

May 23rd, 2019

Corporation of the Town of Amherstburg
512 Sandwich Street South
Amherstburg, Ontario
N9V 3R2

Attention: Shane McVitty, P.Eng., Drainage Superintendent

Dear Shane:

COLCHESTER TOWNLINE DRAIN – SECTION 65 (7981 HOWARD AVENUE)

Project REI2018D034

Town of Amherstburg, County of Essex

1.0 Authorization

In accordance with the confirmation received from the Town on September 24th, 2018, we have made all of the necessary investigations and determinations for the preparation of a report, in accordance with Section 65 of the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010”. This report deals with a subsequent connection to the Colchester Townline Drain for the parcel owned by Joel Bezaire at 7981 Howard Avenue. This parcel is shown on the plans attached in **Appendix “REI-B”**.

Our appointment to deal with this request, where “If an owner of land that is not assessed for a drainage works subsequently connects the land with the drainage works for the purpose of drainage”, is in accordance with and pursuant to Section 65.(3) of the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010”. We have inserted herein a copy of Section 65 for reference purposes, labeled **Appendix “REI-A”**. We have therefore performed all of the necessary research, investigations, and review of all pertinent documentation, etcetera, for the carrying out of our study and we report thereon as follows.

2.0 Background

From plans and information provided by the Owner’s engineering consultant and the Town, we have established those areas that are to be connected to the “Colchester Townline Drain”. Work on the parcel included preparation and approval of storm water management reports prepared by others and these reports were submitted to the Town for review and approval of a new commercial development on the site.

We have also obtained reference information from the Town Drainage Department and Town of Tecumseh for the affected portion of the drain, including the current governing By-law 78-32, the September 15th, 1978 report with the Schedule of Assessment within same for the “Colchester

Townline Drain”, which was prepared by Maurice Armstrong, P.Eng. We find that the lands affected by the proposed commercial development are approximately the east portion of the parcel area located across County Road 8 from the Drain as shown in the Armstrong report. Investigations have revealed that the parcel has had a tile drainage outlet for a considerable length of time, with no adverse impact to the Drain.

3.0 Existing Drainage Conditions

From our review of the input from the Town and the plans and storm water management design completed to date on behalf of Joel Bezaire (Townline Development Truck Parking Area), by Challeng Consulting Engineers, we were able to establish the overall parcel area affected by this study is 25 acres (10.1 hectares).

We reviewed the latest engineer’s report on the “Colchester Townline Drain”, which is the September 15th, 1978 report by Maurice Armstrong, P.Eng. From same we were able to determine that the area within the affected parcel is currently not assessed to the Drain, but it does utilize the “Colchester Townline Drain” as an outlet as noted above.

Based on the noted research and investigations, we have prepared plans included herein as **Appendix “REI-B”** which show:

1. the boundary of the affected Parcel 470-02400 at 7981 Howard Avenue
2. the proposed layout location for the commercial site
3. the proposed commercial construction

Parcel 470-02400 currently comprises approximately 18.897 hectares (46.69 acres) and the proposed development is on the easterly portion of the parcel. The parcel is presently draining the following affected area to the “Colchester Townline Drain” through the current tile outlet under County Road 8:

- a) Parcel 470-02400 10.1 hectares (25.0 acres)

This is confirmed by the correspondence between the Owner and Town of Tecumseh staff.

4.0 Allowable Release Rates and Storm Water Management

The S.W.M. report documentation provided by the Owner’s Consultant to the Town shows that storm water management (S.W.M.) practices are being utilized for the proposed commercial development on the parcel. Under no circumstance would the additional runoff volumes be permitted to drain into the “Colchester Townline Drain” unless storm water management is provided. The storm water management system will ensure that the allowable release rate into the

“Colchester Townline Drain” for the parcel does not exceed the 1:2 year storm pre-development runoff rate for the original area that was affected based on utilizing a 0.20 runoff coefficient and limiting the flow discharge rate to 112 litres per second (3.96cfs). No increase shall be permitted for the area currently using the drain, which area is to be officially connected through this report. Under no circumstance should the Town consider allowing the increased total flow volumes into the “Colchester Townline Drain” unless this condition is met. Proper storm water management facilities restricting the flows to the allowable release rate of 112lps will ensure that the subsequent flows will have no significant adverse effect on the capacity of the “Colchester Townline Drain”.

Final storm water management reports have been prepared by Challeng Consulting for the proposed development taking the allowable release rate into consideration, and these were submitted to the Town and the Essex Region Conservation Authority (E.R.C.A.) for review by them. Approval from the Town and E.R.C.A. will be required before any development work proceeds.

