


# Notice of Alteration Form



File No. : <b>6193.00</b>	Environment Act Licence No. : <b>Pending</b>
Legal name of the Licencee: 7317434 Manitoba Ltd.	
Name of the development: <b>Crystal Spring Colony - Wastewater Lagoon</b>	
Category and Type of development per Classes of Development Regulation: Waste Treatment and Storage                      Wastewater treatment lagoons	
Licencee Contact Person: Victor Kleinsasser Mailing address of the Licencee: Box 10 City: Ste. Agathe                      Province: Manitoba                      Postal Code: R0G 1Y0 Phone Number: (204) 433-2511      Fax:                      Email: victor@crystalspringhb.com	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Burns Maendel Consulting Engineers Ltd. (BMCE)	
Phone: (204) 728-7364 Fax:	Mailing address: 903 Rosser Ave, Brandon, MB R7A 0L3
Email address: a.haigh@bmce.ca	
Short Description of Alteration ( <i>max 90 characters</i> ): Primary cell revised to accommodate extended trickle discharge period.	
Alteration fee attached:    Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
If No, please explain: No fee required for alterations proposed prior to the issuance of a License.	
Date: 2024-04-16	Signature:  Printed name: Ashley Haigh, P.Eng.
<p>A complete Notice of Alteration (<b>NoA</b>) consists of the following components:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Cover letter</b></li> <li><input checked="" type="checkbox"/> <b>Notice of Alteration Form</b></li> <li><input checked="" type="checkbox"/> <b>1 hard copy and 1 electronic copy of the NoA detailed report</b> (see "<a href="#">Information Bulletin - Alteration to Developments with Environment Act Licences</a>")</li> <li><input type="checkbox"/> <b>\$500 Application fee, if applicable</b> (Cheque, payable to the Minister of Finance)</li> </ul>	
<p><b>Submit the complete NoA to:</b> Director, Environmental Approvals Branch Manitoba Environment and Climate 14 Fultz Blvd Winnipeg, Manitoba R3Y 0L6 <a href="mailto:EABDirector@gov.mb.ca">EABDirector@gov.mb.ca</a></p> <p><b>For more information:</b> Phone: (204) 945-8321 Fax: (204) 945-5229 <a href="https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html">https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html</a></p>	
<p><b>Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an <a href="#">Environment Act Proposal Form</a> (see "<a href="#">Information Bulletin – Environment Act Proposal Report Guidelines</a>")</b></p>	

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April 16, 2024

Environmental Approvals Branch  
Manitoba Environment, Climate and Parks  
Box 35 - 14 Fultz Boulevard  
Winnipeg MB R3Y 0L6

**Reference: Notice of Alteration Report  
Domestic Wastewater lagoon  
Municipality of Armstrong, MB**

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Dear Director,

Burns Maendel Consulting Engineers Ltd. would like to submit a Notice of Alteration Report for the proposed domestic wastewater lagoon in the Rural Municipality of Armstrong on behalf of Crystal Spring Colony Farms Ltd. The volume of the primary cell for the proposed lagoon has been increased to accommodate inflows during the extended trickle discharge period and additional trees will be planted to improve the slight lines around the lagoon.

All the information relating to the Notice of Alteration has been compiled in the attached document. One (1) electronic PDF copy has been submitted. If you have any questions or comments, please feel free to contact the undersigned.

Regards,



**ES** ENGINEERS  
GEOSCIENTISTS  
MANITOBA

Certificate of Authorization  
Burns Maendel Consulting  
Engineers Ltd.

Environmental Approvals Branch  
Manitoba Environment, Climate and Parks  
Box 35 - 14 Fultz Boulevard  
Winnipeg MB R3Y 0L6

## **Notice of Alteration Report**

**Crystal Spring Colony New Development**  
**SE 28-18-03 EPM**

Submitted by:

Burns Maendel Consulting Engineers Ltd.  
903 Rosser Ave.  
Brandon, MB R7A 0L3  
Tel: 204.728.7364  
Fax: 204.728.4418

On behalf of:

7317434 Manitoba Ltd.  
Crystal Spring Colony Farms Ltd.  
Municipality of Armstrong  
Box 10  
St Agathe, MB R0G 1Y0

April 16, 2024



### **Standard Limitations**

This report was prepared by Burns Maendel Consulting Engineers Ltd. (BMCE) for the account of Crystal Spring Colony Farms Ltd., 7317434 Manitoba Ltd. (the Client). The disclosure of any information contained in this report is the sole responsibility of the Client. The material in this report reflects BMCE's best judgment in light of the information available to it at the time of preparation. Should this report be used by a third party, any reliance or decisions made based on this report are the responsibility of such third party. BMCE accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report. BMCE makes no representation concerning the legal significance of the findings or the information contained within this report.

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## 1. Introduction and Background

Crystal Spring Colony (7317434 Manitoba Ltd.) retained BMCE to aid in the site planning for a daughter colony. This includes the design of a new domestic wastewater lagoon and corresponding environmental approvals.

Following the generation and submission of an Environment Act Proposal (EAP) for the new lagoon, prior to approval, BMCE noted that the proposed primary lagoon cell was not adequately sized to accommodate inflows during the extended trickle discharge period. Additional tree plantings have also been added to the drawings for improved sight lines.

BMCE has revised the lagoon design to account for these revised volumes.

## 2. Description of Proposed Changes

### 2.1. Sealed Engineering Drawings

BMCE has revised the detailed drawing set for the lagoon siting plan, site layout, lagoon plan view, section views and details. Sealed engineering drawings detailing the revised wastewater lagoon sizing and additional tree planting locations have been included in Appendix A.

### 2.2. Lagoon Design

The following sections provide information on changes to the design considerations, assumptions, and methods used in the lagoon design.

#### 2.2.1. Primary Cell Design (Organic Loading)

The area outlined in Table 1 was determined at the active storage depth in the lagoon using the 56 kg BOD<sub>5</sub>/ha/d and the additional volume required for trickle discharge. This represents a depth of 0.6 m from the high-water level or 0.9 m from the bottom of cell which will represent the average water depth in the lagoon throughout the year.

**Table 1 – Primary Cell Design Summary**

Parameter	Result
Top of Berm Dimensions – L x W (m)	83 x 130.3
Floor Dimensions – L x W (m)	63 x 110.3
Area at Average Active Storage Depth (m <sup>2</sup> )	8,248
Organic Treatment Capacity Provided (kg BOD <sub>5</sub> / d)	46.2
Organic Loading Rate (kg BOD <sub>5</sub> / d)	26.1
Organic Treatment Volume Required (m <sup>3</sup> )	5,597
Trickle Discharge Additional Volume Required (m <sup>3</sup> )	4,303
Total Cell Volume Required (m <sup>3</sup> )	9,900
Volume Provided (m <sup>3</sup> )	9,908

### 2.2.2. Secondary Cell Design (Hydraulic Loading)

The total active storage volume provided for the secondary cells was calculated using the volume of the secondary cell plus half of the volume of the primary cell (without additional trickle discharge volume), per *Manitoba Sustainable Development's Design Objectives for Wastewater Treatment Lagoons*.

