

The Town of Plympton-Wyoming
546 Niagara Street
Wyoming, ON
N0N 1T0

July 2, 2025

Your Worship and Councillors:

Re: Fieldview Estates Drain

In accordance with your instructions, M. Gerrits Consulting Inc. has undertaken an examination of the private tile on Part of Lot 15, Concession 1, in the Town of Plympton-Wyoming.

Authorization Under the Drainage Act

This Engineer's Report has been prepared, under Section 4 of the Drainage Act, as per the petition of an affected landowner with the Area Roll Number (ARN) 383536000200120 (Fieldview Estates Inc.). The requesting landowner does not have a legal outlet for the water generated on their lands. The area requiring drainage was reviewed by the Engineer and in M. Gerrits Consulting Inc.'s opinion, the petition is valid.

On Site Meeting

A site meeting was held on December 20, 2024, at 402 Broadway Street in the Town of Plympton-Wyoming.

The following attended the meeting:

Elizabeth Cummings – Town of Plympton-Wyoming
Councillor Van Klaveren – Town of Plympton-Wyoming
M. Gerrits – M. Gerrits Consulting Inc.
Roger Burma – Landowner
Rob Johnson – Landowner
Ben McNalley – Landowner
Don McNalley – Landowner
Glen Miller – Landowner (Representing the County of Lambton)
Matt Pasut – Landowner
Kevin Tizzard – Landowner

- M. Gerrits completed a brief overview of the Drainage Act.
- M. Gerrits confirmed the petition for drainage was valid under Section 4(1) of the Drainage Act as the requesting landowner does not have a legal outlet for the water generated on their lands.

- M. Gerrits informed all present that Fieldview Estates Inc. (Fieldview Estates) was currently completing a Closed Circuit Television (CCTV) inspection of the private drain, and that the costs of the flushing and CCTV inspection would be borne by Fieldview Estates, since it was not completed under the Drainage Act.
- M. Gerrits informed all present that the pipe is an older concrete tile that was installed privately, and not under the Drainage Act. The capacity of the drain is limited by one flat section between Station 0+188 and Station 0+348, and that the capacity of the existing drainage system will be less than a standard municipal storm sewer, which is designed to convey the 2-year design storm.
- M. Gerrits informed all present that the lands owned by Fieldview Estates was scheduled for development, and that the landowner requires a legal outlet for their storm water drainage.
- M. Pasut of C.R. Creative Co Ltd. informed all present that storm water generated on their site, was directed to the Broadway Street (County Road 21) roadside ditch and not to the drain. Michal Gerrits states he will review the C.R. Creative Co Ltd. site plan, and determine if the lands are in the watershed.
- R. Johnson informed all present that the last section of pipe across the W. M. Johnson Construction Ltd. pastures was replaced with a 450mm HDPE tile.
- R. Johnson informed all present that the existing drain was located below the office of 1838089 Ontario Ltd. (W. M. Johnson Construction Ltd.).
- M. Gerrits informed all present that a new drain would need to be realigned around the office of W. M. Johnson Construction Ltd.
- The benefiting landowners all stated that the existing drain adequately services their lands, and that they preferred to keep the existing private drain. Landowners felt the existing drain could be repaired, and if necessary realigned around the office of W. M. Johnson Construction Ltd.
- M. Gerrits informed all present that the drain is undersized for future developments, and that landowners will likely have to retain additional water on their sites as part of any future storm water management plan.
- M. Gerrits informed all present that the private tile is an older concrete tile, and that at any point in the future, any landowner on the drain can request the drain be improved to a higher standard, and a new report would be required.
- R. Burma (Fieldview Estates) suggested that M. Gerrits review the CCTV videos and if possible consider incorporating the private drain into a new drain report. Fieldview Estates would cover the costs of the CCTV review.
- Most benefiting landowners voiced concerns that the proposed drain improvement only benefits the Fieldview Estates lands, since they do not currently have drainage problems. M. Gerrits informed all present that currently, lands within the private drain's watershed

do not have a legal outlet for water, with the exception of the lands owned by W.M. Johnson Construction Ltd.

- M. Gerrits informed all present that he will review the CCTV information, and schedule a second meeting to review the conditions of the drain and options to move forward.

Second Meeting

A site meeting was held on April 3, 2025 at the Town of Plympton-Wyoming municipal office. The following attended the meeting:

Elizabeth Cummings – Town of Plympton-Wyoming

M. Gerrits – M. Gerrits Consulting Inc.

Roger Burma – Landowner

Rob Johnson – Landowner

Ben McNalley – Landowner

Don McNalley – Landowner

Matt Pasut – Landowner

Steven Porter – Landowner

- M. Gerrits reviewed the finding of the CCTV inspections. It was determined that the drain between Station 0+000 (Stonehouse Drain) and the junction box at Station 0+067 was in good shape. It was a 450mm Dia. HDPE pipe. The drain between the junction box at Station 0+067 and the catch basin at Station 0+188 was a 350mm Dia. concrete tile, was in poor shape, and could not be inspected due to obstructions. The drain between the catch basin at Station 0+188 and the catch basin at Station 0+348, was a 350mm Dia. concrete tile, was in good shape with some minor longitudinal cracking, and had damaged and obstructed laterals. The drain between the catch basin at Station 0+348 and the catch basin at Station 0+494, was a 300mm Dia. concrete tile, was in good shape, and had some minor longitudinal cracking, and obstructed laterals. The last section of tile at Station 0+494 had some minor deterioration that appeared to be limited to the surface.
- Landowners were informed the C.R. Creative Co Ltd. property did not appear to be in the watershed.
- Landowners were made aware that although the concrete tile appears to be in good shape, it is an older tile and may need to be repaired or replaced in the future.
- Landowners were made aware that any improvements will not be beneath the office of W.M. Johnson Construction Ltd.