The flows from the development parcel will generally outlet near the northwest corner of the parcel area to be developed for truck parking and will outlet to the “Colchester Townline Drain” through the existing tile drain outlet that extends under the roadway. We also find that the use of S.W.M. controls will reduce the peak flows in the drain and therefore the commercial development will not adversely impact on the downstream covered drain sections. Based on our findings, we believe that it is reasonable to allow for the increased total flow volumes from the proposed commercial lands, provided that the necessary storm water management provisions are made and maintained for the proposed commercial use and expansions.

5.0 Subsequent Connection Charges

We find that the area being drained to the “Colchester Townline Drain” from the affected parcel will be a newly affected area for the commercial development. Normally adding in a new parcel area would result in buy-in charges to the affected parcel for the additional area being brought into the drain based on the remaining life of the construction and any recent maintenance work carried out on the Municipal drain. For this project we find, from our investigations with the Town, that there are no recent maintenance charges so that only the original construction cost is a factor, and that the total area from the affected parcel now draining to the “Colchester Townline Drain” will be 10.1 hectares (25.0 acres) which is the area that is currently allowed into the drain for the parcel, although not previously formalized under a report pursuant to the Drainage Act. From the information received, we understand that there is no additional area that requires a subsequent connection to the drain and consequently charges are required to the affected parcel for the area already being brought into the drain. Based on the proposed allowable area of drainage, we find that the original total assessment should be \$225.00 to reflect the current area going into the drain. However, using an estimated life expectancy of 50 years and adjusting for the Consumer Price Index between 1978 and 2018, we find that the buy in should be for 20% of the estimated cost or \$45.00. When adjusted for inflation of 362.3%, we recommend that the buy in cost be \$163.04. Due to the increase in flow volume created by the S.W.M. system, we also recommend that the Outlet Liability

be increased by a factor of 1.5, similar to that used for greenhouse developments with S.W.M. systems. The calculated total for buy-in becomes **\$244.55**. This amount is to be collected and used towards future maintenance of the “Colchester Townline Drain” pursuant to Section 65 of the Drainage Act.

As noted above, the S.W.M. controls must restrict the outflow rate to the 1:2 year predevelopment rates from the proposed affected area of the parcel up to and including for the 1:100 year storm, and therefore no adverse impact on flow rates in the Drain will occur.

6.0 Assessment for Increased Flow Volumes

With implementation of a storm water management system limiting the outflows into the “Colchester Townline Drain” to the pre-development flow rate, as outlined above, the increased total flow volumes from the affected parcel would have no adverse effect on the capacity of the “Colchester Townline Drain”. Therefore, based on the above conditions, we find that the “Colchester Townline Drain” has the ability to accept the additional total flow volumes from within the affected parcel, and we are therefore prepared to recommend the approval of this commercial development.

If the Town of Tecumseh is prepared to approve the increased total flow volumes from the lands of Townline Development Truck Parking Area into the “Colchester Townline Drain” at the controlled discharge rate, an update to the assessments is to be established by the engineer and the cost for same is to be charged entirely to the owner of the affected lands. Section 65.(3) of the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010” requires that *“where the nature or extent of the use of a drainage works by land assessed for the drainage works is subsequently altered, an engineer appointed by the Municipality for the purpose shall make an inspection and assess the land for a just proportion of the drainage works”*.

From our investigations of the Town’s drainage files, we have determined that the drainage works for which the affected parcel must be assessed for a just proportion is the “Colchester Townline Drain”.

The Outlet Liability charge to the owner of the affected parcel should be based on the increased total flow volumes from the assessed portions to the “Colchester Townline Drain”. This parcel should be added to the September 15th, 1978 Schedule of Assessment and be shown with a value of **\$338.00** for Outlet Liability. Since the parcel is located across the road from the drain, we recommend that there be \$0.00 Benefit assessment. The Total Values in the assessment schedule should be increased by the new Outlet Liability charge.

7.0 Assessment Adjustments for Increased Total Flow Volume

We find that the Parcel being added to the September 15th, 1978 report and assessment schedule should have its “Value of Outlet Liability” and “Total Value” amounts set to reflect the total flow

volume that will result from the existing and proposed commercial development affected areas on the parcel. The “Value of Benefit” for this parcel will be set at zero due to its location across the roadway from the drain.

8.0 Future Maintenance Charges

Based on our review of the proposed areas of development and hard surface areas that are to be created by the development of the site, we find that the following adjustments should be made to the September 15th, 1978 assessment schedule for the Outlet and Total Values:

<u>Description</u>	<u>Acres (Ha.) Afft'd</u>	<u>Original Value of Outlet</u>	<u>Original Total Value</u>	<u>Updated Value of Outlet</u>	<u>Updated Total Value</u>
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Townline Development Truck Parking Area

Parcel 470-02400	25.0 (10.1)	\$0.00	\$0.00	\$ 338.00	\$ 338.00
UPDATED TOTAL AMHERSTBURG				\$ 338.00	\$ 338.00
UPDATED TOTAL ASSESSMENT				\$44,755.50	\$94,072.50

In accordance with Section 65.(3) of the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010”, we recommend that the values in the September 15th, 1978 Schedule of Assessment which is included within the current governing by-law be amended for the current affected parcel to show the updated values as noted above.