**Table 2 – Secondary Cell Design Summary**

Parameter	Result
Top of Berm Dimensions – L x W (m)	83 x 273
Floor Dimensions – L x W (m)	63 x 253
Secondary Cell Volume Provided (m <sup>3</sup> )	21,954
Primary Cell Volume Provided (m <sup>3</sup> )	2,799
Total Active Storage Provided (m <sup>3</sup> )	24,753
Hydraulic Capacity Provided (m <sup>3</sup> /d)	107.6
Hydraulic Loading (m <sup>3</sup> /d)	107.6

### 2.3. Facility Operation

Based on the loading calculations, BMCE anticipates a second discharge *will* be necessary in a typical operating year, at full build-out.

## 3. Changes to the Existing Environment in the Project Area

There are no changes to the existing environment in the project area resulting from the changes to the lagoon volume. For details regarding the existing environment in the project area, please refer to the EAP submitted by BMCE on August 17, 2023.

## 4. Changes to the Possible Effects & Planned Mitigation of Proposed Development

Although the lagoon is expanding closer to the nearest non-colony residences, it is still 525m and 606m away, respectively, which is greater than the minimum 300m setback requirement in the *MECC Design Objectives for Wastewater Treatment Lagoons*.

The changes to the volume of the lagoon are not expected to make changes to human safety and health or the environment, therefore, no new mitigation measures will be implemented. For details of current mitigation measures, please refer to the EAP submitted by BMCE on August 17, 2023.

### 4.1. Human Health

Odour will only be a problem for short periods of time during the spring and *fall*.

#### **4.2. Reporting**

“A statement whether the effluent was used for golf course irrigation purposes, volumes, dates, and times of irrigation applications,” can be removed from this section.

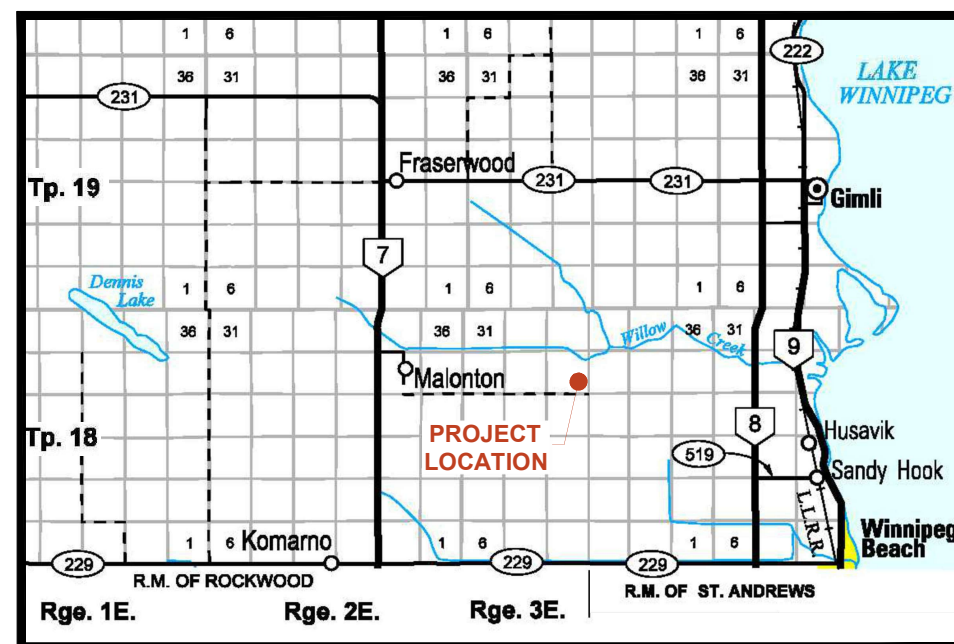




## Appendix A – Sealed Engineering Drawings



# 7317434 MANITOBA LTD DOMESTIC LAGOON DESIGN



SE 28-18-3 EPM  
RM OF ARMSTRONG  
MANITOBA

CIVIL DRAWINGS		
DWG NO.	DRAWING NAME	REV
C1.1	LAGOON SITING PLAN	1
C1.2	LAGOON SITE PLAN	1
C1.3	LAGOON PLAN VIEW	1
C3.1	LAGOON SECTIONS	1
C3.2	LAGOON DETAILS	0
C3.3	SECTIONS AND DETAILS	0

DATE

APRIL 16, 2024

PROJECT NO:

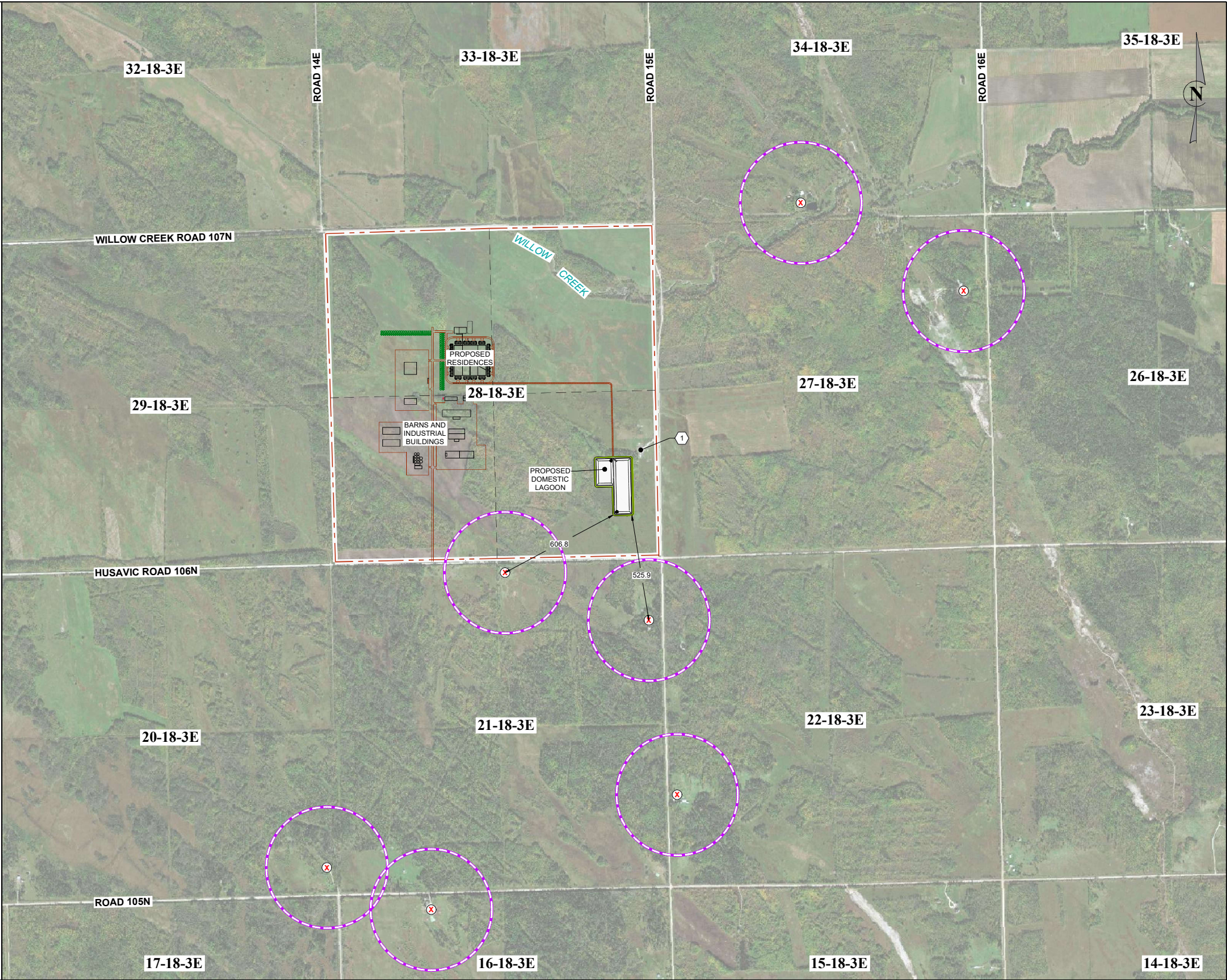
BMCE-21-011:35



LEGEND	
ADJACENT SINGLE RESIDENCE	(X)
SUBJECT SITE PROPERTY LINE	-----
300m SETBACK TO RESIDENCE	-----

KEYNOTES:

1 EXISTING ABANDONED RESIDENCE;  
OWNED BY 7317434 MANITOBA LTD.



1	APRIL 16, 2024	AH	CR	ISSUED FOR EAP NOTICE OF ALTERATION
0	AUGUST 17, 2023	AH	CR	ISSUED FOR EAP SUBMISSION TO MECF
NO.	DATE	APP.	BY	DESCRIPTION
REVISIONS				



DESIGNED BY:	REVIEWED BY:
KD	AH
DRAWN BY:	
CR	
PROJECT START DATE:	
JAN 12, 2023	
PLOT SIZE:	
A1 (594x841)	
SCALE:	
1:10,000	

PROJECT NAME:

7317434 MANITOBA LTD  
DOMESTIC LAGOON DESIGN  
SE 28-18-3 EPM, RM OF ARMSTRONG, MB

 **BURNS MAENDEL**  
CONSULTING ENGINEERS LTD.

903 Rosser Ave.  
Brandon, Manitoba  
R7A 0L3  
Tel: (204) 728-7364  
Fax: (204) 728-4418

DRAWING TITLE:	
LAGOON SITING PLAN	
PROJECT NUMBER:	DRAWING NO:
BMCE-21-011:35	C1.1



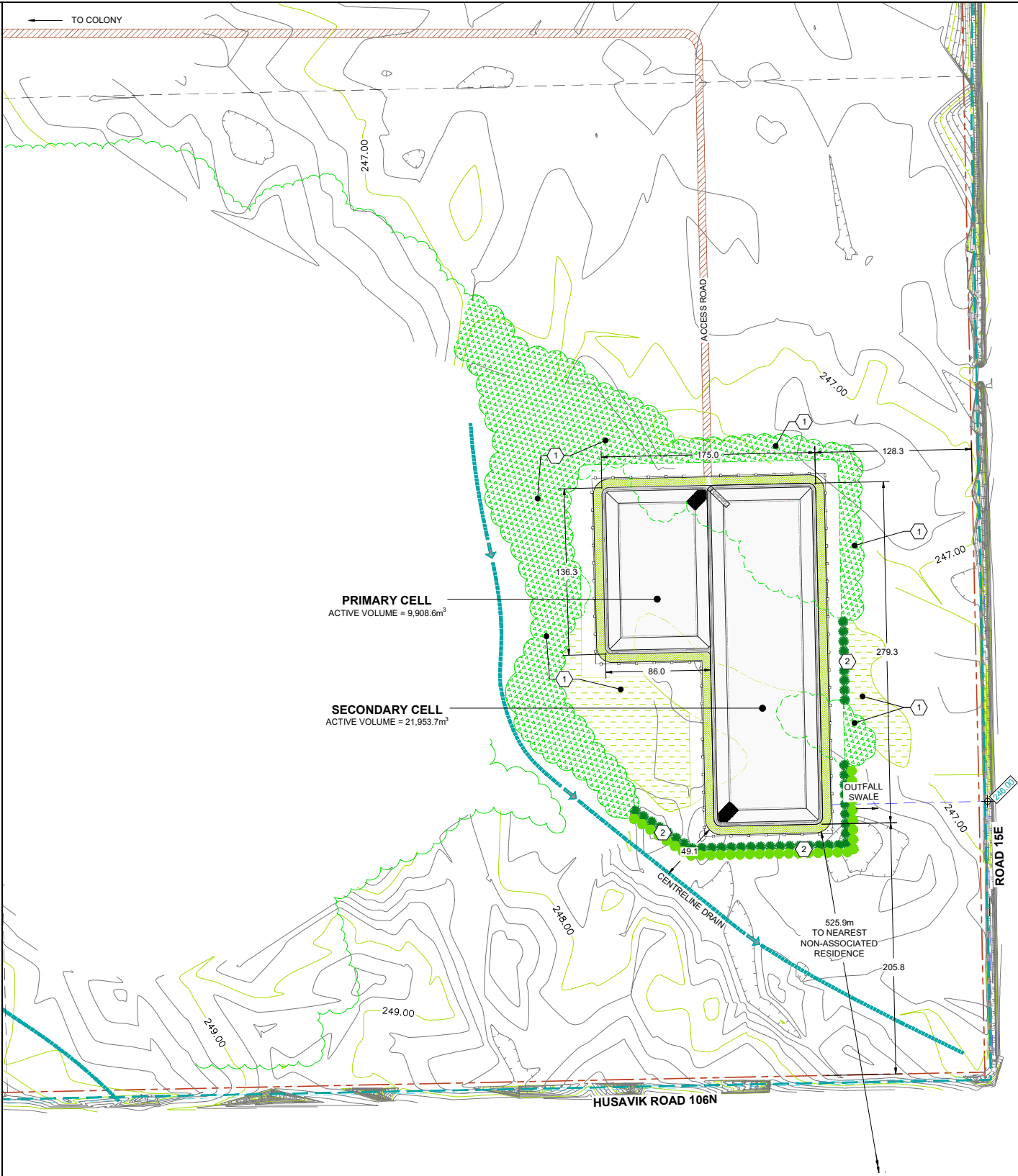
GENERAL NOTES

1. ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF.
2. EXISTING FEATURE LOCATIONS HAVE BEEN DERIVED FROM SURVEY INFORMATION COLLECTED BY BMCE ON MARCH 10, 11 & 12 2021, AND OCTOBER 5, 2022.
3. CADASTRAL PROPERTY LINE INFORMATION WAS OBTAINED FROM MANITOBA LAND INITIATIVE ON MARCH 5, 2021.
4. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
5. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF MANITOBA WATER SERVICES BOARD STANDARD CONSTRUCTION SPECIFICATIONS.

KEYNOTES:


- 1 TREED BUFFER TO BE MAINTAINED.
- 2 ADDITIONAL TREES TO BE PLANTED TO CREATE CONTINUOUS BUFFER OF TREES.
- MINIMUM TWO ROWS OF TREES REQUIRED WHERE NO TREES CURRENTLY EXIST, AS SHOWN.
  - MINIMUM ONE ROW OF TREES REQUIRED WITHIN THE SPARSELY TREE COVERED AREA, AS SHOWN.