- Landowners were made aware that if their lands are changed and a site plan is required, the capacity of the existing tile may require landowners to store additional water on their land, similar to what Fieldview Estates is required to do under their site plan agreement. Typically storm sewers are designed to convey the 2-year design storm, and it is estimated that the 2-year design storm would require a pipe between 750mm Dia. and 900mm Dia, depending on grades etc.
- Landowners were made aware if the private tile is incorporated into a drain, the report would only include the existing tile and proposed realignment, and future improvements would require a new report.

After the meeting, M. Gerrits met with R. Burma and R. Johnson to review an alignment in the field. The proposed alignment will be located between the edge of pavement and the fence on the W. M. Johnson Construction Ltd. lands.

Existing Conditions and Investigation

The Fieldview Estates Inc. lands is an undeveloped lot in the Town of Plympton-Wyoming that utilizes a private drain, on the west limit of their property, to outlet their storm water. As part of the site plan agreement, Fieldview Estates Inc. is required to have a legal outlet for their water, and have petitioned for drainage.

M. Gerrits Consulting Inc. inspected and surveyed the drain, and determined the drain's watershed. The original drain was a concrete drain. The date the drain was installed is unknown. The drain commences at the Stonehouse Drain on the lands with the ARN 383536000200135 (W.M. Johnson Construction Ltd.). The drain extends 67m in a northerly direction to a junction box. The drain is a 450mm Dia. HDPE pipe with a 0.15% grade and is in good condition. The date the drain was replaced is unknown. The drain then extends 97m in a northerly direction to a catch basin on the lands with the ARN 383536000200130 (Ron Canton Ltd.). The drain is a 350mm Dia. concrete tile and is in poor condition, is obstructed and is located under the office of W.M. Johnson Construction Ltd. The drain then extends 160m in a northerly direction, to a catch basin on the lands with the ARN 383536000200125 (Advantage Farm equipment Ltd.). The drain is a 350mm Dia. concrete tile with a 0.05% grade, and is in good condition with some minor longitudinal cracking. The drain then extends 146m in a northerly direction, to a catch basin on the lands with the ARN 383536000200120 (Fieldview Estates Inc.), and is in good condition with some isolated surface damage at Station 0+493.

Drain Classification

The Ontario Ministry of Agriculture, Food Affairs (OMAFRA), Agricultural mapping indicates that the downstream Stonehouse Drain is currently rated as a Class C drain.

Recommendations

M. Gerrits Consulting Inc. recommends that a new drain report be prepared for a drainage works to be known as the Fieldview Estates Drain, across part of the south east 1/4 of Lot 15, Concession 1 in the Town of Plympton-Wyoming. The report includes the following:

- The private drain between the Stonehouse Drain (Station 0+000) and JB1 (Station 0+067), and the private drain between CB4 (Station 0+188) and CB6 (Station 0+494) shall be incorporated into this report.
- The private drain between JB1 (Station 0+067) and CB4 (Station 0+188) shall remain as a private drain for the abutting landowner.
- Install a new 450mm Dia. HDPE closed drain from Station 0+067 and Station 0+188 c/w connections and structures.
- Provide future maintenance specifications for the drain.
- Prepare Schedules of Maintenance for the drain.

Design

The drainage works between Station 0+067 and Station 0+188 has been designed to maintain/improve the capacity of the system.

Maximum allowable stormwater release rates for each parcel of land within the watershed were calculated. The calculations were based on the limited capacity of the existing tile drain; however, landowners will be required to complete internal stormwater management for their lands as part of any future site plan approvals. The release rates for the benefiting landowners upstream of Station 0+188 (CB4) are governed by the minimal pipe grade between Station 0+188 and 0+348. Benefiting lands will be permitted to release stormwater into the drain at the following rates:

Fieldview Estates Inc. (ARN – 383536000200120) = 3.57 L/s

R. Johnson (ARN – 383536000200110) = 12.75 L/s

Advantage Farm Equipment Ltd. (ARN – 383536000200125) = 6.89 L/s (Interim Flow CB6-CB54)
9.35L/s (Total Allowable Flow CB5-CB4)

Ron Canton Ltd. (ARN – 383536000200130) = 5.54 L/s (Interim Flow CB5-CB4)
26.42L/s (Total Allowable Flow CB4-CB3)

1838089 Ont. Ltd. (ARN – 383536000200135) = 3.88 L/s (Interim Flow CB4 -CB3)
3.91 L/s (Interim Flow CB3 -CB2)
15.41 L/s (Total Allowable Flow JB1-Stonehouse Drain)

Note: The flows on the lands with the ARN 383536000200135 between CB4 and CB2 can be combined to one outlet upstream of JB1

Approvals

All construction will be completed in accordance with the applicable Conservation Authority permits.

Estimate of Cost

It is recommended that the work be carried out in accordance with the accompanying specification of work and profile, that form a part of this report. An Estimate of Cost has been prepared in the amount of \$89,659, which includes engineering fees and an inspection allowance.

A plan has been prepared, which shows the location of the work and the approximate drainage area. A profile has been prepared, which shows the depths and grades of the proposed work.

Assessment

As per Section 21 of the Drainage Act, a Schedule of Assessment for the lands and roads affected by the Fieldview Estates Drain has been prepared.

