

November 3, 2022

Gentlemen and Mesdames:

Re: Morgan Drain Improvements for #440 Texas Road Development

Through this memo I am looking to provide insight into how the Morgan Drain will be impacted by the proposed development at #440 Texas Road, further outline the proposal for re-routing the drain and evaluate the working areas needed to facilitate future maintenance of the re-routed drain.

Appointment under Section 78 of the Drainage Act

The Morgan Drain consists of the Morgan Drain, Morgan Drain South Branch and the Morgan Drain North Branch as can be seen from Drawing 1 in Appendix A. The proposed development at #440 Texas Road will impact the existing Morgan Drain and Morgan Drain South Branch. Therefore, the Town of Amherstburg appointed R. Dobbin Engineering under Section 78 of the Drainage Act to investigate improvements to the drain in consultation with Dillon Consulting, who is representing the developer, in order to accommodate the development of this land.

Proposed Solution

Following multiple meetings with the Town, members of Dillon Consulting and ourselves, it was determined that the best route forward was to have the storm sewer through the subdivision handling the internal water and the upstream Morgan Drain and Morgan Drain South. Enclosing both drains along their existing routes, or close to them, was analyzed but determined, by Dillon Consulting, that it would cause too much of a reduction in the number of lots. Preliminary plans had the storm sewer and diverted drain going through the subdivision separately. However, the Town felt that adding an additional deep sewer through the subdivision was not the best route forward. Therefore, Dillon was to design a storm system through the subdivision that would handle the 100-year storm from the upstream Morgan Drain and Morgan Drain South watersheds in addition to the flows from subdivision. The resulting design of the Morgan Drain and Morgan Drain South re-routing is shown on Drawing 2 and 3 of Appendix A. This results in all the features providing an outlet for the upstream Morgan Drain and Morgan Drain South watersheds being incorporated under the Drainage Act. These features include, but are not limited to, the storm sewer, manholes, stormwater management pond, pump station, stormwater management pond overflow outlet and the pumped outlet. The remainder of the internal storm infrastructure will be municipally owned once assumed.

A profile of the entire Morgan Drain has been included, with the area of the development left out. Detailed drawings of the subdivision can be seen apart of the package provided by Dillon Consulting.

Working Corridors

As instructed, R. Dobbin Engineering Inc. has reviewed the re-routing proposal for the Morgan Drain within the development limits at #440 Texas Road based on drawings dated October 14, 2022. R. Dobbin Engineering is of the opinion that ensuring a 6m wide working area for sections of the storm system outside of the road right of way will be sufficient for maintenance purposes. This shall be the case for the storm sewer between lots 33 and 34, south of lot 1, and around the storm water management pond. For sections of a single storm sewer the sewer shall be centered within this right of way. R. Dobbin Engineering believes that an increased right of way will be required for the outlet of the stormwater management pond as there is proposed to be two pumped outlets and two overflow pipes. R. Dobbin Engineering believes that a right of way width of at least 10m should be provided in this section.

R. Dobbin Engineering is of the opinion that the exact details of ownership of these working areas should be addressed apart of the subdivision agreement, but recommends ownership be transferred to the Town in order to eliminate the potential development of these areas by future landowners.

Route Forward

Pending final design drawings approved by the County of Essex, Conservation Authority, Town of Amherstburg, etc. R. Dobbin Engineering can finalize the Drainage Act report and proceed to final adoption of the bylaw by Town council.

