

Court File No. CV-23-00001165-0000 (Chatham)

ONTARIO
SUPERIOR COURT OF JUSTICE

IN THE COURT OF THE DRAINAGE REFEREE

IN THE MATTER of the *Drainage Act*, R.S.O. 1990, Chapter D. 17

AND IN THE MATTER OF an application by the Corporation of the Municipality of Chatham-Kent for certain orders of the Drainage Referee with respect to construction of the Shaw Branch of the East Branch Facey Drain and By-law No. 93-2021;

B E T W E E N:

CORPORATION OF THE MUNICIPALITY OF CHATHAM-KENT

Applicant

and

CANADIAN PACIFIC RAILWAY COMPANY

Respondent

APPLICATION pursuant to s.106 of the *Drainage Act*, R.S.O. 1990, c D.17

AFFIDAVIT OF JOHN M. SPRIET

I, *John M. Spriet, P. Eng.*, of the City of London , in the County of Middlesex, MAKE OATH
AND SAY:

1. I am a professional engineer licensed in the Province of Ontario and a member of the Professional Engineers of Ontario in good standing. I am an engineer of Spriet Associates, a professional engineering and architectural services firm located in London Ontario. Attached hereto as **Exhibit "A"** to this my Affidavit is a copy of my curriculum vitae.
2. I have worked in drainage engineering for 28 years and am familiar with the *Drainage Act* and its application to municipal drainage projects in the Province of Ontario.

3. Through my career, I have been appointed as a drainage engineer for municipalities in Southwestern Ontario concerning matters under the *Drainage Act*, primarily under section 4 and 78 of the *Drainage Act*. I have authored approximately 500 drainage engineering reports through my career.

4. Spriet Associates London Limited was appointed by the Corporation of the Municipality of Chatham-Kent (the "Municipality") to prepare a report on the construction of the Shaw Branch of the Facey East Municipal Drain serving parts of Lots 3 & 4, Concession 3 (Community of Zone) in the Municipality of Chatham-Kent, and as such I have knowledge of the matters hereinafter deposed to save and except where I have indicated that I have obtained facts from other sources, in which case I state the source of the information and I verily believe those facts to be true.

Background

5. On February 11, 2020, the Municipality received a "Petition for Drainage Works by Owners" under Section 4(b) of the *Drainage Act*. The Petition sought the provision of legal and functional outlet to the East Branch of the Facey Drain (the "Drainage Work"). Attached hereto as **Exhibit "B"** to this my Affidavit is a copy of the Petition.

6. On March 2, 2020, the Municipality's Council ("Council") approved the appointment of Spriet Associates London Limited to make an examination of the area requiring drainage and to prepare a drainage report, in accordance with Section 8 of the *Drainage Act*. Attached hereto as **Exhibit "C"** to this my Affidavit are a copy of the relevant Council meeting minutes for March 2, 2020 approving the Recommendations of the Drainage Board of February 18, 2020 to appoint Spriet, a copy of such Recommendations being also attached as part of Exhibit "C".

7. On April 6, 2020, my staff attended the site to take field information including surveying of the site to gain an understanding of the petition and obtain relevant topographical elevations. At this time, we attended alone as we were not permitted to gather under the Pandemic regulations. From this visit and subsequent review of collected data, we verified that the lands are tributary to the East Branch of the Facey drain, with the lay of the lands naturally sloping south easterly towards the existing open drain. Based on this information, we determined that the lands of A. Miller represent at least 60 percent of the area requiring drainage and therefore the petition is valid.

8. On October 27, 2020, an on-site meeting concerning the Drainage Work was held near the Drainage Work site. Mr. Miller, the petitioning landowner, Blaise Chevalier, Drainage Superintendent for the Municipality, and Ann Ford, Drainage Analyst for the Municipality attended in person. I attended via telephone conference.

9. At this meeting we discussed the petition presented before us. Mr. Miller indicated the need for improved subsurface drainage for his lands and indicated he need a connection to the East Branch. I indicated that crossing of the tracks would be done by boring a new pipe at a deeper elevation under the tracks. I indicated that in my experience, a geotechnical investigation would be required by the railway for a boring and, given the sandy soils in the area, piping ramming would be required. I indicated we would need to consult with the Canadian Pacific Railway Company (“CP”) about this drain.

10. On December 1, 2020, Jack Carello, Manager of Utilities and Flagging for CP, sent an email to the Municipality, copying my office, requesting a teleconference to discuss the Drainage Work. Attached hereto as **Exhibit “D”** to this my Affidavit is a copy of that correspondence.

11. On December 14, 2020, a phone meeting occurred concerning the Drainage Work between Jack Carello of CP, Brandon Widner, P. Eng, of Spriet Associates London Limited, Blaise Chevalier, Drainage Superintendent for the Municipality, and Ann Ford, Drainage Analyst for the Municipality. Mr. Widner advises me that the purpose of the meeting, as was articulated by Mr. Widner to participants of the call at the time, was to discuss the proposed Drainage Work in respect of its crossing of CP lands. Mr. Widner discussed the preliminary design and location as per the plan provided in November of that year. Mr. Widner asked Mr. Carello what requirements CP would have for the Drainage Work and confirmed to Mr. Carello that the resulting engineer's report would comply with CP's technical requirements for the project. Further to this, alternatives were discussed as to the possibility of crossing to the north and south of the area requiring drainage as mentioned by CP. It was indicated those alternatives would be more costly than what is proposed and would be at the expense of CP. In addition to this, CP inquired as to the possibility of doing the work themselves to save cost on the project. CP was advised that they could undertake the work themselves, at their cost.

12. On February 3, 2021, at the request of Mr. Carello, a further on-site meeting occurred at the Drainage Work location between Mr. Widner of my office, Rheal Lemelin, representative of CP, Mr. Chevalier, and Ms. Ford to review my office's proposal for the Drainage Work, any potential alternatives, and CP's requirements for the project. At this meeting, Mr. Widner explained that the work was proposed to proceed by boring, not open cut, including for the purpose of minimizing interruptions to CP's operations. Mr. Lemelin stated that, based on the proposed work plan at that time, a hydrological study and geotechnical report would not be required. Mr. Chevalier explained that increased cost to the project arising from the crossing work would be borne by CP under the *Drainage Act*.

13. On February 8, 2021, the Municipality wrote to Mr. Carello and Mr. Lemelin copying myself, confirming that the on-site meeting had occurred on February 3, 2021 with Mr. Lemelin present. The Municipality further confirmed that my office would be proceeding to finish the engineer's report for the Drainage Work and requested CP to confirm whether it would require a geotechnical report. On February 10, 2021, Mr. Carello responded to the Municipality, copying me on his reply, to advise that if the proposed Drainage Work entailed a pipe under 12", a geotechnical report and track settlement plan would not be required by CP. Mr. Chevalier requested further clarification and Mr. Lemelin replied to advise if, possible, that the pipe be 10". Attached hereto as **Exhibit "E"** to this my Affidavit is a copy of that correspondence.

14. On February 19, 2021, I submitted the engineer's report, plan, profile and detail, for construction of the Shaw Branch of the Facey East Municipal Drain serving parts of Lots 3&4, Concession 3 (Community of Zone) in the Municipality of Chatham-Kent (the "Engineer's Report") to the Municipality's Drainage Board for its consideration. The Engineer's Report took into account the technical requirements CP had specified, including a 10" pipe for the crossing. Attached hereto as **Exhibit "F"** to this my Affidavit is a copy of my Engineer's Report and plan, profile and detail.

ENGINEER'S REPORT

15. As a summary of work involved in preparing the Engineer's Report, I began by examining the prior drainage reports in the area relevant to the petition to gain understanding of what drainage works have been constructed overtime, the watershed area limits, and how costs have been previously assessed.

16. The most recent and relevant report concerning capital work to the Shaw drain is dated October 1, 1979 by HH Todgham P.Eng. The report called for the cleanout of the existing East Branch from its junction with the Facey Drain to the outlet of the existing tile drain a length of 2466 lineal meters. Attached hereto as **Exhibit "G"** to this my Affidavit is a copy of that report.

17. The work involved the excavation of the channel along this length. In addition to this, the report provided for the replacement of the tile drain on the upstream end from County Road 23 downstream for 722 lineal meters. A new assessment schedule was included in this report in which all the lands, roads, and railways were assessed for benefit and outlet in accordance with the *Drainage Act*.

18. Prior to this report, a report was filed by H. H. Todgham P. Eng dated September 23, 1969. The 1969 report called for deepening of the existing open drain at the request of several landowners to allow to improvement of drainage on their lands. This required the drain to be deepened by approx. 450mm to 750mm in depth. This work was carried out along the course of the from the junction of Facey Drain to the Outlet of the tile portion, and length of approx. 8063 lineal feet. Again under this report a new assessment schedule was provided in which the roads, lands and railway were assessed benefit and outlet under this report. Attached hereto as **Exhibit "H"** to this my Affidavit is a copy of that report.

19. Once this was completed, as noted above, on April 6, 2020, my office attended at the site to visualise the site and capture relevant topographical information. With this information in hand, I assessed that the petition was valid.

20. Based on the topographical information I obtained in the field, I determined that the existing surface pipe across the right of way does not provide sufficient depth to allow the upstream

lands to be systemically tiled. Typically, a minimum depth of 1m from the ground surface to the invert of the tile plus any required slope on the pipe is required. The current depth of the surface pipe would not allow this. Attached hereto as **Exhibit "I"** to this my Affidavit is a topographical plan my office has prepared showing the area in question.

21. My office then proceeded to begin preparing a proposed design and associated costs and assessments. As is typical of my practice, our office also held a preliminary meeting with the landowners and reached out to the rail authority for their specific requirements. This consultation continued until CP and the other involved landowners were satisfied with the preliminary work plans. I then proceeded to prepare a final design, plans, assessments and final report.

22. The Engineer's Report, as adopted by Council, proposed a crossing method, chosen to minimize disruption to the railway right-of-way, as it is a trenchless method versus an open cut method. The proposed work involves the following: (1) 10 meters of open ditch construction from the Facey Drain east to the outlet of the bore pipe; (2) Supply and Installation 16m of 250mm steel pipe by jack and bore under the railway tracks; (3) Supply and installation of 11m of 250mm diameter of plastic pipe across the remainder of the rail right of way; (4) Supply and installation of a catch basin.

23. On May 31, 2021, Council finally adopted By-law Number 93-2021 for the Drainage Work to be completed in accordance with the Engineer's Report. Attached hereto as **Exhibit "J"** to this my Affidavit is a copy of the By-law.

24. On June 15, 2021, Mr. Chevalier wrote to CP advising that the Municipality was organizing to mobilize for construction and requesting an encroachment permit be reached for the work to proceed on CP property. On July 6, 2021, Mr. Carello responded, copying me on his response, to

advise that the Drainage Work would need to follow a utility protocol, enclosing a utility application form and flagging application form, and advising that “all expenses for this proposed installation will be borne by the applicant including CP flagging fees.” Attached hereto as **Exhibit “K”** to this my Affidavit is a copy of that correspondence and enclosures.

25. On January 14, 2022, at the request of the Municipality and in the interest of clarifying CP’s liability for costs assessed to it in respect of the Drainage Work, I provided a letter further detailing the assessment rationale in the Engineer’s Report. The Municipality provided this letter to Mr. Carello on January 19, 2022. Attached hereto as **Exhibit “L”** is the Municipality’s email to Mr. Carello with my enclosed letter, on which I was copied.

26. On March 11, 2022, Mr. Carello responded to advise that CP was conducting an internal Engineering review of CP’s “existing drainage and history of the drainage pattern within the operating corridor for which has been in place since 1889 prior to the Provincial Drainage Act of 1975.” CP further advised that, “although an assessment, and deviation of funds was put together by J.M. Spriet, CP requests a full surface drainage water report/hydrological study that depicts a 1:100 year storm for this section of property to the north and south of the active railway corridor.” Finally, CP stated it is of the position that:

- a) its existing culverts can manage existing surface water and drainage ditches are functioning to handle existing flows in order to operate a Railroad safely; and
- b) CP is not in a position to participate monetarily with the Drainage Work.

27. I am advised by Mr. Chevalier that on April 13, 2022, the Municipality responded to CP to advise that the Municipality would be prepared to enter into an encroachment agreement for the

Drainage Work but that it was not prepared to agree that CP was not liable for assessed costs as set out in the Engineer's Report. Attached hereto as **Exhibit "M"** to this my Affidavit is a copy of CP's correspondence of March 11, 2022 and the Municipality's response of April 13, 2022.

DRAINAGE WORK EXECUTION

28. I have personally been involved in a number of drainage projects under the *Drainage Act* that involved boring operations under a railway corridor. Based on my experience in those projects and in drainage engineering, it is my opinion that execution of the proposed Drainage Work, as set out in the Engineer's Report, will result in minimal disruptions, if any, to CP or its operations.

29. In my experience, the Drainage Work would proceed with the municipality obtaining a permit from the railway owner and the work would proceed in accordance with that permit. Typical conditions on a permit including flagging and foreman attendance during the project, the costs of which are borne by the railway company.

30. As was done in this case, sizing of the boring is selected in consultation with the railway company. The Engineering Report produced for this project specifically incorporated CP's specifications for the proposed sizing of the pipe to be installed by bore, which I determined reasonably provided sufficient drainage capacity, while also avoiding the need for further testing and reports which will be costly to CP. I note that CP's representatives agreed that the proposed specifications were acceptable to CP and their operations, and did not, at any time, advise my office of outstanding concerns regarding impacts to their operations from the proposed Drainage Work prior to my office delivering the Engineer's Report. CP presented no appeals during the *Drainage Act* process.

31. Trains would be permitted to continue using the track throughout the project as required by CP, albeit that boring work will halt temporary while trains pass through the work area.

32. Consistent with the above, in my experience, where *Drainage Act* work is proposed to be carried out on federal railway lands, the Engineer appointed under the *Drainage Act* cooperates with the railway to come up with specifications that satisfy the technical requirements of the railway and see the project completed at the lowest cost possible, as was done in this case.

33. I am not aware of a *Drainage Act* project involving work on federal railway lands that was not accomplished through the above general procedure. To my knowledge, this has been the practice to see such drainage projects completed for many decades. For example, in the 1969 project I referred to previously, Section 13 of the Engineer's General Specifications explicitly provided that all work on or adjacent to any railway "is to be carried out in accordance with the requirements of...the railway...and its specifications for such work are to be followed as if they were part of this specification."

34. In the same manner that the 1969 report required work to be carried out in accordance with a railway's specifications, in my experience, engineers appointed under the *Drainage Act* consistently work cooperatively with federal railways to produce drainage reports that satisfy federal railway technical requirements.

ASSESSMENT OF COSTS

35. Assessment for the Drainage Work in the Engineer's Report was prepared utilizing a modified Todgham Method, in which costs are divided between outlet and benefit costs. These costs were then assessed under Sections 22 and 23 of the *Drainage Act*.

36. I understand that CP has stated that it does not derive drainage benefits from the drainage scheme. However, CP very clear derives drainage benefits from the drain.

37. CP's lands are within the Facey Drain catchment area and contribute water to the system. In this location, CP does not currently have a direction connection to the Facey drain. With the construction of the Shaw branch, they will have a direct connection which will provide CP with better control of surface water. CP will also obtain improved drainage on the north side of the tracks with a deeper outlet. All of these outcomes are considered benefit under the *Drainage Act*.

38. In terms of outlet assessment, CP has 1.0 hectares of land that drain into the drainage works, and run-off rates are appropriately applicable to reflect the greater run-off from railway lands versus farmlands.

39. In addition, a special assessment under Section 26 would be assessed to CP for the increased cost to the project for boring across CP's right of way, due to the construction and operation of their rail line. Section 26 states the increased costs to a project caused by the existence of a public utility are to be assessed to the public utility. The *Drainage Act* defines "public utility" to include railways, however operated. In my experience, drainage engineer's uniformly assess Section 26 costs to federal railways in this matter.

40. If CP wished to appeal their assessment, they had a right to do so under the *Drainage Act* by filing an appeal at the Court of Revision or at the Agriculture, Food and Rural Affairs Appeal Tribunal. It is those bodies that have the power to review and modify assessments.

41. I make this affidavit for no improper purpose.

SWORN REMOTELY BEFORE ME at the
Municipality of Chatham-Kent, this 27th day of
March 2024 in accordance with O.Reg 431/20,
Administering Oath or Declaration Remotely

Emily Crawford

Digitally signed by Emily Crawford
Date: 2024.03.27 16:25:33 -04'00'

**John M
Spriet**

Digitally signed by
John M Spriet
Date: 2024.03.27
16:15:09 -04'00'

John Spriet

A Commissioner for taking Affidavits *(or as may be)*

**THIS IS EXHIBIT "A" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily Crawford
Date: 2024.03.27 20:47:40 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

JOHN M. SPRIET, P. Eng.
Professional Engineer

Position	Civil Engineer/Managing Partner
Memberships	Association of Professional Engineers of Ontario, Ontario Society of Professional Engineers
Education	Bachelor of Engineering Science (Civil) University of Western Ontario, 1996
Experience	<p>1996 to Present - Spriet Associates London Limited Project Engineer</p> <p>Manages the firm as well as projects in various disciplines including:</p> <ul style="list-style-type: none">• Preparation of reports under the Drainage Act (500 plus reports)• Stormwater management facilities• Bridge replacement and rehabilitation• Site design• Storm sewers and road design• Structural design
Employment History	<p>1996 to Present - Spriet Associates London Limited: Commenced working at firm directly from university, performed all jobs in the firm, from surveying, to drafting, to design.</p> <p>1993 to 1995 - Spriet Associates London Limited - Summer Student: Surveyor on municipal drainage projects, road jobs, site plans, ect... Responsible for collecting field data and translating into notes office staff could use.</p> <p>1991 to 1993 - Vytac Incorporated: Summer student performing odd jobs in vinyl siding factory.</p>

**THIS IS EXHIBIT "B" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily
Crawford
Date: 2024.03.27 20:48:06 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

This form is to be used to petition municipal council for a new drainage works under the *Drainage Act*. It is not to be used to request the improvement or modification of an existing drainage works under the *Drainage Act*.

To: The Council of the Corporation of the Chatham - Kent of _____

The area of land described below requires drainage (provide a description of the properties or the portions of properties that require drainage improvements)

out let through Canadian
 Pacific Property
 no work required on West Pt.
 Lots 3 and 4 Con 3.

In accordance with section 9(2) of the *Drainage Act*, the description of the area requiring drainage will be confirmed or modified by an engineer at the on-site meeting.

As owners of land within the above described area requiring drainage, we hereby petition council under subsection 4(1) of the *Drainage Act* for a drainage works. In accordance with sections 10(4), 43 and 59(1) of the *Drainage Act*, if names are withdrawn from the petition to the point that it is no longer a valid petition, we acknowledge responsibility for costs.

Purpose of the Petition (To be completed by one of the petitioners. Please type/print)

Contact Person (Last Name) <u>Miller</u>	(First Name) <u>Alex</u>	Telephone Number <u>519 672-4409</u> ext <u>401-6336</u>
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Address	
Road/Street Number <u>29405</u>	Road/Street Name <u>Florence Rd.</u>

Location of Project			
Lot <u>wt pt 3 and 4</u>	Concession <u>3</u>	Municipality <u>C-K</u>	Former Municipality (if applicable) <u>Zone</u>

What work do you require? (Check all appropriate boxes)

- Construction of new open channel
- Construction of new tile drain
- Deepening or widening of existing watercourse (not currently a municipal drain)
- Enclosure of existing watercourse (not currently a municipal drain)
- Other (provide description ▼)

Provide legal and Functional outlet

Name of watercourse (if known)
outlet to East Branch Facey

Estimated length of project
width of Canadian Pacific Property

General description of soils in the area
Sand

What is the purpose of the proposed work? (Check appropriate box)

- Tile drainage only
- Surface water drainage only
- Both

Petition filed this 16th day of FEBRUARY, 2020

Name of Clerk (Last, first name) <u>DICK, TIMOTHY</u>	Signature 
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**THIS IS EXHIBIT "C" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily
Crawford
Date: 2024.03.27 20:49:03 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

**The Corporation of the Municipality of
Chatham-Kent**

**Chatham-Kent Council Meeting
Council Chambers, Chatham-Kent Civic Centre**

March 2, 2020

6:00 P.M.

1. Call to Order

The Mayor called the meeting to Order:

Present: Mayor Darrin Canniff, Councillors Authier, Bondy, Ceccacci, Crew, Faas, Finn, Hall, Harrigan, Kirkwood-Whyte, Latimer, McGrail, B. McGregor, C. McGregor, Pinsonneault and Thompson

Absent: Councillors Sulman and Wright

**2. Disclosures of Pecuniary Interest
(Direct or Indirect) And the General Nature Thereof**

3. Supplementary Closed Session Agenda Items

**4. Recess to Closed Session – 4:00 p.m.
Councillor Carmen McGregor, Closed Session Chair**

That Council moved into a Closed Session Meeting of Council pursuant to Section 239 of the Municipal Act, 2001, as amended, for the following reasons:

- Advice that is subject to solicitor-client privilege, including communications necessary for that purpose with regard to **Erie Shore Drive**. Section 239(2)(f), Municipal Act, 2001.
- Litigation affecting the municipality and advice that is subject to solicitor-client privilege, including communications necessary for that purpose with regard to **litigation involving a member of Council**. Section 239(2)(e) & (f), Municipal Act, 2001.
- Proposed acquisition of land by the municipality or local board and advice that is subject to solicitor-client privilege, including communications necessary for that purpose with regard to **Surplus St. Clair Catholic School Board properties**. Section 239(2)(c) & (f), Municipal Act, 2001.

5. Adjournment of Closed Session

Resumption of Open Council Meeting – 6:00 p.m.

6. Playing of the National Anthem

7. Approval of Supplementary Agenda

The Municipal Clerk noted that the following items will be added to the agenda:

- Item 17(e) - Erie Shore Drive Road Closure
- Item 18(f) - Community Update on Coronavirus Disease 2019 (COVID-19), Presentation by Dr. David Colby, Medical Officer of Health
- Item 19(c) - Verbal Update – Rose Beach Line

The Municipal Clerk noted that the following items have been postponed:

- Item 15(a) Tender for Contract T17-206, Fifth Street Bridget over Thames River Structure Rehabilitation, Chatham
- Item 17(c) Ontario Heritage Act re Ridge House Museum, 53 Erie Street, Ridgetown

It was also noted that Item 17(e) – Road Closure – Erie Shore Drive, will be moved up the agenda to follow the recognition.

8. Disclosures of Pecuniary Interest (Direct or Indirect) for Open Session Agenda Items and the General Nature There Of

Declaration of Interest, Municipal Conflict of Interest Act, R.S.O. 1990, .M.50
 Re: Amendment to By-law 102-2018 for Base Line Road, Chenal Road, Snye Road, Seys Line and Island View Road Waterline Project (Community of Chatham Township)
 Item No: #16c

I, Councillor C. McGregor hereby declare a potential (deemed/direct/indirect) pecuniary interest on the above noted Council/Committee/Board Agenda, Item, Title for the following reasons: Lives in the area.

Declaration of Interest, Municipal Conflict of Interest Act, R.S.O. 1990, .M.50
 Re: 2019 Record of Payment to Council-Owned Vendors
 Item No: #13(a)

I, Councillor Aaron Hall hereby declare a potential (deemed/direct/indirect) pecuniary interest on the above noted Council/Committee/Board Agenda, Item, Title for the following reasons: Spouse owns Glassroots Media.

Declaration of Interest, Municipal Conflict of Interest Act, R.S.O. 1990, .M.50
 Re: 2019 Record of Payment to Council-Owned Vendors
 Item No: #13(a)

I, Councillor Michael Bondy hereby declare a potential (deemed/direct/indirect) pecuniary interest on the above noted Council/Committee/Board Agenda, Item, Title for the following reasons: Owns business that may be used and paid by the Municipality of Chatham-Kent.

9. Recognition

- (a) Recognition of Matthew Sterling for being awarded the Eliot Moses Memorial Special at the 2019 International Plowing Match

Councillors Latimer, McGrail and Faas presented a certificate of recognition to Matthew Sterling who was awarded the Eliot Moses Memorial Special at the 2019 International Plowing match. This award, donated by the Moses Family, is in memory of Eliot Moses, who was an OPA President in 1933 and was a director for 33 years.

10. Planning

- (a) [Applications for Zoning By-law Amendment PL202000007](#)
[1078262 Ontario Ltd.](#)
[Friendship Way](#)
[Community of Wheatley \(West Kent\)](#)

The Mayor asked if any person from the public had an interest in the application. There were members from the public noted as being present with an interest in the matter. The applicant was present at the meeting.

The Senior Planner presented the application.

Joyce Eaton, on behalf of the owners of Lots 2 and 3 Erie Street North and Linda Brown, Wheatley

Ms. Eaton noted that her clients were concerned about traffic and parking in the development given that most of the units will be townhouses in a very condensed, small area.

The new units being added are not consistent with the existing units. The new units seem to be much smaller in size with less frontage, rear yard setbacks and green space. There were further concerns about the lack of recreational space for families with children.

Gail Zeray, 1-123 Erie Street North, Wheatley

Ms. Zeray echoed the concerns raised by Ms. Eaton.

Councillor Authier moved, Councillor Harrigan seconded:

“That

- 1. Zoning By-law Amendment Application D-14 WH/03/20/O to rezone Blocks 4, 5, 6 and 8, Plan 24M-940, in the Community of Wheatley, to a site-specific Residential Low Density First (RL1-1502) zone and site-specific Residential Medium Density First (RM1-1449, RM1-1500 and RM1-1501) zones, to facilitate the development of a Single Detached Dwelling and Row House Dwellings, be approved, and the implementing by-law be adopted.”**

The Mayor put the Motion

Councillor	Vote	Councillor	Vote
Authier	Yes	Latimer	Yes
Bondy	Yes	McGrail	Yes
Ceccacci	Yes	B. McGregor	Yes
Crew	Yes	C. McGregor	Yes
Faas	Yes	Pinsonneault	Yes
Finn	Yes	Sulman	Absent
Hall	Yes	Thompson	Yes
Harrigan	Yes	Wright	Absent
Kirkwood-Whyte	Yes	Mayor Canniff	Yes

Yes Votes: 16
No Votes: 0

Motion Carried

- (b) [Chatham-Kent Community Improvement Plan: A Plan to Support the Chatham-Kent Growth Strategy and 2018 – 2022 Council Term Priorities](#)**

The Mayor asked if any person from the public had an interest in the application. There were no members from the public noted as being present with an interest in the matter. The applicant was present at the meeting.

Councillor Crew moved, Councillor Hall seconded:

“That

1. The Chatham-Kent Community Improvement Plan be adopted and the implementing by-law be approved, as amended.
2. Implementation of the Downtown and Main Street Areas Community Improvement Plan, Commercial Community Improvement Plan, and Employment Community Improvement Plan be suspended effective March 31, 2020, except that:
 - a) Existing approvals and agreements under the Downtown and Main Street Areas Community Improvement Plan, Commercial Community Improvement Plan, and Employment Community Improvement Plan remain in effect in accordance with the provisions of the respective plan; and,
3. That administration be authorized to close out surpluses and deficits related to the Community Improvement Plan base budget to the Community Improvement Plan Reserve on an annual basis.”

Councillor Bondy moved an amendment, Councillor B. McGregor seconded:

“That Section 12 of the by-law be amended to change the Commercial minimum \$250,000 eligible cost to five years only at 60%.”

The Mayor put the Amendment

Councillor	Vote	Councillor	Vote
Authier	Yes	Latimer	Yes
Bondy	Yes	McGrail	Yes
Ceccacci	Yes	B. McGregor	Yes
Crew	No	C. McGregor	Yes
Faas	No	Pinsonneault	Yes
Finn	Yes	Sulman	Absent
Hall	No	Thompson	Yes
Harrigan	No	Wright	Absent
Kirkwood-Whyte	Yes	Mayor Canniff	Yes

Yes Votes: 12

No Votes: 4

Amendment Carried

The Mayor put the Motion, as amended

Councillor	Vote	Councillor	Vote
Authier	Yes	Latimer	Yes
Bondy	Yes	McGrail	Yes
Ceccacci	Yes	B. McGregor	Yes
Crew	Yes	C. McGregor	Yes
Faas	Yes	Pinsonneault	Yes
Finn	Yes	Sulman	Absent
Hall	Yes	Thompson	Yes
Harrigan	Yes	Wright	Absent
Kirkwood-Whyte	Yes	Mayor Canniff	Yes

Yes Votes: 16

No Votes: 0

Motion Carried

Regular

11. Presentation

- (a) Presentation by Brenda Slater, Account Manager Zone 1, Municipal Property Assessment Corporation re Overview of Ontario's Property Assessment and Taxation System

Brenda Slater, Account Manager, Municipal Assessment Corporation provided Council with an overview of Ontario's property assessment and taxation system.

Municipality of Chatham-Kent Assessment Base 2019 taxation year

Property Class	Number of Properties	Total Assessed Value (M's)	Percentage of Total Portfolio
Residential	41,729	6,739,826,616	47.30
Farm/Managed Forest	8,391	5,284,875,053	37.08
Commercial	2,966	993,861,572	6.99
Industrial	827	357,301,260	2.50
Special/Exempt	1,250	685,800,802	4.81
Multi-residential	152	187,518,780	1.32
Total	55,315	14,249,184,083	100.00

Councillor B. McGregor moved, Councillor Latimer seconded:

"That the presentation be received for information."

The Mayor put the Motion

Motion Carried

12. Deputations – items on current agenda (requests must be received by 3:00 p.m.)

Council received the following deputations with regard to Item 17e – Erie Shore Drive Road Closure:

- Michelle MacLean (read by Councillor Latimer)
- Terra Cadeau
- Sean Panjer
- Murray Spencer
- Sarah VanDerPaelt
- Trevor Dixon
- Andrew Spencer
- Dave Davis
- Gary Janadia
- Stephanie Robinson
- Jeffrey O'Brien
- Richard Barnier

13. Consent Agenda

- (a) Information reports

- (i) 2019 Record of Payment to Council-Owned Vendors
 - (ii) Proposed Arena Complex
 - (iii) Municipal Heritage Committee – 2019 Annual Report
- (b) Routine Approval
- (i) Budget Methodology
- (c) Committee Reports
- (i) Drainage Board Recommendations from its meeting held on February 18, 2020
 - (ii) Chatham-Kent Board of Health Minutes from its meeting held on January 15, 2020
 - (iii) Chatham-Kent Museum Advisory Committee minutes from its meeting held on September 26, 2019
 - (iv) Ridge House Museum Advisory Committee minutes from its meeting held on September 24, 2019
 - (v) Chatham-Kent Age Friendly Community Advisory Committee minutes from its meeting held on November 7, 2019
 - (vi) Chatham-Kent Accessibility Advisory Committee minutes from its meeting held on January 21, 2020
 - (vii) Ridge Landfill Liaison Committee minutes from its meeting held on December 10, 2019
 - (viii) Blenheim Landfill Liaison Committee minutes from its meeting held on December 10, 2019

Councillor Authier moved, Councillor McGrail seconded:

“That the items listed on the Consent Agenda be approved as presented and that action be taken as required, excluding those items placed aside.”