Lands, roads, buildings, utilities, or other structures that are increased in value or are more easily maintained as a result of the construction, improvement, maintenance, or repair of a drainage works, may be assessed for benefit (Section 22).

Lands and roads that use the drainage works as an outlet, for which the drainage works are constructed or improved, an improved outlet is provided either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse, may be assessed for outlet. The assessment for outlet shall be based on the volume and the rate of flow of the water artificially caused to flow into the drainage works, from the lands and roads liable for such assessments. Outlet assessments are generally based on equivalent hectares (Eq. Ha) which are determined by the land use. Typical Ha to Eq. ha ratio are listed below:

Agricultural Lands – 1 Ha = 1Eq. Ha

Residential Lands (Lawns) – 1 Ha = 1.3

Residential Lands -2.0 Eq. Ha

Non-Agricultural Lands – 1Ha. = 2 Ha - 3 Eq. Ha

If, from any land or road, water is artificially caused by any means to flow upon and injure any other land or road, the land or road from which the water is caused to flow, may be assessed for injuring liability with respect to a drainage works, to relieve the injury so caused to such other land or road (Section 23).

The Engineer may assess for special benefit, any lands for which special benefits have been provided by the drainage works (Section 24). The CCTV review costs, and additional costs for the increased benefit to the petitioning lands, were assessed as a Section 24 to the landowner with the ARN 383536000200120, Fieldview Estates Inc.

All final costs included in the cost estimate of this report, including special benefits as identified above, shall be pro-rated based on the Schedule of Assessment.

The estimated cost of the drainage works has been assessed in the following manner:

- The drain has generally been assessed with 65% of the estimated cost assessed as a benefit assessment, and the remainder assessed as an outlet assessment to the upstream properties, based on equivalent hectares.

Allowances

Under Section 29 of the Drainage Act, the Engineer in his report shall estimate and allow in money to the Owner of any land that it is necessary to use for the construction or improvement of a drainage works, or for the disposal of material removed from drainage works. This shall be considered an allowance for right-of-way. Section 29 allowances have been provided under this report for right of way. Section 29 allowances are based on a land value of \$25,000.00 per acre (\$61,728.00 per hectare). The landowner with the ARN 383536000200140 was provided an allowance for the section of outlet pipe, from the north property lien of their lands to the Stonehouse drain.

Under Section 30 of the Drainage Act, the Engineer shall determine the amount to be paid to persons entitled for damage, if any, to ornamental trees, lawns, fences, land and crops occasioned by the disposal of material removed from a drainage works. This shall be considered an allowance for damages. Section 30 allowances will be provided under this report. Section 30 allowances are based on \$1,500.00 per hectare for the first year and \$750.00 for the second year (\$2,250.00 per hectare total).

Under Section 31 of the Drainage Act, where an existing drain that was not constructed on requisition or petition under this Act or any predecessor of this Act is incorporated in whole or in part in a drainage works, the engineer in the report shall estimate and allow in money to the owner of such drain or part the value to the drainage works of such drain or part and shall include such sum in the estimate of the cost of the construction, improvement, repair or maintenance of the drainage works. Section 31 allowances will be provided under this report. Section 31 allowances are \$7,207, and are based on the pro-rated costs of the existing concrete tile, and the HDPE tile.

Table of Allowances

Conc.	Lot	Roll	Owner	Section 29	Section 30	Section 31	Total
1	Pt. Lot 15	383536000200110	R. Johnson	827	226	362	1,415
	Pt. Lot 15	383536000200120	Fieldview Estates Inc.	1,241	75	362	1,678
	Pt. Lot 15	383536000200125	Advantage Farm Equipment Ltd.	3,426	500	599	4,525
	Pt. Lot 15	383536000200130	Ron Canton Ltd.	4,136	603	691	5,430
	Pt. Lot 15	383536000200135	1838089 Ontario Ltd.	5,802	656	5,193	11,651
	Pt. Lot 15	383536000200140	G. Feenstra	185	-	-	185
				\$ 15,617	\$ 2,060	\$ 7,207	\$ 24,884

Access and Working Area

Access to the drain shall be gained from private lanes, fence lines, property lines, and along the drain as listed below. Access to the working area along the private lanes, property lines and fence lines, shall be restricted to a width of 6m.

- Station 0+000 to Station 0+067 – 3m of land on the west side of the drain, and 17m of land on the east side of the drain.
- Station 0+067 to Station 0+163 – 6.25m of land on either side of the drain.
- Station 0+163 to Station 0+316 – 3m of land on the west side of the drain, and 17m of land on the east side of the drain.
- Station 0+316 to Station 0+494 – 3m of land on the east side of the drain, and 17m of land on the west side of the drain.

Restrictions

Following construction, no trees or shrubs shall be planted, nor shall permanent structures be erected within the working area without prior written permission of Council, unless otherwise specified in this report.

Attention is also drawn to Sections 80 and 82 of the Drainage Act, which refers to a landowner's responsibility regarding obstruction of a drainage works, the removal of obstructions in a drain, and the damage caused to a drain by an obstruction.

Agricultural Grant

Under Section 85 of the Drainage Act, a grant may be available for assessments against privately owned parcels of land which are used for agricultural purposes, and are eligible for the Farm Property Class Tax Rate. Section 88 of the Drainage Act directs the Municipality to make application for this grant upon certification of this drain. Landowners are made aware that OMAFA decides if lands listed as agricultural but are not tilled (farmed), are eligible for grant.