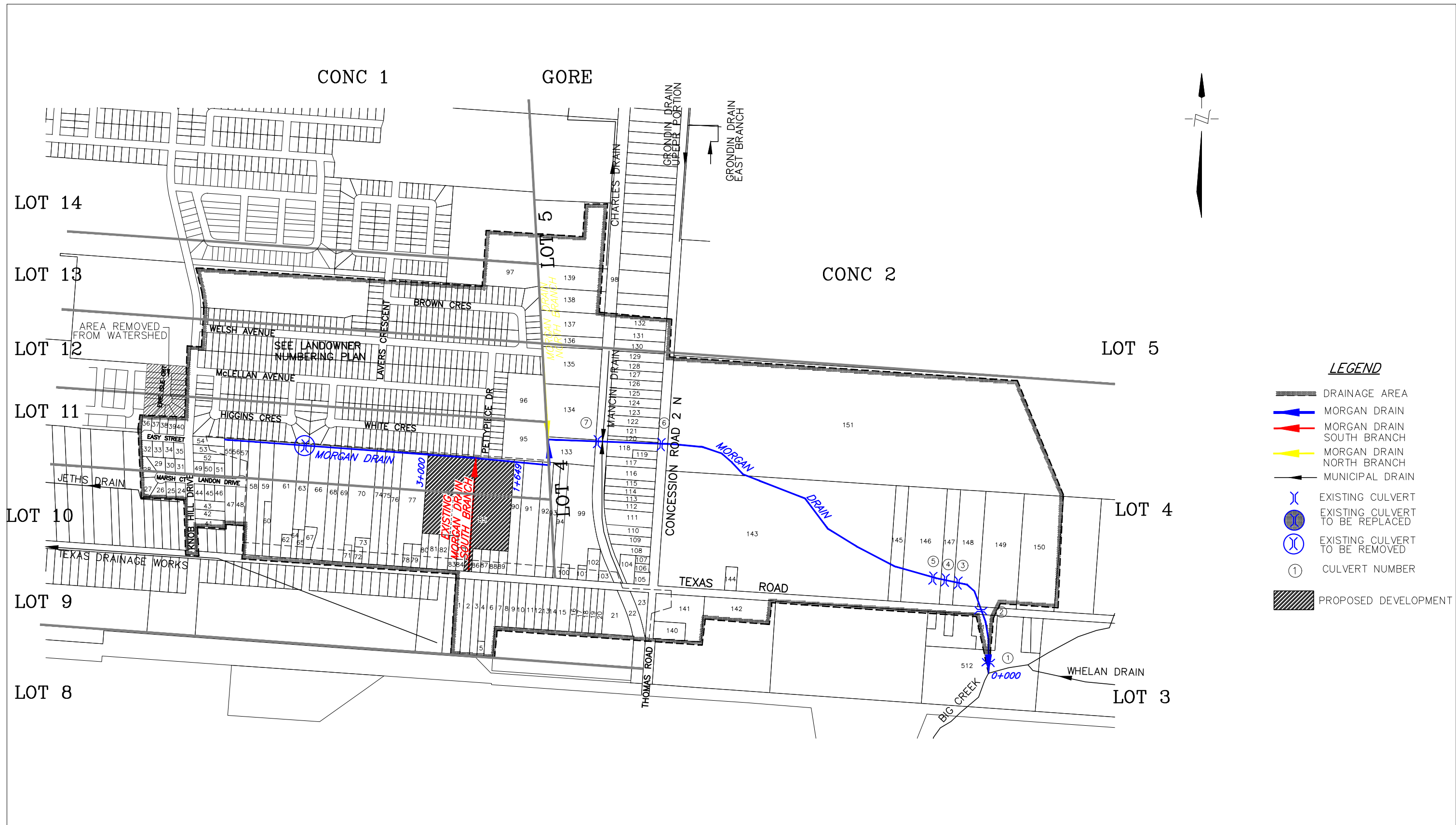
If you have any questions, please feel free to reach out to me.

Yours truly,

Josh Warner, P. Eng
R. Dobbin Engineering Inc.
519-882-0032 ext. 204
josh@dobbineng.com

Appendix A

Drawings