Therefore, in accordance with Section 65.(3) of the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010”, we recommend that the above noted updated values be collected from the affected parcel by the Town of Amherstburg on a pro-rata basis only when there is future maintenance or repairs of the “Colchester Townline Drain”, pursuant to the “Drainage Act, R.S.O. 1990, Chapter D.17, as amended 2010”.

9.0 Summary and Recommendations

As already established herein, we have conducted a drainage study of the “Colchester Townline Drain” and have determined that the increased total flow volumes for Parcel 470-02400 from development as a commercial site, as shown on the plans within **Appendix “REI-B”**, shall not adversely affect the performance of said Municipal Drain as long as the Storm Water

Report – Colchester Townline Drain
Section 65 Changes in Assessment
for 7981 Howard Ave. - REI2018D034

2019-05-23

Management Facilities limit the total release rate allowed into said drain to the 1:2 year pre-development runoff from the original affected lands of 112lps.

The pre-development runoff coefficient to be utilized shall be 0.20 for these lands and shall be confirmed in the Storm Water Management Reports submitted to the Town of Amherstburg and E.R.C.A. for their approval and confirm a maximum discharge rate of 112lps.

We have also established herein updated Value of Outlet Liability charges to be paid by the affected Parcel 470-02400, which is a representation of the increased total flow volumes from the developed site.

Based on all of the above, we would therefore recommend that the Town of Amherstburg approve the proposed commercial development of Parcel 470-02400 located at 7981 Howard Avenue into the "Colchester Townline Drain", as long as all of the above requirements and conditions are complied with. We further recommend that the costs for preparation of this report be assessed 100% to the affected Parcel 470-02400 that is being developed.

If you, or Council, have any questions regarding this "Changes in Assessment Report", please do not hesitate to contact us. It is our understanding that this report is to be approved at the earliest to allow for construction works to be carried out on the proposed commercial development as soon as all approvals are received.

We respectfully remain,

Yours truly,

Rood Engineering Inc.



Gerard Rood, P.Eng.



tm

Att.

APPENDIX “REI-A”

SPECIAL PROVISIONS

Changes in assessment

Subsequent subdivision of land

65. (1) If, after the final revision of an engineer's assessment of land for a drainage works, the land is divided by a change in ownership of any part, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to apportion the assessment among the parts into which the land was divided, taking into account the part of the land affected by the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

Agreement on share of assessment

(2) If the owners of the subdivided land mutually agree on the share of the drainage assessment that each should pay, they may enter into a written agreement and file it with the clerk of the local municipality and, if the agreement is approved by the council by resolution, no engineer need be instructed under subsection (1). 2010, c. 16, Sched. 1, s. 2 (26).

Subsequent connection to drainage works, etc.

(3) If an owner of land that is not assessed for a drainage works subsequently connects the land with the drainage works for the purpose of drainage, or if the nature or extent of the use of a drainage works by land assessed for the drainage works is subsequently altered, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to inspect the land and assess it for a just proportion of the drainage works, taking into account any compensation paid to the owner of the land in respect of the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

Subsequent disconnection from drainage works

(4) If an owner of land that is assessed for a drainage works subsequently disconnects the land from the drainage works, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to inspect the land and determine the amount by which the assessment of the land should change. 2010, c. 16, Sched. 1, s. 2 (26).

Restriction on connection or disconnection

(5) No person shall connect to or disconnect from drainage works without the approval of the council of the municipality. 2010, c. 16, Sched. 1, s. 2 (26).

Notice of instructions

(6) The clerk of the local municipality shall send a copy of the instructions mentioned in subsection (1), (3) or (4) to the owners of the affected lands as soon as reasonably possible. 2010, c. 16, Sched. 1, s. 2 (26).

Engineer's assessment

(7) An engineer who prepares an assessment pursuant to instructions received under subsection (1), (3) or (4) shall file the assessment with the clerk of the local municipality. 2010, c. 16, Sched. 1, s. 2 (26).

Notice of assessment

(8) The clerk of the local municipality shall attach the engineer's assessment to the original assessment and send a copy of both to the owners of the affected lands. 2010, c. 16, Sched. 1, s. 2 (26).

Assessment binding

(9) Subject to subsection (11), the engineer's assessment is binding on the assessed land. 2010, c. 16, Sched. 1, s. 2 (26).