The Mayor put the Motion

Motion Carried

14. Notices of Motion

- (a) Presentation of new Notices of Motion

Councillor Bondy presented a notice of motion regarding Victoria Avenue Reconstruction. The matter will be added to the March 23, 2020 Council agenda for discussion and voting.

Councillor Hall presented a notice of motion regarding Youth Leaders Forum & Information event. The matter will be added to the April 6, 2020 Council agenda for discussion and voting.

Councillor Harrigan presented a notice of motion regarding the Wheatley Recreation Fund. The matter will be added to the March 23, 2020 Council agenda for discussion and voting.

Councillor Thompson presented a notice of motion regarding a pedestrian activated crosswalk at the corner of Anger and Chatham Streets in Blenheim. The matter will be

**Municipality of Chatham-Kent
Recommendations of the Drainage Board
To
Chatham-Kent Council**

RE: Drainage Board Meeting – February 18, 2020

Members present were Chairman Brian Anderson, Vice Chairman Grant Guy, Second Vice Chairman Ron Gelderland, and member Steve Gleeson. Not present Louis Roesch, and Scott McGeachy.

A summary of the recommendations of the Board with respect to the drainage matters considered at the February 18, 2020 meeting are set forth below. The provisional by-laws are found elsewhere in the agenda.

Summary of Recommendations of the Drainage Board

1. Talbot Trail Lot 151 Drain
Community of Raleigh

That the Engineer's report on the Talbot Trail Lot 151 Drain dated January 14, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Talbot Trail Lot 151 Drain.

2. Josh Vyn No. 1 Drain
Community of Howard

That the Engineer's report on the Josh Vyn No. 1 Drain dated January 6, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Josh Vyn No. 1 Drain.

3. Josh Vyn No. 2 Drain
Community of Howard

That the Engineer's report on the Josh Vyn No. 2 Drain dated January 6, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Josh Vyn No. 2 Drain.

4. Camythorne Drain
Community of Raleigh

That the Engineer's report on the Camythorne Drain dated February 3, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Camythorne Drain.

5. Campbell Leatherdale Drain
Community of Howard

That the Engineer's report on the Campbell Leatherdale Drain dated February 5, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Campbell Leatherdale Drain.

6. Duart Drain 2020
Community of Orford

That the Engineer's report on the Duart Drain 2020 dated January 24, 2020 be adopted as presented and Council give 1st and 2nd reading to the By-law with respect to the Duart Drain 2020.

That the following engineering appointments be approved: Section 4 Drain, Tecumseh Line – Spriet Associates London Limited, Facey East Branch Section 4 Drain - Spriet Associates London Limited, Section 4 Drain, Grande River Line - Spriet Associates London Limited, Hepburn Drain - Spriet Associates London Limited, Lalonde Drain - Spriet Associates London Limited, and Ted Teetzel Drain - Spriet Associates London Limited.

**THIS IS EXHIBIT "D" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily Crawford
Date: 2024.03.27 20:48:38 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

Emily Crawford

From: Jack Carello <Jack_Carello@cpr.ca>
Sent: December 3, 2020 5:10 PM
To: Blaise Chevalier
Cc: Ann Ford; brandon@spriet.on.ca; John M Spriet; Rheal Lemelin
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Let's try the week after. Mon/Tues btwn 1pm – 3pm.

From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: December 2, 2020 5:13 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Blaise Chevalier <blaisec@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: Re: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Jack, I will not be back to work till next Thursday, off on bereavement leave.

Rheal

Sent from my iPhone

On Dec 2, 2020, at 5:10 PM, Jack Carello <Jack_Carello@cpr.ca> wrote:

Next Wed/Thurs btwn 10:30 & noon works for me.

Rheal - Do these dates/times work with your schedule.

From: Blaise Chevalier <blaisec@chatham-kent.ca>
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Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

It would be best to set up a conference call to discuss this proposal further.

Regards,

<image002.png>

Jack Carello, SR/WA
Manager Utilities & Flagging
Engineering Public Works
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
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Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
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Hi Jack,

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Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca

<image003.png>

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From: Glenna Hall <Glenna_Hall@cpr.ca>
Sent: November 18, 2020 6:15 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; Jack Carello <Jack_Carello@cpr.ca>
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

Hello Blaise,

I've copied in your regional contact Jack Carello who will be able to assist with your general queries.

Please note due to end of year wrap-ups and higher than usual application requests, newly submitted utility application forms will be reviewed beginning of year 2021, unless in the case of an emergency.

Regards,
Glenna

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, November 18, 2020 9:39 AM
To: Glenna Hall <Glenna_Hall@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; Brandon Widner <brandon@spriet.on.ca>
Subject: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

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Hi Glenna,

I've been given your contact information from our drainage consultant, Spriet Associates, who indicated they had worked with you on previous Drainage Act projects. They had recommended I reach out to you first as you may be able to direct me through the appropriate channels at CP Rail.

We've received a petition under Section 4 of the Drainage Act for outlet to a property located at the north-east corner of the intersection of Zone Rd 2 and the CP rail line, located between the villages of Bothwell and Kent Bridge. Based on preliminary site reviews and survey, the proposed project scope generally includes the installation of a new rail crossing consisting of a 400mm diameter pipe (there is an existing 900mm diameter concrete in the same vicinity) and some drainage swale improvements.

I've attached a site map detailing the location (yellow line). Can you advise who we should be reaching out to at CP at this point for review and comments?

Thanks.

Blaise Chevalier

*Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent*

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
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**THIS IS EXHIBIT "E" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

**Emily
Crawford**

Digitally signed by Emily
Crawford
Date: 2024.03.27 20:49:31
-04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

Emily Crawford

From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: February 10, 2021 1:47 PM
To: Blaise Chevalier; Jack Carello
Cc: Ann Ford; brandon@spriet.on.ca; John M Spriet
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

If possible make 10"

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, February 10, 2021 12:51 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Thanks for the response - to confirm, is that inclusive of 12" (meaning 12" and smaller)? The current sizing proposal is for a 12" diameter crossing.

Thanks,

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Wednesday, Feb 10, 2021, 9:33 AM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>, brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

If the proposed installation pipe stays under 12" then a Geotechnical report and track settlement plan would not be required.

Regards,



Jack Carello, Civil Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western
Region
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: February 8, 2021 12:37 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Good afternoon gentlemen,

Thanks for coming down and meeting with us Rheal, despite the new position (and slightly larger geographic area).

Spriets are currently working towards finishing a preliminary report and wanted to confirm that a geotechnical report is NOT required from your end. I just wanted to follow up with you two since, as Rheal indicated at our meeting, it was a little unclear whether this work falls under Rheal or Jack's department. I know Rheal indicated that this wouldn't be required for him.

Can you confirm this?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: January 19, 2021 1:51 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise, I can meet with you on Feb February 03 around 11:00 at the nearest road crossing of mile 47.59 Windsor Sub.

Rheal Lemelin | Manager Bridge Maintenance Toronto | 2025 McCown Rd., Scarborough, ON. M1S 5K3
C 416 525 9094 | O 416 609 7880



From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, January 13, 2021 11:36 AM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Rheal,

With the new COVID regulations coming into effect, I was wondering if a site visit was still a possibility for you? Just hoping to keep this project moving along if possible.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

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From: Blaise Chevalier
Sent: December 18, 2020 3:07 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; 'Jack Carello' <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Good morning Rheal,

Just following up to our call we had earlier this week with Jack. Based on our discussion, Jack suggested it might be beneficial to have a site visit to review the proposal with you as all as any potential alternatives.

Would you happen to have some availability in the new year to meet at this location?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
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Manager Utilities & Flagging
Engineering Public Works
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Sent: November 18, 2020 6:15 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; Jack Carello <Jack_Carello@cpr.ca>
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

Hello Blaise,

I've copied in your regional contact Jack Carello who will be able to assist with your general queries.

Please note due to end of year wrap-ups and higher than usual application requests, newly submitted utility application forms will be reviewed beginning of year 2021, unless in the case of an emergency.

Regards,
Glenna

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, November 18, 2020 9:39 AM
To: Glenna Hall <Glenna_Hall@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; Brandon Widner <brandon@spriet.on.ca>
Subject: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Glenna,

I've been given your contact information from our drainage consultant, Spriet Associates, who indicated they had worked with you on previous Drainage Act projects. They had recommended I reach out to you first as you may be able to direct me through the appropriate channels at CP Rail.

We've received a petition under Section 4 of the Drainage Act for outlet to a property located at the north-east corner of the intersection of Zone Rd 2 and the CP rail line, located between the villages of Bothwell and Kent Bridge. Based on preliminary site reviews and survey, the proposed project scope generally includes the installation of a new rail crossing consisting of a 400mm diameter pipe (there is an existing 900mm diameter concrete in the same vicinity) and some drainage swale improvements.

I've attached a site map detailing the location (yellow line). Can you advise who we should be reaching out to at CP at this point for review and comments?

Thanks.

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca

<image003.png>

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**THIS IS EXHIBIT "F" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily
Crawford
Date: 2024.03.27 20:49:56
-04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham-Kent

Community of Zone



**SPRIET
ASSOCIATES**

ENGINEERS & ARCHITECTS

155 York Street
London, Ontario N6A 1A8
Tel. (519) 672-4100
Fax (519) 433-3251
E-mail MAIL@SPRIETONCA

Our Job No. 220060

February 19, 2021

London, Ontario
February 19, 2021

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham-Kent

Community of Zone

To the Drainage Board of the
The Municipality of Chatham-Kent

Members of the Drainage Board:

We are pleased to present our report on the construction of the Shaw Branch of the Facey East Municipal Drain serving parts of Lots 3 & 4, Concession 3 (Community of Zone) in the Municipality of Chatham-Kent.

AUTHORIZATION

This report was prepared pursuant to Section 4 of the Drainage Act. Instructions were received from your Municipality with respect to a motion of Council. The work was initiated by a petition signed by the owners whose lands contain over 60 percent of the area requiring drainage.

DRAINAGE AREA

The total watershed area as described above contains approximately 9.3 hectares. The area requiring drainage for the Shaw Branch is described as the lands located northwest adjacent to the CP Railway in Lot 4, Concession 3.

EXISTING DRAINAGE CONDITIONS

At a site meeting held with respect to the project and through later discussions, the owners reported the following:

- that the petitioning landowner, A. & D. Miller (Roll No. 1-093), requested a deeper outlet to allow for the systematic tiling of approximately 6.0 hectares of land, the landowner also indicated also that the lands were subject to frequent ponding along the south limit of his property.
- the Drainage Superintendent for the Municipality indicated that this would require a crossing under the CP Rail property and that the drain would be tributary to the Facey East Drain
- a subsequent site meeting was held with officials from CP Rail to discuss a potential crossing and they indicated that any borings under 300mm in diameter did not require a geotechnical report



EXISTING DRAINAGE CONDITIONS (cont'd)

A field investigation and survey were completed and, upon reviewing our findings, we note the following:

- that the lands within the area requiring drainage are currently serviced by a 900mm diameter surface culvert that does not contain sufficient outlet to allow for subsurface drainage
- that construction of a new crossing under C.P. Rail lines would necessitate maintenance work on the Facey East Drain downstream of the proposed work

Preliminary design, cost estimates and assessments were prepared, and provided to the owners to review the findings and preliminary proposals. Further input and requests were provided by the affected owners at that time and at later dates. Based on the proposed design it was decided to proceed with the petition.

DESIGN CONSIDERATIONS

The proposed drain was designed, with respect to capacity, using the Drainage Coefficient method contained in the "DRAINAGE GUIDE FOR ONTARIO", Publication 29 by the Ontario Ministry of Agriculture, Food, and Rural Affairs. The Drainage Coefficient defines a depth of water that can be removed in a 24-hour period and is expressed in millimetres per 24 hours. The coefficient used for the Shaw Branch was 38mm.

We would like to point out that there have been indications of sandy soil conditions, but no formal soil investigation has been made.

All of the proposed work has been generally designed and shall be constructed in accordance with the DESIGN AND CONSTRUCTION GUIDELINES FOR WORK UNDER THE DRAINAGE ACT.

RECOMMENDATIONS

We are therefore recommending the following:

- that a new branch drain, to be known as the Shaw Branch, be constructed commencing at the East Branch of the Facey Drain and travel northwesterly under the CP Rail allowance to just within the limits of the lands of A. & D. Miller (Roll No. 1-093) for a total length of 43 lineal meters
- that the crossing under the railway be done by jack and bore to minimize disruption to rail traffic
- that a swale be constructed from the lands of A. & D. Miller (Roll No. 1-093) east to the existing 900mm diameter surface culvert to ensure that the lands receive adequate surface drainage



RECOMMENDATIONS (cont'd)

- that a catch basin be installed on the upstream end of the branch to alleviate surface ponding and provide a visible connection point to the drain
- that the Facey East Drain be cleaned out under maintenance to provide a sufficient outlet for the Shaw Branch

Due to the indications of poor soil conditions our design includes the use of sealed sewer pipe on a crushed stone bedding to minimize settlement and the incursion of soil particles.

In accordance with the principals of Section 14(2) of the Drainage Act, the existing surface waterway beside along the route of the tile drain shall be part of the drainage works for future maintenance. The width available for the waterway shall be equal to the maintenance working width as noted on the Contract Drawings.

ENVIRONMENTAL CONSIDERATIONS AND MITIGATION MEASURES

There are no significant wetlands or sensitive areas within the affected watershed area or along the route of the drains. The proposed construction of the Shaw Branch of the Facey East Drain includes quarry stone outlet protection, surface inlets, and waterway which greatly help reduce the overland surface flows and any subsequent erosion. A temporary flow check of silt fencing is to be installed in the ditch downstream of the tile outlet for the duration of the construction.

SUMMARY OF PROPOSED WORK

The proposed work consists of approximately 10 lineal meters of open ditch construction including quarry stone rip-rap bank protection and bank seeding; approximately 33 lineal meters of 250mm (10") HDPE sewer pipe and steel pipe including related appurtenances.

SCHEDULES

Four schedules are attached hereto and form part of this report, being Schedule 'A' - Allowances, Schedule 'B' - Cost Estimate, Schedule 'C' - Assessment for Construction, and Schedule 'D' - Assessment for Maintenance.

Schedule 'A' - Allowances. In accordance with Sections 29 and 30 of the Drainage Act, allowances are provided for right-of-way and damages to lands and crops along the route of the drain as defined below.

Schedule 'B' - Cost Estimate. This schedule provides for a detailed cost estimate of the proposed work which is in the amount of \$ 36,500.00. This estimate includes engineering and administrative costs associated with this project.

Schedule 'C' - Assessment for Construction. This schedule outlines the distribution of the total estimated cost of construction over the roads and lands which are involved.

SCHEDULES (cont'd)

Schedule 'D' - Assessment for Maintenance. In accordance with Section 38 of the Drainage Act, this schedule outlines the distribution of future repair and/or maintenance costs for portions of, or the entire drainage works.

Drawing No. 1, Job No. 220060, and specifications form part of this report. They show and describe in detail the location and extent of the work to be done and the lands which are affected.

ALLOWANCES

DAMAGES: Section 30 of the Drainage Act provides for the compensation to landowners along the drain for damages to lands and crops caused by the construction of the drain. The amount granted is based on \$3,613.00/ha. for closed drain installed with wheel machine. This base rate is multiplied by the hectares derived from the working widths shown on the plans and the applicable lengths.

RIGHT-OF-WAY Section 29 of the Drainage Act provides for an allowance to the owners whose land must be used for the construction, repair, or future maintenance of a drainage works.

For tile drains where the owners will be able to continue to use the land, the allowance provides for the right to enter upon such lands, and at various times for the purpose of inspecting such drain, removing obstructions, and making repairs. Also, the allowance provides for the restrictions imposed on those lands to protect the right-of-way from obstruction or derogation. The amounts granted for right-of-way on tile drains is based on a percentage of the value of the land designated for future maintenance. Therefore, the amounts granted are based on \$6,670.00/ha. This value is multiplied by the hectares derived from the width granted for future maintenance and the applicable lengths.

For open ditches, the allowance provides for the loss of land due to the construction provided for in the report. The amounts granted are based on the value of the land, and the rate used was \$33,360.00/ha. When any buffer strip is incorporated and/or created, the allowance granted is for any land beyond a 1.8-meter width deemed to have always been part of the drain. For existing open ditches, the right-of-way to provide for the right to enter and restrictions imposed on those lands, is deemed to have already been granted.

ASSESSMENT DEFINITIONS

In accordance with the Drainage Act, lands that make use of a drainage works are liable for assessment for part of the cost of constructing and maintaining the system. These liabilities are known as benefit, outlet liability and special benefit as set out under Sections 22, 23, 24 and 26 of the Act.

BENEFIT as defined in the Drainage Act means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair or maintenance of a drainage works such as will result in a higher market value or increased crop production or improved appearance or better control of surface or sub-surface water, or any other advantages relating to the betterment of lands, roads, buildings or other structures.



ASSESSMENT DEFINITIONS (cont'd)

OUTLET liability is assessed to lands or roads that may make use of a drainage works as an outlet either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek or watercourse.

In addition, a Public Utility or Road Authority shall be assessed for and pay all the increased cost to a drainage works due to the construction and operation of the Public Utility or Road Authority. This may be shown as either benefit or special assessment.

ASSESSMENT

A modified "Todgham Method" was used to calculate the assessments shown on Schedule 'C'- Assessment for Construction. This entailed breaking down the costs of the drain into sections along its route. Special Assessments were then extracted from each section.

The remainder is then separated into Benefit and Outlet costs. The Benefit cost is distributed to those properties receiving benefit as defined under "Assessment Definitions", with such properties usually being located along or close to the route of the drain. The Outlet Costs are distributed to all properties within the watershed area of that section on an adjusted basis. The areas are adjusted for location along that section, and relative run-off rates. Due to their different relative run-off rates, forested lands have been assessed for outlet at lower rates than cleared lands. Also, railways have been assessed for outlet at higher rates than cleared farmlands.

The actual cost of the work involving this report, with the exception of Special Assessments, is to be assessed on a pro-rata basis against the lands and roads liable for assessment for special benefit, benefit, and outlet as shown in detail below and on Schedule 'C' - Assessment for Construction. The Special Assessments shall be levied as noted in the Section "Special Assessment".

SPECIAL ASSESSMENT

In accordance with Section 26 of the Drainage Act, a Special Assessment has been made against CP Railway Inc. being the increased cost to the drainage work for boring a 250mm diameter smooth wall steel pipe across their right-of-way on the Shaw Branch due to the construction and operation of their rail line. The Special Assessment shall be made up of the actual cost of this work and both the final and estimated values of the Special Assessment are to be calculated as follows:

Drain	Cost of Work	Less Equivalent Drain Cost (Fixed)	Plus Administration Cost	Plus Interest & Net H.S.T.	Special Assessment
250mm pipe	\$14,000.00	\$1,280.00	\$6,900.00	\$490.00	\$20,110.00

The above special assessments shall not apply for future maintenance purposes.

SPECIAL ASSESSMENT (cont'd)

If any additional work is required to the drainage works due to the existence of buried utilities such as gas pipelines, communications cables, etc. or if any of the utilities require relocation or repair, then, the extra costs incurred shall be borne by the utility involved in accordance with the provisions of Section 26 of the Drainage Act.

GRANTS

In accordance with the provisions of 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 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 completion of this drain. The Municipality will then deduct the grant from the assessments prior to collecting the final assessments.

MAINTENANCE

Upon completion of construction, all owners are hereby made aware of Sections 80 and 82 of the Drainage Act which forbid the obstruction of or damage or injury to a municipal drain.

After completion, the Shaw Branch of the Facey East Drain shall be maintained by the Municipality of Chatham-Kent at the expense of all upstream lands and roads assessed in Schedule 'D' - Assessment for Maintenance and in the same relative proportions until such time as the assessment is changed under the Drainage Act.

Special Assessments shall **not** be pro-rated for future maintenance purposes.

Repairs or improvements to any railway culvert or sub-surface crossing required by the performance of this work and for future repair and/or replacement, shall be the responsibility of the applicable Railway Authority, entirely at their cost.

Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED



JMS:bv


J.M. Spriet, P.Eng.



SPRIET ASSOCIATES
engineers & architects

SCHEDULE 'A' - ALLOWANCES

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham - Kent
Community of Zone

In accordance with Sections 29 and 30 of the Drainage Act, we determine the allowances payable to owners entitled thereto as follows:

<u>CONCESSION</u>	<u>LOT</u>	<u>ROLL NUMBER (Owner)</u>	<u>Section 29 Right-of-Way</u>	<u>Section 30 Damages</u>	<u>TOTALS</u>
SHAW BRANCH					
3	Pt.3 & 4	1-092-01 (Huston Farms Inc.)	\$ 140.00	\$ 160.00	\$ 300.00
3	Pt.3 & 4	1-093 (A. & D. Miller)	40.00	230.00	270.00
Total Allowances			\$ 180.00	\$ 390.00	\$ 570.00
TOTAL ALLOWANCES ON THE SHAW BRANCH					\$ 570.00
TOTAL ALLOWANCES ON THE SHAW BRANCH OF THE FACEY EAST DRAIN					\$ 570.00

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham - Kent
Community of Zone

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

SHAW BRANCH

Clearing & Grubbing	\$	500.00
10 meters of open ditch construction	\$	1,000.00
Levelling of excavated material	\$	300.00
Seeding of ditch banks and buffer strips (Approx 100m ²)	\$	100.00
Installation of the following H.D.P.E. pipe, including bedding and backfill		
17 meters of 200mm dia. HDPE pipe	\$	1,700.00
Supply of the above listed pipe	\$	500.00
16 meters of 250mm dia., 7.9mm thickness smooth wall steel pipe		
Supply	\$	2,000.00
Installation under CP Railway by boring	\$	12,000.00
Supply and install 600mm X 600mm ditch inlet catchbasins including grate, ditching	\$	2,000.00
Supply and installation of quarry stone rip-rap at outlet and overflow swale (Approx 12 cu.m)	\$	1,500.00
Tile connections and contingencies	\$	1,000.00
Allowances under Sections 29 & 30 of the Drainage Act	\$	570.00

ADMINISTRATION

Interest and Net Harmonized Sales Tax	\$	880.00
Survey, Plan and Final Report	\$	7,900.00
Expenses	\$	780.00
Supervision and Final Inspection	\$	<u>3,770.00</u>
TOTAL ESTIMATED COST	\$	<u><u>36,500.00</u></u>

SCHEDULE 'C' - ASSESSMENT FOR CONSTRUCTION

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham - Kent

Community of Zone

Job No. 220060

February 19, 2021

* = Non-agricultural

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
SHAW BRANCH						
3	Pt.3 & 4		1-092-01 (Huston Farms Inc.)	\$ 300.00	\$	300.00
3	Pt.3 & 4	9.30	1-093 (A. & D. Miller)	2,870.00	4,731.00	7,601.00
R.O.W.		1.00	3-264 (Canadian Pacific Railway)	5,860.00	2,629.00	8,489.00
TOTAL ASSESSMENT ON LANDS				\$ 9,030.00	\$ 7,360.00	\$ 16,390.00
SPECIAL ASSESSMENT against the Canadian Pacific Railway for the increased cost of a 16m - 250mm dia. Smooth wall steel pipe under their Railway						\$ <u>20,110.00</u>
TOTAL ASSESSMENT ON THE SHAW BRANCH						\$ <u><u>36,500.00</u></u>

SCHEDULE 'D' - ASSESSMENT FOR MAINTENANCE

SHAW BRANCH OF THE FACEY EAST DRAIN

Municipality of Chatham - Kent

Community of Zone

Job No. 220060

February 19, 2021

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	PERCENTAGE OF MAINTENANCE COST
SHAW BRANCH				
3	Pt.3 & 4		1-092-01 (Huston Farms Inc.)	1.3 %
3	Pt.3 & 4	9.3	1-093 (A. & D. Miller)	51.9
R.O.W.		1.0	3-264 (Canadian Pacific Railway)	46.8
				=====
			TOTAL ASSESSMENT ON LANDS	100.0 %
				=====
			TOTAL ASSESSMENT FOR MAINTENANCE OF THE SHAW BRANCH	<u>100.0 %</u>

**SPECIFICATIONS FOR CONSTRUCTION
OF
MUNICIPAL DRAINAGE WORKS**

GENERAL INDEX

SECTION A	General Work	Pages 1 to 6
SECTION B	Open Drain	Pages 7 to 9
SECTION C	Tile Drain	Pages 10 to 15
STANDARD DETAILED DRAWINGS		SDD-01 to SDD-05



SECTION A - GENERAL WORK

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A.4 SURPLUS EXCAVATED MATERIAL AND GRAVEL.....	3
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A.6 LIVESTOCK.....	4
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A.8 RAILWAYS, HIGHWAYS, UTILITIES.....	4
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SECTION A

GENERAL WORK

A.1 COMMENCEMENT AND COMPLETION OF WORK

The work must commence immediately after the Contractor is notified of the acceptance of his tender or at a later date, if set out as a condition of the tender. If weather creates poor ground or working conditions the Contractor may be required, at the discretion of the Engineer, to postpone or halt work until conditions become acceptable.

As noted on the drawn, the contractor must first arrange for a preconstruction meeting to be held on the site with the Contractor and affected owners attending to review in detail the construction scheduling, access and other pertinent details. The Contractor's costs for attending this meeting shall be included in his lump sum tender price. If the Contractor leaves the job site for a period of time after initiation of work, he shall give the Engineer and the Superintendent a minimum of twenty-four (24) hours' notice prior to returning to the project.

The work must be proceeded with in such a manner as to ensure its completion at the earliest possible date and within the time limit set out in the tender or in the contract documents.

A.2 WORKING AREA AND ACCESS

The working area available to the Contractor to construct the drain and related works including an access route to the drain shall be as specified on the drawings.

Should the specified widths become inadequate due to unusual conditions, the Contractor shall notify the Engineer immediately in order that negotiations with the affected owners can take place.

Where a Contractor exceeds the specified widths due to the nature of his operations and without authorization, he shall be held responsible for the costs of all additional damages and the amount shall be deducted from his contract price and paid to the affected owners by the Municipality.

A.3 ROAD CROSSINGS

.1 General

- .1 **Scope**: These specifications apply to all road crossings - Municipal, County, Regional, or Highway Roads. Where the word "Authority" is used, it shall be deemed to apply to the appropriate owning authority. These specifications in no way limit the Authority's Specifications and Regulations governing the construction of drains on their Road Allowance. The Authority will supply no labour, equipment or materials for the construction of the road crossing unless otherwise noted on the drawings.
- .2 **Road Occupancy Permit**: Where applicable the Contractor must submit an Application for a Road Occupancy Permit to the Authority and allow a minimum of 5 working days (exclusive of holidays) for its review and issuance.
- .3 **Road Closure Request and Construction Notification**: The Contractor shall submit written notification of construction and request for road closure (if applicable) to the Road Authority/Public Works Manager and the Drainage Engineer or Superintendent for review and approval a minimum of five (5) working days (exclusive of holidays) prior to proceeding with any work on road allowance. It shall be the Road Authority's responsibility to notify all the applicable emergency services, schools, etc. of the road closure or construction taking place.
- .4 **Traffic Control**: Where the Contractor is permitted to close the road to through traffic, the Contractor shall provide for and adequately sign the detour route to the satisfaction of the Road Authority. Otherwise, the Contractor shall keep the road open to traffic at all times. The Contractor shall provide, for the supply, erection and maintenance, suitable warning signs and/or flagmen in accordance with the Manual of Uniform Traffic Control Devices and to the satisfaction of the Road Authority to notify the motorists of work on the road ahead.



A.3 **ROAD CROSSINGS** (cont'd)

- .5 **Site Meeting/Inspection:** A site meeting shall be held with the affected parties to review in detail the crossing and/or its related works. The Authority's Inspector and/or the Drainage Engineer will inspect the work while in progress to ensure that the work is done in strict accordance with the specifications.
- .6 **Weather:** No construction shall take place during inclement weather or periods of poor visibility.
- .7 **Equipment:** No construction material and/or equipment is to be left within 3 meters of the edge of pavement overnight or during periods of inclement weather.

.2 **Jacking and Boring**

- .1 **Material:** The bore pipe shall consist of new, smooth wall steel pipe, meeting the requirements of H20 loading for road crossings and E80 loading for railway crossings. The minimum size, wall thickness and length shall be as shown on the drawings. Where welding is required, the entire circumference of any joint shall be welded using currently accepted welding practices.
- .2 **Site Preparation and Excavation:** Where necessary, fences shall be carefully taken down as specified in the General Conditions. Prior to any excavation taking place, all areas which will be disturbed shall be stripped of topsoil. The topsoil is to be stockpiled in locations away from the bore operation, off the line of future tile placement and out of existing water runs or ditches. The bore pit shall be located at the upstream end of the bore unless otherwise specified or approved. Bore pits shall be kept back at least 1 meter from the edge of pavement and where bore pits are made in any portion of the shoulder, the excavated material shall be disposed of off the road allowance and the pit backfilled with thoroughly compacted Granular "A" for its entire depth.
- .3 **Installation:** The pipe shall be installed in specified line and grade by a combination of jacking and boring. Upon completion of the operations, both ends of the bore pipe shall be left uncovered until the elevation has been confirmed by the Engineer or Superintendent. The ends of the bore pipe shall be securely blocked off and the location marked by means of a stake extending from the pipe invert to 300mm above the surrounding ground surface.
- .4 **Unstable Soil or Rock:** The Contractor shall contact the Engineer immediately should unstable soil be encountered or if boulders of sufficient size and number to warrant concern are encountered. Any bore pipe partially installed shall be left in place until alternative methods or techniques are determined by the Engineer after consultation with the Contractor, the Superintendent and the owning authority.
- .5 **Tile Connections:** Prior to commencement of backfilling, all tile encountered in excavations shall be reconnected using material of a size comparable to the existing material. Where the excavation is below the tile grade, a compacted granular base is to be placed prior to laying the tile. Payment for each connection will be made at the rate outlined in the Form of Tender and Agreement.
- .6 **Backfill:** Unless otherwise specified, the area below the proposed grade shall be backfilled with a crushed stone bedding. Bore pits and excavations outside of the shoulder area may be backfilled with native material compacted to a density of 95% Standard Proctor. All disturbed areas shall be neatly shaped, have the topsoil replaced and hand seeded. Surplus material from the boring operation shall be removed from the site at the Contractor's expense.
- .7 **Restoration:** The entire affected area shall be shaped and graded to original lines and grades, the topsoil replaced, and the area seeded down at the rate of 85 kg/per ha. unless otherwise specified or in accordance with the M.T.O. Encroachment Permit. Fences shall be restored to their original condition in accordance with the General Conditions.
- .8 **Acceptance:** All work undertaken by the Contractor shall be to the satisfaction of the Engineer.