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Plan

PROJECT No.
2021-1291

APPROVED
J. WARNER

CHECKED
J. WARNER

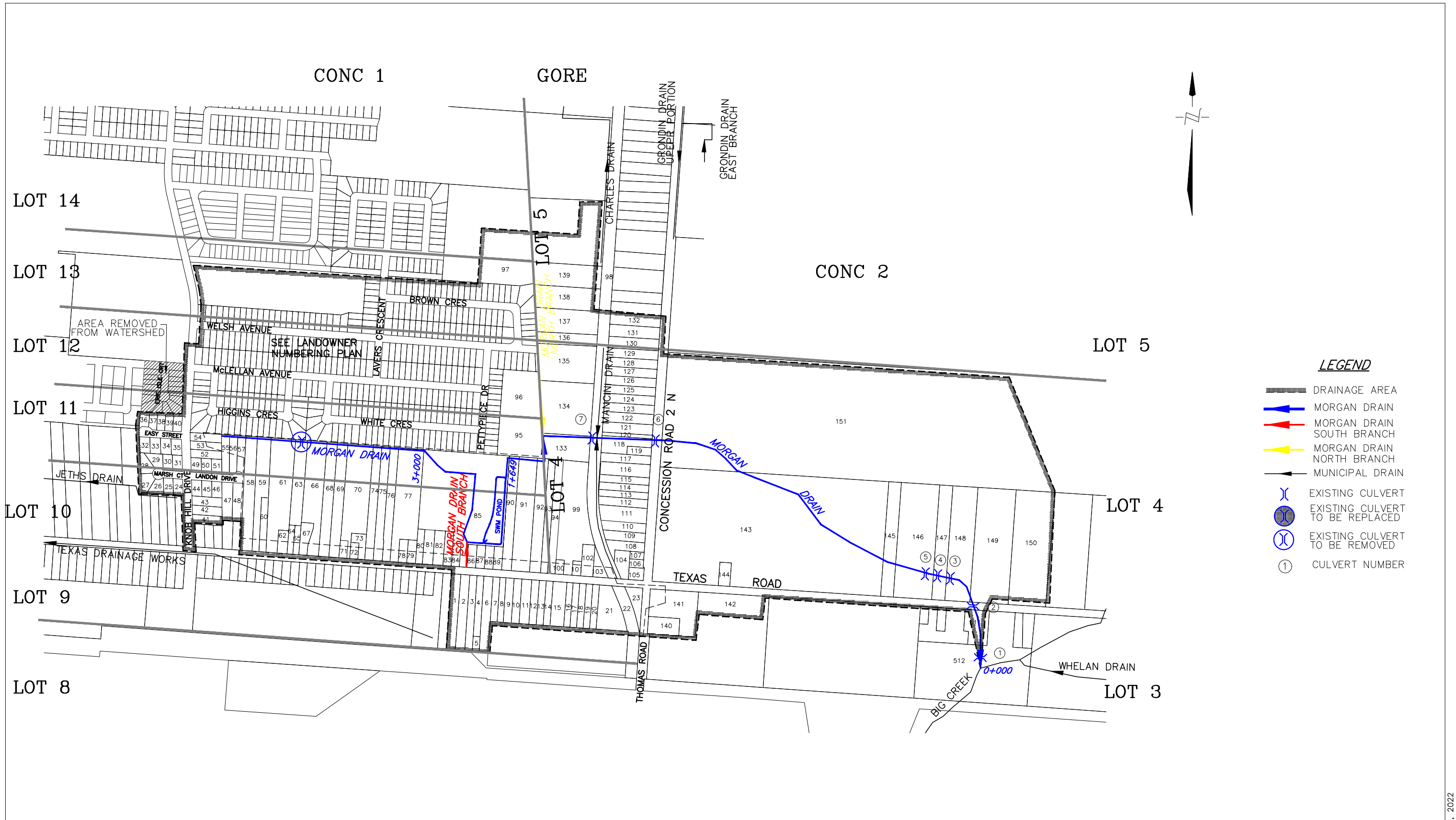
DRAWN
C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	PRELIM.	OCT. 2022	CS
SCALE 1:10,000			
0 80 160 240m			