Maintenance

Upon completion of the work, the drainage works shall be repaired and maintained by the Town of Plympton-Wyoming, under the provisions of the Drainage Act, as per the applicable Schedule of Maintenance enclosed in this report, until said maintenance assessment is varied in accordance with the provisions of the Drainage Act. The Schedule of Maintenance is provided for the future maintenance of the drainage works, and is based on estimated costs. Any special restoration costs associated with restoring landscaping, or pavement, curbing, etc shall be assessed to the property as a special benefit.

Yours truly,

Michael Gerrits, P. Eng.
M. Gerrits Consulting Inc.

Handwritten:
M.G.
July 2, 2023
25-10



Fieldview Estates Drain
Town of Plympton-Wyoming
July 2, 2025

ESTIMATE OF COST

Item	Description	Quantity	Unit	Unit Rate	Total
1	Benchmark Loop and Confirmation of Existing Pipe Invert Elevations at JB1 & CB4	1	LS	300	300
2	Remove Topsoil and Stockpile for Restoration	570	sq.m.	3	1,710
3	Remove and Dispose of Asphalt	38	sq.m.	5	190
4	Remove, Stockpile and Reinstate Existing Horse Fence	1	L.S	550	550
5	Remove and Dispose of Tree (1) at CB4	1	L.S	250	250
6	Remove and Dispose of Trees (2) and Install New Tree (1) at Station 0+147 (Provisional)	1	L.S	550	550
7	Remove and Dispose of Ex CSP CB and Plug Lead (Station 0+167)	1	L.S	300	300
8	Connect Proposed Drain to JB1	1	L.S	450	450
9	Connect Proposed Drain to CB4	1	L.S	550	550
10	Supply and Install 450mm HDPE DR35 Storm Sewer c/w Bedding	121	m	155	18,755
11	Supply and Install CB2 (1200mm MH) c/w Flatt Top and Herringbone Grate and Regrading of Ditch	1	ea	2,250	2,250
12	Supply and Install CB3 (600mmX 600mm) c/w Flatt Top and Herringbone Grate and Regrading of Ditch	1	ea	2,250	2,250
13	Granular 'B' (Type II)	38	t	40	1,520
14	Granular 'A'	15	t	40	600
15	Asphalt (HL4 90mm Depth, 2 Lifts)	9	t	350	3,150
16	Dispose of Unsuitable Trench Material (Provisional)	10	cu.m.	8	75
17	Lawn Restoration	570	sq.m.	5	2,850
18	Work Around Trees	1	LS	100	100
19	Work Around Telephone Utility	1	LS	100	100
20	Work Around Gas Utility	1	LS	100	100
				Sub Total	\$ 36,600
				Allowances	\$ 24,884
				Miscellaneous	\$ 1,500
				Engineering	\$ 19,055
				CCTV Review	\$ 825
				Certification and Final Assessment Table	\$ 100
				Inspection, Tendering and Contract Administration (Allowance)	\$ 6,050
				Net HST	\$ 645
				Total Estimate	\$ 89,659

Fieldview Estates Drain
Town of Plympton-Wyoming
July 2, 2025

SCHEDULE OF ASSESSMENT

Conc.	Lot or Part	Affected Area (Ha.)	Roll No.	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)	Eq. Area (Ha.)
<u>Agricultural Lands</u>									
1	Pt. Lot 15	0.12	383536000200160	W. Lammers	-	-	85	85	0.1
	Pt. Lot 15	3.24	383536000200125	Advantage Farm Equipment Ltd.	-	7675	5757	13432	8.1
	Pt. Lot 15	4.42	383536000200110	R. Johnson	-	7675	3141	10816	4.4
	Pt. Lot 15	0.85	383536000200200	1838089 Ontario Ltd.	-	-	604	604	0.9
					-	15350	9587	24937	
Total Special Benefit					-				
Total Benefit					15,350				
Total Outlet					9,587				
Total - Agricultural Lands					24,937				
<u>Non-Agricultural Lands</u>									
1	Pt. Lot 15	1.237	383536000200120	Fieldview Estates Inc.	30,420	7675	2638	40733	3.71
	Pt. Lot 15	3.84	383536000200130	Ron Canton Ltd.	-	7675	6140	13815	8.64
	Pt. Lot 15	1.34	383536000200135	1838089 Ontario Ltd.	-	7675	1971	9646	2.77
**	Pt. Lot 15	1.34	383536000200140	G. Feenstra	-	-	-	-	-
	Pt. Lot 15	0.03	383536000200203	J. McCahill	-	-	28	28	0.04
	Pt. Lot 15	0.15	383536000200202	H. Hoeksema	-	-	140	140	0.20
	Pt. Lot 15	0.12	383536000200100	D. Timmington	-	-	112	112	0.16
	Pt. Lot 15	0.16	383536000200102	M. Nagle	-	-	227	227	0.32
					30,420	23,025	11,256	64,701	
Total Special Benefit					30,420				
Total Benefit					23,025				
Total Outlet					11,256				
Total - Non-Agricultural Lands					64,701				

Conc.	Lot or Part	Affected Area (Ha.)	Roll No.	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)	Eq. Area (Ha.)
<u>Public Lands</u>									
	Broadway Street (CR21)	0.03		County of Lambton	-	-	21	21	0.03
					-	-	21	21	

Note - ** Allowances provided to the landowner
for the lands on which the outlet pipe
is located

Total Special Benefit	-
Total Benefit	-
Total Outlet	21
Total - Public Lands	21
Total - Agricultural Lands	24,937
Total - Non-Agricultural Lands	64,701
Total - Public Lands	21
Total Assessment	\$ 89,659

Fieldview Estates Drain
Town of Plympton-Wyoming
July 2, 2025

SCHEDULE OF MAINTENANCE

For maintaining the Drain between Station 0+000 and Station 0+494). Any special restoration costs associated with restoring landscaping, or pavement, curbing, etc., shall be assessed to the property as a special benefit.