A.3 **ROAD CROSSINGS** (cont'd)

.3 **Open Cut**

- .1 **Material**: The culvert or sub-drain crossing pipe material shall be specified on the drawings.
- .2 **Site Preparation and Excavation**: Where necessary, fences shall be carefully taken down as specified in the general conditions. Prior to any excavation taking place, the areas which will be disturbed shall be stripped of topsoil. The topsoil is to be stockpiled in locations away from the construction area.
- .3 **Installation**: The pipe shall be installed using bedding and cover material in accordance with Standard Detailed Drawing No. 2 or detail provided on drawings.
- .4 **Unstable Soil or Rock**: The Contractor shall contact the Engineer immediately should unstable soil be encountered or if boulders of sufficient size and number to warrant concern are encountered.
- .5 **Tile Connections**: Prior to commencement of backfilling, all tiles encountered in excavations shall be reconnected using material of a size comparable to the existing material. Where the excavation is below the tile grade, a compacted granular base is to be placed prior to laying the tile. Payment for connections not shown on the drawings shall be an extra to the contract.
- .6 **Backfill**: Backfill from the top of the cover material up to the underside of road base shall meet the requirements for M.T.O. Granular "B". The backfill shall be placed in lifts not exceeding 300mm in thickness and each lift shall be thoroughly compacted to produce a density of 98% Standard Proctor. Granular "B" road base for County Roads and Highways shall be placed to a 450mm thickness and Granular "A" shall be placed to a thickness of 200mm, both meeting M.T.O. requirements. Granular road base materials shall be thoroughly compacted to produce a density of 100% Standard Proctor.

Where the road surface is paved, the Contractor shall be responsible for placing an HL-4 Hot Mix Asphalt patch of the same thickness as the existing pavement. The asphalt patch shall be flush with the existing roadway on each side and not overlap. If specified, the asphalt patch shall not be placed immediately over the road base and the Granular "A" shall be brought up flush with the existing asphalt and a liberal amount of calcium chloride shall be spread on the gravel surface. The asphalt patch must be completed within the time period set out on the drawing.

The excavated material from the trench beyond a point 2.5 meters from the travelled portion or beyond the outside edge of the gravel shoulder, may be used as backfill in the trench in the case of covered drains. This material should be compacted in layers not exceeding 600mm.

A.4 **SURPLUS EXCAVATED MATERIAL AND GRAVEL**

Excess excavated material from open cut installation through roads, railways, laneways and lawn/grass areas, shall be removed and disposed of off-site by the Contractor as part of their lump sum installation price. If as a result of any work, gravel or crushed stone is required and not all the gravel or crushed stone is used in the construction of the works, the Contractor shall haul away such surplus gravel or stone unless otherwise approved.

A.5 **FENCES**

No earth shall be placed against fences and all fences removed by the Contractor are to be replaced by him in as good condition as found. In general, the Contractor will not be allowed to cut existing fences but shall disconnect existing fences at the nearest anchor post or other such fixed joint and shall carefully roll it back out of the way. Where the distance to the closest anchor post or fixed joint exceeds 50 meters, the Contractor will be allowed to cut and splice in accordance with accepted methods and to the satisfaction of the owner and the Engineer or Superintendent. Where existing fences are deteriorated to the extent that existing materials are not salvageable for replacement, the Contractor shall notify the Engineer or the Superintendent prior to dismantling. Fences damaged beyond salvaging by the Contractor's negligence shall be replaced with new materials, similar to those existing, at the Contractor's expense. The replacement of the fences shall be done to the satisfaction of the owner and the Engineer or Superintendent. The site examination should indicate to the Contractor such work, if any, and an allowance should be made in the tendered price.

The Contractor shall not leave any fence open when he is not at work in the immediate vicinity.

A.6 LIVESTOCK

The Contractor shall provide each property owner with 48 hours' notice prior to removing any fences along fields which could possibly contain livestock. Thereafter, the property owner shall be responsible to keep all livestock clear of the construction areas until further notified. Where necessary, the Contractor will be directed to erect temporary fences. The Contractor shall be held responsible for loss or injury to livestock or damage caused by livestock, where the injury or damage is caused by his failure to notify the property owner or through negligence or carelessness on the part of the Contractor.

The Contractor constructing a tile drain shall not be held responsible for damages or injury to livestock occasioned by leaving trenches open for inspection by the Engineer if he notifies the owner at least 48 hours prior to commencement of the work on that portion. The Contractor will be held liable for such damages or injury if the backfilling of such trenches is delayed more than 1 day after acceptance by the Engineer.

A.7 STANDING CROPS

The Contractor shall not be held responsible for damages to standing crops within the working area available and the access route provided if he notifies the owner thereof at least 48 hours prior to commencement of the work on that portion.

A.8 RAILWAYS, HIGHWAYS, UTILITIES

A minimum of forty-eight (48) hours' notice to Railways, Highways and Utilities, exclusive of Saturdays, Sundays and Holidays, shall be required by the Contractor prior to any work being performed and in the case of a pipe being installed by open cutting or boring under a Highway or Railway, a minimum of 72 hours' notice is required.

A.9 UTILITIES

The attention of the Contractor is drawn to the presence of utilities along the course of the drain. The Contractor will be responsible for determining the location of all utilities and will be held liable for any damage to all utilities caused by his operations. The Contractor shall co-operate with all authorities to ensure that all utilities are protected from damage during the performance of the work. The cost of any necessary relocation work shall be borne by the utility. No allowance or claims of any nature will be allowed on account for delays or inconveniences due to utilities relocation, or for inconveniences and delays caused by working around or with existing utilities not relocated.

A.10 IRON BARS

The Contractor shall be held liable for the cost of an Ontario Land Surveyor to replace any iron bars destroyed during the course of construction.

A.11 STAKES

At the time of the survey, stakes are set along the course of the drain at intervals of 50 meters. The Contractor shall ensure that the stakes are not disturbed unless approval is obtained from the Engineer. Any stakes removed by the Contractor without the authority of the Engineer, shall be replaced at the expense of the Contractor. At the request of the Contractor, any stakes which are removed or disturbed by others or by livestock, shall be replaced at the expense of the drain.

A.12 RIP-RAP

Rip-rap shall be specified on the drawings and shall conform to the following:

- .1 **Quarry Stone:** shall range in size from 150mm to 300mm evenly distributed and shall be placed to a 300mm thickness on a filter blanket at a 1.5 to 1 slope unless otherwise noted. Filter blanket to be Mirafi 160N or approved equal.
- .2 **Broken Concrete:** may be used in areas outside of regular flows if first broken in maximum 450mm sized pieces and mixed to blend with quarry stone as above. No exposed reinforcing steel shall be permitted.
- .3 **Shot Rock:** shall range in size from 150mm to 600mm placed to a depth of 450mm thickness on a filter blanket at a 1.5:1 slope unless otherwise noted. Filter blanket to be Mirafi 160N or approved equal.

A.13 GABION BASKETS

Supply and install gabion basket rip-rap protection as shown on the drawings.

Gabion baskets shall be as manufactured by Maccaferri Gabions of Canada Ltd. or approved equal and shall be assembled and installed in strict accordance with the manufacturer's recommendations.

The gabion fill material shall consist solely of fractured field stone or gabion stone graded in size from 100mm to 200mm (4" to 8") and shall be free of undersized fragments and unsuitable material.

A.14 RESTORATION OF LAWNS

- .1 **General:** Areas noted on the drawings to be restored with seeding or sodding shall conform to this specification, and the Contractor shall allow for all costs in his lump sum bid for the following works.
- .2 **Topsoil:** Prior to excavation, the working area shall be stripped of existing topsoil. The topsoil stockpile shall be located so as to prevent contamination with material excavated from the trench. Upon completion of backfilling operations, topsoil shall be spread over the working area to a depth equal to that which previously existed but not less than the following:
 - Seeding and sodding - minimum depth of 100mm
 - Gardens - minimum depth of 300mm

In all cases where a shortfall of topsoil occurs, whether due to lack of sufficient original depth or rejection of stockpiled material due to Contractor's operations, imported topsoil from acceptable sources shall be imported at the Contractor's expense to provide the specified depths. Topsoil shall be uniformly spread, graded, and cultivated prior to seeding or sodding. All clods or lumps shall be pulverized, and any roots or foreign matter shall be raked up and removed as directed.

.3 Sodding

- .1 **Materials:** Nursery sod to be supplied by the Contractor shall meet the current requirements of the Ontario Sod Growers Association for No. 1 Bluegrass Fescue Sod.
- .2 **Fertilizer:** Prior to sod placement, approved fertilizer shall be spread at the rate of 5kg/100m² of surface area and shall be incorporated into such surfaces by raking, discing or harrowing. All surfaces on which sod is to be placed shall be loose at the time of placing sod to a depth of 25mm.
- .3 **Placing Sod:** Sod shall be laid lengthwise across the face of slopes with ends close together. Sod shall be counter sunk along the joints between the existing grade and the new sodding to allow for the free flow of water across the joint. Joints in adjacent rows shall be staggered and all joints shall be pounded and rolled to a uniform surface.

On slopes steeper than 3 to 1, and in unstable areas, the Engineer may direct the Contractor to stake sod and/or provide an approved mesh to prevent slippages. In all cases where such additional work is required, it will be deemed an extra to the contract and shall be paid for in accordance with the General Conditions. No sod shall be laid when frozen nor upon frozen ground nor under any other condition not favourable to the growth of the sod. Upon completion of sod laying the Contractor shall thoroughly soak the area with water to a depth of 50mm. Thereafter it will be the responsibility of the property owner to maintain the area in a manner so as to promote growth.

A.14 **RESTORATION OF LAWNS (cont'd)**

.4 **Seeding**: Seed to be supplied by the Contractor shall be "high quality grass seed" harvested during the previous year, and shall be supplied to the project in the supplier's original bags on which a tag setting out the following information is affixed:

- Year or Harvest - recommended rate of application
- Type of Mixture - fertilizer requirements

Placement of seed shall be by means of an approved mechanical spreader. All areas on which seed is to be placed shall be loose at the time of placing seed, to a depth of 25mm. Seed and fertilizer shall be spread in accordance with the supplier's recommendations unless otherwise directed by the Engineer. Thereafter it will be the responsibility of the property owner to maintain the area in a manner so as to promote growth.

.5 **Settlement**: The Contractor shall be responsible during the one-year guarantee period for the necessary repair of restored areas due to trench settlement. Areas where settlement does not exceed 50mm may be repaired by top dressing with fine topsoil. In areas where settlement exceeds 50mm, the Contractor will be required to backfill the area with topsoil and restore with seeding and/or sodding as originally specified.

A.15 **RESTORATION OF ROADS AND LANEWAYS**

.1 **Gravel**: Restoration shall be in accordance with the applicable standard detailed drawing or as shown on the drawings.

.2 **Asphalt and Tar and Chip**: Prior to restoration all joints shall be neatly sawcut. Restoration shall be as a in gravel above with the addition of the following:

- .1 Roads shall have the finished grade of Granular 'A', allow two courses of hot-mix asphalt (M.T.O. 310), 80mm HL6 and 40mm HL3 or to such greater thickness as may be required to match the existing.
- .2 Laneways shall have the finished grade of Granular 'A' allow one 50mm minimum course of hot-mix asphalt (HL3) or greater as may be required to match existing.



SECTION B - OPEN DRAIN

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SECTION B
OPEN DRAIN

B.1 PROFILE

The profile drawing shows the depth of cuts from the ground beside the stake to the final invert of the ditch in meters and decimals of a meter and also the approximate depth of cuts from the existing bottom of the ditch to the elevation of the ditch bottom. These cuts are established for the convenience of the Contractor; however, benchmarks will govern the final elevation of the drain. Benchmarks have been established along the course of the drain and their locations and elevations are noted on the profile drawing. A uniform grade shall be maintained between stakes in accordance with the profile drawing.

B.2 ALIGNMENT

The drain shall be constructed in a straight line and shall follow the course of the present drain or water run unless otherwise noted on the drawings. Where it is necessary to straighten any bends or irregularities in alignment not noted on the drawings, the Contractor shall contact the Engineer or Superintendent before commencing the work.

B.3 CLEARING AND GRUBBING

Prior to commencement of work, all trees, scrub, fallen timber and debris shall be removed from the side slopes of the ditch and for such a distance on the working side so as to eliminate any interference with the construction of the drain or the spreading of the spoil. The side slopes shall be neatly cut and cleared flush with slope whether or not they are affected directly by the excavation. With the exception of large stumps causing damage to the drain, the side slope shall not be grubbed. All other cleared areas shall be grubbed and the stumps put into piles for disposal by the owner.

All trees or limbs 150mm (6") or larger, that it is necessary to remove, shall be considered as logs and shall be cut and trimmed, and left in the working width separate from the brush, for use or disposal by the owner. Trees or limbs less than 150mm in diameter shall be cut in lengths not greater than 5 meters and placed in separate piles with stumps spaced not less than 75 meters apart in the working width, for the use or disposal of the owner. In all cases, these piles shall be placed clear of excavated materials, and not be piled against standing trees. No windrowing will be permitted. The clearing and grubbing and construction of the drain are to be carried out in two separate operations and not simultaneously at the same location.

B.4 EXCAVATION

The bottom width and the side slopes of the ditch shall be those shown on the profile drawing.

Unless otherwise specified on the drawings, only the existing ditch bottom is to be cleaned out and the side slopes are not to be disturbed. Where existing side slopes become unstable because of construction, the Contractor shall immediately contact the Engineer or Superintendent. Alternative methods of construction and/or methods of protection will then be determined, prior to continuing the work.

Where an existing drain is being relocated or where a new drain is being constructed, the Contractor shall, unless otherwise specified, strip the topsoil for the full width of the drain, including the location of the spoil pile. Upon completion of levelling, the topsoil shall be spread to an even depth across the full width of the spoil.

B.5 EXCAVATED MATERIAL

Excavated material shall be deposited on either or both sides of the drain as indicated on the drawings or as directed by the Engineer or Superintendent. A buffer strip of not less than 3 meters in width through farmed lands and 2 meters in width through bush areas shall be left along the top edges of the drain. The buffer strip shall be seeded and/or incorporated as specified on the drawings. The material shall be deposited beyond the specified buffer strip.

B.5 EXCAVATED MATERIAL (cont'd)

No excavated material shall be placed in tributary drains, depressions, or low areas which direct water into the ditch so that water will be trapped behind the spoil bank. The excavated material shall be placed and levelled to a minimum width to depth ratio of 50 to 1 unless instructed otherwise. The edge of the spoil bank away from the ditch shall be feathered down to the existing ground; the edge of the spoil bank nearest the ditch shall have a maximum slope of 2 to 1. The material shall be levelled such that it may be cultivated with ordinary farm equipment without causing undue hardship on machinery and personnel. No excavated material shall cover any logs, scrub, debris, etc. of any kind.

Where it is necessary to straighten any unnecessary bends or irregularities in the alignment of the ditch, the excavated material from the new cut shall be used for backfilling the original ditch. Regardless of the distance between the new ditch and the old ditch no extra compensation will be allowed for this work and must be included in the Contractor's lump sum price for the open work.

Any stones 150mm or larger left exposed on top of the levelled excavated material shall be removed and disposed of as an extra to the contract unless otherwise noted on plans.

B.6 EXCAVATION THROUGH BRIDGES AND CULVERTS

The Contractor shall excavate the drain to the full specified depth and width under all bridges. Where the bridge or culvert pipe is located within a road allowance, the excavated material shall be levelled within the road allowance. Care shall be taken not to adversely affect existing drainage patterns. Temporary bridges may be carefully removed and left on the bank of the drain but shall be replaced by the Contractor when the excavation is completed unless otherwise specified. Permanent bridges must be left intact. All necessary care and precautions shall be taken to protect the structure. The Contractor shall notify the Engineer or Superintendent if excavation may cause the structure to undermine or collapse.

B.7 PIPE CULVERTS

Where specified on the drawings, the existing culvert shall be carefully removed, salvaged and either left at the site for the owner or reinstalled at a new grade or location. The value of any damage caused to the culvert due to the Contractor's negligence in salvage operation will be determined and deducted from the contract price.

All pipe culverts shall be installed in accordance with the standard detail drawings as noted on the drawings. If couplers are required, 5 corrugation couplers shall be used for up to and including 1200mm dia. pipe and 10 corrugation couplers for greater than 1200mm dia.

B.8 MOVING DRAINS OFF ROADS

Where an open drain is being removed from a road allowance, it must be reconstructed wholly on the adjacent lands with a minimum distance of 2.0 meters between the property line and the top of the bank, unless otherwise noted on the drawings. The excavated material shall be used to fill the existing open ditch and any excess excavated material shall be placed and levelled on the adjacent lands beyond the buffer strip, unless otherwise noted. Any work done on the road allowance, with respect to excavation, disposal of materials, installation of culverts, cleaning under bridges, etc., shall be to the satisfaction of the Road Authority and the Engineer.

B.9 TRIBUTARY OUTLETS

The Contractor shall guard against damaging the outlets of tributary drains. Prior to commencement of excavation on each property the Contractor shall contact the owner and request that all known outlet pipes be marked by the owner. All outlets so marked or visible or as noted on the profile, and subsequently damaged by the Contractor's operations will be repaired by the Contractor at his cost. All outlet pipes repaired by the Contractor under direction of the Drainage Superintendent or Engineer which were not part of the Contract shall be considered an extra to the contract price.

B.10 SEDIMENT BASINS AND TRAPS

The Contractor shall excavate sediment basins prior to commencement of upstream work as shown on the plan and profile. The dimension of the basin will be in a parabolic shape with a depth of 450mm below the proposed ditch bottom and the basin will extend along the drain for a minimum length of 15 meters.

A sediment trap 300mm deep and 5 meters long with silt fence placed across ditch bottom on the downstream end of the trap shall be constructed prior to and maintained during construction, to prevent silt from flushing downstream. The silt fence shall be removed and disposed of after construction.

B.11 SEEDING

.1 **Delivery:** The materials shall be delivered to the site in the original unopened containers which shall bear the vendor's guarantee of analysis and seed will have a tag showing the year of harvest.

.2 **Hydro Seeding:** Areas specified on drawings shall be hydro seeded and mulched upon completion of construction in accordance with O.P.S.S. 572 and with the following application rates:

Primary Seed (85 kg/ha.):	50% Creeping Red Fescue 40% Perennial Ryegrass 5% White Clover
Nurse Crop	Italian (Annual) Ryegrass at 25% of Total Weight
Fertilizer (300 kg/ha.)	8-32-16
Hydraulic Mulch (2000 kg/ha.)	Type "B"
Water (52,700 litres/ha.)	

Seeding shall not be completed after September 30.

.3 **Hand Seeding:** Hand seeding shall be completed daily with the seed mixture and fertilizer and application rate shown under "Hydro Seeding" above. Placement of the seed shall be by means of an approved mechanical spreader. Seeding shall not be completed after September 30.

SECTION C - TILE DRAIN

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SECTION C

TILE DRAIN

C.1 PIPE MATERIALS

- .1 **Concrete Tile:** All tile installed under these specifications shall be sound and of first quality and shall meet all A.S.T.M. Specifications current at the time of tendering. Concrete tile shall conform to Designation C412 "Extra Quality" except that the minimum compression strengths shall be increased by 25%. Heavy Duty tile shall conform to Designation C412 "Heavy Duty Extra Quality".
- .2 **Corrugated Steel Pipe:** Unless otherwise specified, all metal pipe shall be corrugated, riveted steel pipe or helical corrugated steel pipe with a minimum wall thickness of 1.6mm (16 gauge) and shall be fully galvanized.
- .3 **Plastic Tubing:** The plans will specify the type of tubing or pipe, such as non-perforated or perforated (with or without filter material).
 - i) Corrugated Plastic Drainage Tubing shall conform to the current O.F.D.A. Standards
 - ii) Heavy Duty Corrugated Plastic Pipe shall be "Boss 1000" manufactured by the Big 'O' Drain Tile Co. Ltd. or approved equal
- .4 **Concrete Sewer Pipe:** The Designations for concrete sewer pipe shall be C14 for concrete sewer pipe 450mm (18") diameter or less; and C76 for concrete sewer pipe greater than 450mm (18") diameter. Where closed joints are specified, joints shall conform to the A.S.T.M. Specification C443.

Where concrete sewer pipe "seconds" are permitted the pipe should exhibit no damages or cracks on the barrel section and shall be capable of satisfying the crushing strength requirements for No.1, Pipe Specifications (C14 or C76). The pipe may contain cracks or chips in the bell or spigot which could be serious enough to prevent the use of rubber gaskets, but which are not so severe that the joint could not be mortared conventionally.
- .5 **Plastic Sewer Pipe:** The plans will specify the type of sewer pipe, such as non-perforated or perforated (with or without filter material). All plastic sewer pipe and fittings shall be "Boss Poly-Tite", ULTRA-RIB", "Challenger 3000" or approved equal with a minimum stiffness of 320 kpa at 5% deflection.
- .6 **Plastic Fittings:** All plastic fittings shall be "Boss 2000" or "Challenger 2000" with split coupler joints or approved equal.

C.2 TESTING

The manufacturer shall provide specimens for testing if required. The random selection and testing procedures would follow the appropriate A.S.T.M. requirements for the material being supplied. The only variation is the number of tiles tested: 200mm to 525mm dia. - 5 tile tested, 600mm to 900mm dia. - 3 tile tested. The drain will be responsible for all testing costs for successful test results. Where specimens fail to meet the minimum test requirements, the manufacturer will be responsible for the costs of the unsuccessful tests. Alternately, the Engineer may accept materials on the basis of visual inspections and the receipt in writing from the Manufacturer of the results of daily production testing carried out by the Manufacturer for the types and sizes of the material being supplied.

C.3 LINE

Prior to stringing the tile, the Contractor shall contact the Superintendent or the Engineer in order to establish the course of the drain.

Where an existing drain is to be removed and replaced in the same trench by the new drain or where the new drain is to be installed parallel to an existing drain, the Contractor shall excavate test holes to locate the existing drain (including repairing drainage tile) at intervals along the course of the drain as directed by the Engineer and/or the Superintendent. The costs for this work shall be included in the tender price.

Where an existing drain is to be removed and replaced in the same trench by the new drain, all existing tiles shall be destroyed, and all broken tile shall be disposed of offsite.

C.3 **LINE** (cont'd)

The drain shall run in as straight a line as possible throughout its length, except that at intersections of other water courses or at sharp corners, it shall run on a curve of at least a 15-meter radius. The new tile drain shall be constructed at an offset from and generally parallel with any ditch or defined watercourse in order that fresh backfill in the trench will not be eroded by the flow of surface water. The Contractor shall exercise care not to disturb any existing tile drain or drains which parallel the course of the new drain, particularly where the new and the existing tile act together to provide the necessary capacity.

C.4 **CLEARING AND GRUBBING**

Prior to commencement of drain construction, all trees, scrub, fallen timber and debris shall be cleared and grubbed from the working area. Unless otherwise specified, the minimum width to be cleared and grubbed shall be 20 meters in all hardwood areas and 30 meters in all softwood areas (willow, poplar, etc.), the width being centred on the line of the drain.

All trees or limbs 150mm (6") or larger, that it is necessary to remove, shall be considered as logs and shall be cut and trimmed, and left in the working width separate from the brush, for use or disposal by the owner. Trees or limbs less than 150mm in diameter shall be cut in lengths not greater than 5 meters and placed in separate piles with stumps spaced not less than 75 meters apart in the working width, for the use or disposal of the owner. In all cases, these piles shall be placed clear of excavated materials, and not be piled against standing trees. No windrowing will be permitted. The clearing and grubbing and construction of the drain are to be carried out in two separate operations and not simultaneously at the same location.

C.5 **PROFILE**

The profile drawing shows the depth of cuts from the ground beside the stake to the final invert of the drain in meters and decimals of a meter. These cuts are established for the convenience of the Contractor; however, benchmarks will govern the final elevation of the drain. Benchmarks have been established along the course of the drain and their locations and elevations are noted on the profile drawing.

C.6 **GRADE**

The Contractor shall provide and maintain in good working condition, an approved system of establishing a grade sight line to ensure the completed works conform to the profile drawing. In order to confirm the condition of his system and to eliminate the possibility of minor errors on the drawings, he shall ensure his grade sight line has been confirmed to be correct between a minimum of two control points (bench marks) and shall spot check the actual cuts and compare with the plan cuts prior to commencement of tile installation. He shall continue this procedure from control point to control point as construction of the drain progresses. When installing a drain towards a fixed point such as a bore pipe, the Contractor shall uncover the pipe and confirm the elevation, using the sight line, a sufficient distance away from the pipe in order to allow for any necessary minor grade adjustments to be made in order to conform to the as built elevation of the bore pipe. All tile improperly installed due to the Contractor not following these procedures shall be removed and replaced entirely at the Contractor's cost.

When following the procedures and a significant variation is found, the Contractor shall immediately cease operations and advise the Engineer.

C.7 **EXCAVATION**

- .1 **Trench:** Unless otherwise specified, all trenching shall be done with a recognized farm tiling machine approved by the Engineer or Superintendent. The machine shall shape the bottom of the trench to conform to the outside diameter of the pipe for a minimum width of one-half of the outside diameter. The minimum trench width shall be equal to the outside diameter of the tile to be installed plus 100mm (4") on each side unless otherwise approved. The maximum trench width shall be equal to the outside diameter of the tile to be installed plus 250mm (10") on each side unless otherwise approved.

C.7 **EXCAVATION** (cont'd)

- .2 **Scalping**: Where the depths of cuts in isolated areas along the course of the drain as shown on the profile exceed the capacity of the Contractor's tiling machine, he shall lower the surface grade in order that the tiling machine may trench to the correct depth. Topsoil is to be stripped over a sufficient width that no subsoil will be deposited on top of topsoil. Subsoil will then be removed to the required depth and piled separately. Upon completion of backfilling, the topsoil will then be replaced to an even depth over the disturbed area. The cost for this work shall be included in his tender price.
- .3 **Excavator**: Where the Contractor's tiling machine consistently does not have the capacity to dig to the depths required or to excavate the minimum trench width required, he shall indicate in the appropriate place provided on the tender form his proposed methods of excavation.
Where the use of an excavator is either specified on the drawings or approved as evidenced by the acceptance of his tender on which he has indicated the proposed use of a backhoe he shall conform to the following requirements:
a) the topsoil shall be stripped and replaced in accordance with Section .2 "Scalping".
b) all tile shall be installed on a bed of 19mm crushed stone with a minimum depth of 150mm which has been shaped to conform to the lower segment of the tile.
c) the Contractor shall allow for the cost of the preceding requirements (including the supply of the crushed stone) in his lump sum tender price unless it is otherwise provided for in the contract documents.
- .4 **Backfilling Ditch**: Where the contract includes for a closed drain to replace an open drain and the ditch is to be backfilled, the Contractor shall install the tile and backfill the trench prior to backfilling the ditch unless otherwise noted. The distance the trench shall be located away from the ditch shall be as noted on the drawings, (beyond area required for stockpiling topsoil and backfilling). After tile installation is complete topsoil (if present) shall be stripped and stockpiled within the above limits prior to backfilling of ditch. Only tracked equipment shall be permitted to cross backfilled tile trench and must be at 90 degrees to line of tile.

C.8 **INSTALLATION**

The tile is to be laid with close fitting joints and in regular grade and alignment in accordance with the plan and profile drawings. The tiles are to be bevelled, if necessary, to ensure close joints (in particular around curves). Where, in heavy clay soils, the width of a joint exceeds 10mm the joint shall be wrapped with filter cloth as below. Where the width of a joint exceeds 12mm the tile shall first be removed and the joint bevelled to reduce the gap. The maximum deflection of one tile joint shall be 15 degrees. Where a drain connects to standard or ditch inlet catchbasins or junction box structures, the Contractor shall include in his tender price for the supply and installation of compacted Granular 'A' bedding under areas backfilled from the underside of the pipe to undisturbed soil. The connections will then be grouted.

Where a tile drain passes through a bore pit, the Tile Contractor shall include in his tender price for the supply and placement of compacted Granular "A" bedding from the underside of the pipe down to undisturbed soil within the limits of the bore pit.

As above and where soil conditions warrant, the Engineer may require (or as specified on the drawings) that each tile joint be wrapped with synthetic filter cloth. The width of the filter cloth shall be 300mm wide for tile sizes of 150mm to 300mm and 400mm wide for sizes of 350mm to 750mm. The filter cloth shall cover the full perimeter of the tile and overlap a minimum of 100mm or as specified on the drawings. The type of cloth shall be Mirafi 140NL for loam soils and 150N for sandy soil. Any such work not shown on the drawings shall be considered as an addition to the contract price unless specified on the drawings.

C.9 **ROAD AND LANEWAY SUB-SURFACE CROSSINGS**

All road and laneway crossings may be made with an open cut in accordance with standard detailed drawings in the specifications or on the drawings. The exact location of the crossing shall be verified and approved by the Road Authority and the Engineer and/or Superintendent.

C.10 **BACKFILLING**

As the laying of the tile progresses, blinding up to the springline including compaction by tamping (by hand) is to be made on both sides of the tile. No tile shall be backfilled until inspected by the Engineer or Drainage Superintendent unless otherwise approved by the Engineer.

The remainder of the trench shall be backfilled with special care being taken in backfilling up to a height approximately 150mm above the top of the tile to ensure that no tile breakage occurs. During the backfilling operation no equipment shall be operated in a way that would transfer loads onto the tile trench. Surplus material is to be mounded over the tile trench so that when settlement takes place the natural surface of the ground will be restored. Upon completion, a minimum cover of 600mm is required over all tile. Where stones larger than 150mm are present in the backfill material, they shall be separated from the material and disposed of by the Contractor.

Where a drain crosses a lawn area, the backfilling shall be carried out as above except that, unless otherwise specified, the backfill material shall be mechanically compacted to eliminate settlement.

C.11 **UNSTABLE SOIL**

The Contractor shall immediately contact the Engineer or Superintendent if quicksand is encountered, such that installation with a tiling machine is not possible. The Engineer shall, after consultation with the Superintendent and Contractor, determine the action necessary and a price for additions or deletions shall be agreed upon prior to further drain installation. Where directed by the Engineer, test holes are to be dug to determine the extent of the affected area. Cost of test holes shall be considered an addition to the contract price.