TOWN of AMERSTBURG

MORGAN DRAIN EXISTING PLAN

1
OF 7



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Plan

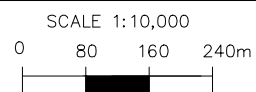
PROJECT No.
2021-1291

APPROVED
J. WARNER

CHECKED
J. WARNER

DRAWN
C. SAUNDERS

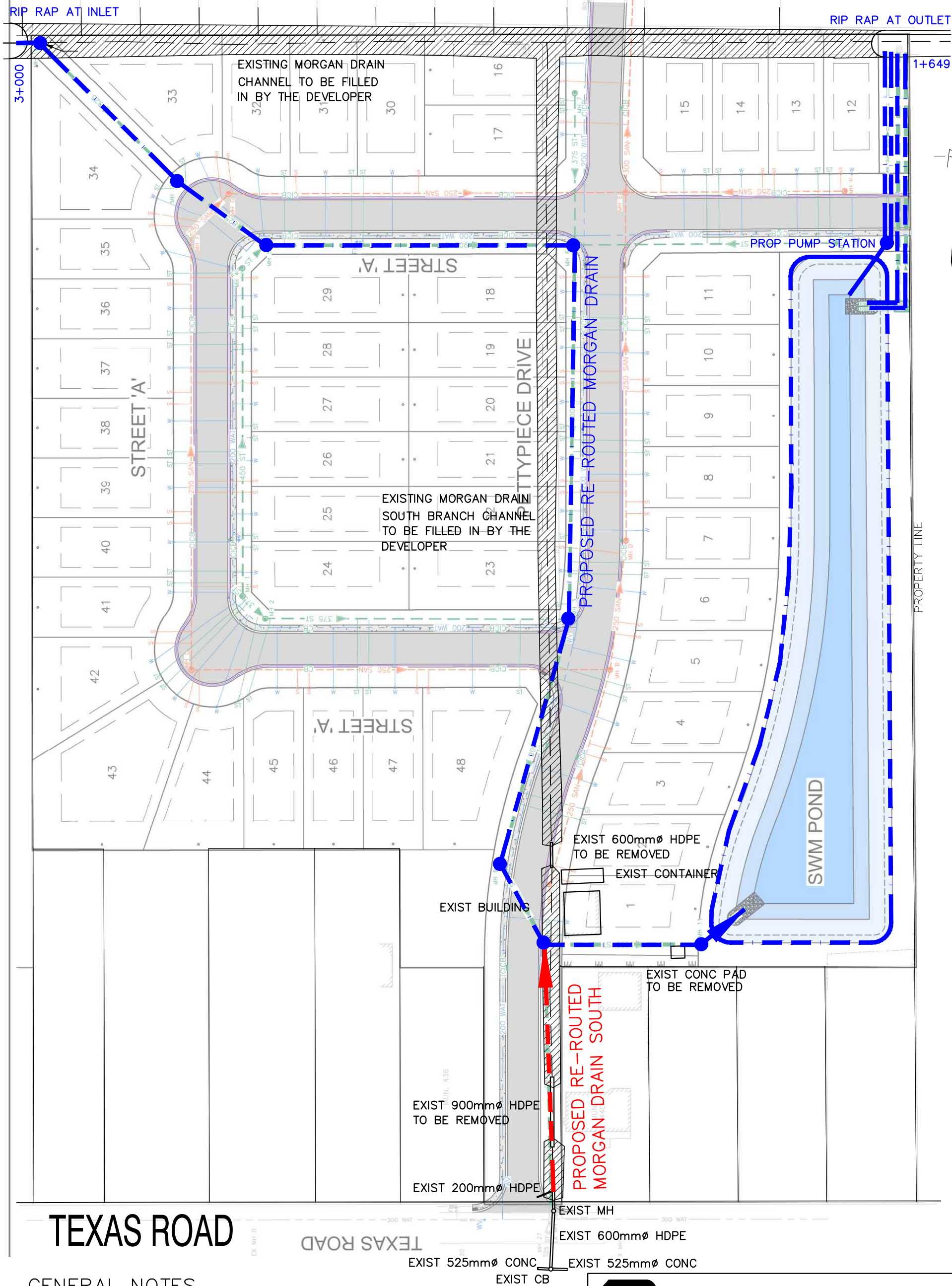
NO.	REVISIONS	DATE	BY
1	PRELIM.	OCT 2022	CS



TOWN of AMERSTBURG

MORGAN DRAIN PROPOSED PLAN

2
OF 7



TEXAS ROAD

GENERAL NOTES

SEE DILLON CONSULTING'S DRAWINGS FOR
DETAILED PLAN AND PROFILES

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	PREMIL.	OCT 2022	JW
B. VAN RUITENBURG	SCALE: 1:1,000 050100150m			
DRAWN				
J. WARNER				

TOWN of AMHERSTBURG
MORGAN DRAIN
DETAILED PLAN

3
OF 7



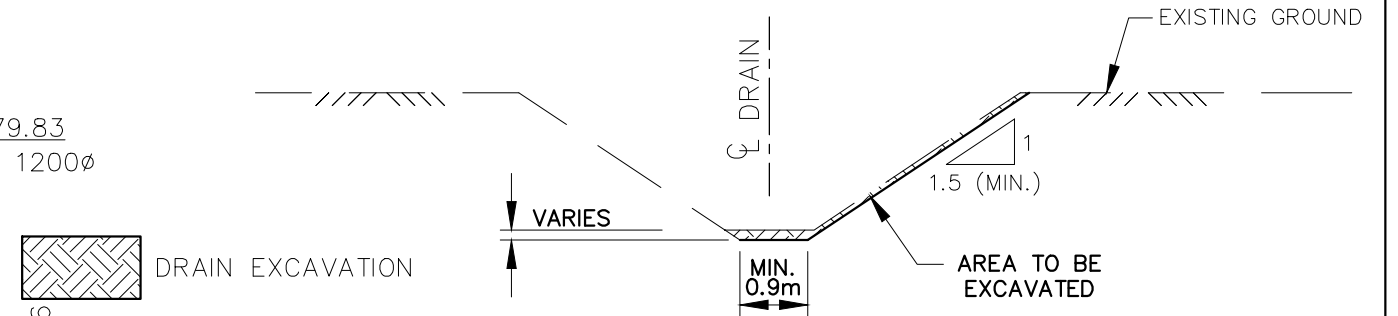
4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Detailed Plan