LEGEND	
PROPERTY LINE	---
RIGHT OF WAY	---
QUARTER SECTION LINE	---
EXISTING GROUND ELEVATION	x 100.00
MAJOR CONTOUR (1.0m INTERVAL)	100.0
BUSH LINE	~ ~ ~
DENSE TREE COVER	▽▽▽▽▽▽▽▽
SPARSE TREE COVER	▽▽▽▽▽▽▽▽
MAJOR DRAINAGE ARROW	→
PROPOSED ELEVATION	x 100.00
PROPOSED GUTTER / DITCH	x 100.00
FENCE LINE	---



NO.	DATE	APP.	BY	DESCRIPTION
1	APRIL 16, 2024	AH	CR	ISSUED FOR EAP NOTICE OF ALTERATION
0	AUGUST 17, 2023	AH	CR	ISSUED FOR EAP SUBMISSION TO MECF
A	JAN 13, 2023	DAB	CR	ISSUED FOR CLIENT REVIEW AND COMMENT
REVISIONS				



DESIGNED BY: KD	REVIEWED BY: AH	PROJECT NAME: 7317434 MANITOBA LTD DOMESTIC LAGOON DESIGN SE 28-18-3 EPM, RM OF ARMSTRONG, MB		DRAWING TITLE:  LAGOON SITE PLAN	
DRAWN BY: CR					
PROJECT START DATE: JAN 12, 2023					
PLOT SIZE: A1 (594x841)		 <b>BURNS MAENDEL</b> CONSULTING ENGINEERS LTD.		PROJECT NUMBER: BMCE-21-011:35	
SCALE: 1:2000				DRAWING NO.: C1.2	
		903 Rosser Ave. Brandon, Manitoba R7A 0L3 Tel: (204) 728-7364 Fax: (204) 728-4418			

GENERAL NOTES

1. ALL DISTANCES ARE IN METRES AND DECIMALS THEREOF.
2. EXISTING FEATURE LOCATIONS HAVE BEEN DERIVED FROM SURVEY INFORMATION COLLECTED BY BMCE ON MARCH 10, 11 & 12 2021, AND OCTOBER 5, 2022.
3. CADASTRAL PROPERTY LINE INFORMATION WAS OBTAINED FROM MANITOBA LAND INITIATIVE ON MARCH 5, 2021.
4. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
5. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF MANITOBA WATER SERVICES BOARD STANDARD CONSTRUCTION SPECIFICATIONS.

CONSTRUCTION NOTES

1. ALL HDPE LINER TO BE 60MIL SINGLE SIDED TEXTURED HDPE UNDERLAIN BY 12oz NON WOVEN GEOTEXTILE FABRIC.

KEYNOTES

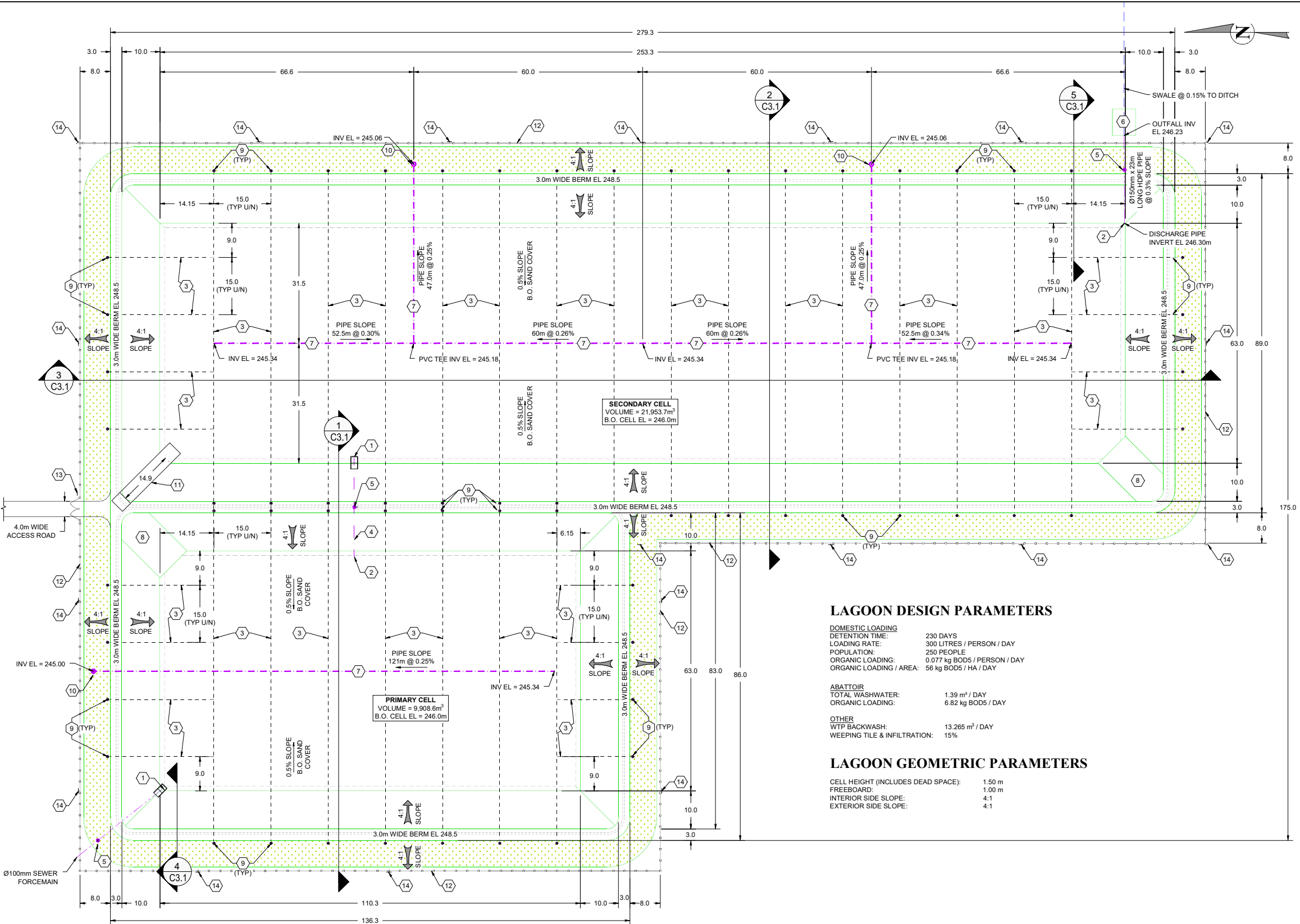
- 1 POLY-PLATE PIPE PENETRATION c/w 1800mm WIDE x 150mm THICK CONCRETE SPLASH PAD w/ 200mm HIGH CURB. SEE DETAIL.
- 2 POLY-PLATE PIPE PENETRATION. SEE DETAIL.
- 3 Ø150mm MULTI FLOW (OR APPROVED EQUAL) GAS VENTING AND DEWATERING PIPE SPACED @ 15.0m o/c U/N.
- 4 Ø150mm HDPE EQUALIZATION PIPE.
- 5 GATE VALVE.
- 6 OUTFALL c/w GEOTEXTILE FABRIC AND 3.0m x 3.0m CONCRETE GROUTED RIP RAP.
- 7 Ø100mm PVC COLLECTION PIPE (NON-PERFORATED).
- 8 10.0m WIDE ACCESS PAD c/w 300mm SAND COVER ON 12OZ GEOTEXTILE OVER HDPE LINER.
- 9 TRAP VENT COMPLETE w/ INSECT SCREEN. (TYP 52 LOCATIONS)
- 10 Ø400mm HDPE SUMP c/w WELDED END CAP AND LOCKABLE METAL LID.
- 11 4.0m WIDE BOAT ACCESS RAMP. (SEE SECTION)
- 12 PERIMETER FENCING, SEE DETAIL.
- 13 MAIN ENTRANCE SIGN, SEE DETAIL.
- 14 PERIMETER SIGN TO BE INSTALLED EVERY 50m; (19 LOCATIONS) SEE DETAIL.

