



# Lassing Dikken Consulting Engineers Ltd

*Celebrating over 25 years of engineering excellence.*

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December 19<sup>th</sup>, 2019

Grainboys Holdings Inc.  
1453 Old Forest Road  
Pickering, Ontario  
L1V 1N8

*Attn: Mr. Kresho Petrovich, President*

***RE: Site Servicing and Development Review - Proposed New Location For Port Royal Mills, 3469 York Durham Line, Township of Uxbridge***

Dear Kresho,

Grainboys Holdings Inc. has purchased the property known as 3469 York Durham Line, in the Township of Uxbridge for the construction of a new Port Royal Mills facility. In order to proceed with the design and construction of the facility this land must first be re-zoned. As part of the re-zoning review process the municipality has requested a site servicing and development review to ensure that this property can be developed to accommodate the new Port Royal Mills facility. Based on our review of the supporting studies, which include a Geotechnical Report by GHD, a Stormwater Report by Jewell Engineering and a Traffic Impact Brief by R.J. Burnside Associates along with the attached site layout sketches we produced, we conclude that this site can be developed for the Port Royal Mills facility.

In order to facilitate the review of this site for the re-zoning application servicing review we have produced some sketches that illustrate the proposed layout of the mill facility on the subject property. These sketches are drawn to scale. The topographic contour information illustrated on these sketches was obtained from a site survey undertaken by Delph & Jenkins OLS in October 2019. The following sketches with regards to this proposed development are contained in Appendix A:

- i) Sketch 19-066 Z1 entitled "Existing Site Conditions"
- ii) Sketch 19-066 Z2 entitled "Proposed Overall Site Plan"
- iii) Sketch 19-066 Z3 entitled "Proposed Part Site Plan"
- iv) Sketch 19-066 Z4 entitled "Proposed Part Grading Plan"
- v) Sketch 19-066 Z5 entitled "Preliminary Floor Plan"
- vi) Sketch 19-066 Z6 entitled "Preliminary Building Elevations"

*Existing Site Conditions and Development Constraints*

This is a rural un-serviced parcel of land located within an area known as the Oak Ridges Moraine. Development of this site must adhere to requirements stipulated under the Oak Ridges Moraine Conservation Plan (ORMCP), the Oak Ridges Moraine Act (Ont. Reg. 140/02) as well as all other local municipal requirements. Under the ORMCP this site is designated as a Landform Conservation Area Category 2 site. This designation limits the site disturbed area to a maximum of 50 % and site impervious surface area to a maximum of 20 %, of the total site area. This development would be considered a major development under the ORMCP. The existing site layout is illustrated on sketch Z1. This site is approximately 36.3 Ha in size and there is currently a residential dwelling located on the site. Land features consist of gently rolling slopes with the exception of the area north of the existing driveway where there is a ridge traversing in an east west direction. There are wooded areas on the east and south



boundaries. The south side also has some wetland type features which are under a Toronto Region Conservation Authority (TRCA) regulated zone. Currently the site is used primarily for agricultural purposes with the majority of land cultivated for crop rotation.

### *Proposed Site Layout*

The proposed development is limited to the south-west zone of the site and is illustrated on sketches Z2 and Z3.

Sketch Z2 contains the site statistics and the denoted Phase 1 and Phase 2 of this development. Sketch Z3 is a blow-up of the Phase 1 development.

Vehicular movements utilizing WB-20 trucks have been taken into account for the proposed truck access areas through the site including around the loading and unloading areas. Allocation for a weigh scale has also been incorporated into the layout. An employee and visitor parking area with an allocation for 38 parking spots including two accessible parking spots adjacent to the office area is also illustrated on the plan. An asphalt surface access road that will accommodate emergency vehicles will also be constructed around the east and north sides of the building ensuring emergency vehicle building access on all sides.

In order to minimize site dust disturbance during daily operations the ground surface cover areas for heavy vehicle movements will be either concrete or asphalt surfaced.

The proposed developed site impervious coverage is 7 % which is well within the ORMCP of a maximum 20 % impervious cover requirements. The disturbed site area is approximately 13 % which is well within the maximum 50 % site disturbance.

### *Site Access*

The site access will be from the east side of York Durham Line. All major truck movement access will be from the north end only as there are currently restrictions towards the south via a bridge with restricted loading. The proposed site access is illustrated on sketch Z3.

A Traffic Impact Brief for this site was produced by R.J Burnside & Associates. This traffic brief has concluded that a site access for major trucks can be constructed for this property.

Final details of the new entrance, including compliance with the municipal and TAC Geometric Design Guidelines For Canadian Roads will be undertaken at the site plan design stage.