C.12 **ROCKS**

The Contractor shall immediately contact the Engineer or Superintendent if boulders of sufficient size and number are encountered such that the Contractor cannot continue trenching with a tiling machine. The Engineer or Superintendent may direct the Contractor to use some other method of excavating to install the drain. The basis of payment for this work shall be determined by the Engineer and Drainage Superintendent.

If only scattered large stones or boulders are removed on any project, the Contractor shall haul same to a nearby bush or fence line, or such other convenient location as approved by the Landowners(s).

C.13 **BROKEN, DAMAGED TILE OR EXCESS TILE**

The Contractor shall remove and dispose of off-site all broken (existing or new), damaged or excess tile or tiles. If the tile is supplied by the Municipality, the Contractor shall stockpile all excess tile in readily accessible locations for pickup by the Municipality upon the completion of the job.

C.14 **TRIBUTARY DRAINS**

Any tributary tile encountered in the course of the drain shall be carefully taken up by the Contractor and placed clear of the excavated earth. If the tributary tile drains encountered are clean or reasonably clean, they shall be connected into the new drain. Where existing drains are full of sediment, or contain pollutants, the decision to connect those drains to the new drain shall be left to the Engineer or Superintendent. Each tributary tile connection made by the Contractor shall be located and marked with a stake and no backfilling shall take place until the connection has been approved by the Engineer or Superintendent.

For tributary drains 150mm dia. or smaller connected to new tiles 250mm dia. or larger, and for 200mm dia. connected to 350mm dia. or larger, the Contractor shall neatly cut a hole in the middle of a tile length. The connections shall be made using a prefabricated adaptor. All other connections shall be made with prefabricated wyes or tees conforming to Boss 2000 split coupler or approved equal.

Where an open drain is being replaced by a new tile drain, existing tile outlets entering the ditch from the side opposite the new drain shall be extended to the new drain. All existing metal outlet pipes shall be carefully removed, salvaged, and left for the owner. Where the grade of the connection passes through the newly placed backfill in the ditch, the backfill material below the connection shall be thoroughly compacted and metal pipe of a size compatible with the tile outlet shall be installed so that a minimum length of 2 meters at each end is extending into undisturbed soil.

C.14 **TRIBUTARY DRAINS** (cont'd)

Where locations of tiles are shown on the drawings the Contractor shall include in his tender price, all costs for connecting those tiles to the new drain regardless of length.

Where tiles not shown on the drawings are encountered in the course of the drain, and are to be connected to the new drain, the Contractor shall be paid for each connection at the rate outlined in the Form of Tender and Agreement.

C.15 **OUTLET PIPES**

Corrugated steel pipe shall be used to protect the tile at its outlet. It shall have a hinged metal grate with a maximum spacing between bars of 40mm. The corrugated steel pipe shall be bevelled at the end to generally conform to the slope of the ditch bank and shall be of sufficient size that the tile can be inserted into it to provide a solid connection. The connection will then be grouted immediately.

The installation of the outlet pipe and the required rip-rap protection shall conform to the standard detailed drawing as noted on the drawing.

C.16 **CATCHBASINS AND JUNCTION BOXES**

1. **Catchbasins:** Unless otherwise noted or approved, catchbasins shall be in accordance with O.P.S.D. 705.010, 705.030. All catchbasins shall include two - 150mm riser sections for future adjustments. All ditch inlet catchbasins shall include one 150mm riser section for future adjustments. The catchbasin top shall be a "Bird Cage" type substantial steel grate, removable for cleaning and shall be inset into a recess provided around the top of the structure. The grate shall be fastened to the catchbasin with bolts into the concrete. Spacing of bars on grates for use on 600mmx600mm structures shall be 65mm centre to centre. Spacing of bars on grates for use on structures larger than 600mmx600mm shall be 90mm with a steel angle frame.

The exact location and elevation of catchbasins shall be approved by the Road Authority or the Engineer/Superintendent. Catchbasins offset from the drain shall have "Boss 2000" 200mm diameter leads or approved equal unless otherwise noted and the leads shall have a minimum of 600mm of cover. The leads shall be securely grouted at the structures and the drain.

2. **Junction Boxes:** Junction boxes shall be the precast type unless otherwise approved. Dimensions for precast junction boxes shall conform to those for catchbasins. The inside dimensions of the box shall be a minimum of 100mm larger than the outside diameter of the largest pipe being connected. The minimum cover over the junction box shall be 600mm. Benching to spring line shall be supplied with all junction boxes.
3. **Connections:** Catchbasins and junction boxes shall not be ordered until elevations of existing pipes being connected have been verified in the field as indicated on the drawings. All connections shall be securely grouted at both the inside and outside walls of the structure.
4. **Installation:** Where the native material is clay, all catchbasins shall be backfilled with an approved granular material placed and compacted to a minimum width of 300mm on all sides with the following exception. Where the native material is sandy or granular in nature it may be used as backfill. Filter cloth shall be placed between the riser sections of all catchbasins.

Where the Contractor has over excavated or where ground conditions warrant, the structure shall be installed on a compacted granular base.

The Contractor shall include in his tender price for the construction of a berm behind all ditch inlet structures. The berm shall be constructed of compacted clay keyed 300mm into undisturbed soil. Topsoil shall be distributed to a 65mm thickness and seeded unless otherwise specified. The Contractor shall also include for regrading, shaping and seeding of road ditches for a maximum of 15 meters each way from all catchbasins.

C.17 BLIND INLETS

Where specified, blind inlets shall be installed along the course of the drain in accordance with details on the drawings.

C.18 GRASSED WATERWAY

Topsoil to be stripped from construction area and stockpiled prior to construction of waterway. Waterway to be graded into a parabolic shape to the width shown on the drawings. Topsoil to be relevelled over the waterway and other areas disturbed by construction.

Waterway to be prepared for seeding by harrowing and then seeded by drilling followed by rolling. Seeding rate to be 85 Kg/Ha with the following mixture:

- 30% Canon Canada Bluegrass
- 25% Koket Chewings Fescue
- 30% Rebel Tall Fescue
- 15% Diplomat Perennial Rye
- Plus #125 Birdsfoot Trefoil (25% of Total Weight)

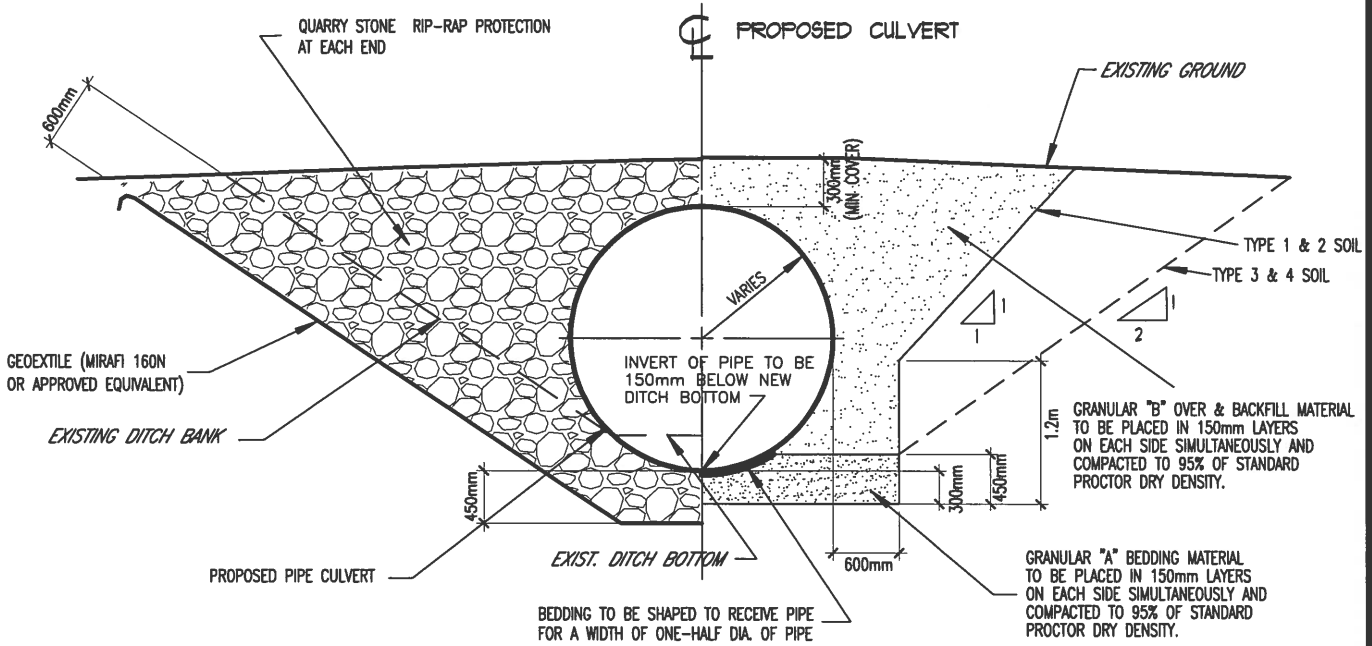
C.19 BACKFILLING EXISTING DITCHES

The Contractor shall backfill the ditch sufficiently for traversing by farm machinery. If sufficient material is not available from the old spoil banks to fill in the existing ditch, the topsoil shall be stripped and the subsoil shall be bulldozed into the ditch and the topsoil shall then be spread over the backfilled ditch unless otherwise specified on the contract drawings. The Contractor shall ensure sufficient compaction of the backfill and if required, repair excess settlement up to the end of the warranty period. The final grade of the backfilled ditch shall provide an outlet for surface water.

C.20 RECOMMENDED PRACTICE FOR CONSTRUCTION OF SUBSURFACE DRAINAGE SYSTEM

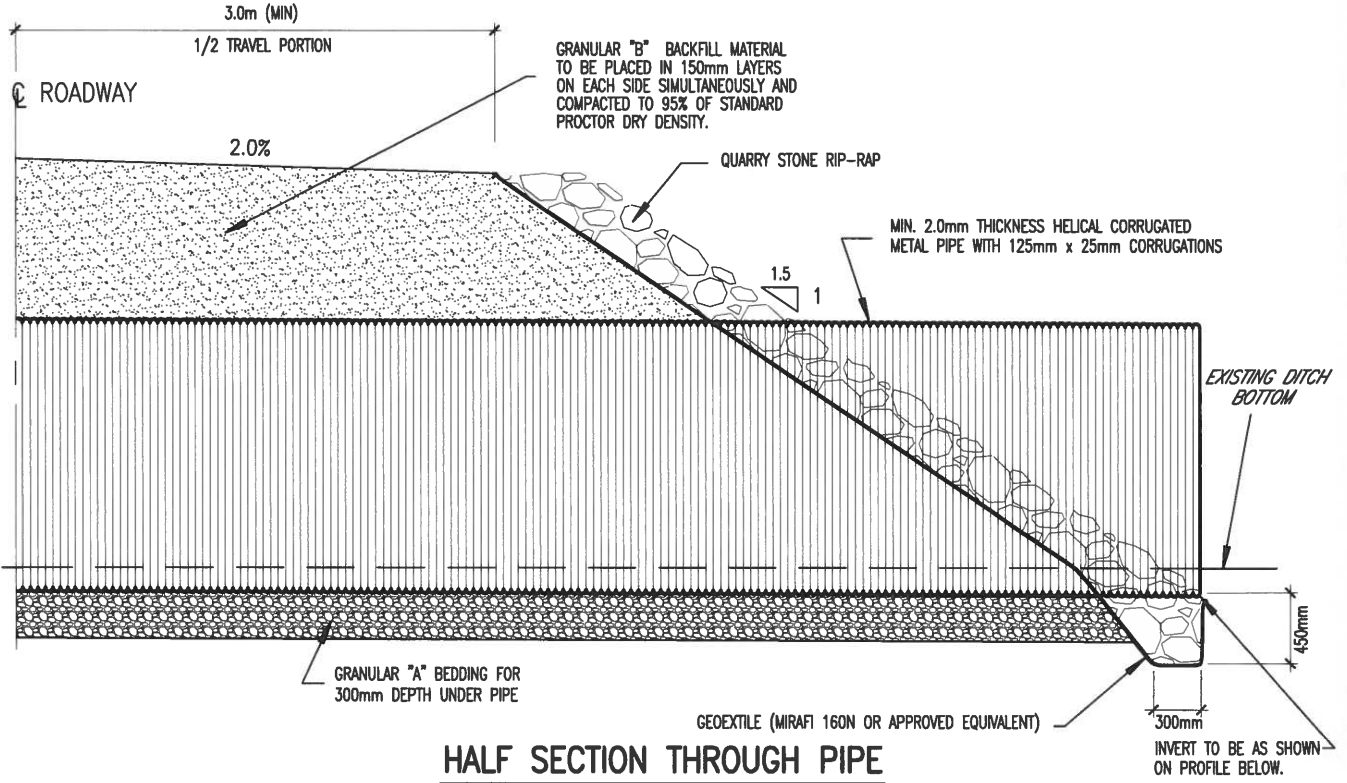
Drainage guide for Ontario, Ministry of Agriculture, Food and Rural Affairs Publication Number 29 and its amendments, dealing with the construction of Subsurface Drainage systems, shall be the guide to all methods and materials to be used in the construction of tile drains except where superseded by other specifications of this contract.

The requirements of licensing of operators, etc. which apply to the installation of closed drains under the Tile Drainage Act shall also be applicable to this contract in full unless approval otherwise is given in advance by the Engineer.



HALF ELEVATION

HALF SECTION

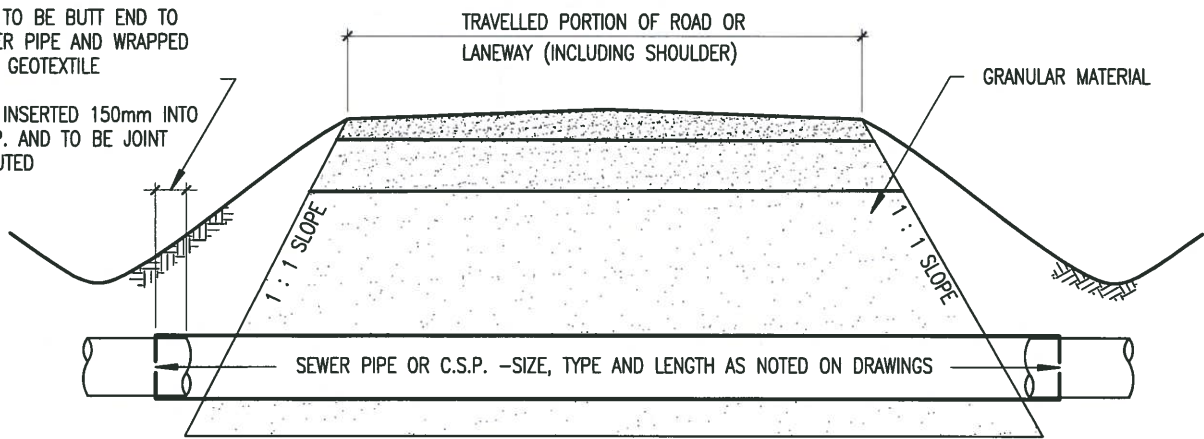


NOTES

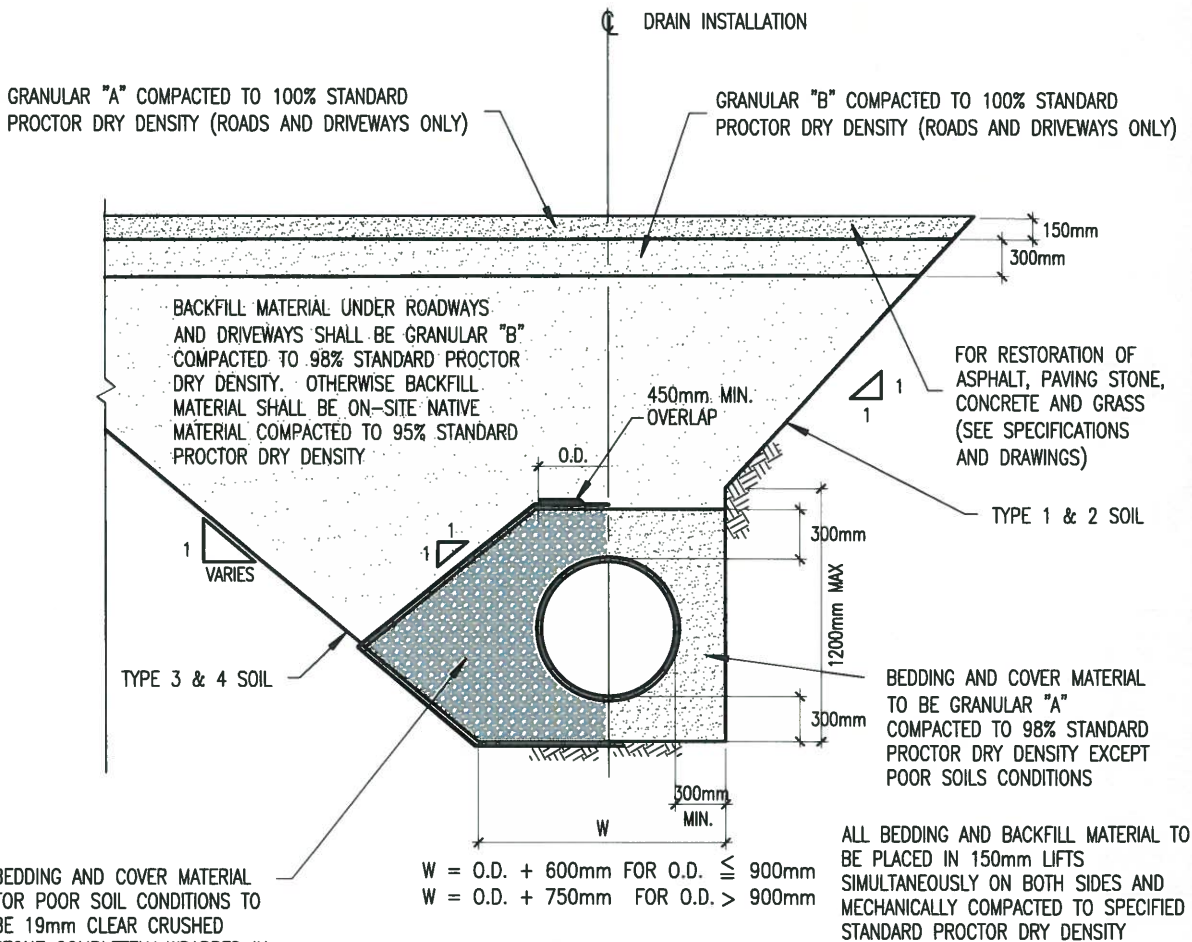
- 1) WHERE THE CULVERT IS TO BE INSTALLED IN POOR SOIL CONDITIONS, THE BEDDING MATERIAL SHALL BE 19mm CRUSHED STONE COMPLETELY WRAPPED IN GEOTEXTILE SUCH AS MIRAFI 160N OR APPROVED EQUIVALENT.

TYPICAL FARM CULVERT INSTALLATION DETAIL		
Scale: N.T.S.	Approved by: M.P.D.	Date: January 1983
Drawn by: jk	M.P.D.	Revised: November 2000
ELEVATION & SECTION		STANDARD DETAILED DRAWING
SPRIET ASSOCIATES LONDON LIMITED CONSULTING ENGINEERS ARCHITECTS		No. 01


1. TILE TO BE BUTT END TO SEWER PIPE AND WRAPPED WITH GEOTEXTILE
2. TILE INSERTED 150mm INTO C.S.P. AND TO BE JOINT GROUDED

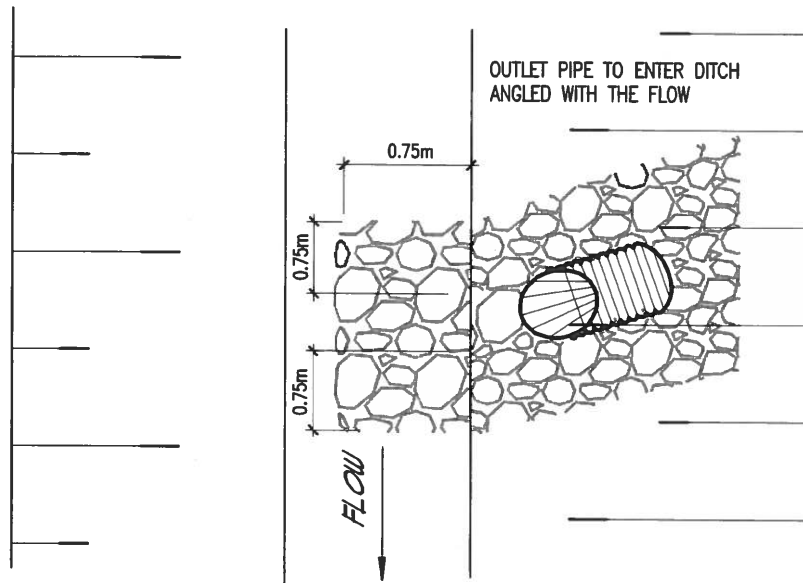


SECTION THROUGH PIPE



CROSS SECTION

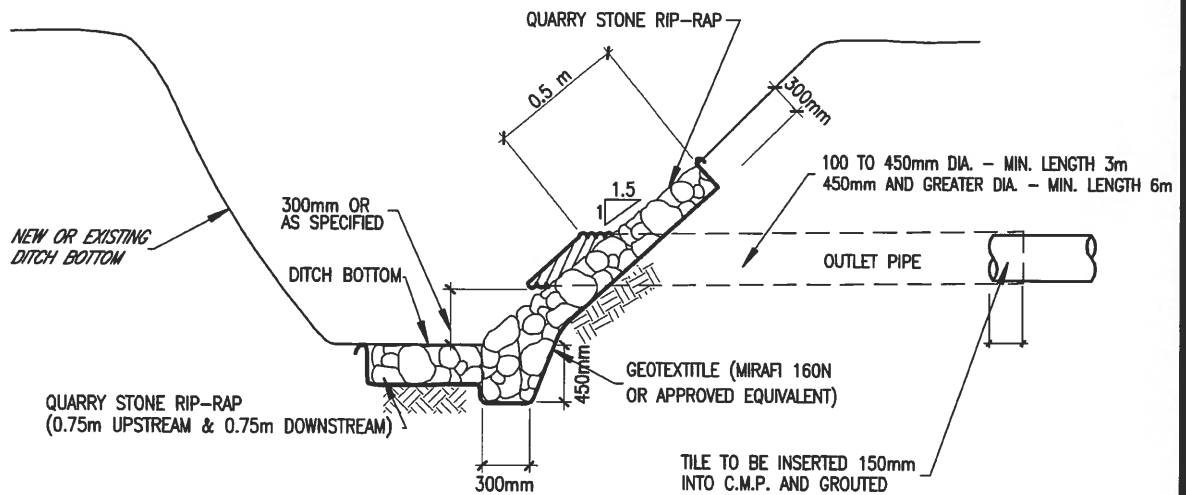
TYPICAL INSTALLATION DETAIL FOR SEWER PIPE UNDER DRIVEWAYS AND TRAVELLED PORTIONS OF ROADS		
Scale: N.T.S.	Approved by: M.P.D.	Date: January 1983
Drawn by: jk		Revised: JULY 2018
ELEVATION & SECTION		STANDARD DETAILED DRAWING No. 02
 SPRIET ASSOCIATES LONDON LIMITED CONSULTING ENGINEERS ARCHITECTS		



PLAN

NOTES

1. WHERE THE DISTURBED AREA EXCEEDS THE MIN. WIDTHS, RIP-RAP TO EXTEND TO A MIN. OF 600mm BEYOND THE DISTURBED AREA



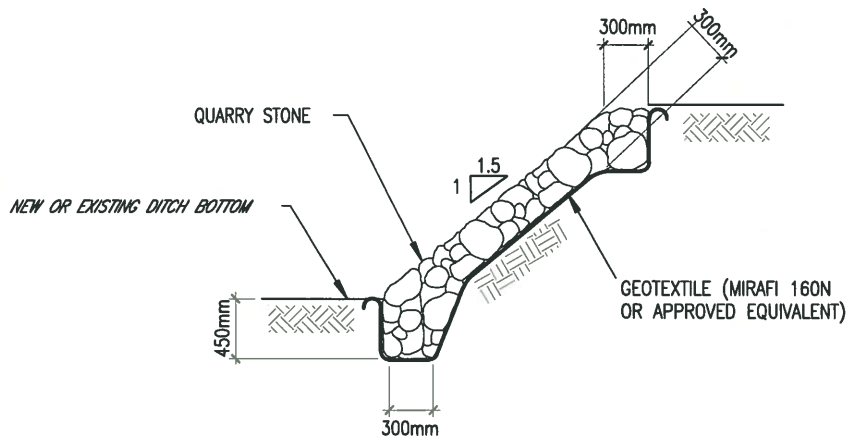
TYPICAL OUTLET RIP-RAP

NOTES

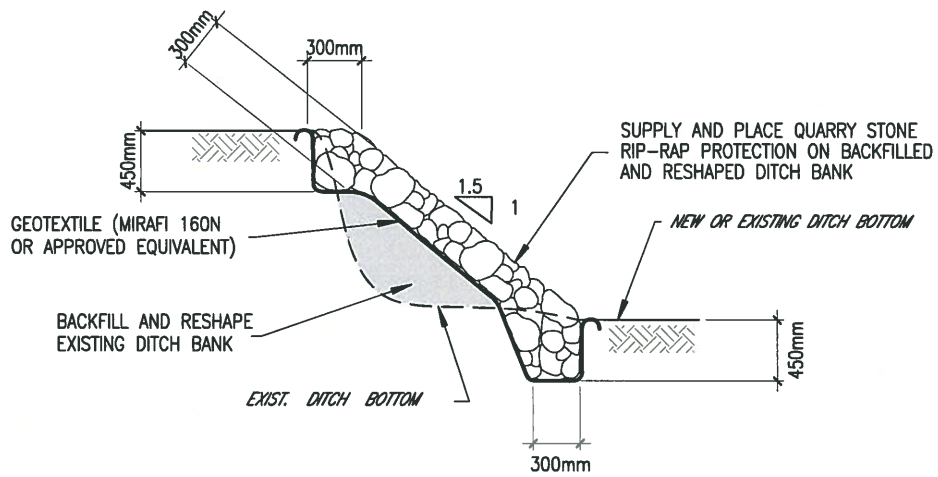
1. RIP-RAP TO EXTEND UP THE SLOPE 0.5 METER ABOVE TOP OF OUTLET
2. WHERE SURFACE RUN ENTERS DITCH AT OUTLET PIPE, A ROCK CHUTE SHALL BE INSTALLED (SEE S.D.D. No. 05) AND PIPE SHALL BE INSTALLED ADJACENT TO ROCK CHUTE.
3. HINGED RODENT GATE TO BE AFFIXED TO END OF OUTLET PIPE.

TYPICAL OUTLET RIP-RAP THROUGH SIDE SLOPE OF DITCH

Scale: N.T.S.	Approved by:	Date: November 2000
Drawn by: jk	M.P.D.	Revised: January 2009
PLAN & SECTION		STANDARD DETAILED DRAWING No. 03
SPRIET ASSOCIATES LONDON LIMITED CONSULTING ENGINEERS ARCHITECTS		



TYPICAL DITCH BANK RIP-RAP

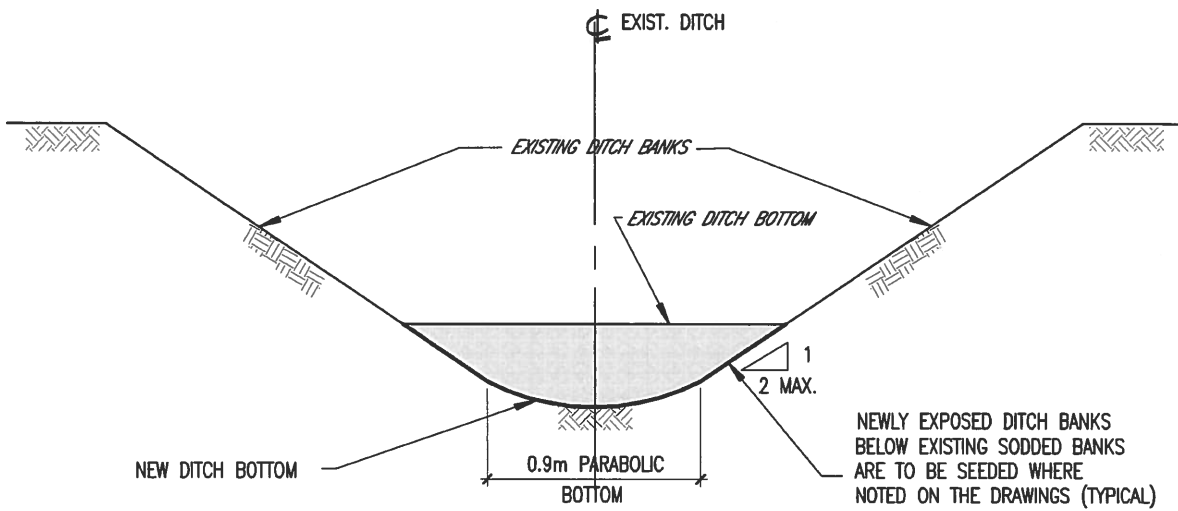


**TYPICAL DITCH BANK RIP-RAP
WITH BACKFILLING OF WASHOUT**

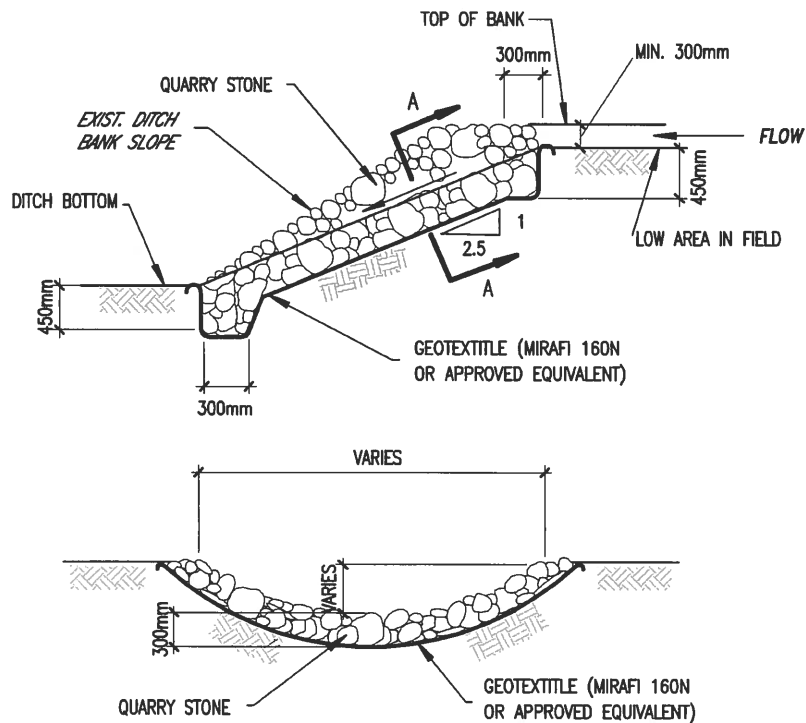
TYPICAL DITCH BANK RIP-RAP DETAILS

Scale: N.T.S.	Approved by:	Date: July 2000
Drawn by: jk	M.P.D.	Revised: November 2000

SECTIONS	STANDARD DETAILED DRAWING No. 04
 SPRIET ASSOCIATES LONDON LIMITED CONSULTING ENGINEERS ARCHITECTS	



TYPICAL DITCH BOTTOM CLEANOUT



SECTION A-A

TYPICAL ROCK CHUTE

**TYPICAL DITCH BOTTOM CLEANOUT
TYPICAL ROCK CHUTE CONSTRUCTION**

Scale: N.T.S.