Costs

(10) The costs of the assessment, including the fees of the engineer, shall be paid by the owners of the lands in the proportion fixed by the engineer or, on appeal, by the Tribunal, and subsection 61 (4) applies to these costs. 2010, c. 16, Sched. 1, s. 2 (26).

Appeal of assessment

(11) If the engineer's assessment is for an amount greater than \$500, the owner of the land may appeal to the Tribunal within 40 days after the date the clerk sends a copy of the assessment to the owner. 2010, c. 16, Sched. 1, s. 2 (26).

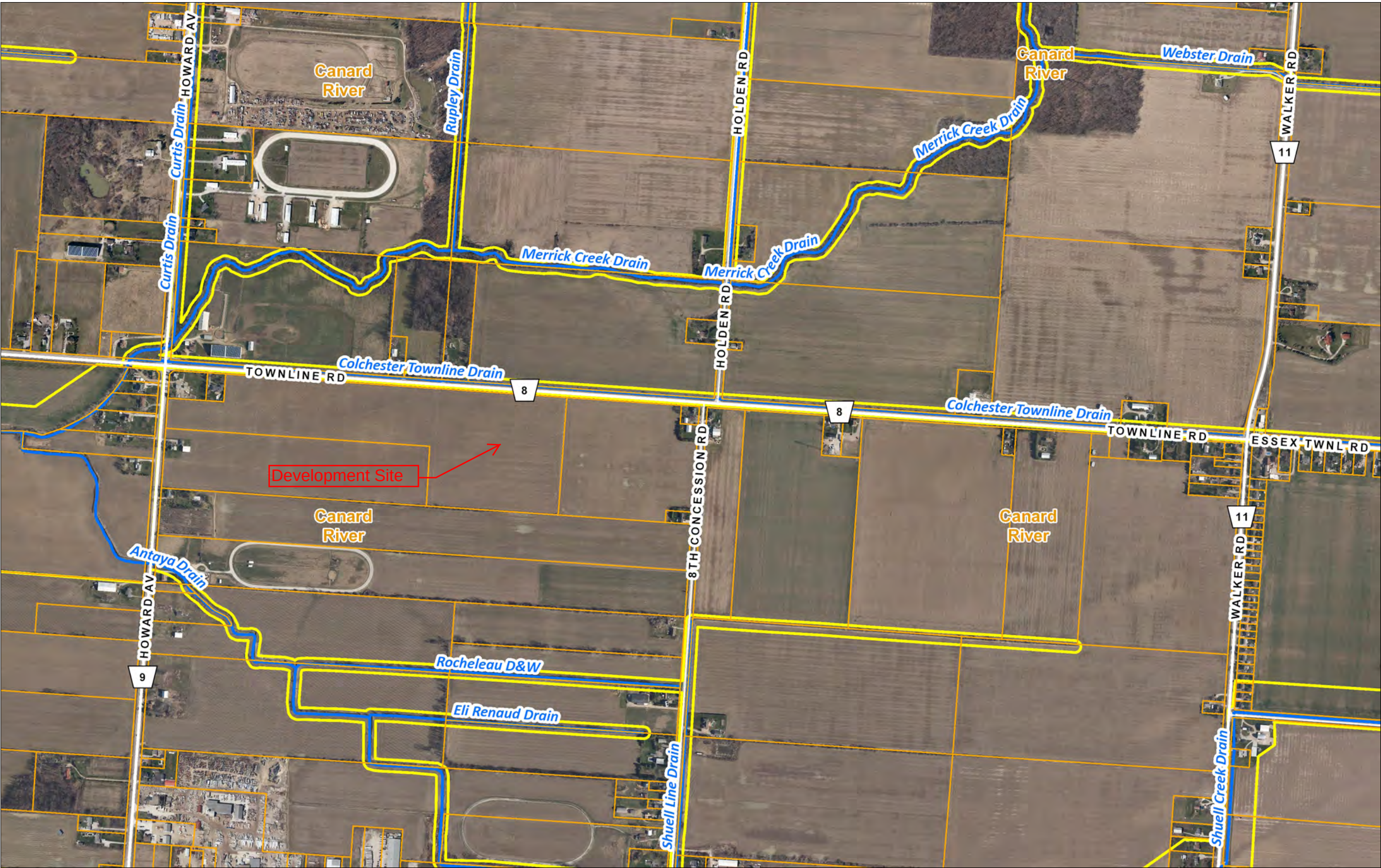
Use of amount collected

(12) Any amount collected under subsection (3) shall be credited to the account of the drainage works and shall be used only for the improvement, maintenance or repair of the whole or any part of the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

66. Repealed: 2010, c. 16, Sched. 1, s. 2 (26).

APPENDIX “REI-B”

Colchester Townline Drain



- Legend**
- Parcel Fabric
 - 1:100 yr Flood Line
 - Limit of Regulated Area
 - Constructed Drains (LIO)
 - Open or Unknown
 - Closed/Tiled
 - Subwatershed (Line)

Rood Engineering Inc.
Consulting Engineers
9 Nelson Street
Leamington, Ontario N8H 1G6
519-322-1621

2019-01-18

Location



THIS MAP HAS BEEN PRODUCED BY THE GENERAL PUBLIC AND NOT BY QUALIFIED ERCA STAFF.