Conc.	Lot or Part	Affected Area (Ha.)	Roll No.	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)	Eq. Area (Ha.)
<u>Agricultural Lands</u>									
1	Pt. Lot 15	0.12	383536000200160	W. Lammers	-	-	108	108	0.1
	Pt. Lot 15	3.24	383536000200125	Advantage Farm Equipment Ltd.	-	3211	1789	5000	8.1
	Pt. Lot 15	4.42	383536000200110	R. Johnson	-	3211	1685	4896	4.4
	Pt. Lot 15	0.85	383536000200200	1838089 Ontario Ltd.	-	-	760	760	0.9
<u>Non-Agricultural Lands</u>									
1	Pt. Lot 15	1.237	383536000200120	Fieldview Estates Inc.	-	3211	1415	4626	3.71
	Pt. Lot 15	3.84	383536000200130	Ron Canton Ltd.	-	3211	1909	5120	8.64
	Pt. Lot 15	1.34	383536000200135	1838089 Ontario Ltd.	-	3211	317	3528	2.77
	Pt. Lot 15	0.03	383536000200203	J. McCahill	-	-	34	34	0.04
	Pt. Lot 15	0.15	383536000200202	H. Hoeksema	-	-	175	175	0.20
	Pt. Lot 15	0.12	383536000200100	D. Timmington	-	-	141	141	0.16
	Pt. Lot 15	0.16	383536000200102	M. Nagle	-	-	286	286	0.32
<u>Public Lands</u>									
	Braodway Street	0.03		County of Lambton	-	-	26	26	0.030
					-	16,055	8,645	24,700	
Total Maintenance Assessment					\$	24,700			

SPECIFICATION OF WORK

1. Scope of Work

The work to be included in this specification, includes the tile drain located on the south-east ¼ of Lot 15, Concession 1, in the Town of Plympton-Wyoming.

- Install a new 450mm HDPE tile c/w associated structures and connections.

2. Plans and Specifications

These specifications shall apply and be a part of the construction Contract. This Specification of Work shall take precedence over all plans and general conditions pertaining to the Contract. The Contractor shall provide all labour, equipment, and supervision necessary to complete the work as shown in the plans, and described in these specifications. Any work not described in these specifications, shall be completed according to the Ontario Provincial Standard Specifications (OPSS) and Standard Drawings (OPSD).

Any reference to the Owner contained in these Contract Documents, shall refer to the Town of Plympton-Wyoming, or the Engineer authorized by the Town of Plympton-Wyoming, to act on its behalf.

3. Health and Safety

The Contractor, at all times, shall be responsible for health and safety on the worksite, including ensuring that all employees wear suitable personal protective equipment, including safety boots and hard hats.

The Contractor shall be responsible to ensure that all procedures are followed under the Occupational Health and Safety Act, to ensure that work sites are safe, and that accidents are prevented. In the event of a serious or recurring problem, a notice of noncompliance will be issued. The Contractor will be responsible for reacting immediately to any deficiency, and correcting any potential health and safety risk. Continuous disregard for any requirement of the Occupational Health and Safety Act could be cause for a stop work order to be issued, or even termination of the Contract.

The Contractor shall also ensure that only competent workmen are employed onsite, and that appropriate training and certification is supplied to all employees.

4. Workplace Safety and Insurance Board

The Contractor hereby certifies, that all employees and officers working on the project are covered by the Contractor's benefits. The WSIB Clearance Certificate must be furnished prior to the execution of the Contract, and updated every 90 days.

5. Benchmarks

The benchmark locations are identified on the profile drawing. When these elevations are on existing structures that are to be replaced, the Contractor shall transfer the benchmark to a new location, prior to the removal of the structure.

The Contractor is required to complete a benchmark loop, prior to construction, to verify the benchmarks. If discrepancies exist, the Contractor must notify the Drainage Superintendent and Engineer, prior to completing any work.

6. Utility Locates

Prior to completing any works, the Contractor shall locate all utilities in the working area and forward the locations and elevations to the Drainage Superintendent and Engineer for review. Any conflicts with gas services water services, sanitary services and telephone services must be confirmed prior to construction to allow for the relocation of utilities or grade adjustments. The Contractor may be required to work around utilities.

7. Geotechnical Investigation

A geotechnical investigation has not been undertaken within the project limits.

8. Access and Working Area

Refer to the report for the access and working area requirements.

9. Abandon Existing Private Drain

The existing private tile drain shall be abandoned at Station 0+188 (CB4) and Station 0+067 (JB1).

Removals shall be in accordance with OPSS MUNI 510.

10. Removals

Removals shall be in accordance with OPSS MUNI 510. The steel, concrete and trees and stumps shall be disposed of offsite at the expense of the Contractor.

Removals shall be in accordance with OPSS MUNI 510.

Brushing and clearing shall be in accordance with OPSS MUNI 201.

11. Strip Existing Working Corridor (Station 0+067 to Station 0+188)

The existing working corridor shall be stripped of organic matter. Topsoil shall be stockpiled onsite. The material must be used as part of the final restoration.