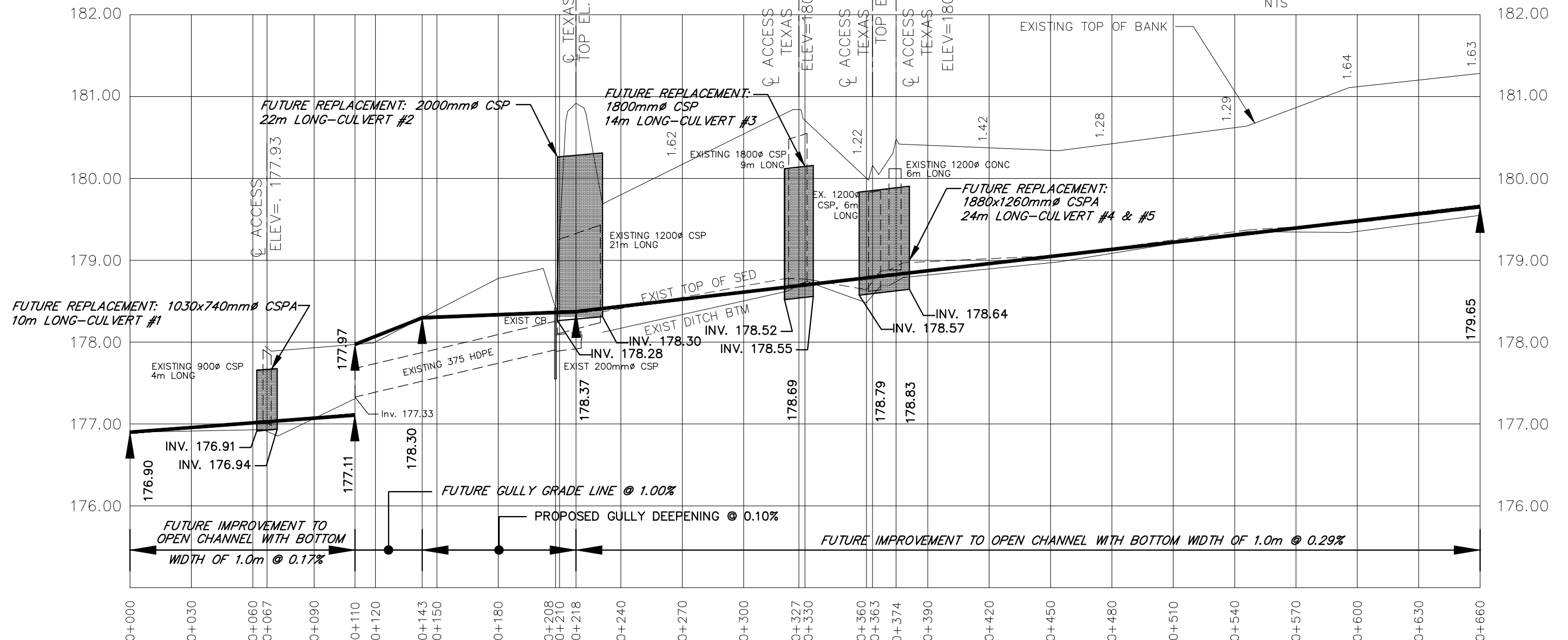
PROJECT No.
2021-1291

1. BENCHMARK No.1 ELEV. 179.25
TOP SOUTH END OF EXISTING 1200Ø
CSP, STATION 0+218
2. NUMBERS ARE DEPTH FROM TOP OF
BANK TO BOTTOM OF NEW CHANNEL.

BENCHMARK No.3 ELEV. 179.83
TOP EAST END OF EXISTING 1200Ø
CSP, STATION 0+363



TYPICAL MAIN DRAIN CROSS SECTION
STATIONS 0+000 TO 1+649 & 3+000 TO 2+464



PROJECT No.
2021-1291

DRAWN
C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	PRELIM.	OCT 2022	CS

SCALE: 1: 2,000

0 20 40 60m

A horizontal scale bar with four segments. The first segment is labeled '0', the second '20', the third '40', and the fourth '60m'. The bar is drawn with a top line and a bottom line, with vertical tick marks at each segment boundary.