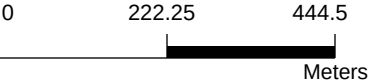
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Notes

REI2018D034



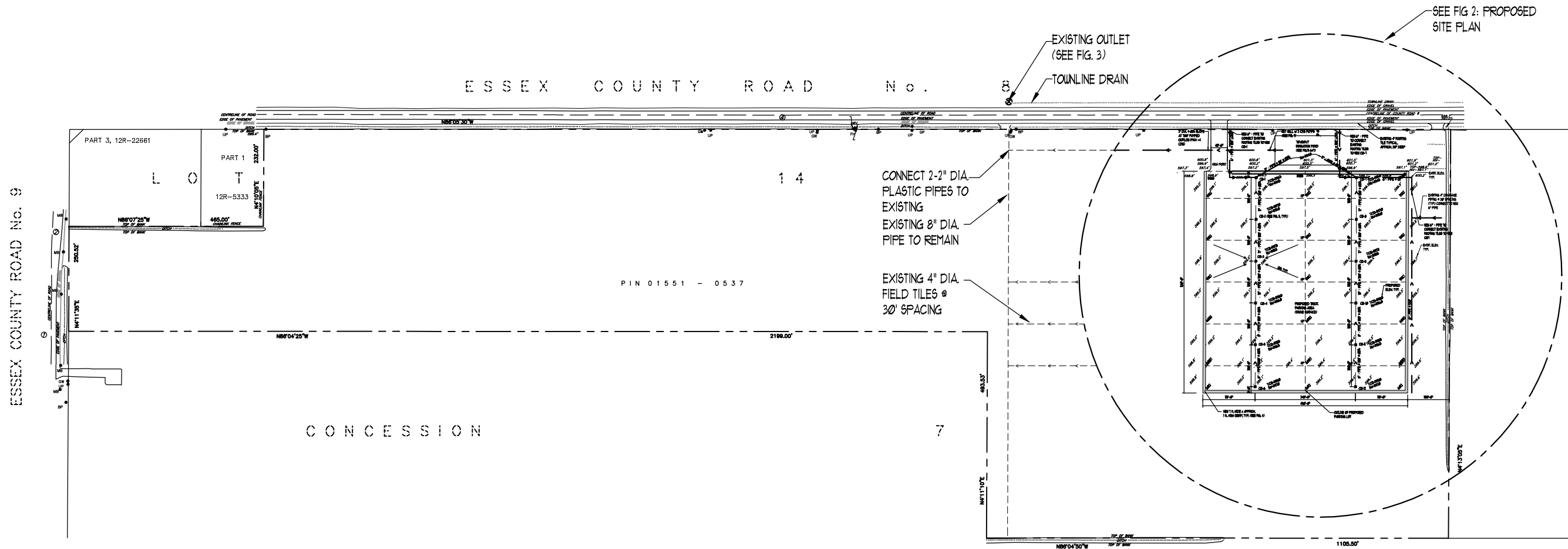
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8/23/2018

BASE PLAN BY: CLARKE SURVEYORS INC.,
JOB # 34922-01, MARCH 22, 2018.