Stripping shall be in accordance with OPSS 206.

12. Installation of Tile

The Contractor shall supply, install, and backfill the tile to the depths and grades as shown on the drawings. HDPE tile shall be smooth wall pipe (320 kPa), with bell and spigot joints.

An excavator must be used in areas of soil instability, unless approved by the Engineer. All tile joints shall be wrapped with a minimum 300mm width of Terrafix 270R (or approved equal) filter fabric. The filter fabric shall be overlapped by 450mm at the top of the tile. The tile shall be laid in straight lines or on smooth gradual curves with a minimum radius of 25 metres.

Laser control shall be used to ensure proper grades. The grades calculated on the profile drawing are to the invert of the tile, with allowances to be made by the Contractor for the wall thickness of the tile and pipe.

The tile trench may be excavated by means of a wheel machine or hydraulic excavator. Specifications for each are as follows:

Wheel Machine

A wheel machine can be used to excavate the trench, to allow for a round bottom. Prior to backfilling, the tile shall be covered manually to a depth of approximately 100mm over the pipe, to ensure that the tile and pipe are not displaced by large clumps of earth. The trench shall be backfilled with excavated material free of stones, broken tile, or other deleterious material. All stones larger than 100mm in diameter, evident immediately after construction, shall be picked up by the Contractor and disposed offsite. The landowners are responsible for stones after that. The excavated earth material shall be left windrowed over the trench, to allow for settlement.

Excavator

When tile is installed with an excavator, the tile must be properly bedded and installed as per the tile or pipe manufacture's recommendations. The bottom of the excavation shall be excavated to the required depth to allow for 100mm of granular bedding, with any over excavation backfilled with granular material or 3/4 inch clear stone. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with granular or clear stone from the bottom of the excavation to the springline of the pipe. Care shall be taken to ensure that the backfill on either side of the culvert does not differ by more than 300mm, so that the pipe is not displaced. The drain shall be backfilled from the springline to within 100mm of finished grade, with excavated material compacted to 95% standard proctor maximum dry density, in lifts not exceeding 250mm.

Note, that if excavated material is found unsuitable for backfill purposes, then granular material will be required as backfill. Unit prices shall be established in any tender for the disposal of the excavated material and the import of approved granular material, at the expense of the drainage works.

After the tile has been installed and backfilling operations are complete, the topsoil shall be spread to its original depth. All areas disturbed by construction shall be left in a condition suitable for seeding.

The section of drain within the W. M. Johnson Ltd. laneway shall be backfilled with Granular 'B' Type 2 material, as detailed on the drawings. The backfill shall be placed from the top of the bedding, to within 290mm of the finished grade. The top 240mm of the road shall be restored with 90mm of HL4 Asphalt and 150mm (min) of Granular 'A' material. Asphalt depths shall match the existing depths. All granular bedding and backfill material including any required fill below the culvert invert, shall be mechanically compacted to 95% standard proctor maximum dry density. The top Granular "B" material shall be mechanically compacted to 98% standard proctor maximum dry density, and the top 150mm of Granular "A" material shall be mechanically compacted to 100% standard proctor maximum dry density.

Laser control shall be used to ensure proper grades. The grades calculated on the profile are to the invert of the tile, with allowances to be made by the Contractor for the wall thickness of the tile and pipe.

The existing concrete tile can be maintained with a similar diameter HDPE tile.

13. Catch Basins

The and catch basins and catch basins shall be in accordance with the applicable OPSS and OPSD, and shall be installed to the elevations and locations shown on the drawings as follows:

Structure	Station	Dia. (mm)	Inlet (Grate) Elev. (m)	Inlet Pipe Elev. (m)	Outlet Pipe Elev. (m)
CB#2	0+090	1200	209.10	207.71 (N) (450mm)	207.71 (SW) (450mm)
CB#3	0+163	1200	209.14	207.81 (NW) (450mm)	207.81 (S) (450mm)

The catch basins shall be precast concrete structures as noted above. The structure shall have a flat top with a frame and herringbone grate in accordance with OPSD 400.0100.

The structures shall be made with the top sections separate from the base sections, in order to allow riser sections to be installed or removed as necessary (i.e. the base section shall not extend for more than 150mm above the top of the highest opening in the base section). The structures shall have a 600mm sump.

The structures shall be set at the final elevation, as directed by the Drainage Superintendent. The structure shall be set on a layer of clear stone. The clear stone shall be extended up to the springline of the inlet and outlet pipe connections.

Any tile connection to the structures shall be concreted on both the inside and outside, prior to backfilling. Any pipe or tile shall not protrude more than 50mm inside the wall.

14. Subsurface Drainage

The landowner is responsible to mark all of the tiles entering the drain. The landowner is responsible for all of the costs to maintain private tile outlets. Tile ends shall be repaired with equivalent sized, non perforated agricultural HDPE pipe.

15. Restoration

Restoration shall be in accordance with the following:

- HL4 asphalt to be 90mm in depth. The asphalt shall be placed in two lifts. If the existing asphalt thickness is greater than 90mm, additional asphalt will be placed at the direction of the Drainage Superintendent or Engineer.
- Granular 'A' to be 150mm in depth.
- Granular 'B' Type 2 to be 450mm in depth.
- Disturbed areas shall be restored with native topsoil and seed. Native topsoil is to match existing depths.