TOWN of AMERSTBURG

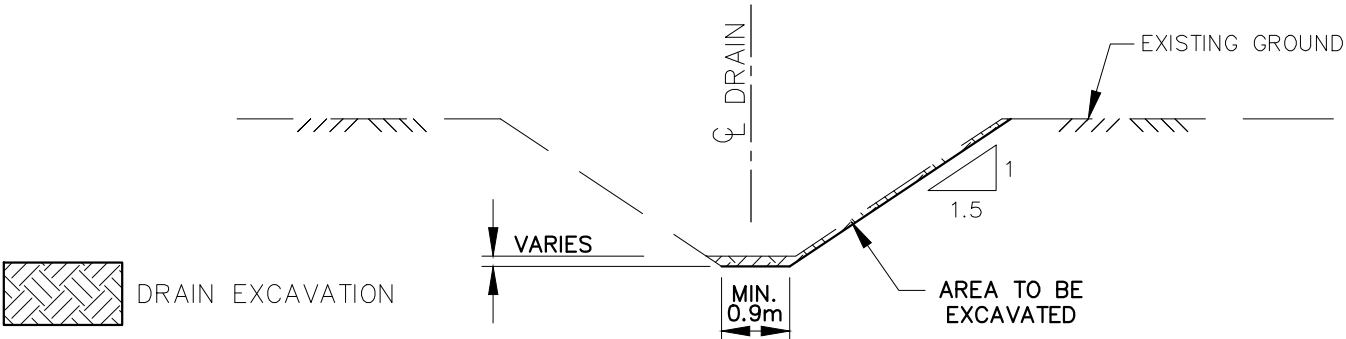
MORGAN DRAIN

PROFILE

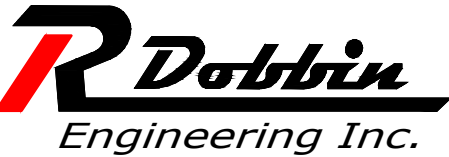
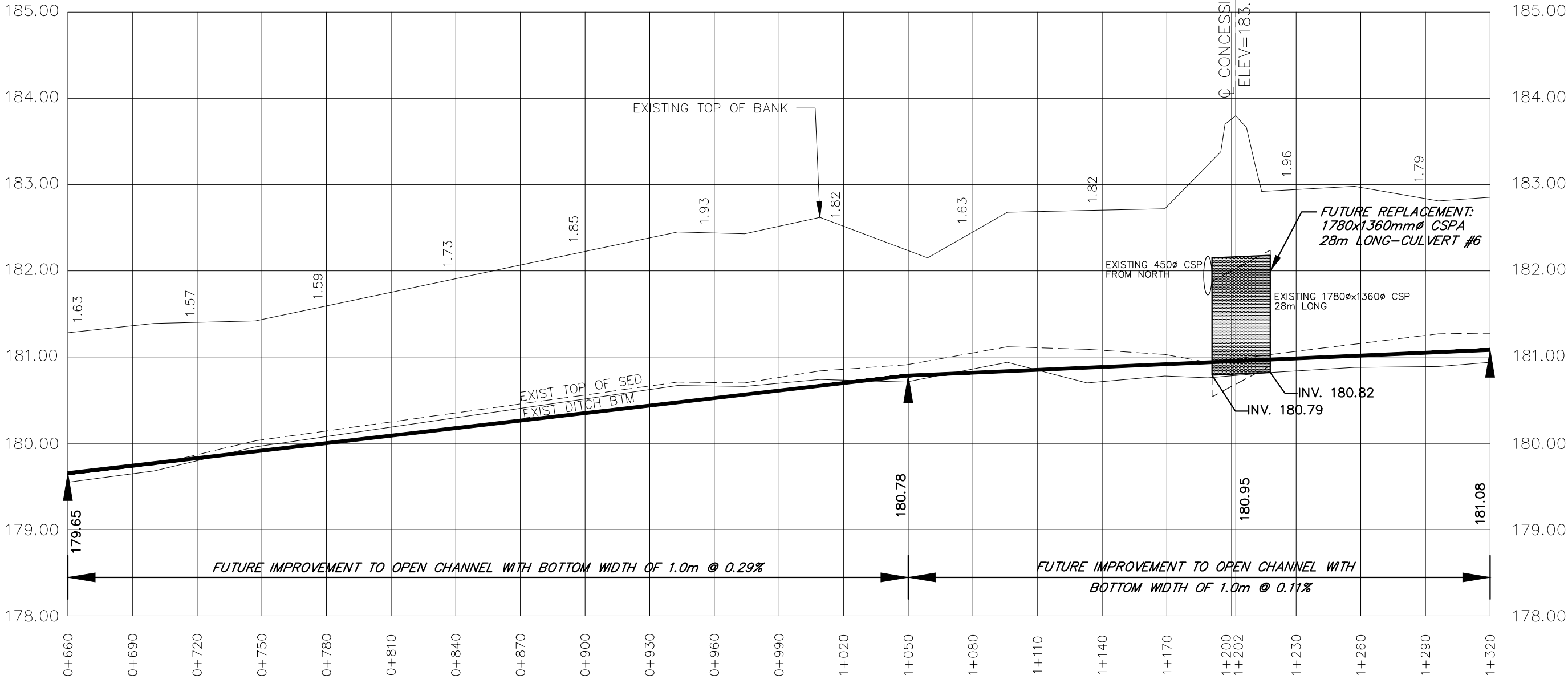
4
OF 7

GENERAL NOTES

- 1. BENCHMARK No.4 ELEV. 181.88
TOP EAST END OF EXISTING 1800x1300ø CSPA, STATION 1+202
- 2. NUMBERS ARE DEPTH FROM TOP OF BANK TO BOTTOM OF NEW CHANNEL.



TYPICAL MAIN DRAIN CROSS SECTION
STATIONS 0+000 TO 1+649 & 3+000 TO 2+464
NTS



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Profile 2

PROJECT No.
2021-1291

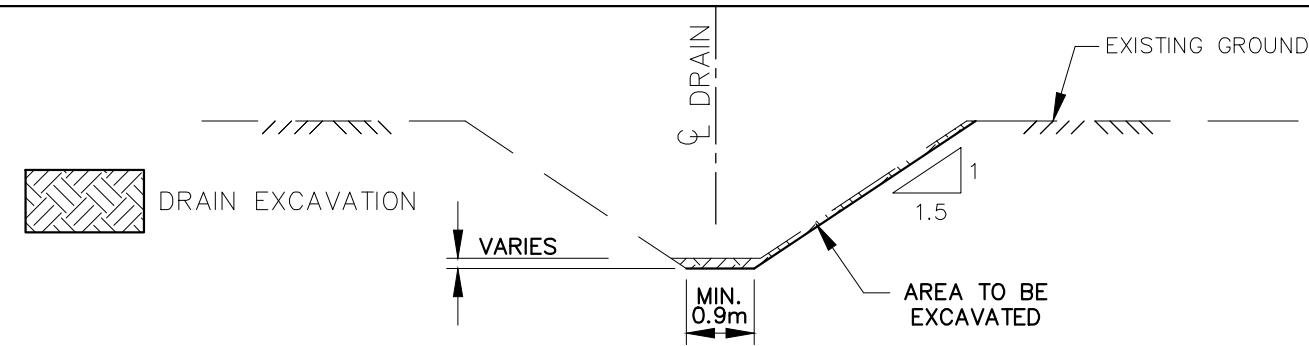
APPROVED	J. WARNER
CHECKED	J. WARNER
DRAWN	C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	PRELIM.	OCT 2022	CS
SCALE: 1:2,000			
0 20 40 60m			