NOTES FOR OPERATION

1. PRIOR TO DISCHARGING LAGOON, DEWATERING SUMP SHALL BE INSPECTED TO DETERMINE IF GROUND WATER IS PRESENT WITHIN THE SUMP.
2. IF GROUNDWATER IS PRESENT, PUMP SUMP UNTIL SUCH A TIME AS ALL GROUND WATER HAS BEEN REMOVED FROM SUMP.
3. MAINTAIN THE PUMPING OPERATION AS REQUIRED DURING THE LAGOON DISCHARGE AND SUBSEQUENT FILLING TO ENSURE THAT GROUNDWATER ELEVATION REMAINS BELOW THAT OF THE LAGOON BOTTOM AT ALL TIMES.

LEGEND

FENCE LINE	
GATE VALVE	
SUMP PIT	
TRAP VENT	
SANITARY MAIN	
COLLECTION PIPE	
MULTI-FLOW GAS VENTING	
CONCRETE	
SAND	
SOD	



LAGOON DESIGN PARAMETERS

DOMESTIC LOADING  
DETENTION TIME: 230 DAYS  
LOADING RATE: 300 LITRES / PERSON / DAY  
POPULATION: 250 PEOPLE  
ORGANIC LOADING: 0.077 kg BOD5 / PERSON / DAY  
ORGANIC LOADING / AREA: 56 kg BOD5 / HA / DAY

ABATTOIR  
TOTAL WASHWATER: 1.39 m³ / DAY  
ORGANIC LOADING: 6.82 kg BOD5 / DAY

OTHER  
WTP BACKWASH: 13.265 m³ / DAY  
WEEPING TILE & INFILTRATION: 15%

LAGOON GEOMETRIC PARAMETERS

CELL HEIGHT (INCLUDES DEAD SPACE): 1.50 m  
FREEBOARD: 1.00 m  
INTERIOR SIDE SLOPE: 4:1  
EXTERIOR SIDE SLOPE: 4:1

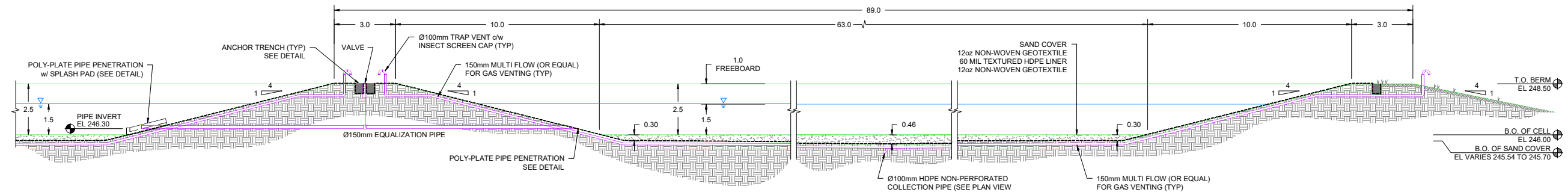


DESIGNED BY: KD  
REVIEWED BY: AH  
DRAWN BY: CR  
PROJECT START DATE: JAN 2023  
PLOT SIZE: A1 (594x841)  
SCALE: 1:500

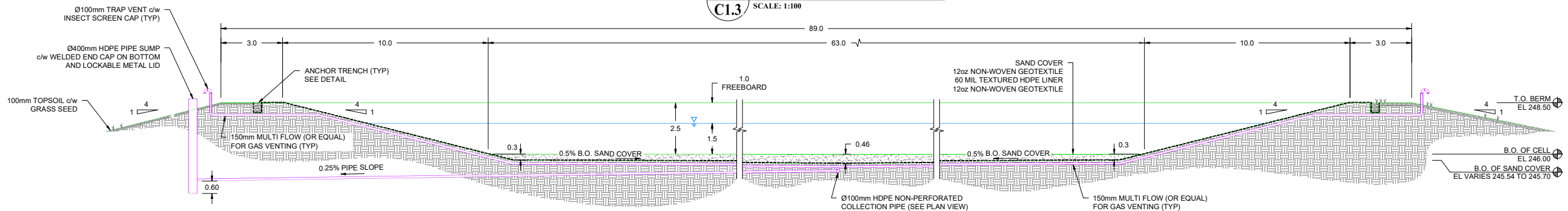
PROJECT NAME:  
7317434 MANITOBA LTD  
DOMESTIC LAGOON DESIGN  
SE 28-18-3 EPM, RM OF ARMSTRONG, MB  
BURNS MAENDEL  
CONSULTING ENGINEERS LTD.  
903 Rosser Ave.  
Brandon, Manitoba  
R7A 0L3  
Tel: (204) 728-7364  
Fax: (204) 728-4418

DRAWING TITLE:  
LAGOON PLAN VIEW  
PROJECT NUMBER:  
BMCE-21-011:35  
DRAWING NO:  
C1.3

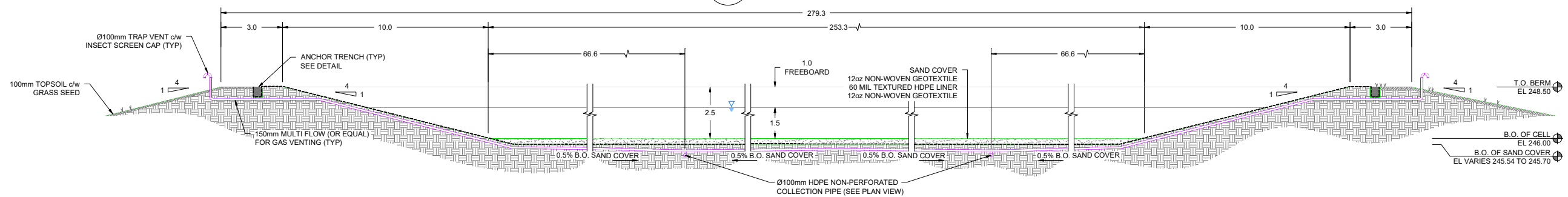
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0	AUGUST 17, 2023	AH	CR	ISSUED FOR EAP SUBMISSION TO MECP
NO.	DATE	APP.	BY	DESCRIPTION
REVISIONS				



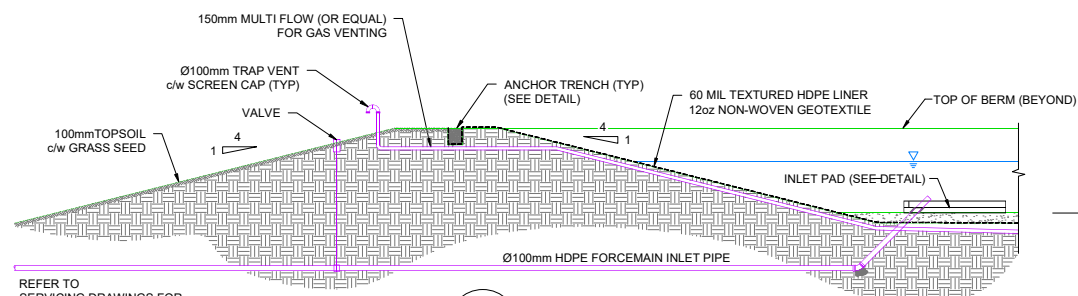
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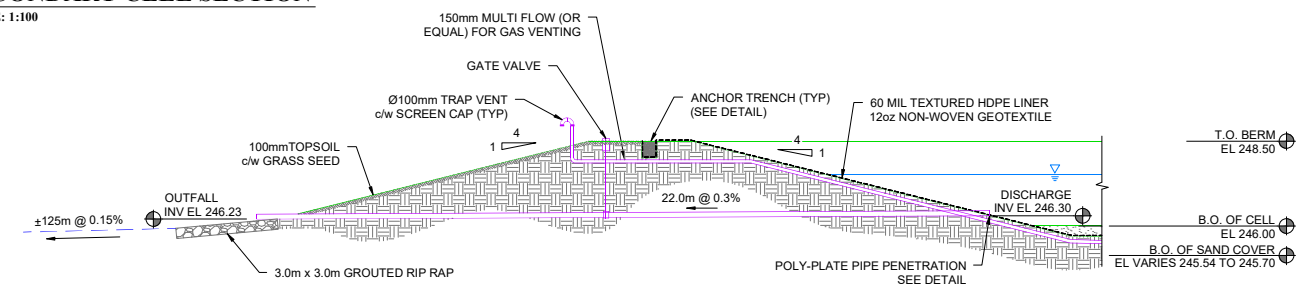
**2 SECONDARY CELL SECTION**  
C1.3 SCALE: 1:100



