

1.3.1 The Sequence and direction of progressive rehabilitation will follow aggregate extraction leaving 3:1 slopes in unconsolidated material, and 2:1 slopes in consolidated material as extraction continues. The pit floor will be rehabilitated after extraction is complete.

1.3.2 As the limit of extraction is reached, the operator will either extract to the limit of extraction and backfill to produce a 3:1 or 2:1 slope with available overburden, or extract less material and use in situ material to produce a 3:1 or 2:1 slope. Due to lack of overburden, import fill may be used on the pit floor and side slopes to permit the establishment of vegetation.

1.3.3 Vegetation will be established through hydro-seeding, select tree planting and natural regeneration.

1.3.4 The faces will be sloped and graded to achieve a 3:1 or 2:1 slope and the floor will be leveled.

1.3.5 Progressive rehabilitation will follow the operational sequence.

1.3.6 Clean inert fill (e.g. Topsoil and/or overburden) may be imported to facilitate pit rehabilitation. Only sufficient material to create a 3:1 or 2:1(horizontal: vertical) grade may be imported. Fill will be imported according to Ontario Regulation 406.

Final Rehabilitation

1.4.1 Clean inert fill (e.g. Topsoil and/or overburden) may be imported to facilitate pit rehabilitation. Only sufficient material to create a 3:1 or 2:1(horizontal: vertical) grade may be imported. Fill will be imported according to Ontario Regulation 406.

1.4.2 Berms to be removed and the faces will be sloped and graded to achieve a 3:1 or 2:1 slope, and the floor will be leveled.

1.4.3 All slopes and graded pit floor areas will be allowed to re-vegetate naturally. Hydro-seeding may be used and native/local plant material (shrubs and trees) may be planted or transplanted in areas within the pit to facilitate naturalized re-vegetation.

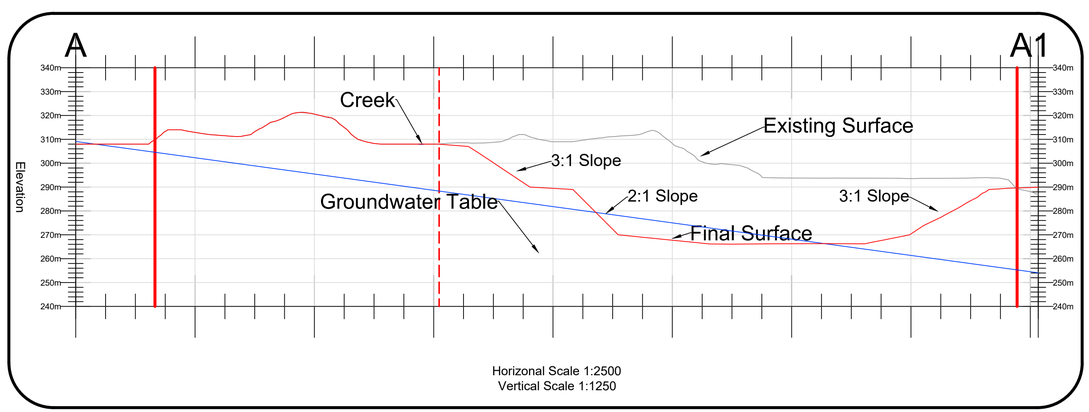
1.4.4 No buildings and/or structures will remain on the site.

1.4.5 The established groundwater table is variable. According to the Level 2 Hydrogeological Study Report completed by WSP November 2020, the groundwater level ranges from approximately 307-309masl at SW2 to 254-258masl at Well #1.

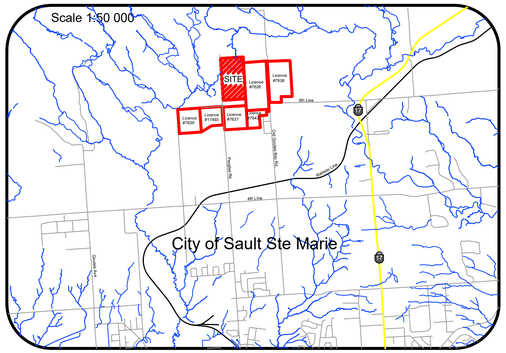
1.4.6 No internal haul roads will remain on the site.

1.4.7 No surface water drainage or drainage facilities are proposed for the site.

1.4.8 Final floor elevation will be 266m+/- a.s.l.



Horizonal Scale 1:2500
Vertical Scale 1:1250



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City Pit & Quarry Final Features

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RP1 R9833Parts 1 to 6 & RP 19831 Part 1
City of Sault Ste. Marie, ON

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Sheet 4 of 4