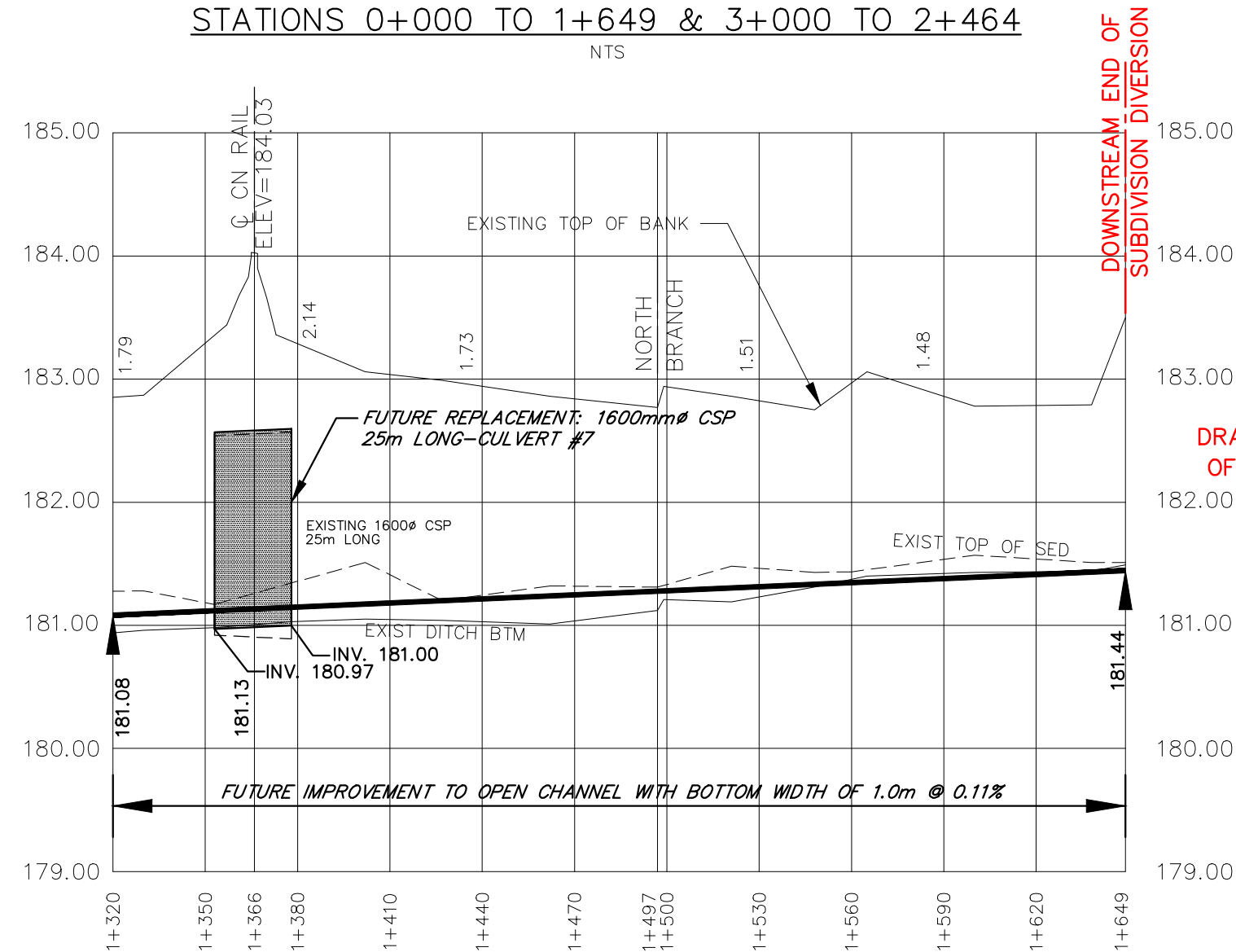
TOWN of AMERSTBURG
MORGAN DRAIN
PROFILE

GENERAL NOTES

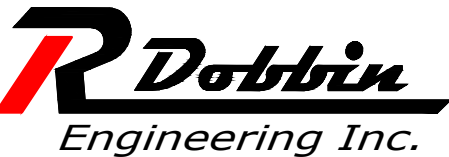
- 1. BENCHMARK No.5 ELEV. 182.54
TOP EAST END OF EXISTING 1600Ø
CSP, STATION 1+366
- 2. NUMBERS ARE DEPTH FROM TOP OF
BANK TO BOTTOM OF NEW CHANNEL.



TYPICAL MAIN DRAIN CROSS SECTION
STATIONS 0+000 TO 1+649 & 3+000 TO 2+464
NTS



SEE DILLON CONSULTING
DRAWINGS FOR INTERNAL RE-ROUTING
OF MAIN DRAIN AND SOUTH BRANCH



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Profile 3

PROJECT No.
2021-1291

APPROVED
J. WARNER

CHECKED
J. WARNER

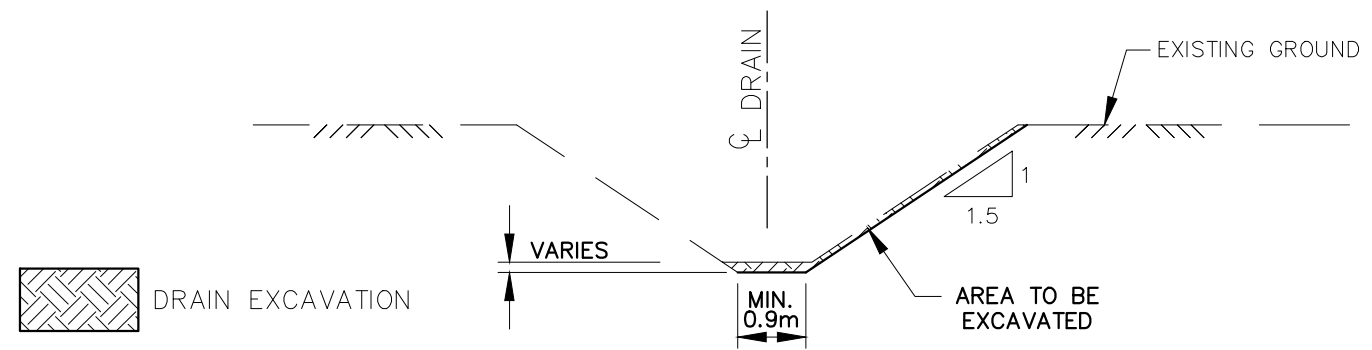
DRAWN
C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	PRELIM.	OCT 2022	CS
SCALE: 1:2,000			
0 20 40 60m			