### *Site Lighting*

Exterior site lighting will be required on the exterior of the new building facility as well as the parking and vehicular access areas. All exterior lighting will be designed and installed in such a manner as to prevent light trespass onto adjacent properties and the road allowance. Given the lateral distance to adjacent properties it should not be difficult to prevent light trespass onto adjacent properties.

Final exterior lighting design for this development will be undertaken at the site plan and building permit stages in accordance with all local and regulatory design requirements.

### *Site Landscaping*

All healthy existing trees in the undisturbed areas of this site will remain. Native tree species along with wetland shrubbery will be added on the south side of the pond area to blend into the existing vegetated area on the south. The remaining cultivated areas will be maintained for agricultural usage.

Final landscape details will be determined at the site plan design stage.



### *Building Design Considerations*

The proposed building floor usage layouts including the material process flows are illustrated on sketch Z5. Preliminary building elevations are illustrated on sketch Z6. The west end office area and easterly industrial section will be steel framed with cladding typical of industrial facilities. Appropriate noise and dust suppression systems for all internal equipment will be incorporated into the interior of the mill facility design. Building envelopes will be designed to ensure dust, odour and noise do not create any adverse conditions for neighbouring properties. Final building design will incorporate criteria that ensures all life safety and building code design criteria are adhered to.

### *Fire Fighting*

The Ontario Building and Fire Codes as well as NFPA Standards stipulate minimum fire safety design requirements for this proposed new mill facility. As this is a rural site with no services and given the size and occupancy of the new mill facility it is anticipated that fire walls may be incorporated into the final building design layout. Portions of this facility will also require some type of a fire suppression system such as sprinklers. We have incorporated a readily accessible location on the site for an underground water storage facility to be used for fire water storage. This is illustrated on sketch Z3.

An emergency access road will be constructed around the entire facility.

Final sizing and details of the onsite fire water storage and pumping requirements as well as fire wall locations will be undertaken at the building design stage.

### *Potable Water*

A new drilled well will have to be constructed on this site to service the mill operation. Section 6.1.5.1 of the GHD geotechnical report discusses new well regulatory requirements. The new mill operation will be a dry manufacturing industry with no process water requirements. The mill facility will employ approximately twenty people. Water usage is estimated to be comparable to that of a larger estate type residential occupancy. As noted in the GHD report a properly constructed well should provide adequate potable water for this development. Onsite treatment of the well water, if required, will also be incorporated into the facility design. Final details of the potable water system will be determined via further testing at the building design stage.

### *Sanitary*

This site will have a self contained septic sewage system constructed. The proposed mill facility will have an occupant load of approximately twenty people, this includes office and mill operating personnel. The mill operation will be a dry operation with no process water produced. For the anticipated occupant load the Ontario Building Code would require a maximum of four water closets; there will also be some showers for the mill employees.

The proposed location of this leaching bed system is on the south-west side and is illustrated on sketch Z3. Section 6.1.5.2 of the geotechnical report by GHD confirmed that the soil type on this site generally consists of sandy silt or silty sand underlain by clayey silt. For this facility it is proposed to construct a raised leaching bed septic system with imported sand fill material. Preliminary sizing of the septic system indicates a total daily sewage flow of 3000 L. Using imported sand with a T time of 10 minutes results in pipe length of 145m; a 9000 L tank will be required. The layout of this preliminary septic system including a mantel area has been incorporated onto sketch Z3. We have not illustrated a reserve bed location on the Z3. However with this size of a site it can readily be seen that there is ample space for a 100 % reserve bed area also.



### *Storm Water and Sediment & Erosion Controls During Construction Stage*

The stormwater report undertaken by Jewell Engineering has illustrated that this site can be developed to meet the regulatory requirements associated with stormwater concerns for new developments, including those within the ORMCP and TRCA regulated areas. Please also refer to the Jewell report for a detailed description of the site layout grading and pond areas as well as quantity and quality recommendations for developing this site.

A detailed sediment & erosion plan drawing for this development will be provided at the site plan permit stage.

### *Snow Storage*

Snow removal from the access road, parking area and truck turnaround zones would be stored on site adjacent to these areas. Drainage of the thawed snow storage would all be directed via swales to the appropriate down-gradient receiving areas. Given the size of this site it can readily be seen that onsite snow storage will not be a concern.

### *Conclusion*

Port Royal Mills would like to construct a new mill facility on a 36.3 Ha site at 3469 York Durham Line. In order to support the review for this re-zoning application Lassing Dibben has produced sketches Z1 through Z6. These sketches illustrate the existing as well as the proposed site and building layouts. These layout sketches illustrate that the facility can be constructed on this site with acceptable vehicular movements while maintaining adequate setbacks to ensure compliance with TRCA requirements .