FIGURE 1: PROPOSED SITE PLAN
SCALE: N.T.S



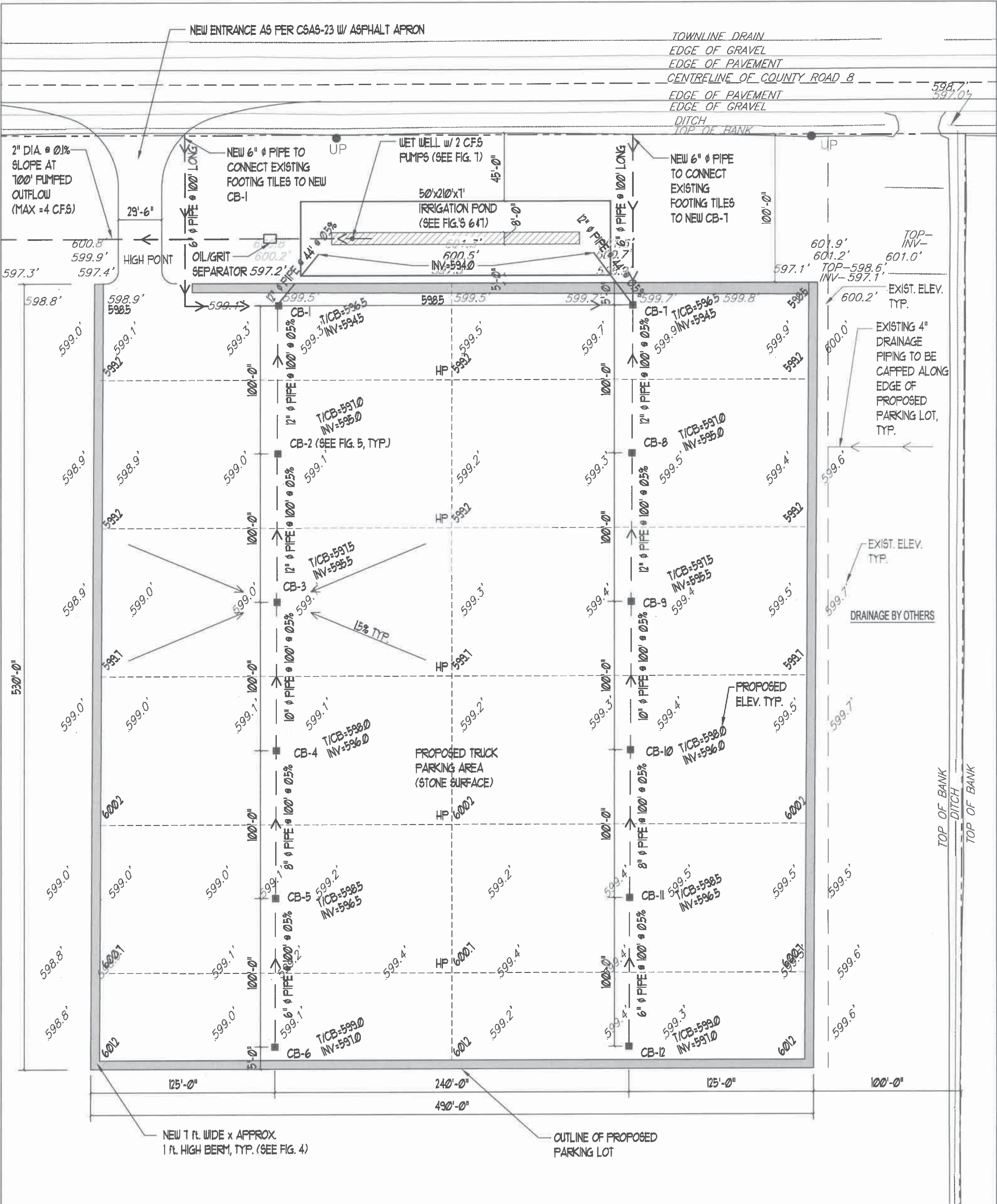
ISSUED FOR: DATE:
OWNER REVIEW APR 10/18
OWNER REVIEW DEC 10/18

PROJECT: BEZAIRE PROPERTY
7981 HOWARD AVENUE, AMHERSTBURG, ONTARIO
DATE: DECEMBER 10, 2018
PROJ. NO: 18014
SCALE: AS SHOWN

PROPOSED SITE PLAN

DWG. NO. S1
REV. NO.

ChallEng.
CONSULTING ENGINEERS
SUITE 342,
13300 TECUMSEH ROAD EAST,
WINDSOR, ONTARIO, N9M4R8
PHONE: 519-979-7333
FAX: 519-979-7331
CEC@CEC14.COM WWW.CEC14.COM



LEGEND

- NEW 2'x2'x6' HIGH CATCH BASIN WITH STEEL GRATE, 2" SUMP WITH GOS-GULLEY (CB-1 & CB-7 ONLY) TRAPS, AND 6'x6'x8" THK. CONC. PAD

--- DRAINAGE PIPE

○ UP UTILITY POLE

- BERM
- PROPERTY LINE
- 97.33R EXISTING ELEVATION
- 97.33R PROP. ELEVATION
- TC TOP OF COVER
- INV PIPE INVERT

FIGURE 2: PROPOSED SITE PLAN

SCALE: 1/64" = 1'-0"

BASE PLAN BY: CLARKE SURVEYORS INC.,
JOB # 34922-01, MARCH 22, 2018.