Approved by:

Date: November 2000

Drawn by: jk

M.P.D.

Revised:

SECTIONS

STANDARD
DETAILED
DRAWING
No. 05



SPRIET ASSOCIATES LONDON LIMITED
CONSULTING ENGINEERS ARCHITECTS

**THIS IS EXHIBIT "G" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily
Crawford
Date: 2024.03.27 20:50:43 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

EAST BRANCH OF FACEY DRAIN

TOWNSHIP OF ZONE

TODGHAM AND CASE ASSOCIATES INCORPORATED
CONSULTING ENGINEERS
CHATHAM, ONTARIO

79 10 01

TODGHAM AND CASE ASSOCIATES
INCORPORATED
CONSULTING CIVIL ENGINEERS

280 GRAND AVE. EAST
P. O. BOX 1326 N7M 5R9

CHATHAM, ONTARIO
519/354-0400

79 10 01

To the Reeve and Council
of the Township of Zone.

Re: East Branch of Facey Drain.

Gentlemen:

In accordance with your instructions, we have made an examination and survey of the open portion and tile portion of the East Branch of the Facey Drain commencing at the outlet of the open portion into the Facey Drain in the N $\frac{1}{2}$ of Lot 3, Concession 3 and proceeding upstream along the entire length of the open and closed portions to the head of the existing tile at the westerly limit of County Road No. 23 in the S $\frac{1}{2}$ of Lot 8. We have extended our examination and survey of the tile portion of the drain across County Road No. 23, in accordance with your instructions, acting upon the drainage petition by the Kent County Engineer, for the upstream extension of the drain.

A review of the records indicates that the existing tile drain extends from its head at the west limit of County Road No. 23 in the S $\frac{1}{2}$ of Lot 8 (Station 20) to its outlet into the open portion of the drain at the line between Lots 6 and 7. The largest part of this tile drain was installed under a report by the late George A. McCubbin dated June 3, 1937. At that time approximately 150 m of 150 mm (6") diameter tile, 180 m of 180 mm (7") diameter tile and 425 m of 200 mm (8") diameter tile were installed from the west limit of County Road No. 23 to the middle of the S $\frac{1}{2}$ E $\frac{1}{2}$ of Lot 7, Concession 3 (Station 20 to Station 722). The remainder of the existing tile was installed under a report by this office dated September 23, 1969. At that time the existing tile drain was extended downstream across the remainder of Lot 7 by the installation of 350 mm (14") diameter tile. The remainder of the East Branch of the Facey Drain from the outlet of the tile drain at the line between Lots 6 and 7 downstream to its outlet into the Facey Drain in the N $\frac{1}{2}$ of Lot 3, Concession 3, consists of an open drain. A review of the records indicates that the last work of repair and improvement on the open portion of the drain was done under a report by this office dated September 23, 1969.

At that time, the open portion of the East Branch of the Facey Drain was repaired and improved from its outlet into the Facey Drain, upstream to the line between Lots 6 and 7 by carrying out a substantial deepening of the drain. The remainder of the open drain across the S $\frac{1}{2}$ of Lot 7 was enclosed at that time, by the installation of 350 mm (14") diameter tile. In addition, the necessary farm culvert construction was carried out throughout the length of the work.

Since the last work of repair and improvement, the open portion of the East Branch has become obstructed with brush, weeds, bars and sediment to a point where it no longer provides adequate drainage to the lands that it is intended to serve. We, therefore, recommend that the open portion of the East Branch of the Facey Drain be repaired and improved by means of deepening and widening along its entire length and the necessary farm culvert construction throughout the length of the work.

During our examination of the tile portion of the East Branch of the Facey Drain, we found that the existing 150 mm (6") diameter tile in Lot 8 was substantially filled with silt which caused considerable water pressure in the tile. In addition, we examined the location where the tile portion of the East Branch is immediately adjacent to the west limit of County Road No. 23. We found a large pond of water on each side of the road and that the road ditches were filled with water. There was no evidence that water was draining away, at all. We, therefore, recommend that the tile portion of the East Branch of the Facey Drain be repaired and improved to have a capacity to remove approximately one-half inch of runoff per acre per 24 hours from the area to be served by the tile. Due to the poor condition of the existing 150 mm (6") diameter tile in Lot 8 and the age of the 150 mm (6"), 175 mm (7") and 200 mm (8") tile installed under the report by the late George A. McCubbin, we recommend that the section of tile drain from Station 20 to Station 722 be abandoned and replaced with a new tile drain capable of conveying the entire design flow of one-half inch of runoff per acre per 24 hours. In order to achieve the recommended capacity at the gradient available, we recommend that the new tile be at least 250 mm (10") diameter from Station 20 to Station 155, 300 mm (12") diameter from Station 155 to Station 500 and 350 mm (14") diameter from Station 500 to Station 722. The existing 350 mm (14") diameter tile in the S $\frac{1}{2}$ E $\frac{1}{2}$ of Lot 7, Concession 3 (Station 722 to the line between Lots 6 and 7) is of sufficient capacity and appears to be in good working order and therefore requires no work at this time. We would further recommend that the new tile be installed parallel to the existing tile but far enough away from it to avoid damaging it and that the existing tile and new tile be cross-connected near Station 500. In this manner, the maximum utilization of the existing tile drain will be achieved.

In addition, we recommend that the East Branch of the Facey Drain be extended across County Road No. 23 to its east limit by installing 300 mm (12") diameter corrugated steel pipe across the road allowance and that a catch basin be installed on each side of the road.

Attached to this report and labelled "Schedule C" is our Drawing No. 78076 which consists of a plan showing the location of the proposed work marked in a heavy solid line and the lands affected by the work outlined in a heavy dashed line, together with a profile for the work that we recommend. Also attached and labelled "Schedule B" is a specification showing the dimensions, grades, disposal of material and other particulars of the work to be carried out.

In general terms, the proposed work on the open portion of the drain involves deepening of the drain by varying amounts up to 0.39 m as well as the necessary farm culvert construction along the length of the work. The proposed work on the tile portion of the drain involves the installation of 250 mm (10"), 300 mm (12") and 350 mm (14") diameter tile, the upstream extension of the drain across County Road No. 23 and the installation of two catch basins on County Road No. 23. Upon completion, the tile portion of the drain will have the capacity to remove approximately one-half inch of runoff per acre per 24 hours from the area served by the tile. The invert of the proposed tile drain will be installed at or slightly lower than the invert of the existing tile. In addition, the tile portion of the East Branch and all private tiles entering the open portion of the drain will have at least 0.30 m of freeboard beneath their inverts.

Throughout the length of the work, the excavated material is to be disposed of as set out in the Special Specifications. In accordance with Sections 29 and 30 of The Drainage Act, we determine the amounts to be paid to the owners for damages to lands and crops (if any) occasioned by the construction of the drainage works and by the disposal of material, to be as shown in the following Schedule of Allowances under the heading "Damages".

SCHEDULE OF ALLOWANCES

<u>Con.</u>	<u>Lot or Part</u>	<u>Owner</u>	<u>Damages</u>
3	Pt. Lot 4 E of Rwy. & Pt. Lot 3	Paul Sweet	20 \$ 365.00
	Pt. Lot 4 E of Rwy. & Pt. Lot 3	<i>See Part</i> Shirley Properties	\$ 85.00 240.00
	Pt. W of Rwy. 5	Martin Featherstone	380.00
	S $\frac{1}{2}$ E $\frac{1}{2}$ ex. Rwy. 6	M. Stacho Croeymeersch	260.00
	N $\frac{1}{2}$ ex. cor. 6	Earl Benjamin Est.	180.00
	S $\frac{1}{2}$ E $\frac{1}{2}$ ex. cor. 7	Cleata-Elliott C. Snow	80.00
	N $\frac{1}{2}$ E $\frac{1}{2}$ 7	M. Stacho A. Vandewezen	140.00
	S $\frac{1}{2}$ E $\frac{1}{2}$ 8	M. Stacho A. Vandewezen	<u>55.00</u>
			<u>\$1700.00</u>

We estimate the cost of the work that we recommend, together with the expenses incidental thereto, to be as follows:

	1900 m ³ Excavation and Levelling	\$ 5600.00
	End Walls for Culvert	450.00
443	135 m of 250 mm (10") dia. tile - Supply	425.00
	- Install	600.00 ✓
1150	345 m of 300 mm (12") dia. tile - Supply	1375.00
	- Install	1850.00 ✓
750	222 m of 350 mm (14") dia. tile - Supply	1175.00
	- Install	1425.00 ✓
	18 m of 300 mm (12") dia. CSP road crossing - Supply	300.00
	- Install	750.00 ✓
	2 Catch Basins	1000.00 X
	Allowances under Sections 29 and 30	1700.00
	Survey, Plans, Report and Inspection	2725.00
	Assistance and Expenses	375.00
	Incidentals and Contingencies	<u>750.00</u>
		<u>\$20500.00</u>

We assess the above estimated cost against the lands and roads as shown in the attached Schedule of Assessment labelled "Schedule A".

Under the provisions of The Railway Act, the Canadian Pacific Railway has the right to carry out the work on its property within a reasonable time. If it elects to do so, it must advise the Township before the calling of tenders so that the work will be deleted from the work of the excavating contract. If the Railway elects to carry out the excavation of the East Branch

within its right-of-way and the cleaning of the concrete culvert and the steel pipe culvert on the East Branch at this Railway crossing, the municipality will pay the sum of \$150.00 to the Railway.

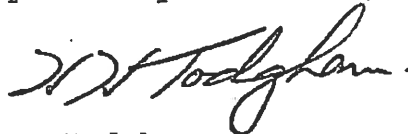
We have estimated the value of benefit derived by the construction of end walls on the existing culvert near Station 10 in the N½ of Lot 3, Concession 3. This amount is shown as a Special Benefit charged against the affected property in addition to the regular drainage assessment against this property.

We have estimated the increase in cost of the drainage works related to the installation of corrugated steel pipe and placement of granular materials across County Road No. 23 and for the repair of the asphalt roadway. Of the total estimated cost of \$20,500.00, we estimate that \$1,200.00 is directly attributable to the additional work involved in crossing the road. This increase in cost is assessed against the County of Kent as owner of County Road No. 23, under Section 26 of The Drainage Act, 1975, in addition to the normal drainage assessments against the road.

After completion, the East Branch of the Facey Drain and the farm culverts along the length of the work are to be maintained by the Township of Zone at the expense of the lands and roads herein assessed and in the same relative proportions subject, of course, to any variations that may be made under the authority of The Drainage Act. For the purpose of maintenance, the amounts assessed for Special Benefit shall be deleted from the assessment schedule.

Since most of the privately-owned lands are used for agricultural purposes and no lateral drains are involved in the work, we recommend that application be made to the Ministry of Agriculture and Food in accordance with Section 88 of The Drainage Act, for a grant payable under Section 85 of this Act, as well as for all other grants for which this work may be eligible.

Respectfully submitted,



H. H. Todgham,
B.A.Sc., O.L.S., P. Eng.

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2. PRIVATELY-OWNED LANDS: Continued

(ii) Used for agricultural purposes:
(Excluding A.R.D.A. Lands)

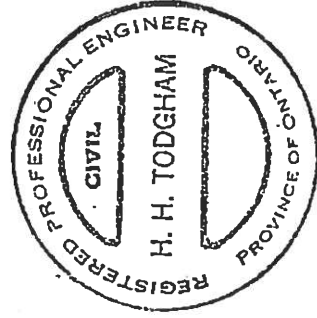
Con.	Lot or Part	Area Affected (Acres)	(Hectares)	Owner	Benefit	Special Benefit	Outlet	Total Assessment
3	N $\frac{1}{2}$ E $\frac{1}{2}$ S $\frac{1}{2}$ E $\frac{1}{2}$	40	16.2	M. Stachor <i>P. Vandeweyer</i>	\$ 2900.00	-	\$ 1440.00	\$ 4340.00
		20	8.1	M. Stachor <i>P. Vandeweyer</i>	1550.00	-	985.00	2535.00
4	W $\frac{1}{2}$	8	4.0	H. Case	400.00	-	520.00	920.00
	Total on Privately-Owned Agricultural Lands				\$10435.00	\$ 225.00	\$ 6150.00	\$16810.00
	Total on Privately-Owned Lands				\$10735.00	\$ 225.00	\$ 6490.00	\$17450.00
	TOTAL ASSESSMENT				\$12060.00	\$1425.00	\$ 7015.00	\$20500.00

Estimated amount of grant under Section 85 of The Drainage Act \$5603.33

Chatham, Ontario,
79 10 01

H. H. Todgham

H. H. Todgham,
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"SCHEDULE B"

SPECIFICATION FOR THE REPAIR, IMPROVEMENT AND EXTENSION
OF THE EAST BRANCH OF THE FACEY DRAIN
IN THE TOWNSHIP OF ZONE

This specification and the report, plan and profile bearing the same date, apply to and govern the installation of approximately 135 m of 250 mm, 345 m of 300 mm, and 222 m of 350 mm diameter tile together with the repair and improvement of approximately 2466 m of open drain and the necessary farm culvert construction along the length of the open portion of the drain. Also included is the upstream extension of the tile portion of the drain across County Road No. 23 and the installation of 2 catch basins.

DESCRIPTION OF WORK

The General Specification for Tile Drains and the General Specification for Open Drains both of which are attached hereto form part of this specification and are to be read with it. Where there is any difference between the requirements of the General Specifications and those of the Special Provisions which follow, the Special Provisions shall govern. The section numbers shown in the Special Provisions which follow refer to the sections having the same numbers contained in the General Specifications.

GENERAL SPECIFICATIONS

SPECIAL PROVISIONS - TILE PORTION

Stakes are set at 25 m intervals commencing at Station 0 on the east limit of County Road No. 23 and proceeding downstream along the course of the work.

SECTION 2
STAKES

Throughout the length of the work, the tile is to be installed on one side or the other of the existing tile drain. The new tile is to be installed parallel to the existing tile but far enough away from it to avoid damaging it. The final alignment shall be satisfactory to the Commissioner in charge. At the downstream end, the Contractor shall gradually swing the alignment of the new tile over to connect to the existing 350 mm diameter tile at Station 722.

SECTION 3
ALIGNMENT

The design grade line of the tile is set to match the invert elevation of the existing 350 mm tile at Station 722. The Contractor will use extreme care to ensure that no reverse grade occurs when connecting to the existing 350 mm tile.

SECTION 4
PROFILE

SECTION 11
CONNECTIONS

After the Tile Contractor has connected the outlet end of the new tile into the existing 350 mm diameter tile near Station 722, he will be required to connect the existing 200 mm diameter municipal tile which is abandoned under this report, into the new main as well as all intercepted private lateral tiles. This work will be performed in accordance with Section 11 of the General Specification for Tile Drains.

SECTION 12
CONSTRUCTION
IN SANDY
SOILS

Where fine sandy soil is encountered, the Commissioner shall supply at the expense of the drain, a suitable type of synthetic filter material to be used to wrap the tile in order to prevent fine soils from entering the drain. The Contractor shall install this filter material as part of his work.

SECTION 16
ROAD CROSS-
ING

Where the new drain crosses County Road No. 23, the Contractor will be required to install 18 m of 300 mm (12") diameter corrugated steel pipe, 16 gauge, between the catch basins at Station 0 and Station 20. The Commissioner will supply, as an expense to the drain, all necessary pipe and granular materials for bedding and backfill. The Contractor will install the pipe and restore the road, complete as specified herein, as part of his work.

The Contractor will carefully cut the pavement where the drain crosses the County Road in order to minimize damage to it. The foundation bed shall be excavated true to line and grade with the trench width 0.6 m wider than the diameter of the pipe and the side walls excavated vertically. The new pipe shall be installed on a 0.10 m bed of Granular "B" material. The Contractor will then backfill the trench for the full width of the pavement plus 1.25 m on each side, using Granular "B" material. The granular material is to be placed in layers not exceeding 0.30 m in thickness and is to be thoroughly compacted with a mechanical vibrating compactor. The top 0.30 m of the trench for the width of the pavement plus 1.25 m on each side is to be filled with Granular "A" material. It is to be placed in layers not greater than 0.15 m in depth and is to be thoroughly compacted with a vibrating compactor. All granular material required for backfill shall meet the gradation and physical requirements of M.T.C. Specification Form 314.

The excavated material from the trench beyond a point 1.25 m from the edge of the pavement may be used for backfilling purposes for these sections of trench. This material is to be placed in layers not

greater than 0.30 m in thickness and is to be compacted either by hand tamping or by the use of a vibrating compactor.

Following the work of backfilling the trench across the pavement and shoulders, the Contractor will place a patch using a cold mix asphalt of a standard acceptable to the County, for the full width of the pavement. This patch is to be at least 0.10 m in thickness and is to be carefully placed and tamped so that it will be as level as possible with the adjoining pavement.

The Contractor will be required to provide suitable warning signs and he shall make every effort to keep the road open to traffic by use of a flagman to direct vehicles around the site of the work. If it is necessary to close the road to through traffic, the Contractor shall provide for an adequately signed detour route.

The Contractor shall notify in writing the Engineer of the County at least 7 days prior to commencement of any work on the County Road Allowance. No labour, equipment or materials for the construction of the road crossings will be supplied by the County.

The Commissioner will arrange for the construction of a catch basin at Station 0 along the east limit of County Road No. 23 and near Station 20 along the west limit of County Road No. 23. The catch basins shall be constructed within the limits of the County Road Allowance and immediately adjacent to the road limits. The catch basins shall be 2'x2' Ministry of Transportation and Communications Style Ditch Inlet Catch Basin Standard DD-716-A or approved equal.

SECTION 19
NEW CATCH
BASINS

From Station 20 to Station 722, the designated working corridor for the tile contractor's equipment shall be restricted to an area which is 10 m wide centred along the proposed final alignment of the tile. In addition, the Commissioner, in consultation with the owner of the S $\frac{1}{2}$ E $\frac{1}{2}$ of Lot 7, Concession 3, shall designate in the field an access corridor for use by the Contractor. This access corridor, having a width of 6 m, shall provide access from the downstream limit of the tile work to the head of the open drain (Station 722 of the tile to the line between Lots 6 and 7).

SECTION 25
WORKING
CORRIDOR

SPECIAL PROVISIONS - OPEN PORTION

SECTION 2
STAKES

Stakes are set at 25 m intervals along the course of the open portion of the East Branch of the Facey Drain. The stakes commence at Station 0 at the outlet of the drain into the Facey Drain in the N $\frac{1}{2}$ of Lot 3, Concession 3 and proceed upstream to Station 2466 at the head of the open portion of the drain at the line between Lots 6 and 7.

SECTION 4
PROFILE

The design grade line of the East Branch is such that it is at or slightly above the invert elevations of the farm culverts at Stations 10 and 1925, the culvert beneath the 5-6 Sideroad and the steel pipe culvert beneath the Canadian Pacific Railway tracks. The Excavation Contractor shall take extreme care in excavating the drain upstream of these culverts so that over-excavation of the drain does not take place which would result in ponding of water upstream of these culverts.

SECTION 5
BOTTOM WIDTH
AND SIDE
SLOPES

Where the existing bottom widths and side slopes of the drain are sufficient to permit the specified deepening of the drain without disturbing the existing banks above the present drain bottom, the Contractor shall take extreme care to avoid any unnecessary disturbance to the existing drain banks.

SECTION 8
DISPOSAL OF
MATERIAL

From Station 0 to Station 2075, the excavated material is to be deposited and spread on the immediately adjacent farm lands on either or both sides of the drain as directed by the Commissioner in consultation with the owners. No excavated material shall be placed on the Railway property.

From Station 2075 to Station 2150, the excavated material is to be deposited and spread on the immediately adjacent farm lands to the south.

From Station 2150 to Station 2466, the excavated material is to be deposited and spread on the immediately adjacent farm lands on either or both sides of the drain as directed by the Commissioner in consultation with the owners.

Where excavated material is deposited in bush, it shall be deposited and levelled in the form of a spoil bank in accordance with the General Specifications for Open Drains, but in no case shall the top of this spoil bank be more than 0.60 m above the natural ground level. Where there is an existing spoil bank along the

side of the drain on which the excavated material is to be disposed of, the excavated material shall be deposited and spread on the side of the spoil bank farthest away from the drain.

Where the East Branch crosses beneath the 5-6 Sideroad at Station 1700, the Contractor will be required to clean the existing 36 inch diameter culvert to its full cross-sectional area using care to avoid damaging it in the process.

SECTION 10
ROAD
CROSSING

The Contractor will perform the following culvert construction in accordance with Sections 11 and 12 of the General Specifications.

SECTION 11
FARM CULVERTS

At Station 10 - The existing 34 foot length of 54 inch diameter corrugated steel pipe is of sufficient depth and capacity and therefore only requires cleaning by the Contractor.

At Station 1925 - The existing 30 foot length of 36 inch diameter corrugated steel pipe is of sufficient depth and capacity and therefore only requires cleaning by the Contractor.

At Station 2280 - The Contractor is required to lower the existing 32 foot length of 36 inch diameter corrugated steel pipe using extreme care to avoid damaging it in the process. The Contractor will carefully remove the pipe, clean it to its full cross-sectional area and replace it in the drain with its invert 4 inches below the design grade line of the drain.

Unless otherwise directed by the Commissioner, the Excavation Contractor will be required to clean to their full cross-sectional areas, the existing concrete culvert and the 30 inch diameter steel pipe culvert beneath the Canadian Pacific Railway tracks at Station 995 of the East Branch. The Contractor shall take extreme care in working through or around these structures to avoid causing damage of any kind to them in the process of cleaning them out.

SECTION 14
RAILWAY

The Commissioner will arrange for the construction of end walls on the existing farm culvert at Station 10. The culvert end walls are to be built from bags of cement and sand mixed in the proportions of one part cement to five parts sand. Any alternative products for end wall construction must be approved by the Engineer prior to installation. The walls are to be placed as shown on the standard

SECTION 19
CULVERT END
WALLS

drawing labelled "Farm Culvert Installation Standard Circular and Pipe-Arch Corrugated Steel Pipe" which is attached to this specification.

SECTION 20
WORKING
CORRIDOR

From Station 0 to Station 2075, the designated working corridor for the Contractor's equipment shall be on the same side of the drain on which the excavated material is to be disposed of. The width of the corridor measured from the adjacent finished top of drain bank shall be restricted to the specified spreading width of the excavated material on that side of the drain plus 2 m. In any event, the minimum width of the working corridor measured from the adjacent finished top of drain bank shall be 8 m.

From Station 2075 to Station 2150, the designated working corridor for the Contractor's equipment shall be on the same side of the drain on which the excavated material is to be disposed of. The width of the corridor measured from the centre line of Lot 6 shall be restricted to the specified spreading width of the excavated material on that side of the drain plus 2 m. In any event, the minimum width of the working corridor measured from the centreline of Lot 6 shall be 8 m.

From Station 2150 to Station 2466, the designated working corridor for the Contractor's equipment shall be on the same side of the drain on which the excavated material is to be disposed of. The width of the corridor measured from the adjacent finished top of drain bank shall be restricted to the specified spreading width of the excavated material on that side of the drain plus 2 m. In any event, the minimum width of the working corridor measured from the adjacent finished top of drain bank shall be 8 m.

Chatham, Ontario,
79 10 01



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GENERAL SPECIFICATION
FOR TILE DRAINS

(1) Tenders will be received and contracts awarded only in the form of a lump sum for the completion of the whole work or of specified sections thereof in accordance with the plan, profile and specification. No bid will be considered, nor will any contract be awarded, on the basis of classification or of unit prices. Contractors must estimate for themselves the quantity and value of the work required. They are expected to examine the locality and also the plan, profile and specification; they will be at liberty, before bidding, to examine any data in the possession of the Municipality or of the Engineer.

SECTION 1
GENERAL
CONDITIONS

(2) All the work included in any contract must be completed on or before the date fixed at the time of letting and must, at the time of completion and final inspection, be in first class condition and comply fully with the specification. Final inspection will be made by the Commissioner or Engineer within twenty days after the Commissioner has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.

(3) Contractors will be held liable for any damages or expenses occasioned by their failure to complete the work on time and for any expenses of inspecting, superintending, reletting or restaking due to their neglect or failure to prosecute the work satisfactorily or to do it properly, also for any damages occasioned by leaving fences open or by any negligence in carrying on the work. Any such expenses or damages may be deducted by the Commissioner from the amount of the contract or may be recovered by the Municipality from the Contractor and his sureties.

(1) Stakes are set one hundred feet apart along the course of the work, numbered consecutively 0, 1, 2, 3, etc. The depths of the drain, as shown on the profile, are measured from the surface of the ground beside the stakes to the invert of the tile.

SECTION 2
STAKES

(2) Contractors will be held responsible for the preservation of stakes in their original positions during the progress of the work and also for seeing that bench marks are not destroyed, defaced, or covered with excavated material.

(1) The tile will follow the course shown on the plan and marked on the ground by the numbered stakes.

SECTION 3
ALIGNMENT

- (2) Unless changes in direction are made at catch basins, manholes, or by the use of manufactured bends or fittings, they shall be made by a smooth curve in the trench on a radius of curvature so that the trenching machine can dig and still maintain grade.
- (3) The alignment of the finished work must be satisfactory to the Commissioner in charge.

SECTION 4
PROFILE

- (1) The tile is to be laid so that its invert will be at the grade line shown on the profile, which grade line is governed by the bench marks. The profile shows, for the convenience of Contractors and others, the approximate depths to be measured from the surface of the ground to the invert of the tile, at each of the numbered stakes, as observed at the time of survey, but bench marks govern.
- (2) The "as-constructed" grade shall be such that each part of the completed drain will provide the capacity required for the area which it drains.
- (3) No reverse grade shall be allowed.
- (4) A variation in grade may be tolerated where the actual capacity of the drain exceeds the required capacity. "As-constructed" grade shall not deviate from the grade line more than 15% of the internal diameter for drain sizes 8 inches or less, or 10% of the internal diameter for sizes greater than 8 inches. These deviations are allowable, provided they are gradual over a distance of not less than 30 feet.

SECTION 5
OBSTRUC-
TIONS

- (1) All brush, timber, logs, stumps, stones or other obstructions in the course of the drain are to be removed to a sufficient distance to be clear of the work.

SECTION 6
BRUSH &
TREES

- (1) All brush and small trees having a diameter less than 6 inches, growing within 15 feet on each side of the drain are to be cut off flush with the ground surface and all of their roots within 10 feet of the tile are to be grubbed out.
- (2) All brush, trees and stumps that are removed are to be put into piles by the Contractor, in locations where they can be safely burned, and are to be burned by him. If, in the opinion of the Commissioner, any of the piles are too wet or green to be burned, he will so advise the Contractor who may then arrange, to the Commissioner's satisfaction, an agreement with the owners where the piles are located, for them to burn the material when dry enough.
- (3) Since the trees and brush that are cut off flush with the earth surface may sprout new growth later, it is strongly recommended that the Township make arrangements for spraying this new growth at the appropriate time so as to kill the trees and brush.

SECTION 7
FENCES

- (1) Where the Contractor finds it necessary to remove any fences in order to permit the installation of the drain or the removal of brush and the grubbing of roots, he will be required to use reasonable care in handling the fencing material and will re-construct the fences in as good condition as that in which they are found, or as the old material permits.
- (2) The Contractor is not to leave any fences open when he is not at work in the immediate vicinity.

SECTION 8
TILE

- (1) Unless otherwise specified, all tile is to be furnished at the site of the work, by the Municipality, and its cost charged as part of the cost of the drain.
- (2) It is to be first class agricultural tile, either clay or cement. Cracked, chipped or uneven tile will not be acceptable and are to be discarded by the Contractor.
- (3) Standard Clay Drain Tile shall meet all American Society for Testing and Materials specifications as set out in Designation C4-62 (Clay Drain Tile).
- (4) Concrete Drain Tile shall meet the specifications as set out in American Society for Testing Materials Designation C412-65.

SECTION 9
EXCAVATION
OF TRENCH

- (1) Construction of the trench shall normally start at the outlet and proceed upgrade.
- (2) Minimum width of trench, measured at the top of the tile, shall be equal to the outside diameter of the tile plus approximately 6 inches, to permit proper soil placement around the tile, or the tile shall be embedded in a 120° circular groove.
- (3) The bottom of the trench shall be cut accurately to the grade line. It shall be smooth with a groove along the bottom center line to guide tile alignment. If a circular groove is used, it shall conform closely in shape to the outside diameter of the tile.
- (4) If the trench is excavated below grade for any reason, it shall be filled above the grade line with gravel or well-pulverized soil, tamped to provide a firm foundation. Then, the bottom of the trench shall be reshaped to the proper grade line.
- (5) When rock is encountered at grade level, the trench shall be excavated approximately 3 inches below grade level and filled to the proper grade line as described in paragraph (4).

- (6) Where the depth of the drain exceeds the working depth of the trenching machine, the Contractor shall excavate the top portion of the trench to a suitable depth and width so that the trenching machine can be operated within its depth range. The top-soil is to be separated from the sub-soil and during the backfilling operation it shall be replaced as the top layer.

SECTION 10
LAYING
PIPE

- (1) When the trench bottom is unstable, a stabilizing material shall be placed before laying the tile.
- (2) Laying of tile shall normally begin at the lower end of the drain and progress upgrade. It is preferable that the tile be laid inside the shoe casting of the drainage machine during the trenching operation.
- (3) Tiles shall be laid in the groove with close joints on a firm bed, free of loose soil and to the grade line of the profile.
- (4) All soil or debris in the tiles shall be removed before installation.
- (5) All tiles shall be free from clinging wet or frozen material that would hinder the laying of the tile on grade.
- (6) The upper end of all tile runs shall be closed tightly with an end plug.
- (7) Before work is suspended for the day, all tiles laid in trenches shall be blinded and any open tile ends closed.