**3 SECONDARY CELL SECTION**  
C1.3 SCALE: 1:100



**4 INLET SECTION**  
C1.3 SCALE: 1:100



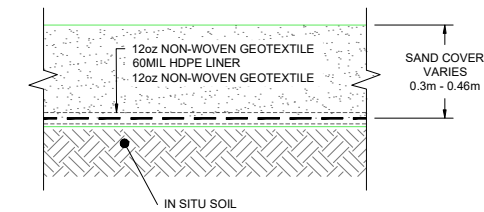
**5 OUTLET SECTION**  
C1.3 SCALE: 1:100

1	APRIL 16, 2024	AH	CR	ISSUED FOR EAP NOTICE OF ALTERATION
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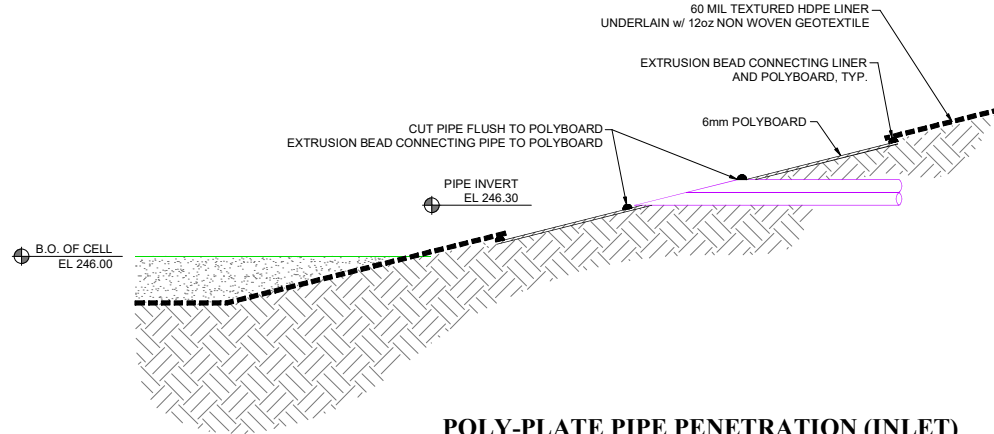


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DRAWN BY: CR	PROJECT START DATE: JAN 2023	PLOT SIZE: A1 (594x841)	PROJECT NUMBER: BMCE-21-011:35
SCALE: AS NOTED		903 Rosser Ave. Brandon, Manitoba R7A 0L3 Tel: (204) 728-7364 Fax: (204) 728-4418	DRAWING NO: C3.1

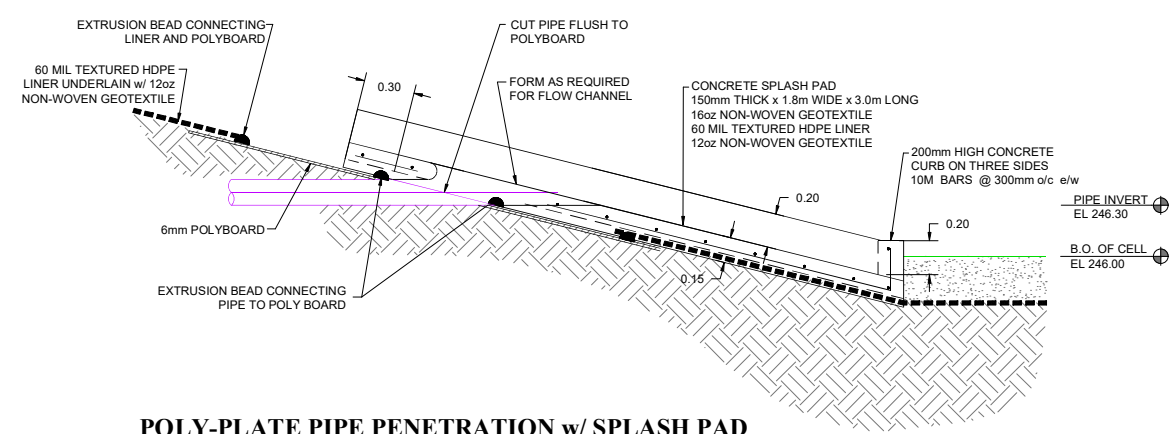




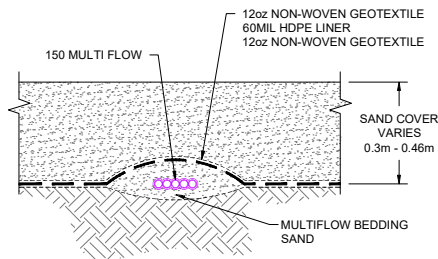
**TYPICAL SAND COVER DETAIL**  
SCALE: 1:10