Adequate sight lines exist to ensure safe access to and from York Durham Line, as per the Traffic Brief produced by R.J. Burnside.

A Geotechnical Investigation undertaken by GHD has confirmed that the existing soils are suitable for the storm water infiltration, new well water supply and the septic system leaching bed. Suitable bearing capacities are also available for the mill facility and building support.

The storm water report undertaken by G.D. Jewell Engineering Inc. has determined that the storm water design requirements for this site can be achieved.

The ORMCP design criteria including the requirements of a maximum 50 % site disturbance and 20% maximum impervious cover have been incorporated into the proposed layouts.

Based on our review of the site servicing, access, storm water and site layout requirements for this site we conclude that the proposed mill operation can be constructed on this site in conformance to all the local municipal, regional and ORMCP requirements.

Final design details will be completed at the site plan design and building permit stages.

Sincerely,

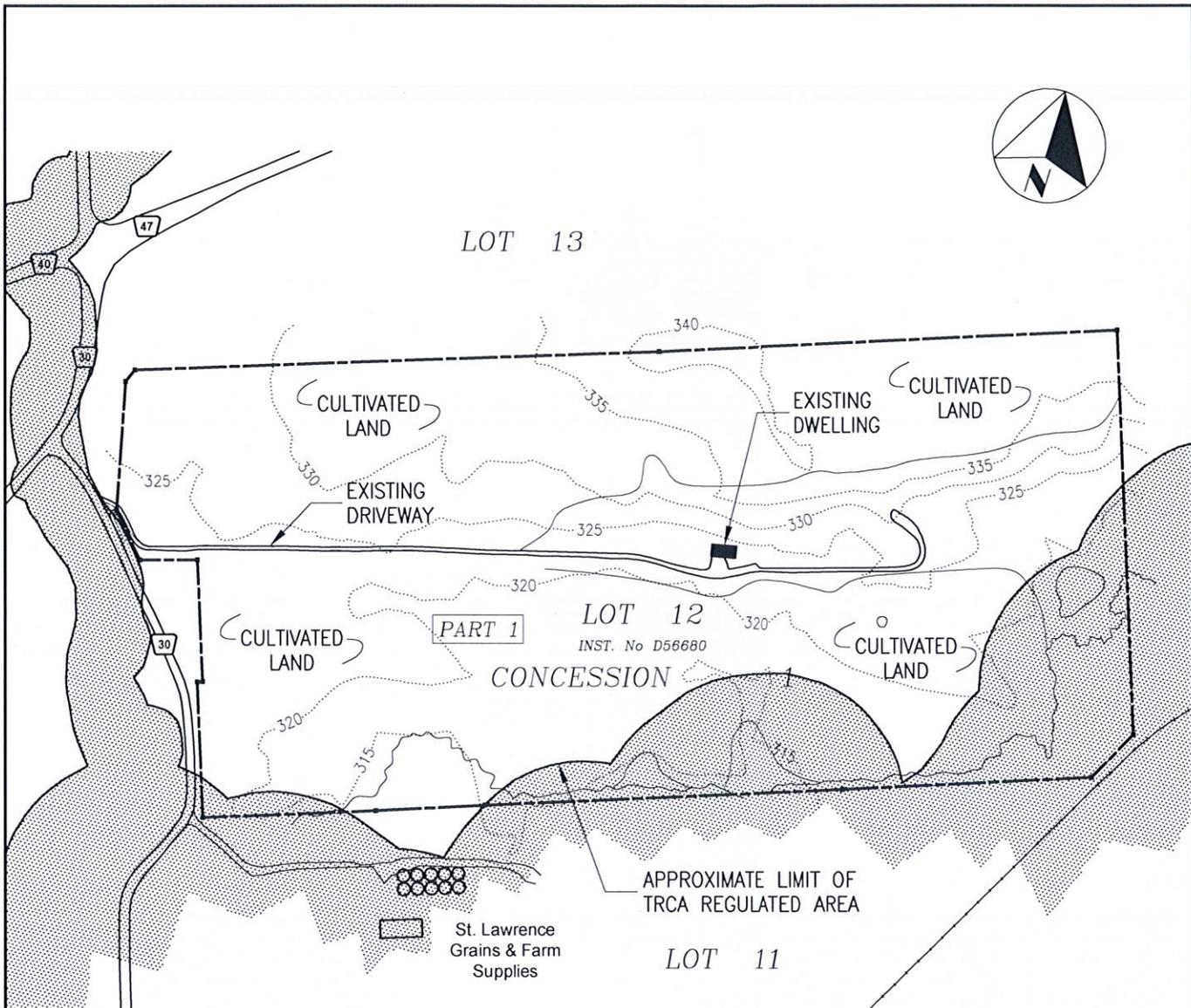
Arny Hoekstra, P. Eng.