SECTION 11
CONNECTIONS

- (1) Intercepted lateral tiles shall connect with the main drain tiles so that their center lines intersect.
- (2) Existing drains shall be inspected by the Commissioner and if found to be in working order, they shall be connected to the new system. Drains containing very little sediment shall be directly connected and drains containing substantial quantities of sediment shall be indirectly connected through filter material.
- (3) Drains carrying sewage or farmstead wastes shall not be connected to the drainage system.
- (4) Plastic tubing connections to rigid drain tile shall be made with manufactured plastic adaptors.
- (5) Manufactured "T", "Y", or elbow fittings shall be used for connections at the junction of two drains.
- (6) All connections will be made by the Contractor as part of his work in installing the drain.

SECTION 12
CONSTRUCTION
IN SANDY
SOILS

- (1) In fine sandy soil all joints shall be covered with glass fiber sheet, or other durable material, to prevent fine soil from entering the drain.
- (2) In fine sandy soil where the trench bottom is unstable, (e.g. quicksand) extreme care shall be taken to keep soil from entering the drain and to provide a firm foundation for the tile. One or more of the following recommended practices shall be used:

Construct the drain when the soil is in the driest condition.

Construct a trench and allow the area to drain.

Backfill the trenches and lay pipe in a new trench.

Use stabilizing material under the pipe, such as coarse gravel or stone or timber planks.

Use a filter material, such as glass fiber sheet, to cover the water inlet area.

Use perforated continuous pipe.

- (3) Drainpipes shall be laid in the trench and the trench backfilled as quickly as possible.
- (4) These special construction requirements are considered to be extra work and the Commissioner will make arrangements with the Contractor to have them carried out.

- (1) As the laying of tile progresses, the tiles shall be blinded by placing crumbly soil, preferably topsoil, around the tiles to a minimum depth of 3 inches above the top of the tiles. Where the tiles may be subject to frost before being backfilled, the minimum depth of blinding shall be 6 inches.

SECTION 13
BLINDING

- (2) Large stones and frozen lumps of soil will not be permitted in the blinding material.
- (3) On steep grades, or where the topsoil contains fine sand, loam or clay soil (if available from the sides of the trench) shall be used as blinding material.
- (4) Where nondegradable filter material is unavailable, vegetative material such as grass, hay, straw or ground corn cobs may be used.

- (1) After the Commissioner has inspected the laying of the tile, earth excavated from the trench shall be used as backfill material and shall be heaped above the trench to avoid depressions following settlement.

SECTION 14
BACKFILLING

- (2) Large stones, roots, broken tile and other material likely to impede or damage field equipment shall be removed from the backfill and placed in a suitable disposal area.
- (3) To avoid the danger of damaging the tile, large stones and frozen lumps of soil shall not be dropped into the trench.
- (4) Surplus soil shall be spread over the adjacent field.
- (5) Except at laneways and road crossings, backfill material shall not be compacted; compaction should be allowed to occur naturally.

SECTION 15
LANE AND
DRIVEWAY
CROSSINGS

- (1) When called for in the Special Provisions, the Commissioner will supply, at the expense of the drain, corrugated steel pipe in place of tile for installation beneath farm lanes and private driveways. The Contractor will place the pipe as part of his work.
- (2) The pipe shall be laid in the trench with its invert at the grade line of the drain. Each end will be connected to the tile in a water-tight manner.
- (3) Unless otherwise specified, the bedding and backfill to the pipe will be native earth from the excavation. However, where driveways have a gravel surface, the Commissioner will supply granular materials for the Contractor to place as the upper layer of backfill to restore the driveway to its original condition.
- (4) The backfill will be carefully placed in the trench so as not to disturb the pipe. It will be carried to the top of the trench in thoroughly compacted 8" layers.

SECTION 16
ROAD
CROSSING

- (1) At road crossings, the Commissioner will supply, at the expense of the drain, corrugated steel pipe in place of tile for installation beneath the travelled part of the road. The Commissioner will also supply, at the expense of the drain, all necessary granular materials for bedding and backfill. The Contractor will install the pipe, complete, as part of his work.
- (2) The trench shall be excavated true to line and grade having a maximum width of 2 feet wider than the outside diameter of the pipe with vertical side walls. It shall be excavated to a depth to provide for 4 inches of granular bedding below the bottom of the pipe.
- (3) The pipe shall be laid with its invert at the grade line of the drain and with the inside circumferential laps pointing downstream. The supplied lengths of pipe shall be joined by means of "Standard Coupler Bands" installed to provide a water-tight connection.

(4) Granular backfill will be placed in the trench below the travelled portion of the road, with excavated material used for backfill across the ditch areas. The granular material shall be placed in 6 inch layers up to the level of the adjoining roadway. Each layer shall be compacted to 100% proctor density before the succeeding layer is placed.

(1) Where the new tile follows the course of an existing tile drain, the Contractor will locate the existing tile, before commencing work and will clearly mark it. He will then exercise reasonable care to avoid disturbing this existing tile.

SECTION 17
EXISTING
TILE DRAIN

(1) Where a drain discharges into an open outlet, the Contractor will install a length of steel pipe supplied by the Commissioner at the expense of the drain, in place of tile. The Commissioner will also supply for installation by the Contractor a removable wire mesh grating to be attached to the end of the pipe. Grate openings shall not exceed 1 inch.

SECTION 18
TILE
OUTLET

(2) The outlet pipe shall be installed as soon as the trench is excavated and shall extend to the toe of the slope of the open ditch.

(3) Backfill for the outlet pipe shall be suitable excavated material placed and compacted in 6 inch layers up to the level of the adjoining ground.

(4) The joint between the tile and the outlet pipe shall be sealed with concrete in a water-tight manner.

(1) The Commissioner will arrange for the construction of concrete catch basins, at the expense of the drain, at the locations shown on the plan and profile and set out in the Special Provisions.

SECTION 19
NEW CATCH
BASINS

(2) Concrete used for the catch basins is to be made from clean, well-graded gravel and fresh cement in the proportions of 5 parts of gravel to 1 part of cement. If ready-mix concrete is used, the class of concrete shall be 3,000 p.s.i. Clean water only is to be used and the concrete is to be well mixed before being placed in the forms.

(3) The catch basin builder will provide and install removable steel or cast iron grating covers having an opening at least 24 inches square.

(4) The elevation of the top surface of the catch basin cover is to be determined by the Commissioner and is to be such as to permit the entry of surface water into the basin, unless otherwise specified.

- (5) The connections of the drain into the catch basin are to be made in a neat and workmanlike manner and they are to be sufficiently tight as to allow no water to pass through around the outside of the drain.
- (6) Unless otherwise specified, cast-in-place catch basins are to measure 24 inches square inside the walls. They shall have 6 inch thick walls and floors with the floors being at least 2 feet below the bottom of the tile.
- (7) If, in the opinion of the Commissioner, a precast concrete catch basin will be less expensive and will be equally as satisfactory as one that is cast-in-place, the Commissioner may arrange for the substitution of a precast catch basin so long as it generally complies with this specification.

SECTION 20
UTILITIES

- (1) Before commencing work, the Contractor will investigate the location of any and all utility lines, pipes or cables which may interfere with the installation of the tile or the construction of the catch basins.
- (2) He shall take all necessary steps to avoid damaging these and, should any damage result to them from his operations, he will be completely responsible for these damages, and will save harmless the Township and the Engineer from any legal actions which may arise as a result of such damage.

SECTION 21
PROTECTION
OF PUBLIC

- (1) Where the Contractor is working on or adjoining a travelled roadway, he will erect the necessary barricades to protect the travelling public against accident and he shall keep these lighted from dusk to dawn.
- (2) When he is installing a road crossing, he will arrange for the detouring of traffic around the construction site.
- (3) The Contractor will use all reasonable means to avoid damage claims as a result of his carelessness or negligence and, should any claims arise, he will save harmless the Township and the Engineer from any legal actions resulting from them.

SECTION 22
CLEAN-UP

- (1) On completion of his work, the Contractor will clean up the site, removing all debris and waste material and leaving the site in a neat and tidy condition.
- (2) He shall pick up any large pieces of broken tile or any other debris resulting from his work and will dispose of it away from the site. He is not to bury any of this material in the course of backfilling the trench.

(1) Where the word "Commissioner" is used in this specification, it shall mean the person or persons appointed by the Council of the Municipality having jurisdiction, to superintend the work.

SECTION 23
COMMISSIONER

(2) The Commissioner will be permitted to make minor variations in the work so long as these variations will result in either a more satisfactory drain or a more economical one. These variations, however, must not be such as to change the intent of the work to be performed nor are they to reduce the standard of quality.

(1) The part of the Specification headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern.

SECTION 24
SPECIAL
PROVISIONS

TODGHAM AND CASE LIMITED
CONSULTING ENGINEERS
280 GRAND AVENUE EAST,
CHATHAM, ONTARIO.

GENERAL SPECIFICATION FOR OPEN DRAINS

(REVISED MARCH 1, 1975)

- (1) Tenders will be received and contracts awarded only in the form of a lump sum for the completion of the whole work or of specified sections thereof in accordance with the plan, profile and specification. No bid will be considered, nor will any contract be awarded, on the basis of classification or of unit prices. Contractors must estimate for themselves the quantity and value of the work required. They are expected to examine the locality and also the plan, profile and specification; they will be at liberty, before bidding, to examine any data in the possession of the Municipality or of the Engineer.

SECTION 1 GENERAL CONDITIONS

- (2) All the work included in any contract must be completed on or before the date fixed at the time of letting and must, at the time of completion and final inspection, be in first class condition and comply fully with the specification. Final inspection will be made by the Commissioner or Engineer within twenty days after the Commissioner has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.
- (3) Contractors will be held liable for any damage or expenses occasioned by their failure to complete the work on time and for any expenses of inspecting, superintending, reletting or restaking due to their neglect or failure to prosecute the work satisfactorily and for any damages occasioned by leaving fences open or by any negligence in carrying on the work. Any such expenses or damages may be deducted by the Commissioner from the amount of the contract or may be recovered by the Municipality from the Contractor and his sureties.

- (1) Stakes are set one hundred feet apart along the course of the work, numbered consecutively, 0, 1, 2, 3, etc. The depths to which the drain is to be dug, as shown on the profile, are measured from the surface of the ground beside the stakes.
- (2) Contractors will be held responsible for the preservation of stakes in their original positions during the progress of the work and also for seeing that bench marks are not destroyed, defaced, or covered with excavated material.

SECTION 2 STAKES

- (1) Except where specified otherwise, the excavation will follow as nearly as possible the course of the existing drain. Wherever sharp or irregular bends occur, all sloping and widening is to be done on that side of the drain that will tend to flatten the bends and improve the flow of water in the drain.
- (2) Where one drain bank adjoins the travelled part of any road or laneway, all sloping and widening is to be done on that side of the drain farthest from the roadway.
- (3) Where one drain bank adjoins a fence line (except where the travelled part of a road or laneway adjoins the other bank) all required sloping and widening is to be done on that side of the drain farthest from the fence line, unless there is sufficient room between the ditch bank and the fence to permit widening on the fence side without disturbing the fence itself.
- (4) Where the drain is to be moved off a road allowance and onto the adjoining lands the top edge of the nearest finished drain bank is to be not closer than 2 feet to the limit of the road allowance. The centre line of the drain is to be kept as straight as possible even though this 2 foot dimension may be exceeded in places.
- (5) Where a new drain is being constructed, its centre line will be as straight as possible and any changes in direction shall be in the form of smooth regular bends. Where a new drain will adjoin an existing fence line, the Contractor will lay out a suitable centre line such that the top edge of the adjacent drain bank, at its widest point, will not be closer than 3 feet to the fence and the Contractor will use this centre line to establish the drain location.
- (6) The alignment of the finished work must be satisfactory to the Commissioner in charge.

SECTION 3 ALIGNMENT

- (1) The excavation of the drain must be made at least to the depth intended by the grade line shown on the profile, which grade line is governed by the bench marks. The profile shows, for the convenience of the Contractors and others, the approximate depths from the surface of the ground at the points where the numbered stakes are set, as well as the amount of deepening required, as observed at the time of survey, but bench marks govern.

SECTION 4 PROFILE

**SECTION 5
BOTTOM WIDTH AND
SIDE SLOPES**

- (1) The bottom widths and the side slopes of the various sections of the finished drain are to be true to line and grade as shown on the profile. The sides of the excavation are to be sloped so that the top width of the finished excavation will exceed the bottom width by twice the slope times the depth, at all places.
- (2) Contractors will not be restricted to the exact dimensions specified but must excavate clear of the specified cross sections and may excavate such additional depth or width as may be required to accommodate the use of suitable excavating equipment or to allow for sediment or caving prior to final inspection, provided that at no place is the surface of the Excavation to be steeper than the slope specified on the profile. The Contractor is not to excavate so much deeper than the grade line as to result in the formation of pockets in the drain bottom that will cause water to stand in pools along the drain.

**SECTION 6
OBSTRUCTIONS**

- (1) All brush, timber, logs, stumps, stones, or other obstructions in the course of the drain are to be removed by the Contractor. Timber, logs and stumps are to be dealt with in the same manner as specified for brush and trees. Large stones and similar materials are to be disposed of away from the site.

**SECTION 7
BRUSH AND TREES**

- (1) Where the existing bottom widths and side slopes of the drain are sufficient to permit the specified deepening of the drain without disturbing the existing banks above the present drain bottom, the Contractor will be required to cut the brush and trees on the sloping banks flush with the surface of the banks but he will not be required to remove their roots and stumps unless they will obviously create obstructions to the flow of water in the drain.
- (2) Where it is necessary to widen the drain and excavate material from the sloping bank, all brush and trees within the course of the drain are to be cut and those roots and stumps in the bottom of the drain and on the bank or banks where the widening takes place are to be removed.
- (3) Throughout the length of the work, the Contractor will cut off flush with the ground surface all brush and trees having a diameter less than 6 inches, and all dead Elm trees, within 10 feet of the top edge of the finished drain banks and within the disposal area covered by the excavated material. Where there is a fence adjoining the drain, he will be required to cut the brush on the opposite side of the fence only if excavated material is to be placed there.
- (4) Should the Contractor find it necessary to remove trees other than those specified above, in order to permit the excavation of the drain or the disposal of material, he will be at liberty to do so only on permission of the Commissioner in charge.
- (5) All trees over 8 inches in diameter that are cut are to be trimmed of branches, and the trunks, along with the branches over 8 inches in diameter, are to be cut up into log lengths and piled for the use of the adjoining owner unless the owner advises the Commissioner he does not want them, in which case they are to be disposed of by the Contractor along with the other brush. Small branches and limbs are to be disposed of by the Contractor along with the other brush. Tree stumps may be burned by the Contractor where permitted; otherwise, they shall be disposed of by him away from the site of the work.
- (6) Following completion of the work, the Contractor is to trim up any broken or damaged limbs on trees which remain standing, disposing of the branches cut off along with other brush and leaving the trees in a neat and tidy condition.
- (7) Brush and trees removed from the drain and banks thereof and from the disposal area are to be put into piles by the Contractor, in locations where they can be safely burned, and are to be burned by him. If, in the opinion of the Commissioner, any of the piles are too wet or green to be burned, he will so advise the Contractor who may then arrange, to the Commissioner's satisfaction, an agreement with the owners where the piles are located, for them to burn the material when dry enough.
- (8) Prior to and during the course of burning operations the Contractor shall comply with the guidelines prepared by the Air Quality Branch of the Ontario Ministry of the Environment and shall ensure that the Environmental Protection Act is not violated.
- (9) In no case will brush or trees be buried in the spoil bank or within the excavated material.

**SECTION 8
DISPOSAL OF
MATERIAL**

- (1) Where a part of the drain is being relocated, the Contractor will strip the topsoil from the new course and stockpile it for re-use, following the completion of the subsoil operations. Subsoil excavated from the new course is to be used first of all to fill the existing course which is being abandoned. Where the Contractor can conveniently do so, he may deposit the material in the old course as he excavates it from the new course but where the distance separating the new course from the old course is too great to permit this, he shall move the material to the old course with trucks. He will pack the material as much as is reasonably possible considering the equipment he is using but he need not carry out any special compaction procedures. Where there is more than enough material to fill the old course, the Contractor is to mound up the excavated material slightly to allow for settlement and he is then to bring the surface of the excavated material to a reasonably smooth and uniform contour. Where there is insufficient material to fill the old course, he is to grade the surface of the material so as to eliminate any holes that would collect water.
- (2) Material not required to fill the part of the existing course that is being abandoned and material excavated from the remainder of the drain is to be deposited on the immediately adjoining farm lands in the locations set out in the Special Specifications. It is to be kept at least 6 feet clear of the top edge of the drain and 3 feet clear of all fences and, beyond these distances, it is to be placed as evenly as is conveniently possible in view of the type of excavating equipment used.

- (3) Where the excavated material is deposited in bush land, it is to be spread and levelled in the form of a spoil bank over at least the full width of the strip that has been cleared to permit the passage of excavating equipment but in no case is the top surface to be left more than 2 feet above the natural ground level even though this may require additional clearing to produce a sufficient disposal area. On completion, the spoil bank is to be left so that it is smooth enough to drive an ordinary farm vehicle along it.
- (4) Where the adjoining land is sufficiently clear to permit cultivation, the Contractor is to spread the excavated material over a sufficiently great width that, after spreading, the excavated material will generally have a thickness of not more than 6 inches. However, the Contractor will not be required to spread the material over a width greater than 60 feet even though this results in a depth of material in excess of 6 inches.
- (5) After the excavated material has been levelled any stockpiled topsoil is to be spread over it and the adjoining land to a depth of not over 4 inches.
- (6) No excavated material is to be placed on lawns or ornamental shrubbery but is to be deposited on either or both sides, on the lands of the same owner.
- (7) In no case is the topsoil or any excavated material to be deposited in ditches, tiles, or depressions intended to conduct water into the drain.
- (8) The Commissioner in charge will be the sole judge as to the proper disposal of material under the contract and this specification.

SECTION 9 FENCES

- (1) Where the Contractor finds it necessary to remove any fences in order to permit the excavation of the drain or the disposal of material, he will handle the fencing carefully. Unless otherwise specified, the Contractor will be required to re-construct the fences following the completion of the work of excavation and levelling in as good a condition as that in which they are found or as the old material permits.
- (2) Except as hereinafter specified the Contractor is not to leave any fences open when he is not at work in the immediate vicinity. Where it is necessary to remove a fence paralleling the drain to excavate the drain or dispose of material, the Contractor is not to take it down more than 1 week before he starts work in that field and he is to replace it within 2 weeks after he finishes work there. The landowners and not the Contractor will be responsible for the control of livestock in the adjoining fields, so long as the Contractor adheres to these time limits.
- (3) Any fences that are constructed or re-constructed along the course of the drain are to be kept at least 3 feet clear of the top edge of the drain bank.

SECTION 10 ROAD CROSSINGS

- (1) Where the drain crosses the travelled part of a road through a bridge, the Contractor will excavate the drain to its specified dimensions through the bridge opening, using care to avoid damaging it. If after the drain has been excavated at any bridge structure it appears to the Commissioner that repairs or replacement may be required, he shall so advise the Road Authority having jurisdiction over the particular bridge.
- (2) Where a new bridge is required or where any underpinning, strengthening or repairs are rendered necessary by the work, it is to be carried out by the Road Authority at its own expense.
- (3) Where the drain crosses the travelled part of a road through a pipe that does not have to be replaced or lowered, the Contractor will clean the pipe to its full cross-sectional area using care to avoid damaging it.
- (4) Where the existing pipe is of sufficient size and is in a good state of repair, but requires to be lowered, the Contractor will carefully remove it, clean it to its full cross-sectional area, and replace it in the drain at the proper elevation.
- (5) Where the existing pipe must be replaced, the Contractor will carefully remove it from the drain, clean it to its full cross-sectional area, and leave it beside the drain for removal by the Road Authority. He will then install the new culvert supplied by the Road Authority.
- (6) Under roadways, new pipes and those that are lowered are to be set with their inverts 4 inches below the grade line when the pipe is 42 inches in diameter or less and 6 inches below when it is over 42 inches in diameter.
- (7) Trenches across the travelled part of the roadways are to be back-filled with compactable granular material supplied by the Road Authority.
- (8) The Contractor will notify the Road Authority at least 3 working days before starting work on any road crossing.

SECTION 11 FARM AND ACCESS CULVERTS

- (1) Where a farm or access bridge or pipe does not have to be replaced or lowered, the Contractor will clean it to its full cross-sectional area using care to avoid damaging it.
- (2) Where the culvert is a pipe that must be lowered, the Contractor will carefully remove it, clean it to its full cross-sectional diameter, and replace it in the drain with its invert 4 inches below the grade line.
- (3) Where a pipe culvert must be replaced, the Contractor will carefully remove it from the drain, clean it to its full cross-sectional area, and leave it beside the drain for disposal by the Drainage Commissioner. Any salvage value from the sale of the pipe shall be credited to the drain. Where a wooden or concrete bridge must be replaced, the Contractor will remove it, disposing of the material away from the site. If a new pipe is to be installed, it will be supplied by the Commissioner at the site, at the expense of the drain. The Contractor will then install it with its invert 4 inches below the grade line.

- (4) The Contractor will backfill around each pipe either with compactable granular material supplied by the Commissioner at the expense of the drain or with material excavated from the drain, as directed by the Commissioner.
- (5) Where a new culvert is to be installed, the owner may request the Commissioner to have it placed in a different location from the existing one and this will be permitted so long as the relocation does not result in an increase in the area draining through the culvert. Adequate notice of the change must be given to the Contractor. In no case may the existing culvert be left in the drain when it has been specified that it is to be removed.
- (6) Should the owner wish to construct end walls, he may do so but both the construction and maintenance of such end walls will be the responsibility of the owner concerned and not of the drain.

**SECTION 12
PIPE CULVERT
INSTALLATION**

- (1) The Commissioner will supply to the Contractor the corrugated pipe in lengths of approximately 20 feet (with couplers, where required), in a prefabricated condition. The cost of such prefabrication will be charged as part of the cost of the drain. Any further fabricating or connecting will be the Contractor's responsibility.
- (2) Pipe culverts will be supplied on trucks and are to be unloaded, installed and back-filled by the Contractor as part of his work.
- (3) Following the placing of the pipe, the Contractor will backfill around it, placing and compacting the backfill material in 9 inch layers, equally on each side of the pipe up to the level of the adjoining ground. At the ends of the pipe, the backfill material is to be sloped 1 1/4 feet horizontally to 1 foot vertically. Where clay material is readily available, the ends of the backfill are to be covered with clay to minimize erosion.

**SECTION 13
TILE OUTLETS**

- (1) Where existing tile outlet pipes of cast iron, asbestos cement, corrugated steel or other rigid material are encountered along the course of the drain, and where they will be removed or rendered useless by the work, the Contractor, as part of his work, shall re-install the outlet pipes in the re-graded drain bank. Any new materials required for this work shall be supplied by the Commissioner as an expense to the drain. The outlet pipes shall be joined to the tile in a water-tight manner and shall be properly set into the sloping drain bank so as to prevent the outlet pipe from collapsing.

**SECTION 14
UTILITIES,
RAILWAYS, ETC.**

- (1) Before commencing work, the Contractor will investigate the location of any and all railways, utility lines, wires, pipes, poles, towers or cables which may interfere with the excavation of the drain. He will take all necessary steps to avoid damaging these and should any damage result to them from his operations, he will be completely responsible for these damages, and will save harmless the Township and the Engineer from any legal actions which may arise as a result of such damage.
- (2) If permits are required to allow the work to be carried out on or adjacent to any utilities, pipelines, railways, etc., the Contractor shall obtain these at his own expense.
- (3) All work on or adjacent to any utility, pipeline, railway, etc., is to be carried out in accordance with the requirements of the utility, pipeline, railway, or other, as the case may be, and its specifications for such work are to be followed as if they were part of this specification.

**SECTION 15
PROTECTION
OF PUBLIC**

- (1) Where the Contractor is working on or adjoining a travelled roadway, he will erect the necessary barricades to protect the travelling public against accident and he shall keep these lighted from dusk to dawn. When he is installing a road crossing, he will arrange for the detouring of traffic around the construction site. The Contractor will use all reasonable means to avoid damage claims as a result of his carelessness or negligence and, should any claims arise, he will save harmless the Township and the Engineer from any legal actions resulting from them.

**SECTION 16
CLEAN-UP**

- (1) On completion of his work, the Contractor will clean up the site, removing all debris and waste materials and leaving the site in a neat and tidy condition.

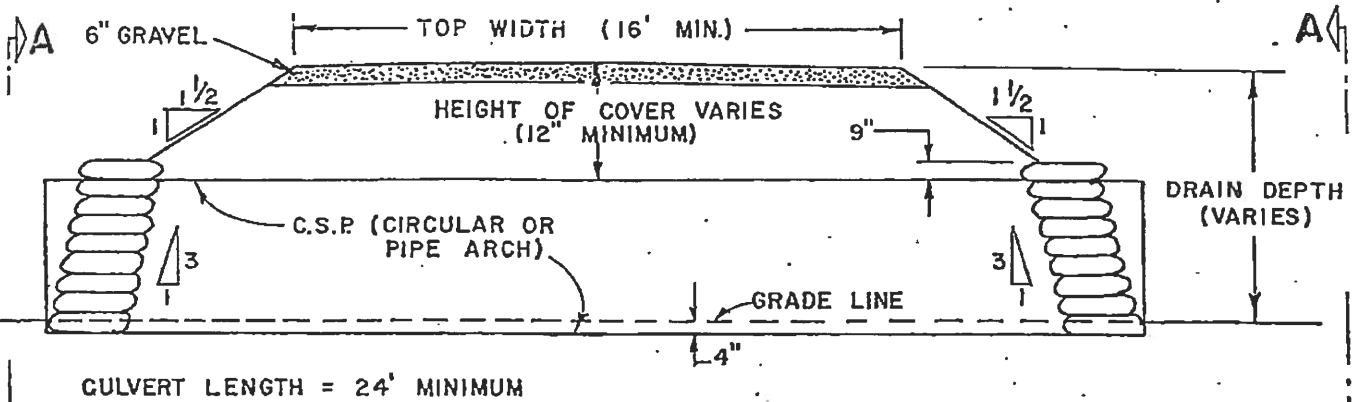
**SECTION 17
COMMISSIONER**

- (1) Where the word "Commissioner" is used in this specification, it shall mean the person or persons appointed by the Council of the Township having jurisdiction, to superintend the work.
- (2) The Commissioner will be permitted to make minor variations in the work so long as these variations will result in either a more satisfactory drain or a more economical one. These variations, however, must not be such as to change the intent of the work performed nor are they to reduce the standard of quality.

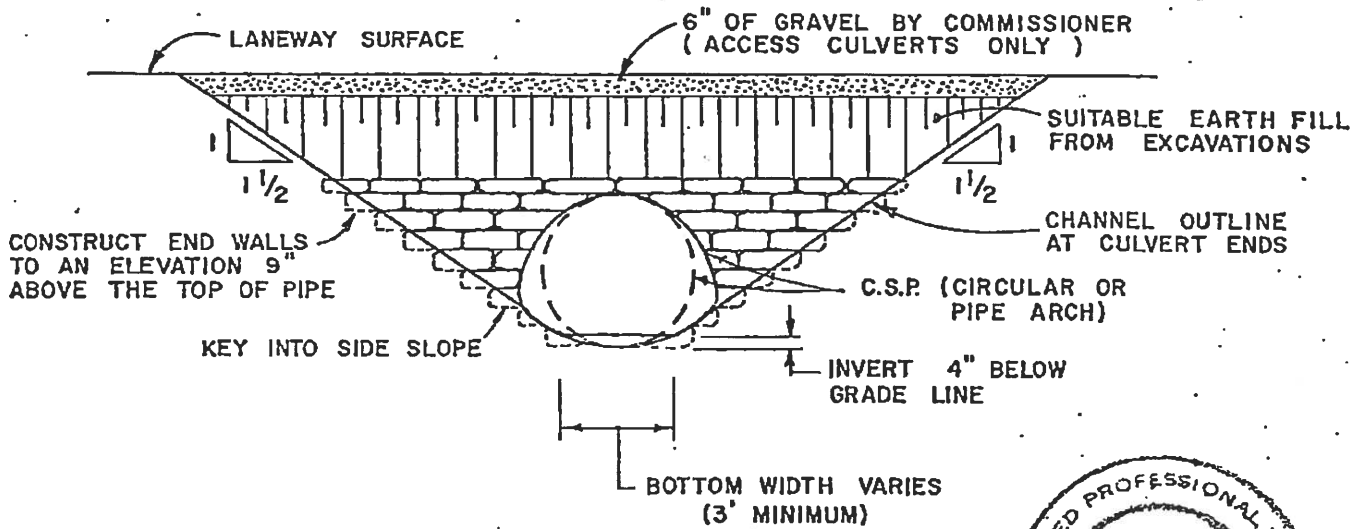
**SECTION 18
SPECIAL PROVISIONS**

- (1) The Part of the Specifications headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern.

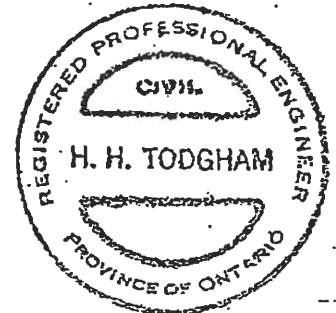
H. H. TODGHAM
TODGHAM AND CASE LIMITED
CONSULTING ENGINEERS
CHATHAM, ONTARIO



LONGITUDINAL SECTION



ELEVATION A-A



CONSTRUCTION NOTES

1. INSTALLATION AND ASSEMBLY OF C.S.P. MATERIALS SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
2. BACKFILL MATERIAL SHALL BE PLACED IN 9" LAYERS EQUALLY ON EACH SIDE OF THE PIPE. EACH LAYER SHALL BE COMPACTED TO 95% PROCTOR DENSITY.
3. END WALLS TO BE CONSTRUCTED WITH BAGS FILLED WITH 5 PARTS SAND TO 1 PART CEMENT IN AN INTERLOCKING MANNER KEYED INTO THE SIDE SLOPES OF THE DRAIN.

FARM CULVERT

INSTALLATION STANDARD

CIRCULAR & PIPE ARCH

CORRUGATED STEEL PIPE

TODGHAM AND CASE ASSOCIATES INCORPORATED
consulting civil engineers
 chatham ontario

DATE - 79 10 01	JOB N ^o - 78076
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**THIS IS EXHIBIT "H" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily Crawford
Date: 2024.03.27 20:51:41 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

TODGHAM AND CASE LIMITED
CONSULTING CIVIL ENGINEERS

151 THAMES STREET
CHATHAM, ONTARIO

HERBERT H. TODGHAM
B.A.SC., O.L.S., P.ENG.

POST OFFICE BOX 386
TELEPHONE 354-0400

C. WILLIAM CASE
M.A.SC., P.ENG.

September 23rd, 1969.