NOTE: THIS DRAWING IS A PART OF
SWM REPORT DATED NOV. 12, 2018

FIELD VERIFY ALL
DIMENSIONS

ISSUED FOR:	DATE:
OWNER REVIEW	APR 19/18
DRAFT TO AMHERSTBURG	MAY 4/18
REVISION 1	MAY 16/18
REVISION 2	NOV 12/18
REVISION 3	APR 18/19
REVISION 4	MAY 13/19

PROJECT:	BEZAIRE PROPERTY
	7981 HOWARD AVENUE, AMHERSTBURG, ONTARIO
DATE:	NOVEMBER 12, 2018
PROJ. NO:	18014
SCALE:	AS SHOWN

PROPOSED SITE PLAN

DWG. NO.	S2
REV. NO.	4



SUITE 342,
13300 TECUMSEH ROAD EAST,
WINDSOR, ONTARIO, N8N4R8
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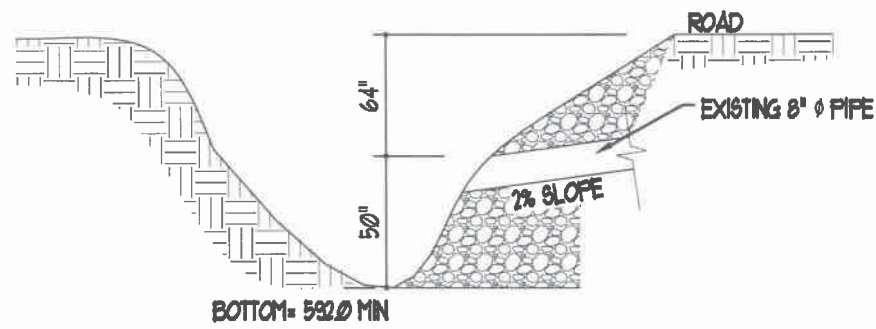
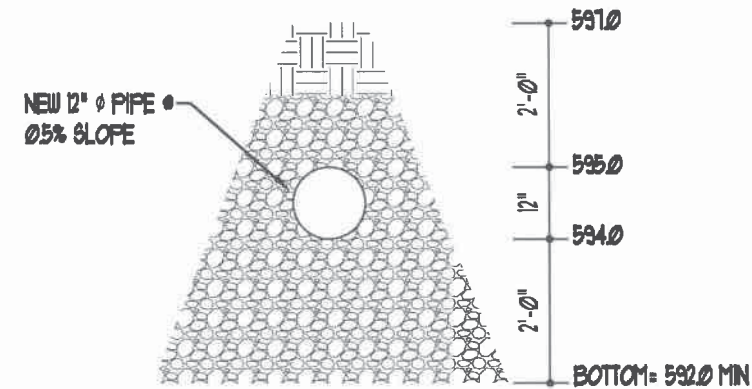


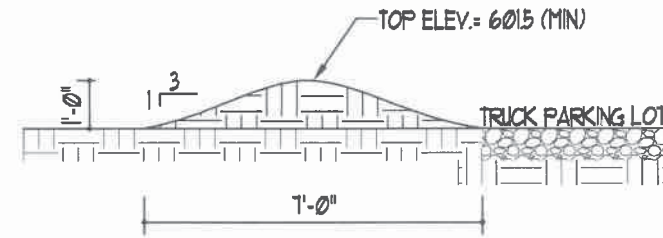
FIGURE 3: EXISTING OUTLET PIPE ELEVATION DETAIL

SCALE: 1/4" = 1'-0"



SECTION A-A: PIPE DETAIL

SCALE: 3/8" = 1'-0"



NOTE: THIS BERM IS TO BE CONSTRUCTED AROUND THE PERIMETER OF THE PARKING LOT.

FIGURE 4: BERM WITH GRASS COVER

SCALE: 1/4" = 1'-0"

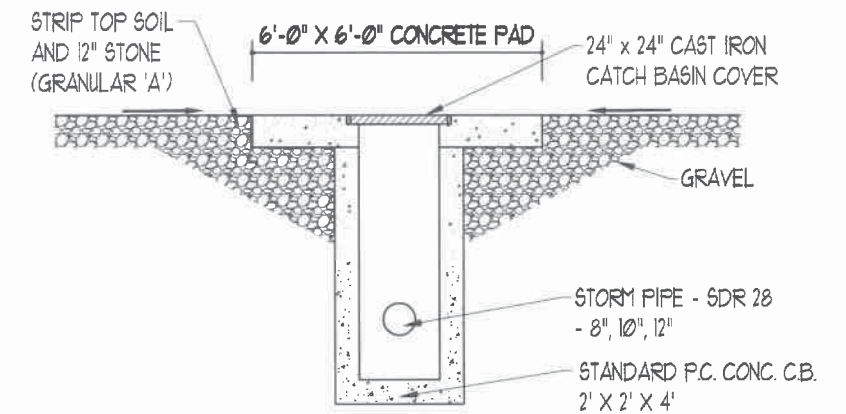


FIGURE 5: CATCH BASIN DETAIL

SCALE: 1/4" = 1'-0"