## **Appendix A**

- i) Sketch 19-066 Z1 entitled "Existing Site Conditions"
- ii) Sketch 19-066 Z2 entitled "Proposed Overall Site Plan"
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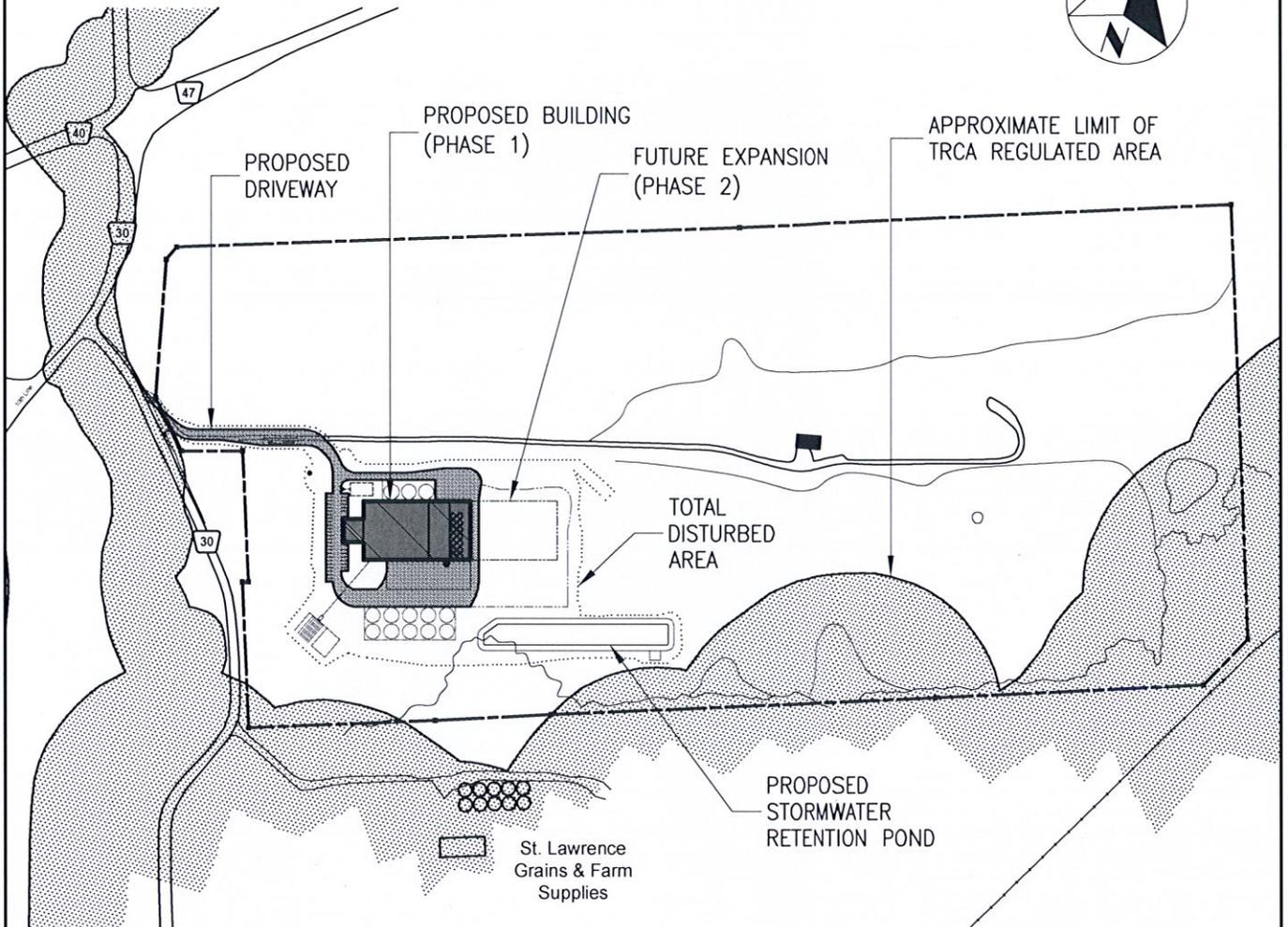
PART OF LOT 12 CONCESSION 1  
 TOWNSHIP OF UXBRIDGE  
 REGIONAL MUNICIPALITY OF DURHAM



BOUNDARY INFORMATION DERIVED FROM:  
 REGISTERED PLAN 40-45780 - 28 MAY 1980  
 PLAN SHOWING  
 PART OF LOT 12 CONCESSION 1  
 TOWNSHIP OF UXBRIDGE  
 REGIONAL MUNICIPALITY OF DURHAM  
 BY D.R. BARCHAM LIMITED O.L.S.