To the Reeve and Council
of the Township of Zone.

Re: East Branch of Facey Drain.

Gentlemen:

In compliance with your instructions we have made an examination and survey of the East Branch of the Facey Drain, beginning at its outlet into the Main part of the Facey Drain on the N $\frac{1}{2}$ of Lot 3, Concession 3 and continuing upstream to the outlet end of the tile part of the drain near the centre of the S $\frac{1}{2}$ E $\frac{1}{2}$ of Lot 7, Concession 3. From this point, upstream to the head of the drain at the west side of the 3-4 Concession Road, it appears that the existing tile is in good condition and nothing further is required.

The last work on the East Branch of the Facey Drain appears to have been carried out under a report by E. C. Brisco, Jr., dated January 15, 1963. That report provided for a nominal cleanout which was apparently considered sufficient at that time. Since then, the drain has become somewhat grown up with weeds and brush but, more important, some of the owners along the drain now want to improve the drainage of their lands. In order to do this, a better outlet is required through this East Branch of the Facey

Drain and to provide this, substantial deepening will have to be carried out. In addition, the owner of the S $\frac{1}{2}$ E $\frac{1}{2}$ Lot 7, Concession 3 is anxious to have the open ditch completely enclosed through this property in order to make the farming operation more efficient.

As a result of our examination and survey, we recommend that the East Branch of the Facey Drain be deepened by varying amounts from about 1 $\frac{1}{2}$ feet to 2 $\frac{1}{2}$ feet from the line between Lots 6 and 7, downstream to the outlet in the Main Drain; further, we recommend that the open part of the East Branch on the S $\frac{1}{2}$ E $\frac{1}{2}$ of Lot 7, Concession 3 be enclosed by installing tile from the end of the existing tile to the fence marking the line between Lots 6 and 7. Attached to this report and labeled "Schedule C" is our Drawing No. 68070-1A which is a plan showing the location of the proposed work marked in red and the lands affected by it outlined in green. Also attached and marked "Schedule D" is Drawing No. 68070-2A which is a profile for the work that we recommend. Attached and marked "Schedule B" is a Specification setting out the dimensions, grades, disposal of material and other particulars of the work.

In general terms, the proposed work involves the deepening of the existing drain as already outlined, together with the necessary widening to accomplish this. In addition, the part of the open drain on Lot 7 is to be enclosed with 14 inch tile. Road, railway and farm culverts are to be cleaned or replaced, as required.

In accordance with Section 8 (1) of The Drainage Act, 1962-63, we determine the amounts to be paid to the owners of the adjoining lands for damages to lands and crops (if any) occasioned by the disposal of material to be as shown in the following schedule:

SCHEDULE OF ALLOWANCES

<u>Con.</u>	<u>Lot or Part</u>	<u>Owner</u>	<u>Damages</u>
3	N $\frac{1}{2}$ 3	Ken & Doug Rose	\$ 40.00
	Pt.E of Rwy.4	K. & D. Rose	150.00
	Pt.W of Rwy.5	Director Veterans Land Act	85.00
	S $\frac{1}{2}$ E $\frac{1}{2}$ ex.Rwy.6	Martin Stacho	70.00
	N $\frac{1}{2}$ ex.SWcor.6	Earl Benjamin Est.	40.00
	S $\frac{1}{2}$ E $\frac{1}{2}$ 7	Cleata Elliott	<u>10.00</u>
			\$395.00

We estimate the cost of the work that we recommend, together with the expenses incidental thereto, to be as follows:

8050 Cu. Yds. of Excavation and Levelling	\$4450.00
Farm Culverts	650.00
484 lineal feet 14" diameter field tile	700.00
12 lineal feet 15" diameter C.S.P.	25.00
Allowances under Section 8	395.00
Survey, Plans, Report and Inspection	685.00
Assistance and Expenses	120.00
Bylaw	90.00
Clerk's Fees	100.00
Letting and Superintending	260.00
Municipal Board Fees	<u>25.00</u>
	\$7500.00

We assess the above estimated cost against the lands and roads as shown in the attached Schedule of Assessment labeled "Schedule A".

In addition to the work provided for in the above estimate and in the schedule of assessment, it may be necessary to extend the existing culvert where the drain crosses the road between Lots 5 and 6. If this is required, the Township Road Authorities will supply the necessary corrugated pipe and couplers for installation by the Contractor.

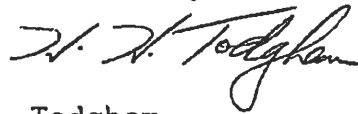
Under the provisions of The Railways Act, the Canadian Pacific Railway has the option of carrying out the work on its property. Should the Railway wish to exercise this option, it must so advise the Township by the time the Bylaw is finally passed and this work will then be eliminated from the Excavation Contract. If the Railway elects to excavate the open ditch on its property and clean the Railway culvert, the Township will pay it \$130 for this work.

After completion the East Branch of the Facey Drain from its outlet into the Main Drain, upstream to the centre of the S $\frac{1}{2}$ of Lot 7 Concession 3 (including the farm culverts referred to in the Specification) is to be maintained by the Township of Zone at the expense of the lands and roads herein assessed and in the same relative proportions subject, of course, to any variations that may be made under the authority of The Drainage Act, 1962-63.

Since most of the privately-owned lands are used for

agricultural purposes, and since no lateral drains are involved, we recommend that application be made to the Minister of Municipal Affairs in accordance with Section 63 of The Drainage Act, 1962-63, for a grant payable under Section 61 of this Act, as well as for all other grants for which this work may be eligible.

Respectfully submitted,



H. H. Todgham,

B.A.Sc., O.L.S., M.E.I.C.

HHT:lo

"SCHEDULE A"

SCHEDULE OF ASSESSMENT

FACEY DRAIN EAST BRANCH

TOWNSHIP OF ZONE

1. PUBLICLY-OWNED LANDS:

(iii) Municipal:

	<u>Owner</u>	<u>Benefit</u>	<u>Outlet</u>
3-4 Concession Road	Township of Zone	-	\$ 91.00
5-6 Sideroad	Township of Zone	\$ <u>200.00</u>	<u>78.00</u>
Total on Publicly-owned Municipal Lands		\$ 200.00	\$ 169.00

2. PRIVATELY-OWNED LANDS:

(i) Not used for agricultural purposes:

<u>Con.</u>	<u>Lot or Part</u>	<u>Owner</u>	<u>Benefit</u>	<u>Outlet</u>
3	Pt.Lots 3,4 & 5	Canadian Pacific Railway	\$ 75.00	\$ 55.00

(ii) Used for agricultural purposes:

<u>Con.</u>	<u>Lot or Part</u>	<u>Acres Affected</u>	<u>Owner</u>	<u>Benefit</u>	<u>Outlet</u>
3	N $\frac{1}{2}$	3	15 Ken & Doug Rose	\$ 200.00	\$ 9.00-
	E $\frac{1}{2}$	4	40 Snobelen Est.	75.00	160.00-
	Pt.E of Rwy.4	43	43 K. & D. Rose	450.00	131.00-
	Pt.W of Rwy.4	30	30 Harvey Shaw	175.00	90.00-
	Pt.E of Rwy.5	30	30 S. A. Lister	75.00	195.00-
	Pt.W of Rwy.5	63	63 Director Veterans Land Act	800.00	495.00-
	S $\frac{1}{2}$ E $\frac{1}{2}$ ex.Rwy.6	40	40 Martin Stacho	500.00	415.00-
	N $\frac{1}{2}$ ex.SWcor. 6	35	35 Earl Benjamin Est.	500.00	433.00-
	S $\frac{1}{2}$ E $\frac{1}{2}$	7	35 Cleata Elliott	700.00	533.00-
	N $\frac{1}{2}$ E $\frac{1}{2}$	7	40 Martin Stacho	-	608.00-
	S $\frac{1}{2}$ E $\frac{1}{2}$	8	20 Martin Stacho	-	305.00-
4	W $\frac{1}{2}$	8	10 George Case	-	<u>152.00</u>
Total on Privately-owned agricultural lands . .				\$3475.00	\$3526.00

	<u>Benefit</u>	<u>Outlet</u>
TOTAL ASSESSMENT.	<u>\$3750.00</u>	<u>\$3750.00</u>

ESTIMATED AMOUNT OF GRANTS:

- | | |
|--|------------------|
| 1. Under Section 61 of The Drainage Act, 1962-63 | \$2333.66 |
| 2. Agricultural Drainage Assistance in Ontario | <u>\$2333.66</u> |
| | \$4667.32 |

Chatham, Ontario,
September 23, 1969.



H. H. Todgham,
B.A.Sc., O.L.S., M.E.I.C.

"SCHEDULE B"

SPECIFICATION FOR THE REPAIR AND IMPROVEMENT
OF PART OF THE EAST BRANCH OF THE FACEY DRAIN
IN THE TOWNSHIP OF ZONE

This specification and the report, plan and profile bearing the same date, apply to and govern the repair and improvement of 8546 lineal feet of open drain by means of deepening and widening 8050 feet of it and enclosing 496 feet in tile. Included in this work will be the lowering or replacement of existing culverts and the cleaning of the existing Railway culvert.

DESCRIPTION
OF WORK

The General Specification for Open Drains attached hereto is part of "Schedule B". It also forms part of this specification and is to be read with it but where there is a difference between the requirements of the General Specification and those of the Special Provisions which follow, the Special Provisions shall govern. The section numbers shown in the Special Provisions which follow refer to the sections having the same numbers contained in the General Specification.

GENERAL
SPECIFICATION

SPECIAL PROVISIONS

The course of the work will follow the course of the existing open ditch except where tile is to be installed on the S½ of Lot 7, Concession 3. Here the Contractor will install the tile on one side or the other of the existing ditch, as directed by the

SECTION 3
ALIGNMENT

Commissioner in charge, rather than in the course of the drain itself. At the upstream end, he will swing the new tile over so that it may be connected into the outlet end of the existing tile.

The Contractor will be required to cut and pile the brush and trees but not to burn them.

SECTION 7
BRUSH AND TREES

Throughout the length of the work the material excavated from the drain is to be placed on either or both sides of the drain as directed by the Commissioner in charge. Where the disposal area is located in bush, the excavated material is to be spread over at least the width of the strip that has been cleared to permit the operation of the excavating equipment but in no case is the top surface to be more than 2 feet above natural ground level and it is to be spread and shaped to reasonably smooth uniform contours. Where the disposal area is on land that is sufficiently clear to permit cultivation, the excavated material is to be deposited and spread over a width of not less than 75 feet from Station 0 to Station 44 and over a width of not less than 50 feet from Station 44 to Station 80+50 at the head of the open part of the drain.

SECTION 8
DISPOSAL OF
MATERIAL

Where the drain crosses the Sideroad between Lots 5 and 6, the Contractor will remove the existing 36 foot length of 36 inch corrugated steel pipe, clean it to its full cross sectional area and re-install it

SECTION 10
ROAD CROSSING

at the proper elevation. Should the Township Road Authorities wish to have this culvert extended, they will supply the necessary pipe and couplers for this purpose and these are to be installed by the Contractor as part of his work.

At Station 0+25, the Contractor will remove the existing old wooden bridge and leave the material neatly piled beside the drain for disposal by the owner.

SECTION 11
FARM CULVERTS

At Station 0+50, the Contractor will remove the existing 48 inch concrete pipe, clean it to its full cross sectional area and leave it beside the drain for disposal by the owner. In its place he will install a 54 inch corrugated steel pipe (12 gauge) 36 feet long supplied by the Commissioner.

At Station 32+15, the Contractor will excavate the drain to its specified dimensions through the existing concrete Railway culvert, taking care to avoid causing damage to the structure.

At Station 62+75, the Contractor will remove the old wooden farm bridge, leaving the material from it neatly piled beside the drain for disposal by the owner. In its place he will install a new 36 inch corrugated steel pipe (14 gauge) 32 feet long supplied by the Commissioner.

Canadian Pacific Railway - As specified under Section 12, the Contractor will excavate the drain to

SECTION 13
UTILITIES,
RAILWAYS, ETC.

its required dimensions through the existing concrete culvert beneath the Railway. If it appears to the Commissioner that excavating the drain to the required depth will result in undermining the culvert footings, he will advise the Railway, at once, and it will become the responsibility of the Railway to carry out whatever underpinning may be necessary to protect its culvert.

The Municipality will enter into a contract with a tiling contractor to install the tile from Station 80+50 to Station 85+46 unless this is specifically made part of the excavation contract. All tile is to be furnished at the site of the work by the Municipality and its cost charged as part of the cost of the drain. It is to be first class agricultural tile, either clay or cement and cracked, chipped or uneven tile will not be acceptable and are to be discarded by the Contractor.

SECTION 18
TILE DRAIN

The tile must be laid with close joints and in regular grade and alignment, the invert of the tile conforming to the grade line of the profile. The Contractors must keep the tile free from earth or sediment during the progress of the work. Should quicksand be encountered, the joints of the tile are to be wrapped with polyethylene sheeting or with a fibreglass wrapping material made for this purpose. All drainage tiles intersected by the new tile are to be properly

connected into it and the joints are to be mortared tight.

As the laying of the tile progresses, a sufficient amount of backfill material is to be placed at the sides and on top of the tile to hold it in place, using sods for this purpose if conveniently available. After the laying of tile has been inspected by the Commissioner, additional filling is to be made up to the surface of the ground. The backfill material in the trench is to be mounded slightly to provide for future settlement. Care is to be taken in placing the backfill to ensure that big lumps of clay, large stones and chunks of frozen soil are not dropped on it.

At the outlet of the new tile, the Commissioner will supply and the Contractor will install a 12 foot length of 15 inch diameter corrugated steel pipe, in place of tile. This pipe is to be so located that it will freely discharge water from the tile drain into the open outlet. After installing this pipe, the Contractor will provide and attach to the end of it a removable wire mesh grating to prevent the entry of rodents into the tile.

At the upstream end of the new tile, the course of it is to be swung over to meet the course of the existing 12 inch tile and the new tile is to be connected to the existing tile. The Contractor will use care to

ensure that the connection of the new tile to the old tile is made in a neat and workmanlike manner and that it is properly supported so that it will not settle out of alignment or grade.

After the tile has been installed at the upper end of the work, the owner of the S $\frac{1}{2}$ E $\frac{1}{2}$ Lot 7 Concession 3 will be permitted to fill in the existing open ditch that is being replaced with tile and this open ditch will be considered abandoned. If, however, there is still a surface ditch above the tile through the N $\frac{1}{2}$ of Lot 7 and the S $\frac{1}{2}$ of Lot 8, the owner of the S $\frac{1}{2}$ of Lot 7 must retain enough surface ditch through his property to provide an outlet for water flowing in the surface ditch on the N $\frac{1}{2}$ of Lot 7 and the S $\frac{1}{2}$ of Lot 8. If he fills in the surface ditch on his property, he must make certain that the material used for this purpose is not allowed to wash out of this ditch into the newly dug drain on Lot 6.

SECTION 19

Chatham, Ontario,
September 23, 1969.



H. H. Todgham,

B.A.Sc., O.L.S., M.E.I.C.

GENERAL SPECIFICATION
FOR OPEN DRAINS

(1) Tenders will be received and contracts awarded only in the form of a lump sum for the completion of the whole work or of specified sections thereof in accordance with the plan, profile and specification. No bid will be considered, nor will any contract be awarded, on the basis of classification or of unit prices. Contractors must estimate for themselves the quantity and value of the work required. They are expected to examine the locality and also the plan, profile and specification; they will be at liberty, before bidding, to examine any data in the possession of the Municipality or of the Engineer.

SECTION 1
GENERAL
CONDITIONS

(2) All the work included in any contract must be completed on or before the date fixed at the time of letting and must, at the time of completion and final inspection, be in first class condition and comply fully with the specification. Final inspection will be made by the Commissioner or Engineer within twenty days after the Commissioner has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.

(3) Contractors will be held liable for any damage or expenses occasioned by their failure to complete the work on time and for any expenses of inspecting, superintending, reletting or restaking due to their neglect or failure to prosecute the work satisfactorily and for any damages occasioned by leaving fences open or by any negligence in carrying on the work. Any such expenses or damages may be deducted by the Commissioner from the amount of the contract or may be recovered by the Municipality from the Contractor and his sureties.

(1) Stakes are set one hundred feet apart along the course of the work, numbered consecutively, 0, 1, 2, 3, etc. The depths to which the drain is to be dug, as shown on the profile, are measured from the surface of the ground beside the stakes.

SECTION 2
STAKES

(2) Contractors will be held responsible for the preservation of stakes in their original positions during the progress of the work and also for seeing that bench marks are not destroyed, defaced, or covered with excavated material.

(1) Except where specified otherwise, the excavation will follow as nearly as possible the course of the existing drain. Wherever sharp or irregular bends occur, all sloping and widening is to be done on that side of the drain that will tend to flatten the bends and improve the flow of water in the drain.

SECTION 3
ALIGNMENT

- (2) Where the drain is located next to the travelled part of any road or laneway, all sloping and widening is to be done on that side of the drain farthest from the roadway.
 - (3) Where one drain bank adjoins a fence line (except where the travelled part of a road or laneway adjoins the other bank) all required sloping and widening is to be done on that side of the drain farthest from the fence line, unless there is sufficient room between the ditch bank and the fence to permit widening on the fence side without disturbing the fence itself.
 - (4) The alignment of the finished work must be satisfactory to the Commissioner in charge.
- (1) The excavation of the drain must be made at least to the depth intended by the grade line shown on the profile, which grade line is governed by the bench marks. The profile shows, for the convenience of Contractors and others, the approximate depths from the surface of the ground at the points where the numbered stakes are set, as well as the amount of deepening required, as observed at the time of survey, but bench marks govern. SECTION 4
PROFILE
 - (1) The bottom widths and the side slopes of the various sections of the finished drain are to be as shown on the profile. The sides of the excavation are to be sloped so that the top width of the finished excavation will exceed the bottom width by twice the slope times the depth, at all places. SECTION 5
BOTTOM WIDTH
AND SIDE SLOPE
 - (2) Contractors will not be restricted to the exact dimensions specified but must excavate clear of the specified cross sections and may excavate such additional depth or width as may be required to accommodate the use of suitable excavating equipment or to allow for sediment or caving prior to final inspection, provided that at no place is the surface of the excavation to be steeper than the slope specified on the profile. The Contractor is not to excavate so much deeper than the grade line as to result in the formation of pockets in the drain bottom that will cause water to stand in pools along the drain.
 - (1) All brush, timber, logs, stumps, stones, or other obstructions in the course of the drain are to be removed by the Contractor. Timber, logs and stumps are to be dealt with in the same manner as specified for brush and trees. Large stones and similar materials are to be disposed of away from the site. SECTION 6
OBSTRUCTIONS

SECTION 7
BRUSH AND TREE.

- (1) Where the existing bottom widths and side slopes of the drain are sufficient to permit the specified deepening of the drain without disturbing the existing banks above the present drain bottom, the Contractor will be required to cut the brush and trees on the sloping banks flush with the surface of the banks but he will not be required to remove their roots and stumps unless they will obviously create obstructions to the flow of water in the drain.
- (2) Where it is necessary to widen the drain and excavate material from the sloping bank, all brush and trees within the course of the drain are to be cut and those roots and stumps in the bottom of the drain and on the bank or banks where the widening takes place are to be removed.
- (3) Throughout the length of the work, the Contractor will cut off flush with the ground surface all brush and trees having a diameter less than 6 inches, within 10 feet of the top edge of the finished drain banks and within the disposal area covered by the excavated material. Where there is a fence adjoining the drain, he will be required to cut the brush on the opposite side of the fence only if excavated material is to be placed there.
- (4) Should the Contractor find it necessary to remove trees other than those specified above, in order to permit the excavation of the drain or the disposal of material, he will be at liberty to do so only on permission of the Commissioner in charge.
- (5) All trees over 8 inches in diameter that are cut are to be trimmed of branches and the trunks, along with the branches over 8 inches in diameter are to be cut up into log lengths and piled for the use of the adjoining owner unless the owner advises the Commissioner he does not want them, in which case they are to be disposed of by the Contractor along with the other brush. Small branches and limbs are to be disposed of by the Contractor along with the other brush. Tree stumps are to be burned by the Contractor if he so desires or are to be disposed of by him away from the site of the work.
- (6) Following completion of the work, the Contractor is to trim up any broken or damaged limbs on trees which remain standing, disposing of the branches cut off along with the other brush and leaving the trees in a neat and tidy condition.
- (7) Brush and trees removed from the drain and banks thereof and from the disposal area are to be burned by the Contractor.

- (8) Since the trees and brush that are cut off flush with the earth surface may sprout new growth later, it is strongly recommended that the Township make arrangements for spraying this new growth at the appropriate time so as to kill the trees and brush and prevent them from forming obstructions in the drain and on the banks.
- (1) Where a part of the drain is being relocated, the Contractor will strip the topsoil from the new course and stockpile it for re-use. Subsoil excavated from the new course is to be used first of all to fill the existing course which is being abandoned. Where the Contractor can conveniently do so, he may deposit the material in the old course as he excavates it from the new course but where the distance separating the new course from the old course is too great to permit this, he shall move the material to the old course with trucks. He will pack the material as much as is reasonably possible considering the equipment he is using but he need not carry out any special compaction procedures. Where there is more than enough material to fill the old course, the Contractor is to mound up the excavated material slightly to allow for settlement and he is then to bring the surface of the excavated material to a reasonably smooth and uniform contour. Where there is insufficient material to fill the old course, he is to grade the surface of the material so as to eliminate any holes that would collect water.
- (2) Material not required to fill the part of the existing course that is being abandoned and material excavated from the remainder of the drain is to be deposited on the immediately adjoining farm lands, in the locations and over the widths set out in the Special Specifications. It is to be kept at least 6 feet clear of the top edge of the drain and 3 feet clear of all fences and, beyond these distances, it is to be placed as evenly as is conveniently possible in view of the type of excavating equipment used.
- (3) Where the disposal area is in bush land, the excavated material may be placed in the form of a spoil bank rather than being spread over the width specified. In this case, it is not to be deposited on top of any existing spoil bank but, rather, it is to be placed on the natural ground on the side of the existing spoil bank farthest from the drain. The material is to be shaped to reasonably uniform contours and the top of the spoil bank is to be not over 2 feet above natural ground level.
- (4) Where the adjoining land is sufficiently clear to permit cultivation, the excavated material is to be further levelled by bulldozer or other suitable means sufficiently to permit cultivation.

SECTION 8
DISPOSAL OF
MATERIAL

- (5) After the excavated material has been levelled any stock-piled topsoil is to be spread over it and the adjoining land to a depth of not over 4 inches.
- (6) No excavated material is to be placed on lawns or ornamental shrubbery but is to be deposited on either side, on the lands of the same owner.
- (7) In no case is the topsoil or any excavated material to be deposited in ditches, tiles, or depressions intended to conduct water into the drain.
- (8) The Commissioner in charge will be the sole judge as to the proper disposal of material under the contract and this specification.

SECTION 9
FENCES

- (1) Where the Contractor finds it necessary to remove any fences in order to permit the excavation of the drain or the disposal of material, he will handle the fencing carefully. Unless otherwise specified, the Contractor will be required to re-construct the fences following the completion of the work of excavation and levelling in as good a condition as that in which they are found or as the old material permits.
- (2) Except as hereafter specified the Contractor is not to leave any fences open when he is not at work in the immediate vicinity. Where it is necessary to remove a fence paralleling the drain to excavate the drain or dispose of material, the Contractor is not to take it down more than 1 week before he starts work in that field and he is to replace it within 2 weeks after he finishes work there. The landowners and not the Contractor will then be responsible for the control of livestock in the adjoining fields, so long as the Contractor adheres to these time limits.
- (3) Any fences that are constructed or re-constructed along the course of the drain are to be kept at least 3 feet clear of the top edge of the drain bank.

SECTION 10
ROAD CROSSING:

- (1) Where the drain crosses the travelled part of a road through a bridge, the Contractor will excavate the drain to its specified dimensions through the bridge opening, using care to avoid damaging it.
- (2) Where a new bridge is required, it is to be built by the Road Authority at its own expense.
- (3) Where the drain crosses the travelled part of a road through a pipe that does not have to be replaced or lowered, the Contractor will clean the pipe to its full cross-sectional area using care to avoid damaging it.

- 4) Where the existing pipe is of sufficient size and is in a good state of repair, but requires to be lowered, the Contractor will carefully remove it, clean it to its full cross-sectional area, and replace it in the drain at the proper elevation.
- (5) Where the existing pipe must be replaced, the Contractor will carefully remove it from the drain, clean it to its full cross-sectional area, and leave it beside the drain for removal by the Road Authority. He will then install the new culvert supplied by the Road Authority.
- (6) Under roadways, new pipes and those that are lowered are to be set with their inverts 4 inches below the grade line when the pipe is 42 inches in diameter or less and 6 inches below when it is over 42 inches in diameter.
- (7) Trenches across roadways are to be backfilled with compactable granular material supplied by the Road Authority.
- (8) The Contractor will notify the Road Authority at least 3 working days before starting work on any road crossing.
- (1) Where a farm or access bridge or pipe does not have to be replaced or lowered, the Contractor will clean it to its full cross-sectional area using care to avoid damaging it.
- (2) Where the culvert is a pipe that must be lowered, the Contractor will carefully remove it, clean it to its full cross-sectional diameter, and replace it in the drain with its invert 4 inches below the grade line.
- (3) Where a wooden bridge or pipe must be replaced, the Contractor will remove it, handling the material carefully and leaving it piled beside the drain for disposal or reuse by the owners. Where a concrete bridge must be replaced, the Contractor will remove it, disposing of the material away from the site. If a new pipe is to be installed, it will be supplied by the Commissioner at the site, at the expense of the drain. The Contractor will then install it with its invert 4 inches below the grade line.
- (4) The Contractor will backfill around each pipe either with compactable granular material supplied by the Commissioner at the expense of the drain or with material excavated from the drain, as directed by the Commissioner.
- (5) Where a new culvert is to be installed, the owner may request the Commissioner to have it placed in a different location from the existing one and this will be permitted so long as the relocation does not result in an increase in the area draining through the culvert. Adequate notice

SECTION 11
FARM AND
ACCESS CULVERT

of the change must be given to the Contractor. In no case may the existing culvert be left in the drain when it has been specified that it is to be removed.

- (6) Should the owner wish to construct timber head walls, he may do so but both the construction and maintenance of such head walls will be the responsibility of the owner concerned and not of the drain.
- (1) The Commissioner will supply to the Contractor the corrugated pipe in lengths of approximately 20 feet (with couplers, where required), in a prefabricated condition. The cost of such prefabrication will be charged as part of the cost of the drain. Any further fabricating or connecting will be the Contractor's responsibility.
- (2) Pipe culverts will be supplied on trucks and are to be unloaded, installed & backfilled by the Contractor as part of his work.
- (3) Following the placing of the pipe, the Contractor will backfill around it, placing and compacting the backfill material in 9 inch layers, equally on each side of the pipe up to the level of the adjoining ground. At the ends of the pipe, the backfill material is to be sloped $1\frac{1}{2}$ feet horizontally to 1 foot vertically. Where clay material is readily available, the ends of the backfill are to be covered with clay to minimize erosion.
- (1) Before commencing work, the Contractor will investigate the location of any and all railways, utility lines, wires, pipes, poles, towers or cables which may interfere with the excavation of the drain. He will take all necessary steps to avoid damaging these and should any damage result to them from his operations, he will be completely responsible for these damages, and will save harmless the Township and the Engineer from any legal actions which may arise as a result of such damage.
- (2) If permits are required to allow the work to be carried out on or adjacent to any utilities, pipelines, railways, etc., the Contractor shall obtain these at his own expense.
- (3) All work on or adjacent to any utility, pipeline, railway, etc., is to be carried out in accordance with the requirements of the utility, pipeline, railway, or other, as the case may be, and its specifications for such work are to be followed as if they were part of this specification.
- (1) Where the Contractor is working on or adjoining a travelled roadway, he will erect the necessary barricades to protect the travelling public against accident and he shall keep these lighted from dusk to dawn. When he is installing a road crossing, he will arrange for the detouring of

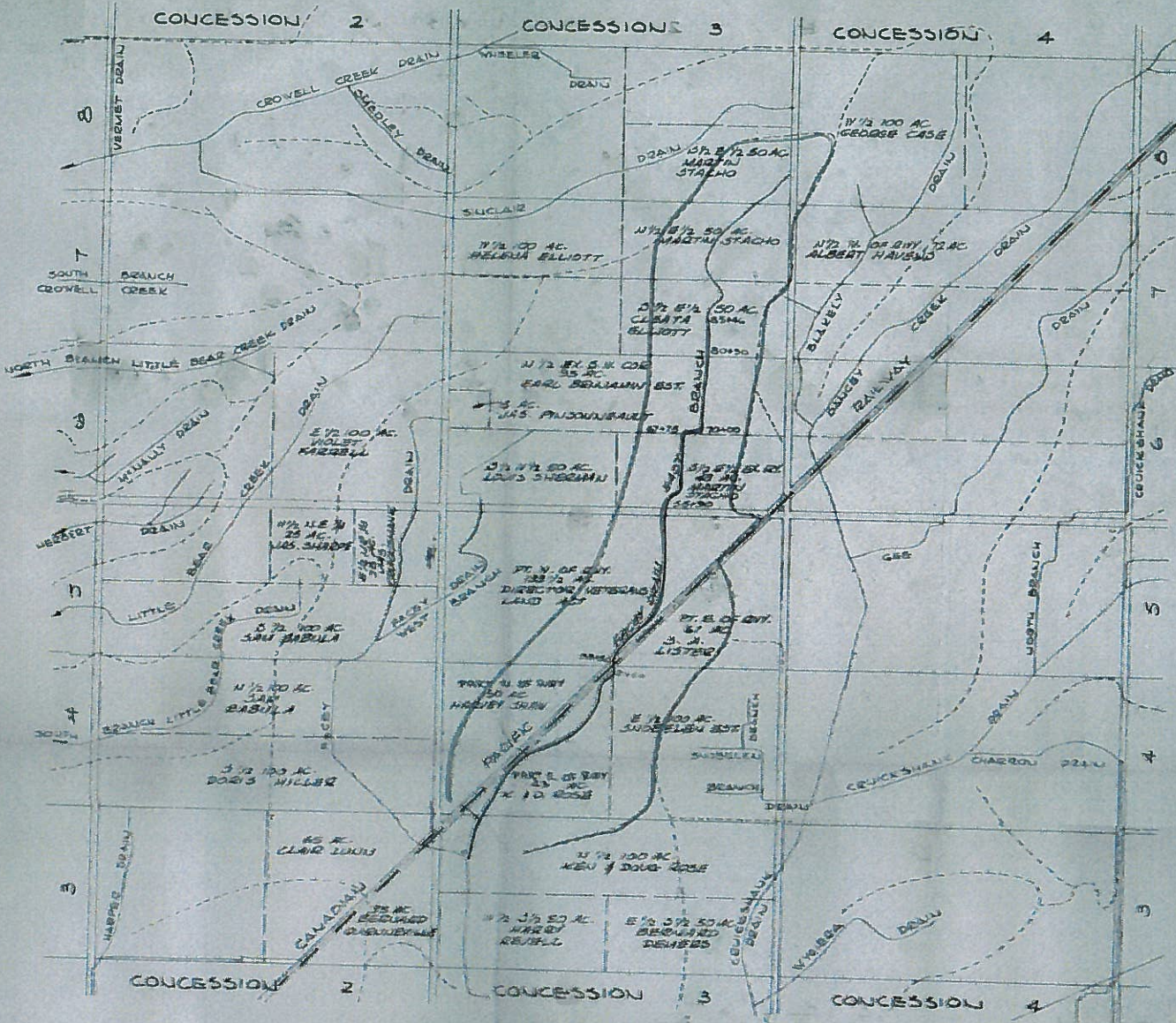
SECTION 12
PIPE CULVERT
INSTALLATIONSECTION 13
UTILITIES,
RAILWAYS, ETCSECTION 14
PROTECTION
OF PUBLIC

traffic around the construction site. The Contractor will use all reasonable means to avoid damage claims as a result of his carelessness or negligence and, should any claims arise, he will save harmless the Township and the Engineer from any legal actions resulting from them.