Seed

- The application rates are as follows:
 - a. Primary seed (85 kg/ha.) consisting of 50% red fescue, 40% perennial ryegrass and 5% white clover.
 - b. Nurse crop consisting of Italian (annual) ryegrass at 25% total weight.
 - c. Fertilizer (300 kg/ha.) consisting of 8-32-16.
- Hand seeding shall be spread on the affected areas on a daily basis with the seed mixture, fertilizer, and application rate as shown above.

Excavation shall be in accordance with OPSS MUNI 206.

Compaction shall be in accordance with OPSS MUNI 501.

Topsoil shall be in accordance with OPSS MUNI 802.

Seed shall be in accordance with OPSS MUNI 804.

Granular shall be in accordance with OPSS 1010.

Asphalt shall be in accordance with OPSS MUNI 310.

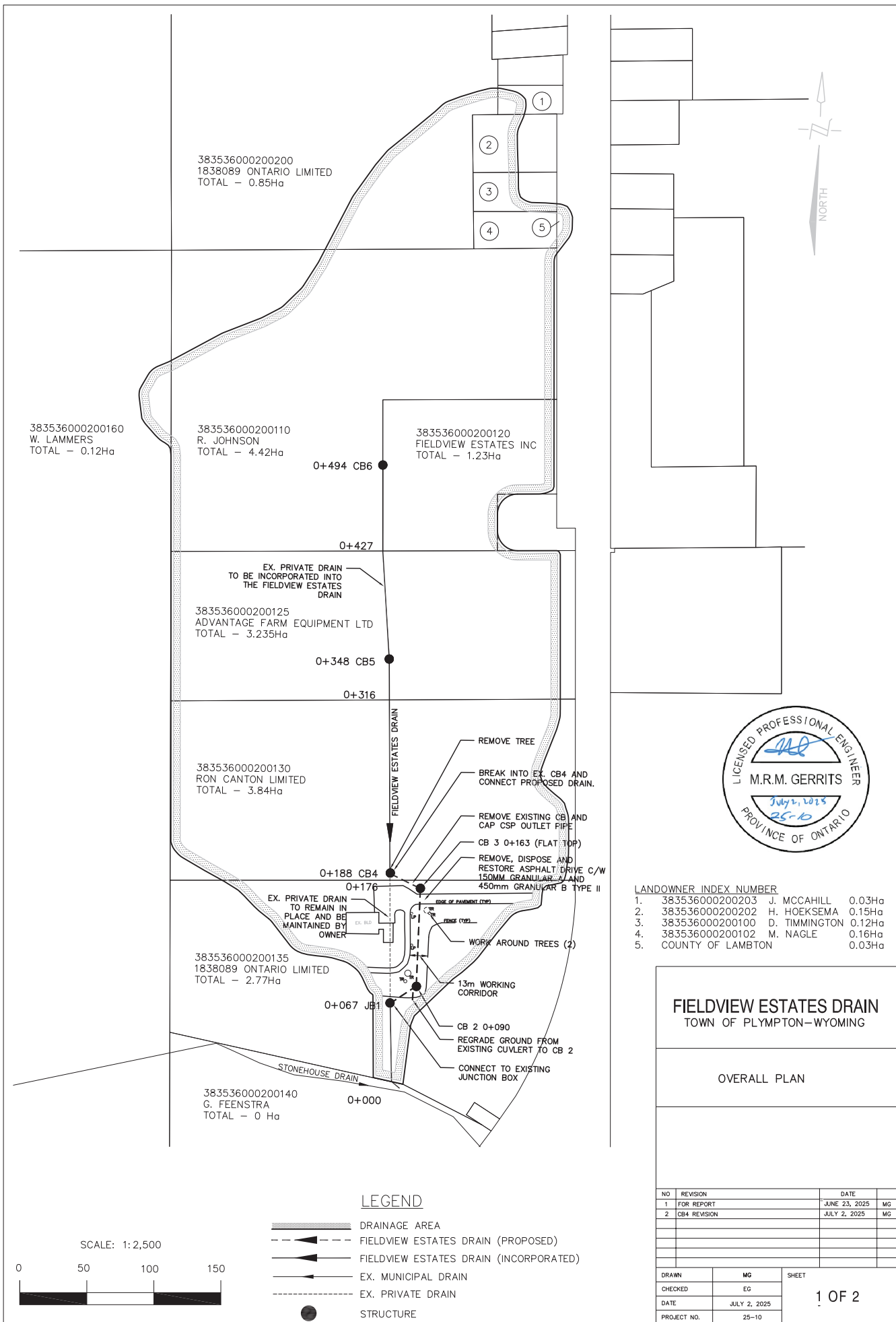
16. Fencing

The Contractor shall remove any cross fences necessary to carry out construction operations. Upon completion of the work, the fences shall be reconstructed using existing materials

17. Environmental Considerations

The Contractor shall take care to adhere to the following considerations.

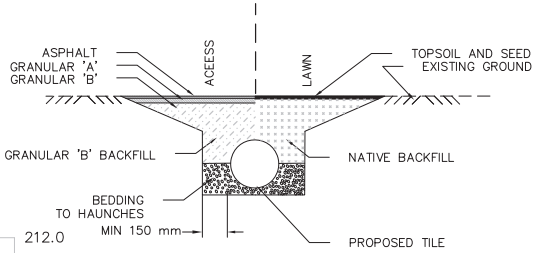
- All activities, including maintenance procedures, shall be controlled to prevent the entry of petroleum products, debris, rubble, concrete, or other deleterious substances into the water. Vehicle and equipment refuelling and maintenance, shall be conducted away from the channel, any surface water runs, or open inlets. All stockpiled material shall be stockpiled well back from any surface water runs, and open inlets that enter the drain.
- The work shall be completed in accordance with any required Conservation Authority permits.