ADDITIONAL SITE PLAN INFORMATION:  
 Imagery by Google © 2019

|  |                   |   |  |  |
|--|-------------------|---|--|--|
| customer:<br>Mr K. Petrovich<br>GRAINBOYS HOLDINGS |                   | title:<br><b>EXISTING<br/>SITE CONDITIONS</b> |  |  <b>Lassing Dikken<br/>Consulting Engineers Ltd</b> |
| date:<br>19DEC19                                   | job no.<br>19-066 | scale:<br>1:6000                              | project:<br>PORT ROYAL MILLS - 3469 York Durham Line |  |



**SITE STATISTICS**

|                                     |                        |      |
|-------------------------------------|------------------------|------|
| LOT AREA                            | 363 045 m <sup>2</sup> | 100% |
| BUILDING AREA                       | 5 000 m <sup>2</sup>   |      |
| ASPHALT DRIVEWAYS & PARKING         | 7 100 m <sup>2</sup>   |      |
| CONCRETE PADS                       | 1 800 m <sup>2</sup>   |      |
| FUTURE BUILDING EXPANSION           | 3 750 m <sup>2</sup>   |      |
| FUTURE SILOS / CONCRETE PADS        | 3 000 m <sup>2</sup>   |      |
| FUTURE ASPHALT                      | 4 500 m <sup>2</sup>   |      |
| Total IMPERVIOUS AREA (Phase 1 & 2) | 25 150 m <sup>2</sup>  | 7%   |
| Total DISTURBED AREA (Phase 1 & 2)  | 46 640 m <sup>2</sup>  | 13%  |

customer:  
**Mr K. Petrovich**  
**GRAINBOYS HOLDINGS**

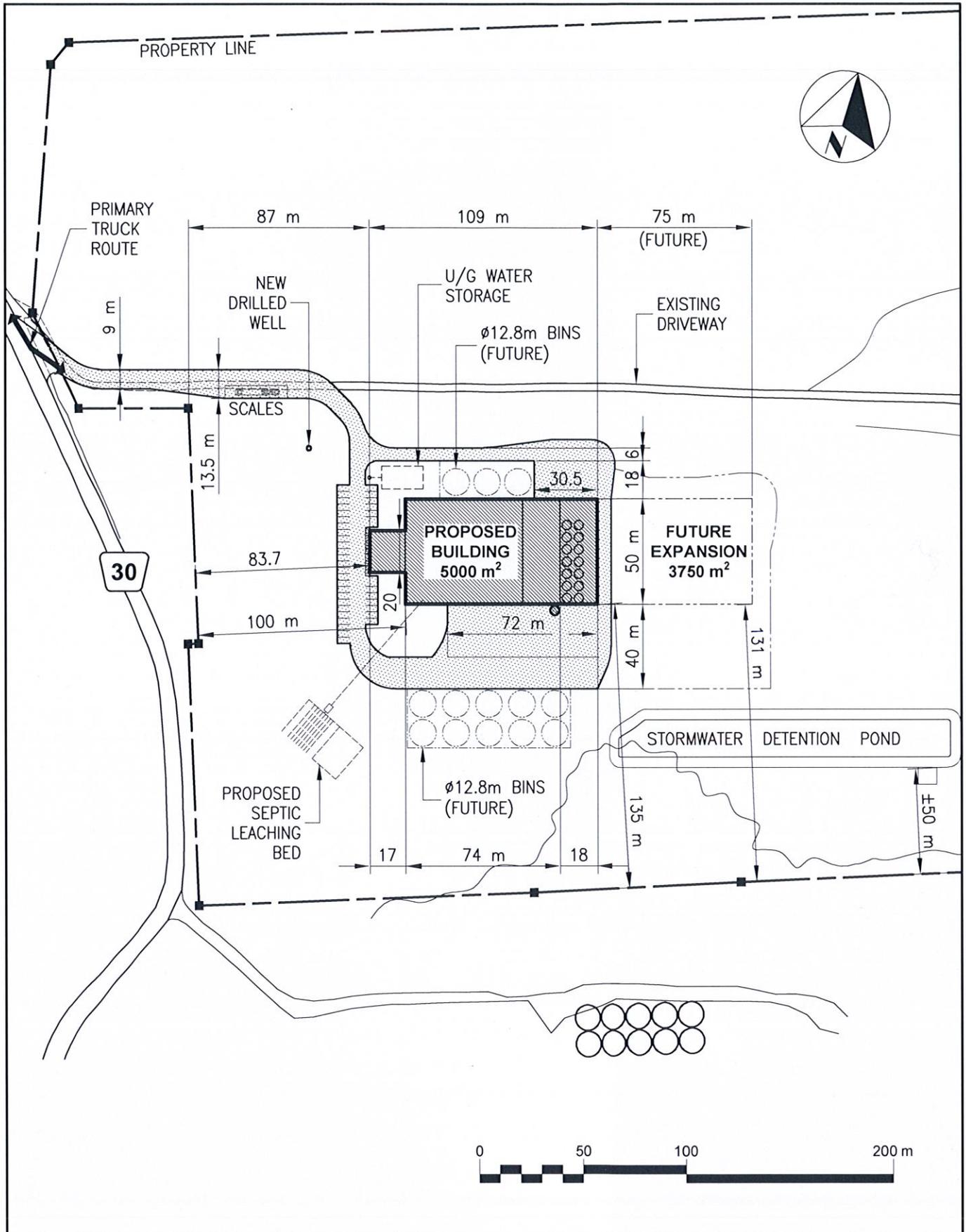
title:  
**PROPOSED**  
**OVERALL SITE PLAN**