TOWN of AMERSTBURG
MORGAN DRAIN
PROFILE

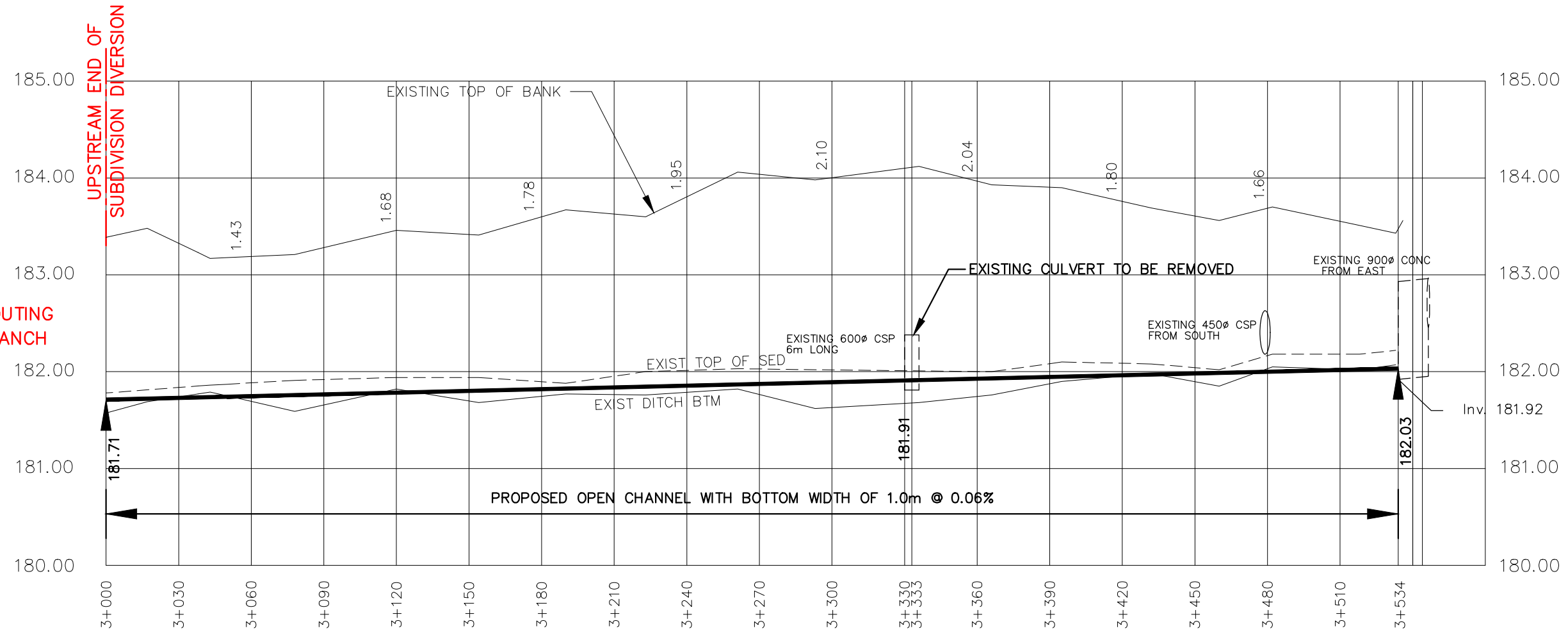
GENERAL NOTES

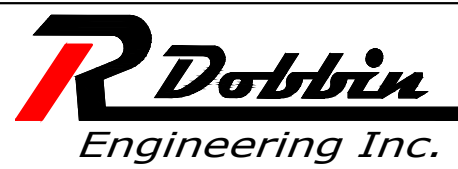
- 1. BENCHMARK No.6 ELEV. 182.93
TOP EAST END OF EXISTING 1500Ø
CSP, STATION 2+464
- 2. NUMBERS ARE DEPTH FROM TOP OF
BANK TO BOTTOM OF NEW CHANNEL.



TYPICAL MAIN DRAIN CROSS SECTION
STATIONS 0+000 TO 1+649 & 3+000 TO 2+464
NTS

SEE DILLON CONSULTING
DRAWINGS FOR INTERNAL RE-ROUTING
OF MAIN DRAIN AND SOUTH BRANCH





4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Morgan Drain Profile 4

PROJECT No.
2021-1291

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED J. WARNER	1	PRELIM.	OCT 2022	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000 0 20 40 60m			

TOWN of AMERSTBURG

MORGAN DRAIN
PROFILE

7
OF 7

Last Updated: October 5, 2022