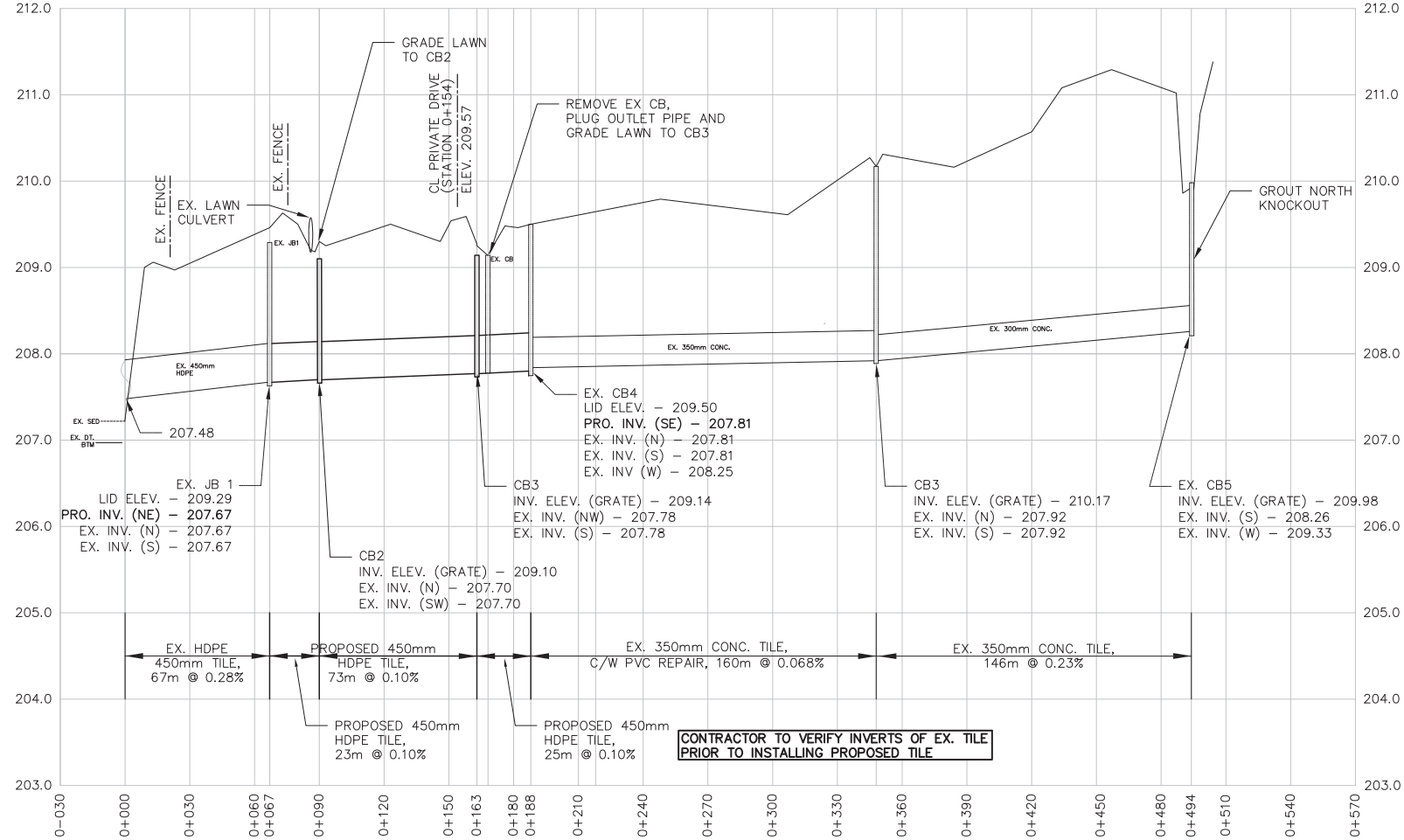
GENERAL NOTES

1. BENCHMARK #1 (PRIMARY BENCHMARK) ELEV. 210.62
TOP NUT OF THE HYDRANT +/-9m NORTH OF THE
W.M. JOHNSON CONSTRUCTION LTD. ENTRANCE AT
OIL HERITAGE ROAD.

2. CONTRACTOR TO COMPLETE A BENCH MARK LOOP TO
VERIFY THE ELEVATIONS. THE CONTRACTOR SHALL SET
THEIR OWN BENCHMARKS FOR THE DURATION OF CONSTRUCTION.
3. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST EXPOSE THE
EXISTING TILE AT JB1 (STATION 0+067) AND CB4 (STATION 0+168)
AND CONFIRM THE INVERTS OF THE PIPE ARE WITHIN 0.05m OF THE
PROPOSED ELEVATIONS. THE CONTRACTOR SHALL NOTIFY THE
ENGINEER OR DRAINAGE SUPERINTENDENT OF ANY DISCREPANCIES.



PROPOSED END SECTION
N.T.S.



NO	REVISION	DATE	BY
1	FOR REPORT	JUNE 23, 2025	MG
2	CB4 REVISION	JULY 2, 2025	MG

FIELDVIEW ESTATES DRAIN
TOWN OF PLYMPTON-WYOMING
PROFILE
STATION 0+000 - STATION 0+494

DRAWN	MG
CHECKED	EG
DATE	JULY 2, 2025
PROJECT NO.	25-10
SHEET	2 OF 2