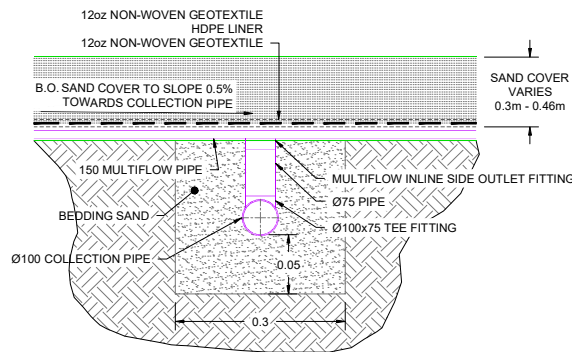
**POLY-PLATE PIPE PENETRATION (INLET)**  
SCALE: 1:20



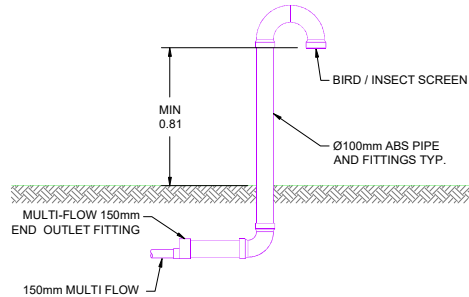
**POLY-PLATE PIPE PENETRATION w/ SPLASH PAD**  
SCALE: 1:20



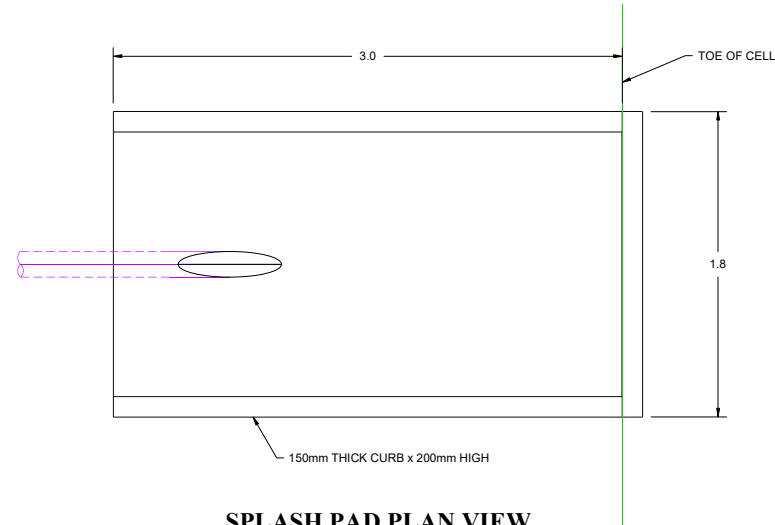
**MULTIFLOW PIPE DETAIL**  
SCALE: 1:10



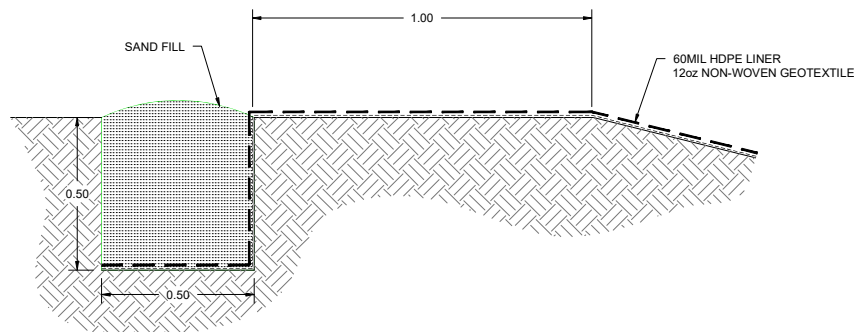
**COLLECTION PIPE DETAIL**  
SCALE: 1:10



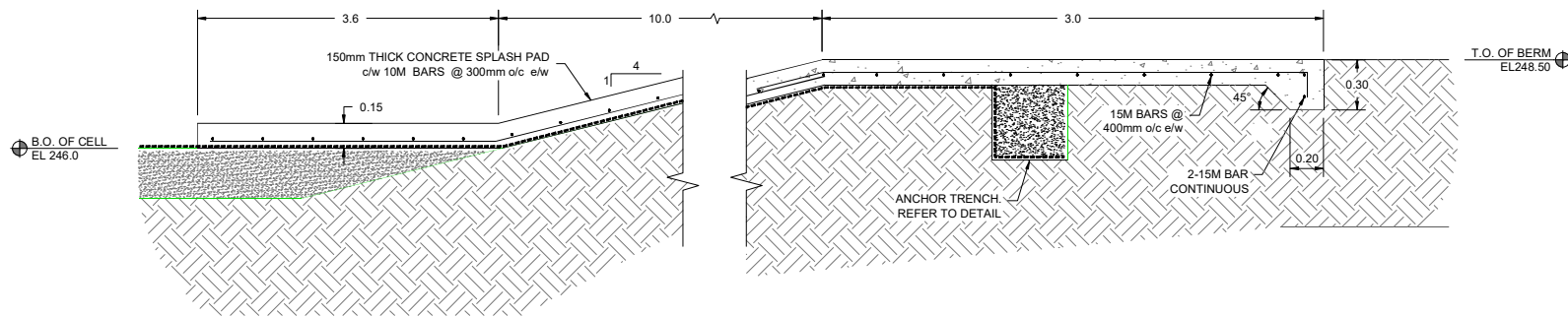
**TRAP VENT DETAIL**  
SCALE: 1:20



**SPLASH PAD PLAN VIEW**  
SCALE: 1:20



**LINER ANCHOR DETAIL**  
SCALE: 1:10

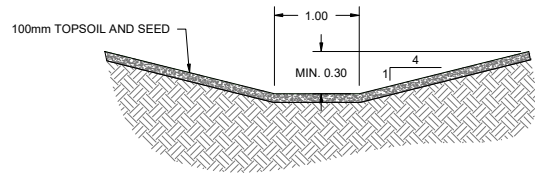


**BOAT ACCESS RAMP SECTION VIEW**  
SCALE: 1:20

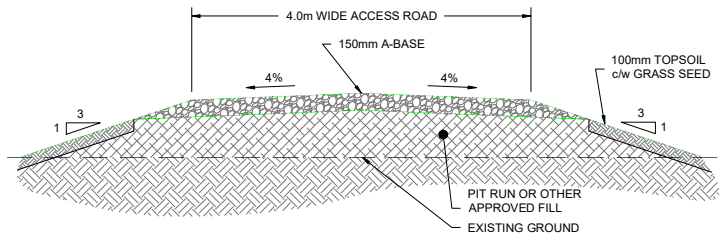
0	AUGUST 17, 2023	AH	CR	ISSUED FOR EAP SUBMISSION TO MECF
NO.	DATE	APP.	BY	DESCRIPTION
REVISIONS				



DESIGNED BY: KD	REVIEWED BY: AH	PROJECT NAME: 7317434 MANITOBA LTD DOMESTIC LAGOON DESIGN SE 28-18-3 EPM, RM OF ARMSTRONG, MB	DRAWING TITLE: LAGOON DETAILS
DRAWN BY: CR	PROJECT START DATE: JAN 2023	PLOT SIZE: A1 (594x841)	PROJECT NUMBER: BMCE-21-011:35
SCALE: AS NOTED		903 Rosser Ave. Brandon, Manitoba R7A 0L3 Tel: (204) 728-7364 Fax: (204) 728-4418 BURNS MAENDEL CONSULTING ENGINEERS LTD.	DRAWING NO: C3.2