date: 19DEC19    job no. 19-066    scale: 1:6000

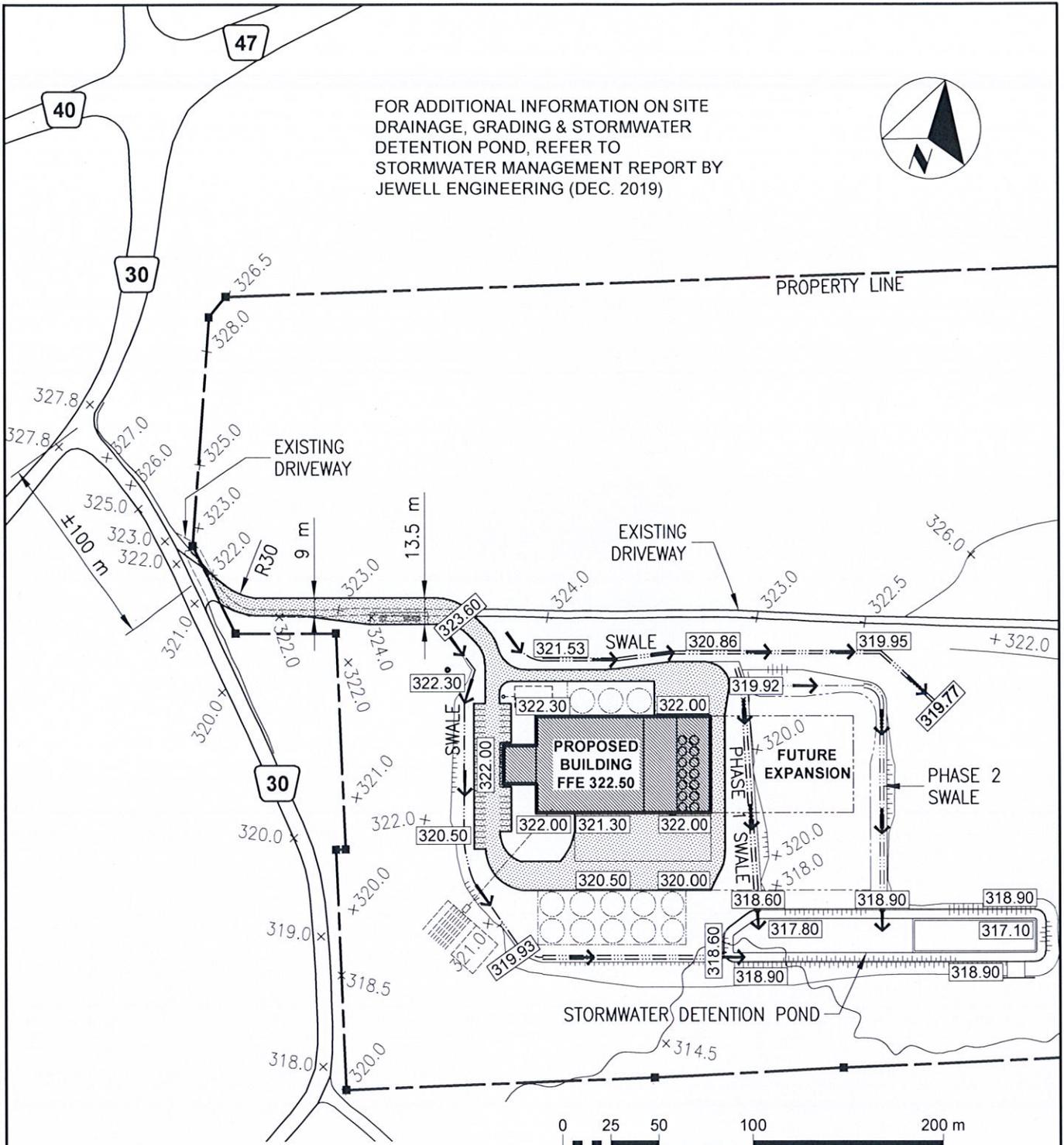
project: PORT ROYAL MILLS - 3469 York Durham Line