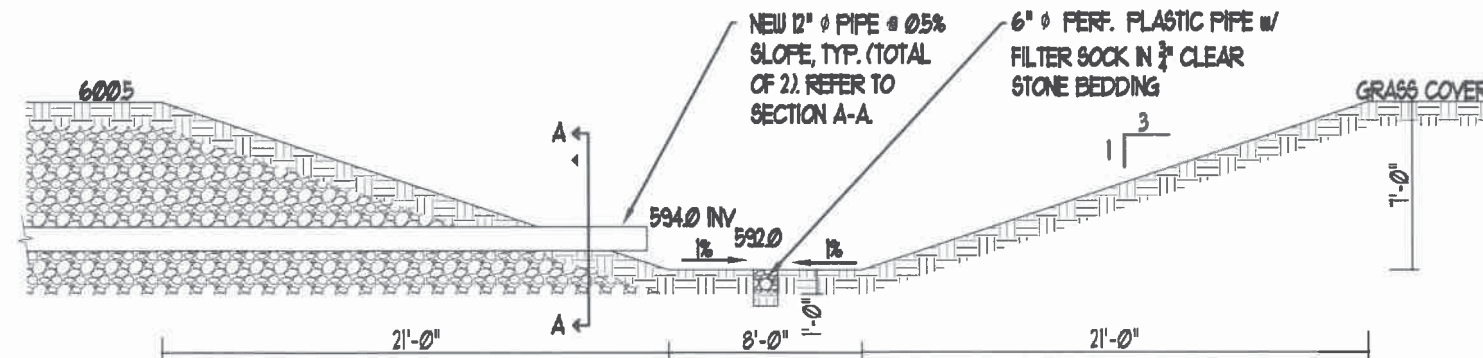


FIGURE 6: IRRIGATION POND DETAIL

SCALE: 1/8" = 1'-0"

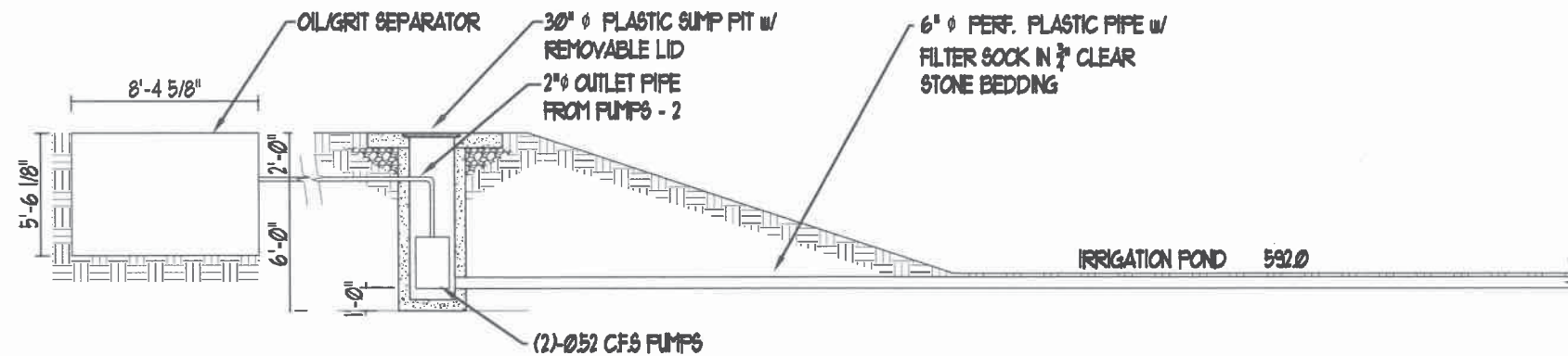


FIGURE 7: POND PUMP DETAIL

SCALE: 1/8" = 1'-0"

FIELD VERIFY ALL DIMENSIONS

ISSUED FOR:	DATE:
OWNER REVIEW	APR 19/18
DRAFT TO AMHERSTBURG	MAY 4/18
REVISION 1	NOV 12/18
REVISION 2	APR 18/19
REVISION 3	MAY 13/19

PROJECT:	BEZAIRE PROPERTY
	7981 HOWARD AVENUE, AMHERSTBURG, ONTARIO
DATE:	NOVEMBER 12, 2018
PROJ. NO:	18014
SCALE:	AS SHOWN

PROPOSED SITE PLAN - DETAILS

DWG. NO.	S3
REV. NO.	3

ChallEng.
CONSULTING ENGINEERS

SUITE 342,
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