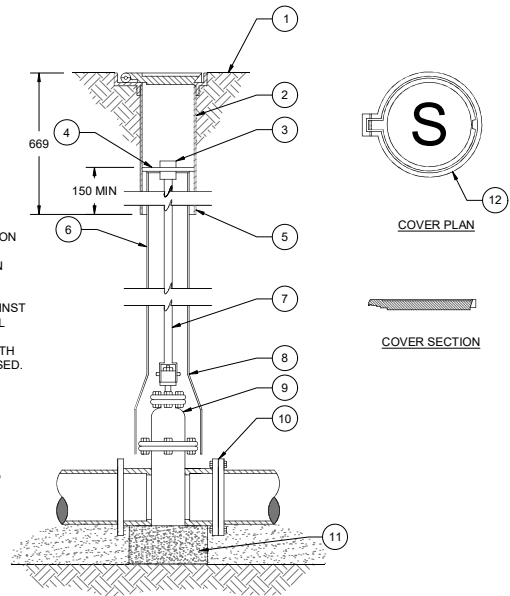


**TYPICAL DITCH / SWALE SECTION**  
SCALE: 1:40

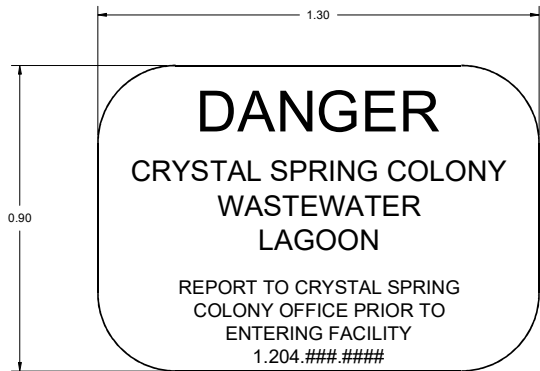


**ACCESS ROAD DETAIL**  
SCALE: 1:30

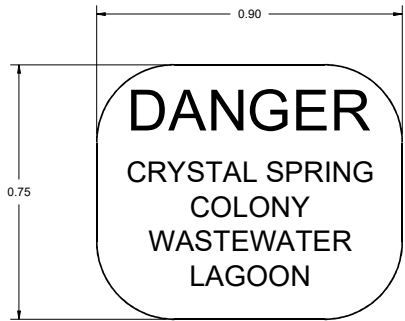
- (1) GRADE
- (2) DUCTILE IRON UPPER SECTION
- (3) 50mm SQUARE OPERATING NUT
- (4) STONE DISC
- (5) ADJUSTABLE VALVE BOX
- (6) PVC or DUCTILE IRON LOWER SECTION
- (7) MINIMUM 50mm SQUARE EXTENSION SPINDLE
- (8) VALVE BOX TO BE PROTECTED AGAINST LATERAL MOVEMENT DURING BACKFILL
- (9) AWWA C500 or C509 GATE VALVE WITH JOINTS COMPATIBLE TO PIPE BEING USED. (FLANGED & PUSH ON ARE SHOWN)
- (10) GASKET
- (11) 450x450x150 CONCRETE BLOCK PLACED ON UNDISTURBED SOIL
- (12) DUCTILE IRON COVER, MARKED "S" FOR SEWER.



**TYPICAL GATE VALVE DETAIL**  
SCALE: 1:10

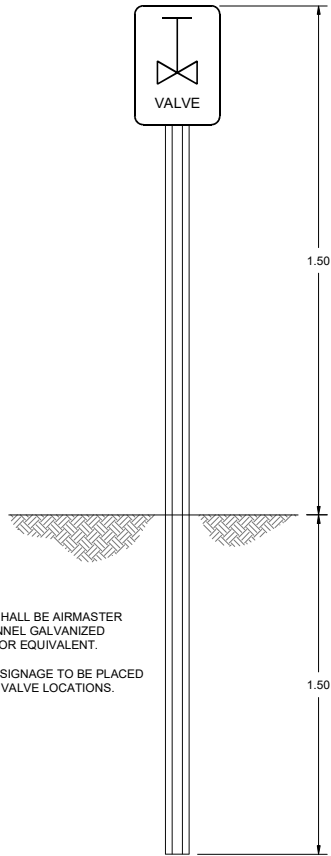


- NOTES:
- 1) MAIN ENTRANCE SIGNAGE TO BE ATTACHED AND INSTALLED WITH TWO 4x4 PRESSURE TREATED WOOD POSTS.
  - 2) SIGN TO BE CONSTRUCTED OF ALUMINUM AIR MASTER QUALITY OR APPROVED EQUAL.

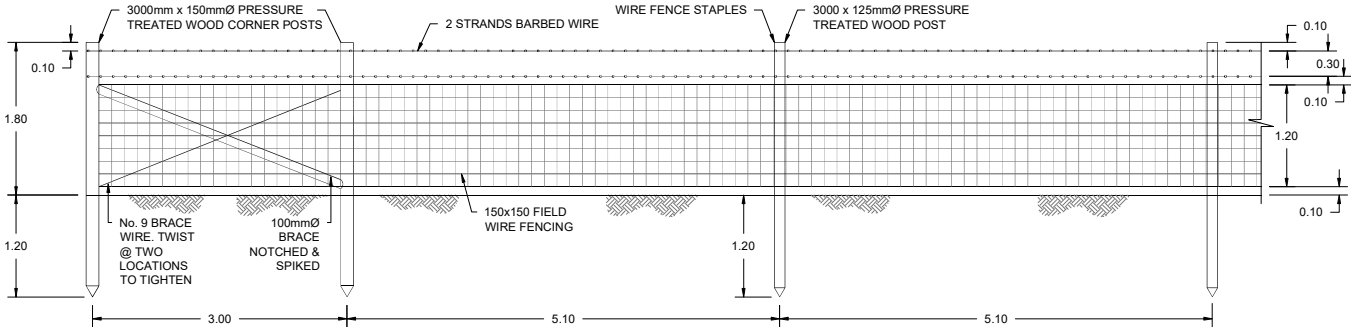


- NOTES:
- 1) PERIMETER SIGNAGE TO BE SECURED TO PERIMETER FENCE POSTS EVERY 50m AROUND ENTIRE FACILITY.
  - 2) SIGNS TO BE CONSTRUCTED OF ALUMINUM AIR MASTER QUALITY OR APPROVED EQUAL.

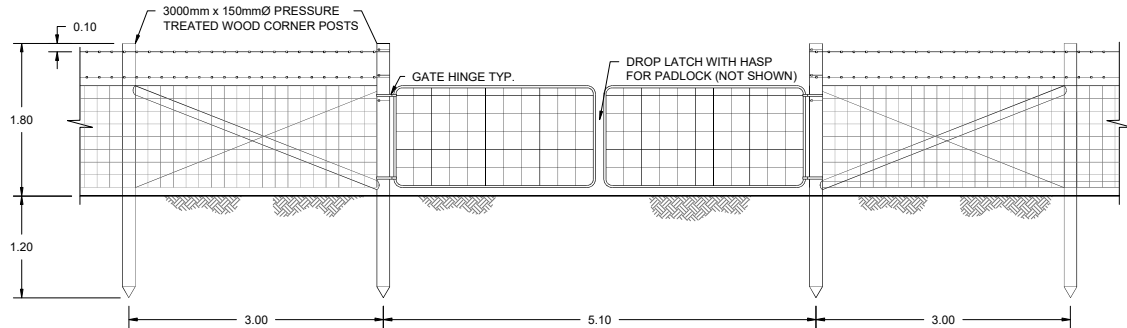
**SIGNAGE DETAILS**  
SCALE: N.T.S.



- NOTES:
- 1) POST SHALL BE AIRMASTER U-CHANNEL GALVANIZED STEEL OR EQUIVALENT.
  - 2) VALVE SIGNAGE TO BE PLACED AT ALL VALVE LOCATIONS.



**PAGE WIRE FENCE DETAIL**  
SCALE: N.T.S.



**PAGE WIRE FENCE GATE DETAIL**  
SCALE: N.T.S.

0	AUGUST 17, 2023	AH	CR	ISSUED FOR EAP SUBMISSION TO MECF
NO.	DATE	APP.	BY	DESCRIPTION
REVISIONS				



DESIGNED BY:	REVIEWED BY:
KD	AH
DRAWN BY:	
CR	
PROJECT START DATE:	
JAN 2023	
PLOT SIZE:	
A1 (594x841)	
SCALE:	
AS NOTED	

PROJECT NAME:	7317434 MANITOBA LTD DOMESTIC LAGOON DESIGN SE 28-18-3 EPM, RM OF ARMSTRONG, MB
BURNS MAENDEL CONSULTING ENGINEERS LTD.	903 Rosser Ave. Brandon, Manitoba R7A 0L3 Tel: (204) 728-7364 Fax: (204) 728-4418

DRAWING TITLE:	SECTIONS AND DETAILS
PROJECT NUMBER:	BMCE-21-011:35
DRAWING NO:	C3.3