dwg. no. 19-066 Z2



|                                       |         |                                    |  |  |  |
|---------------------------------------|---------|------------------------------------|--|--|--|
| customer:                             |         | title:                             |  |  <b>Lassing Dikken<br/>Consulting Engineers Ltd</b> |  |
| Mr K. Petrovich<br>GRAINBOYS HOLDINGS |         | <b>PROPOSED<br/>PART SITE PLAN</b> |  |  |  |
| date:                                 | job no. | scale:                             | project:                                 | dwg. no.   |  |
| 19DEC19                               | 19-066  | 1:2500                             | PORT ROYAL MILLS - 3469 York Durham Line | 19-066 Z3  |  |

FOR ADDITIONAL INFORMATION ON SITE  
DRAINAGE, GRADING & STORMWATER  
DETENTION POND, REFER TO  
STORMWATER MANAGEMENT REPORT BY  
JEWELL ENGINEERING (DEC. 2019)



TOPOGRAPHIC INFORMATION OBTAINED FROM:  
GRAHAM JENKINS  
DELPH & JENKINS NORTH LTD.  
File No. 19279 - October 2019

**LEGEND**

- x 322.50 DENOTES EXISTING GRADE
- 318.29 DENOTES PROPOSED GRADE
- (ALL ELEVATIONS IN METRES)

customer:  
Mr K. Petrovich  
GRAINBOYS HOLDINGS

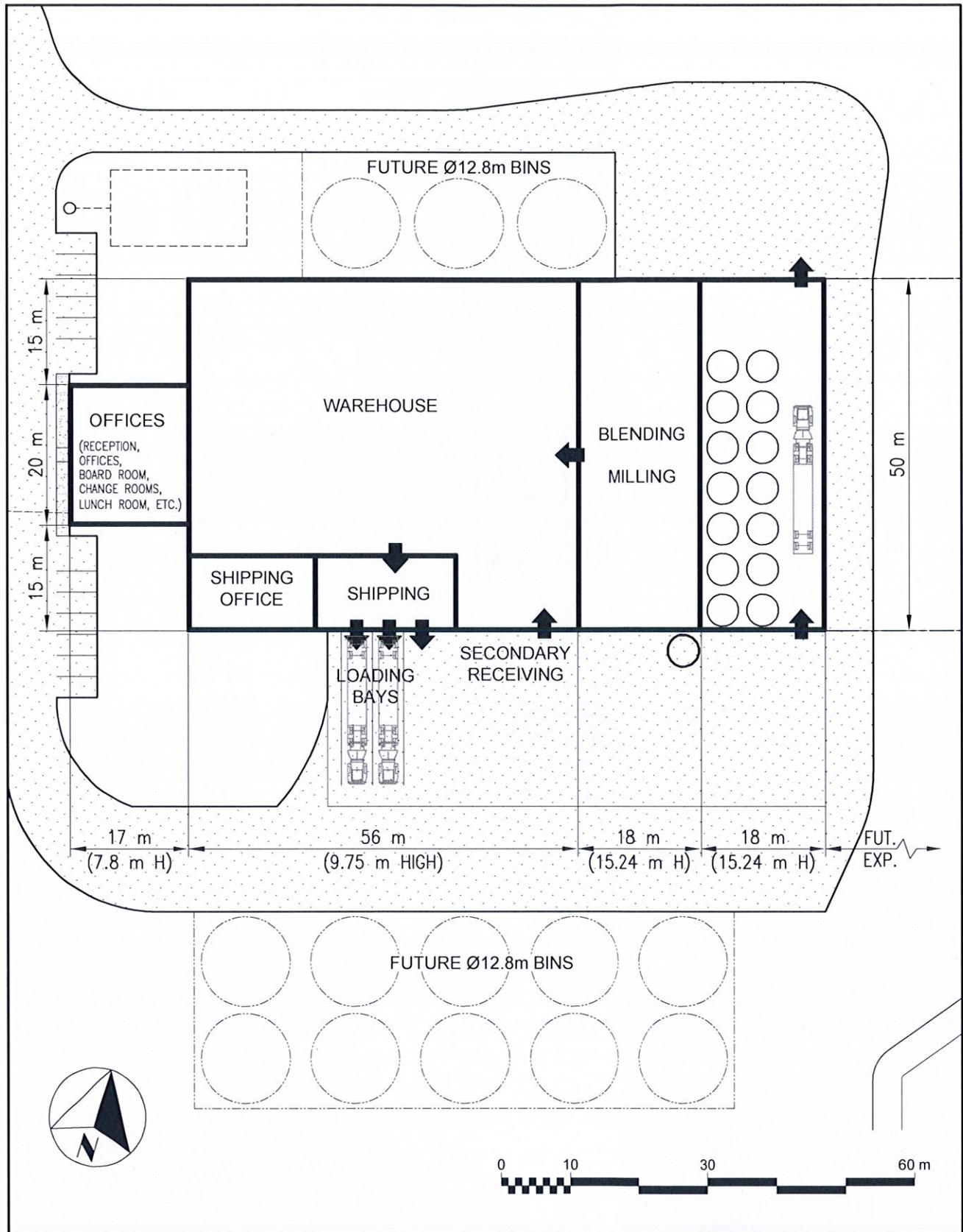
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**PROPOSED  
PART SITE GRADING PLAN**



date: 19DEC19    job no. 19-066    scale: 1:3000

project: PORT ROYAL MILLS - 3469 York Durham Line

dwg. no. 19-066 Z4



customer:  
**Mr K. Petrovich**  
**GRAINBOYS HOLDINGS**

title:  
**PRELIMINARY**  
**FLOOR PLAN**

 **Lassing Dikken**  
**Consulting Engineers Ltd**

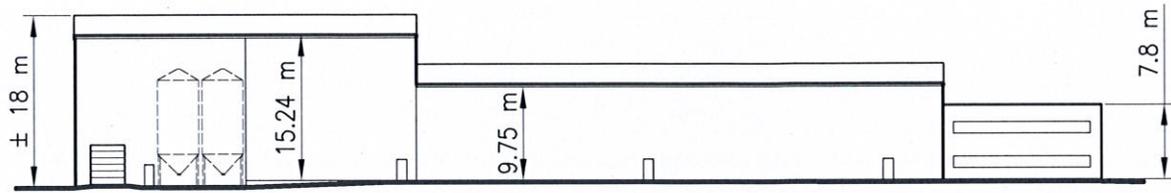
date:  
**19DEC19**

job no.  
**19-066**

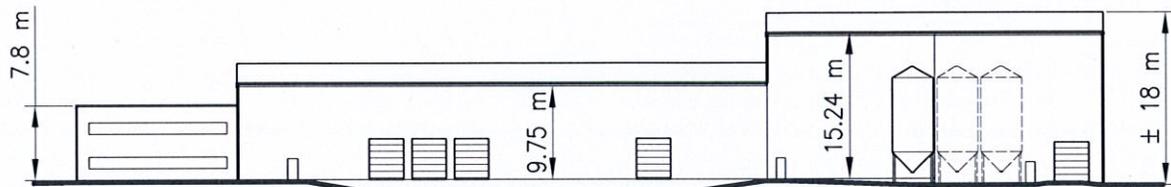
scale:  
**1:750**

project:  
**PORT ROYAL MILLS**

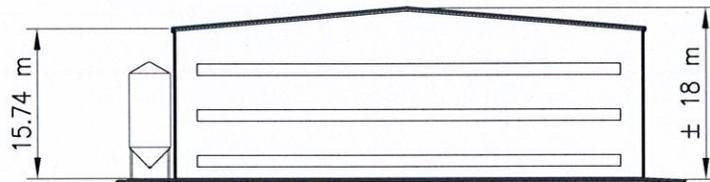
dwg. no.  
**19-066 Z5**



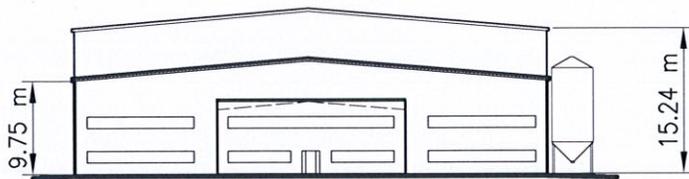
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION



|  |                   |                 |  |  |  |
|--|-------------------|-----------------|--|--|--|
| customer:<br>Mr K. Petrovich<br>GRAINBOYS HOLDINGS |                   |                 | title:<br><b>PRELIMINARY<br/>BUILDING ELEVATIONS</b> |  |  <b>Lassing Dibben<br/>Consulting Engineers Ltd</b> |
| date:<br>19DEC19                                   | job no.<br>19-066 | scale:<br>1:750 | project:<br>PORT ROYAL MILLS                         |  |  |