- (1) On completion of his work, the Contractor will clean up the site, removing all debris and waste materials and leaving the site in a neat and tidy condition. SECTION 15
CLEAN-UP
- (1) Where the word "Commissioner" is used in this specification, it shall mean the person or persons appointed by the Council of the Township having jurisdiction, to superintend the work. SECTION 16
COMMISSIONER
- (2) The Commissioner will be permitted to make minor variations in the work so long as these variations will result in either a more satisfactory drain or a more economical one. These variations, however, must not be such as to change the intent of the work to be performed nor are they to reduce the standard of quality.
- (1) The part of the Specification headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern. SECTION 17
SPECIAL
PROVISIONS

TODGHAM AND CASE LIMITED,
CONSULTING ENGINEERS,
151 THAMES STREET,
CHATHAM, ONTARIO.

18/3/60



CHATHAM ONTARIO
 SEPTEMBER 23 1969

H. H. Toddman
 P. E. O. E. M. E. C.

CHEDULE "C"

TODDMAN & CASE LIMITED
 CONSULTING CIVIL ENGINEERS
 CHATHAM ONTARIO

PLAN OF THE
 FACEY DRAIN E. BRANCH
 TOWNSHIP OF ZONE

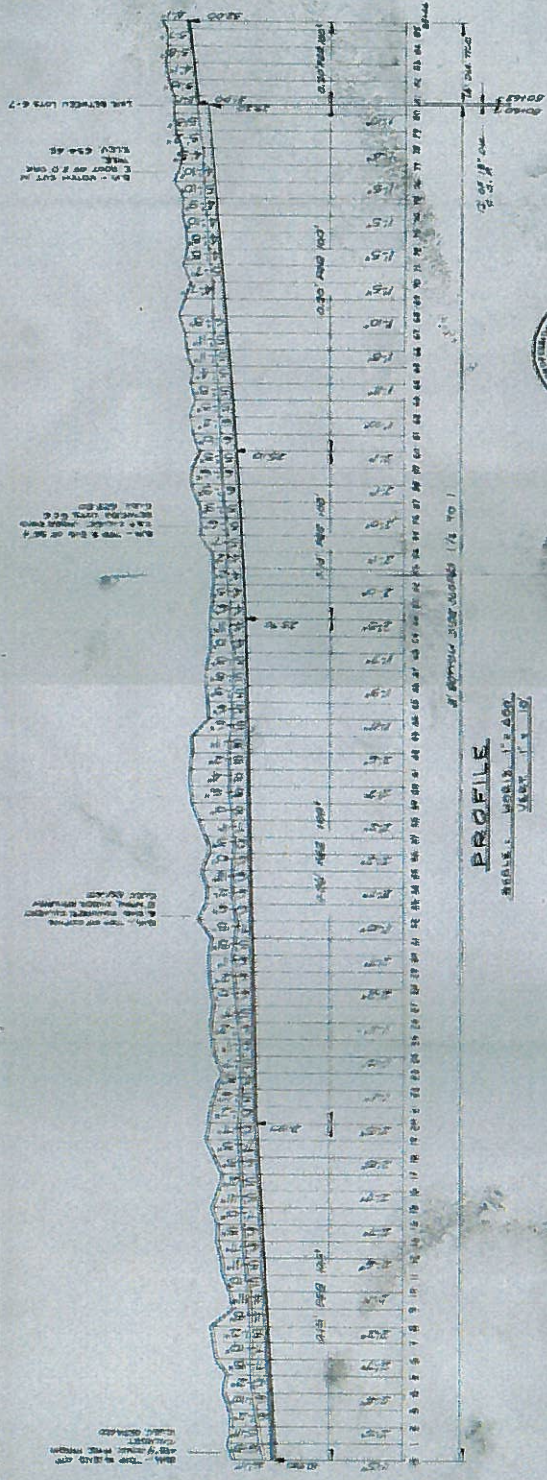
SCALE: 1" = 100'	N. 10' 10"
DATE: SEP 23 1969	22-070-1A

SCHEDULE 'D'

TODDHAM & CASE LIMITED
 CONSULTING CIVIL ENGINEERS
 CHATHAM ONTARIO

PROFILE OF
PACEY DRAIN EAST BRANCH
 TOWNSHIP OF ZONE

DATE AS SHOWN: BOOK N° 997
 DATE: MARCH 25, 1969
 DRAWN BY: W. CALVERT
 68070-2 A



CHATHAM - ONTARIO
 DATE: MARCH 25, 1969
 W. CALVERT
 P.E. CIVIL ENGINEER



PROFILE

VERTICAL SCALE: 1" = 5'

1. - TOP OF DRAIN
 2. - BOTTOM OF DRAIN
 3. - CENTERLINE
 4. - GRADE
 5. - ELEVATION

1. - TOP OF DRAIN
 2. - BOTTOM OF DRAIN
 3. - CENTERLINE
 4. - GRADE
 5. - ELEVATION

1. - TOP OF DRAIN
 2. - BOTTOM OF DRAIN
 3. - CENTERLINE
 4. - GRADE
 5. - ELEVATION

1. - TOP OF DRAIN
 2. - BOTTOM OF DRAIN
 3. - CENTERLINE
 4. - GRADE
 5. - ELEVATION

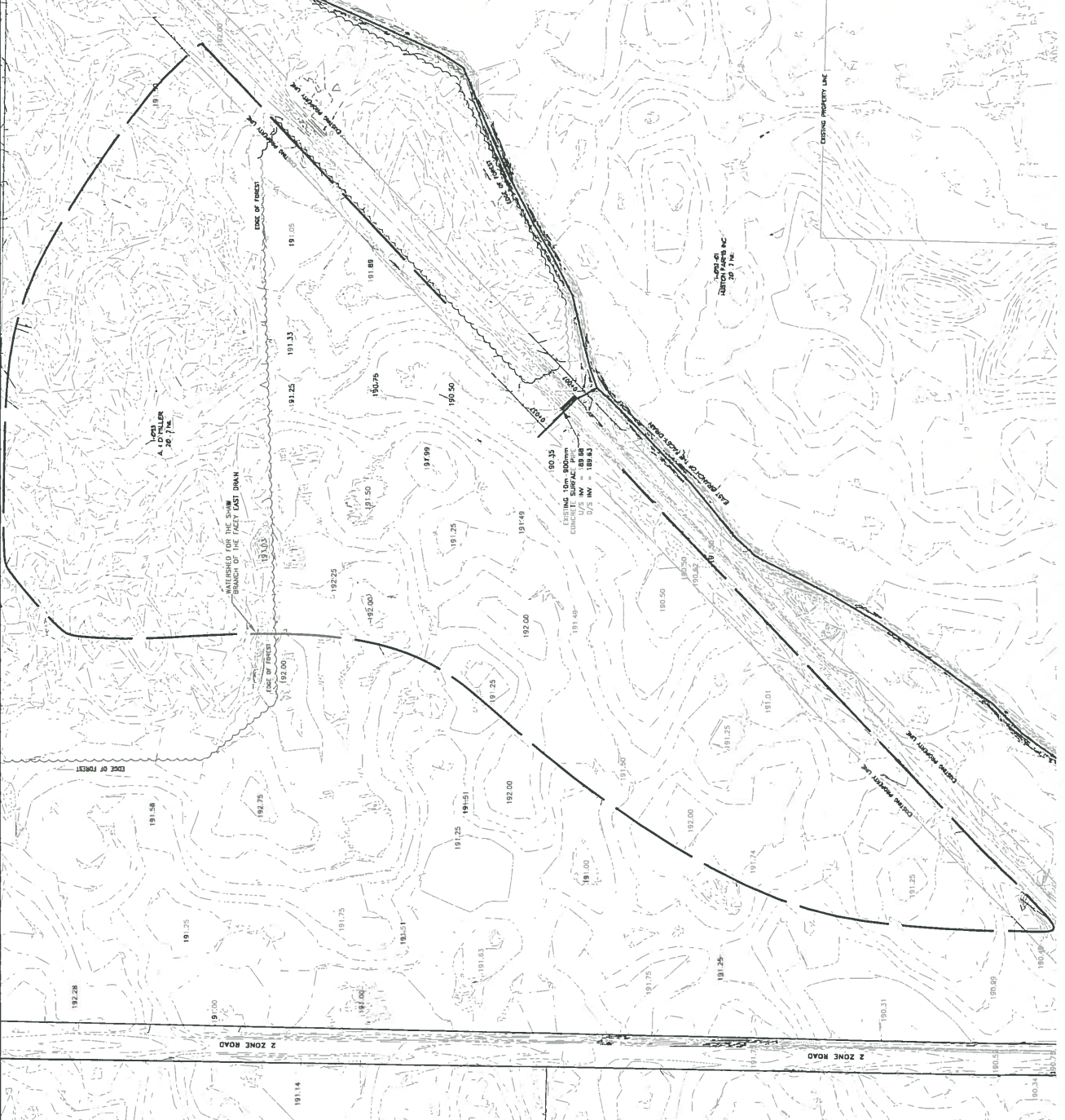
**THIS IS EXHIBIT "I" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily Crawford
Date: 2024.03.27 20:52:10 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

SHAW BRANCH OF THE FACEY EAST DRAIN
Chatham-Kent Municipality of Chatham-Kent

Drawn by: BLAISE CHEVALLIER	Scale: 1:1
Checked by: 5-5-2009-1938	Revision: 1
Field Book: 049-R18	Sheet No.: 220960
PLAN / LIDAR	of 1
SPIRIT ASSOCIATES LIMITED	
LONDON CONSULTING ENGINEERS	



**THIS IS EXHIBIT "J" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily Crawford
Date: 2024.03.27 20:52:36 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

By-law Number 93-2021

Of The Corporation
of the Municipality of Chatham-Kent

A By-law to provide for drainage work in the Municipality of Chatham-Kent for the Shaw Branch of the Facey East Drain (Community of Zone)

Finally Passed the 31st day of May, 2021.

Whereas a requisite number of owners have petitioned the Council of the Municipality of Chatham-Kent in accordance with the provisions of The Drainage Act requesting that the Shaw Branch of the Facey East Drain be constructed and be provided with a sufficient outlet.

And Whereas the Council of the Municipality of Chatham-Kent has procured a Report made by Spriet Associates London Limited, dated February 19, 2021.

And Whereas the estimated total cost of constructing the drainage work is \$36,500.00.

And Whereas \$36,500.00 is the amount to be contributed by the Municipality of Chatham-Kent for construction of the drainage works.

Be it Therefore Enacted by the Municipal Council of the Municipality of Chatham-Kent, pursuant to the provisions of The Drainage Act and amendments thereto as follows:


1. That the Report is hereby adopted and shall be completed in accordance therewith.
2. (1) The Corporation of the Municipality of Chatham-Kent may borrow on the credit of the Corporation the amount of \$36,500.00 being the amount necessary for construction of the drainage works.
(2) The Council may authorize the borrowing of monies towards the construction by the issuance and sale of debentures. Pending the sale of the debentures, Council authorizes the Mayor and Treasurer to make such temporary borrowing as may be required in order to meet the payments due to the vendors.
(3) The Corporation may issue debentures for the amount borrowed less the total amount of,
 - (a) Grants received under Section 85 of the Act;
 - (b) Commuted payments made in respect of lands and roads assessed within the municipality;
 - (c) Monies assessed in and payable by another municipality, and such debentures shall be made payable within five years from the date of the debenture and shall bear interest at a rate not higher than the rate charged by the Ontario Municipal Improvement Corporation on the date of sale of such debenture.

- (4) A special equal annual rate sufficient to redeem the principal and interest on the debentures shall be levied upon the lands and roads as set forth in Schedule "A" hereto attached to be collected in the same manner and at the same time as other taxes are collected in each year for five years after the passing of this by-law.
- (5) For paying the amount of nil being the amount assessed upon the lands and roads belonging to or controlled by the municipality, a special rate sufficient to pay the amount assessed plus interest thereon shall be levied upon the whole rateable property in the Municipality of Chatham-Kent in each year of five years after the passing of this by-law to be collected in the same manner and at the same time as other taxes are collected.
- (6) All assessments of \$500.00 or less are payable in the first year in which the assessment is imposed.
- (7) This by-law comes into force on the passing thereof and may be cited as the Shaw Branch of the Facey East Drain By-law.


This By-law shall come into full force and effect upon the final passing thereof.

Read a First and Second Time, Provisionally adopted this 22nd day of March, 2021

Read a Third Time, Enacted this 31st day of May, 2021



Mayor – Darrin Canniff



Clerk - Judy Smith

**THIS IS EXHIBIT "K" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford

Digitally signed by Emily
Crawford
Date: 2024.03.27 20:53:02 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

Emily Crawford

From: Jack Carello <Jack_Carello@cpr.ca>
Sent: July 6, 2021 11:33 AM
To: Blaise Chevalier
Cc: Ann Ford; brandon@spriet.on.ca; John M Spriet; Rheal Lemelin; Brian Chowdhury
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.
Attachments: CP Utility Application Form 2021.docx; CP Flagging Application Form-2021.docx

Hi Blaise,

To follow the utility protocol, CP will require an agreement to be put in place to cover this pipe installation and all future maintenance. Attached the latest utility application form to commence the process. All submission and payments are being handled electronically in these times of uncertainty. Keep in mind that all expenses for this proposed installation will be borne by the applicant including CP flagging fees.

Regards,



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western
Region
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Tuesday, June 15, 2021 3:40 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hey Rheal and Jack,

Just following up in regards to this project now that it has cleared some of it's legislated timelines we're in a position to get organized for construction. I'm sure you have it somewhere but I've attached a copy of the plan as refresher. Clarke Construction will be the general contractor completing the work.

I'm wondering who I should be speaking with to get organized for an encroachment permit for working in the CP Rail right-of-way and what forms/information I should have the contractor submit.

Thanks,

Blaise Chevalier
Drainage Superintendent

*Drainage, Asset and Waste Management
Municipality of Chatham-Kent*

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: February 10, 2021 1:47 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

If possible make 10"

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, February 10, 2021 12:51 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Jack,

Thanks for the response - to confirm, is that inclusive of 12" (meaning 12" and smaller)? The current sizing proposal is for a 12" diameter crossing.

Thanks,

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Wednesday, Feb 10, 2021, 9:33 AM
To: Blaise Chevalier <blaisec@chatham-kent.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>, brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

If the proposed installation pipe stays under 12" then a Geotechnical report and track settlement plan would not be required.

Regards,



Jack Carello, Civil Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western
Region
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: February 8, 2021 12:37 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Good afternoon gentlemen,

Thanks for coming down and meeting with us Rheal, despite the new position (and slightly larger geographic area).

Spriets are currently working towards finishing a preliminary report and wanted to confirm that a geotechnical report is NOT required from your end. I just wanted to follow up with you two since, as Rheal indicated at our meeting, it was a little unclear whether this work falls under Rheal or Jack's department. I know Rheal indicated that this wouldn't be required for him.

Can you confirm this?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: January 19, 2021 1:51 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise, I can meet with you on Feb February 03 around 11:00 at the nearest road crossing of mile 47.59 Windsor Sub.

Rheal Lemelin | Manager Bridge Maintenance Toronto | 2025 McCown Rd., Scarborough, ON. M1S 5K3
C 416 525 9094 | O 416 609 7880



From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, January 13, 2021 11:36 AM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Rheal,

With the new COVID regulations coming into effect, I was wondering if a site visit was still a possibility for you? Just hoping to keep this project moving along if possible.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Blaise Chevalier
Sent: December 18, 2020 3:07 PM
To: Rheel Lemelin <Rheel_Lemelin@cpr.ca>; 'Jack Carello' <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Good morning Rheel,

Just following up to our call we had earlier this week with Jack. Based on our discussion, Jack suggested it might be beneficial to have a site visit to review the proposal with you as all as any potential alternatives.

Would you happen to have some availability in the new year to meet at this location?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Jack Carello <Jack_Carello@cpr.ca>
Sent: December 3, 2020 5:10 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Let's try the week after. Mon/Tues btwn 1pm – 3pm.

From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: December 2, 2020 5:13 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Blaise Chevalier <blaisec@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: Re: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Jack, I will not be back to work till next Thursday, off on bereavement leave.

Rheal

Sent from my iPhone

On Dec 2, 2020, at 5:10 PM, Jack Carello <Jack_Carello@cpr.ca> wrote:

Next Wed/Thurs btwn 10:30 & noon works for me.

Rheal - Do these dates/times work with your schedule.

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: December 1, 2020 7:37 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Jack,

That works for me - do you have any potential dates/times that would work for you and I can coordinate with Spriets?

Thanks

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Tuesday, Dec 01, 2020, 5:09 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>, brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

It would be best to set up a conference call to discuss this proposal further.

Regards,

<image002.png>

Jack Carello, SR/WA
Manager Utilities & Flagging
Engineering Public Works
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: November 27, 2020 1:44 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

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Hi Jack,

Glenna Hall had forwarded me your way a few weeks ago. I just wanted to forward a copy the preliminary drawings for this project I just received from Spriet Associates to add to this file. I know she said you guys are likely backed up to January for new files at this point so just let me know once you've had the chance to get a look at this.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca

<image003.png>

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From: Glenna Hall <Glenna_Hall@cpr.ca>
Sent: November 18, 2020 6:15 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; Jack Carello <Jack_Carello@cpr.ca>
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

Hello Blaise,

I've copied in your regional contact Jack Carello who will be able to assist with your general queries.

Please note due to end of year wrap-ups and higher than usual application requests, newly submitted utility application forms will be reviewed beginning of year 2021, unless in the case of an emergency.

Regards,
Glenna

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, November 18, 2020 9:39 AM
To: Glenna Hall <Glenna_Hall@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; Brandon Widner <brandon@spriet.on.ca>
Subject: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Glenna,

I've been given your contact information from our drainage consultant, Spriet Associates, who indicated they had worked with you on previous Drainage Act projects. They had recommended I reach out to you first as you may be able to direct me through the appropriate channels at CP Rail.

We've received a petition under Section 4 of the Drainage Act for outlet to a property located at the north-east corner of the intersection of Zone Rd 2 and the CP rail line, located between the villages of Bothwell and Kent Bridge. Based on preliminary site reviews and survey, the proposed project scope generally includes the installation of a new rail crossing consisting of a 400mm diameter pipe (there is an existing 900mm diameter concrete in the same vicinity) and some drainage swale improvements.

I've attached a site map detailing the location (yellow line). Can you advise who we should be reaching out to at CP at this point for review and comments?

Thanks.

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca

<image003.png>

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UTILITY CROSSING APPLICATION FORM

Applicant: Click or tap here to enter text. **Date:** Click or tap to enter a date.

Description of Utility Crossing location:

City/Town: Click or tap here to enter text.	Lot: Click or tap here to enter text.	Concession/Legal Land Desc.: Click or tap
Township: Click or tap here to enter text.	County: Click or tap here to enter text.	Province: Choose an item.
GPS Coordinates of exact utility crossing (latitude/longitude, decimal degrees <u>only</u>): Latitude: Click or tap here to enter text. Longitude: - Click or tap here to enter Name of Road where the utility is crossing CP tracks: Click or tap here to enter text.		
Railway Mileage & Subdivision if known: Click or tap here to enter text.		

Utility Owner Information:

Full Legal Name Of Utility Crossing Owner: Click or tap here to enter text.	
Address: Click or tap here to enter text.	Province: Choose an item.
City/Town: Click or tap here to enter text.	Postal Code: Click or tap
Contact/Signatory: Click or tap here to enter text.	
Phone: Click or tap here to enter text.	
Email Address: Click or tap here to enter text.	
24HR Owner Utility Emergency Response Number: Click or tap here to enter Approximate start date of proposed utility installation work: Click or tap to ent Number of days a CP flagman will be required for: (click) Days Purpose of utility installation: Click or tap here to enter text.	
Does applicant have an existing pipeline, hydro/power/fibre line crossing over/under the railway tracks at this <u>exact</u> location? Choose an item.	
Does applicant have an existing permit / agreement in place with CP for this existing installation? Choose an item. Provide copy of document or CP file number with application.	
Will existing utility be removed from the railway corridor? Choose an item.	
Who owns the property where the utility i.e. pipe/cable/conduit/hydro line etc. crosses the railway tracks? (Check off box beside the property owner.) Municipal <input type="checkbox"/> County <input type="checkbox"/> City <input type="checkbox"/> Region <input type="checkbox"/> CP <input type="checkbox"/>	
Description of work/notes: Click or tap here to enter text.	

Drawing No.: Click or tap here to enter text. **Date:** Click or tap to enter

UTILITY CROSSING FEES

Description	Payment to include with application:	One-time fee to be invoiced (aerial):	One-time fee to be invoiced (below ground):
<u>Utility Crossing Permits</u> Over/Under railway tracks and crossing within Regional/Municipal roads and property not owned by the railway.	Application & Engineering review Fee (Non-refundable) \$700.00 + taxes*	One-time Permit Fee: \$575.00 + taxes* Fee will be invoiced to applicant once approved	One-time Permit Fee: \$575.00 + taxes* Fee will be invoiced to applicant once approved.
<u>Utility Crossing Agreements</u> Over/Under railway tracks & crossing within Canadian Pacific owned lands/right of way.	Application & Engineering review Fee (Non-refundable) \$700.00 + taxes*	One-Time Aerial Crossing Fees: (Hydro/Power, Fibre, Coaxial etc.) \$2,000.00 + taxes*	One-Time Pipe Crossing Fees: (Natural Gas, Oil, Sewer, Watermain, Storm Culverts etc.) ~ less than 30" (750mm) outer diameter of casing: \$2,000.00 + taxes* ~ 30" (750mm) to less than 96" (2400mm) outer diameter of casing: \$5,000.00 + taxes* Fee will be invoiced to applicant once approved.

OTHER APPLICATION FEES

Railway property/title searches	\$400.00 + taxes*	Non-refundable
Utility searches and or copies of agreements/permits	\$200.00 + taxes*/document	Non-refundable
Permit / Drawing Revisions (Substitution of Prints)	\$525.00 + taxes*	Non-refundable
Additional Engineering review fees	\$400.00 + taxes*	Non-refundable
Assignments	\$500.00 + taxes*/agreement	Non-refundable

Express Fee*: (Permit/Agreements/Assignments reviewed within 10 business days):
 Add \$1,200.00 + taxes* to Application/Documentation & Engineering Review Fee above.

Check off the box to the right if requesting this level of service:

Fast Track Fee*: (Permit/Agreements/Assignments reviewed within 5 business days):
 Add \$2,000.00 + taxes* to Application/Documentation & Engineering Review Fee above.

Check off the box to the right if requesting this level of service:

***Express / Fast Track utility applications do not apply to installations that require Geotechnical review.**

Above-mentioned fees do not apply to utility crossings within major rail yards, or running parallel within the railway right of way.

CP reserves the right to review these fees from time to time. CP does not grant easements for utility crossings over/under the railway right of way.

Typical utility crossing application turnaround time: 30-60 business days.

***GST and any provincial sales taxes must be included with all fees. Tax rate is based on physical location of the utility installation.**

Underground Pipe Crossing Information:

Does CP Geotechnical Protocol apply to this installation?	Choose an item.
--	-----------------

If yes – Applicant to send a copy of the Geotechnical report along with a track settlement monitoring plan to CP Geotechnical Service provider for review and installation oversight. All additional fees associated with this review and onsite supervision will be borne by the applicant. Refer to CP Geotechnical Protocol for all required details before submitting.

<p>Number of new underground pipes crossing CPR tracks: Click or tap here to enter text.</p> <p>Material being carried in pipe i.e. storm, watermain, gas etc.: Click or tap here</p> <p>Depth below base of rail to top of steel casing pipe:no. m carrier pipe:no. m</p> <p>Depth below bottom of ditch to top of pipe: no. m</p> <p>Angle of crossing to the tracks: Click (shall not be less than 45 degrees)</p> <p>Number of tracks being crossed: Click or tap here to enter text.</p> <p>Number of manholes within CPR property: Click or tap here</p> <p>Number of shut off valves within CPR property: Click or tap here to</p> <p>Will existing pipe be removed or grouted in place? Click or tap here</p>

Bridge Information:

Does pipe cross underneath a Railway Bridge?	Choose an item.
Depth below grade to top of steel casing pipe: click m	
<p>Distance from edge of bridge abutments to centerline of steel casing pipe: no. m</p> <p>Distance from edge of bridge footings to centerline of steel casing pipe: no. m</p> <p style="color: red; margin: 0;">Installation should not come within the Zone of Potential Influence or that of any part of a railway bridge structure (footings, abutments, columns, piers, etc.). A cross-section of proposed installation must be provided along with Engineer’s report if encroaching into these areas.</p>	

Pipe Specifications:

	Carrier Pipe (mm)	Casing Pipe (mm)
Outside Diameter	Click or tap here	Click or tap here
Wall Thickness	Click or tap here	Click or tap here
Pipe Material	Click or tap here	Click or tap here
Specification & Grade	Click or tap here	Click or tap here
Type of Joint	Click or tap here	Click or tap here
Coating	Click or tap here	Click or tap here
Cathodic Protection	Click or tap here	Click or tap here
Specified Min. Yield Strength	Click or tap here	Click or tap here
Max operating pressure	Click or tap here	Click or tap here
Max operating temperature	Click or tap here	Click or tap here
Max surge & test pressure	Click or tap here	Click or tap here
Min. Operating Temperature	Click or tap here	Click or tap here
Vents: Click or tap	Are Both Ends of the pipe sealed?	Choose an item.
Types of Seals:	Click or tap here to enter text.	
Distance of shut off valves to closest track centerline: Click or tap here to enter text.m		
Distance from nearest point of sending/receiving pits to the nearest rail: Click or tap here m		
<p>Sending pit: Click or tap m Receiving pit:Click or tap m</p> <p style="color: red; margin: 0;">Excavation pits should be placed outside the railway corridor and not come within 10m of the nearest rail. If not practical, provide a detailed summary along with shoring/bracing design.</p>		

Method of installation: Click or tap here to enter text.

Steel casing pipe to conform to Cooper E80 railway loading and must span the complete railway right of way width.

Aerial/Underground Wire Crossing Information:

Aerial Information:

- **Number of NEW wires crossing over the tracks:** Click or tap here to enter text.
Hydro/Power: no. **Neutral:** no. **Fibre:** no. **Fibre count:** no.
- **Number of existing hydro wires / power lines / fibre optic cables crossing over the tracks:** no.
- **Maximum voltage of proposed hydro/power crossing:** no. **EMF output:** no.
- **Height above top of rail to proposed installation:** no. m
No cable/wire shall be less than 7.6m from top of rail to lowest wire including sag. If crossing within railway yards lowest wire with sag should not be less than 10m from top of rail.
- **Number of poles being placed within CPR property:** Click (Property plan must be shown.)
Pole Owner: Click or tap here to enter text.
- **If not the Pole Owner, does your company have permission/permit to use these poles? .**
(provide permission document with application)
- **Number of cabinets within Railway property:** Click or tap here to enter text.
- **Number of guy wires within railway property:** Click or tap here to enter text.
- **Angle of crossing to the tracks:** Click degrees (should not be less than 45 degrees)
- **Number of tracks crossed by installation:** Click or tap here to enter text.

Underground Cable/Wire Crossing Information:

- **Number of wires/cables within the conduit/casing crossing under the tracks:** Click
- **Type of wires/cable crossing underneath the tracks i.e. fiber, hydro etc.** Click
- **Number of manholes, cabinets on railway property:** Click
- **If fibre optic cable duct, Fibre Count:** Click or tap here to enter text.
- **Provide material specification of casing pipe/conduit i.e. HDPE, PVC etc.** Click or tap here
- **Depth below base of rail to top of conduit/casing:** Click m (must not be less than 1.52m)
- **Conduit outside diameter:** Click mm **Wall thickness:** Click mm
- **Steel casing pipe outside diameter:** Click mm **Wall thickness:** Click mm
- **Distance from nearest point of sending/receiving pits to nearest rail:**
Excavation pits should be placed outside the railway corridor and not come within 10m of the nearest rail.
Sending pit: Click m **Receiving pit:** Click m
- **Method of installation: Jack & Bore, Directional drilling etc.:** Click or tap here to enter text.

Bridge Information :

- **Does conduit/pipe cross underneath a Railway Bridge?** Choose an item.
 - **Depth below grade to top of casing pipe:** Click m
 - **Distance from edge of bridge abutments to centerline of conduit/casing pipe:** Click m
 - **Distance from edge of bridge footings to centerline of conduit/casing pipe:** Click m
- Installation should not come within the Zone of Potential Influence or that of any part of a railway bridge structure (footings, abutments, columns, piers, etc.) A cross-section of proposed installation must be provided along with Engineers report if encroaching into the zone.**

Drawing No.: Click or tap here to enter text. **Date:** Click or tap to enter

UTILITY PACKAGE TO INCLUDE

- CP Utility Application Form
- PDF drawing to scale and stamped, (11 X 17 in color preferred).
- Complete installation should be shown on 1 drawing with plan view, profile and cross-section along with an aerial image showing exact crossing location with a solid red line across the rail corridor. (see attached examples) Please do not forward full-sized contract drawings.
- Advance payment made in the amount of \$700 plus taxes to cover the Non-refundable Application & Engineering Review Fee, to be made by EFT or Wire Payment – see payment details on the following page.
- **Geotechnical report if pipe outer diameter is 300mm or larger or if soil conditions are not conducive to the proposed bore. Ensure items 13.4 to 13.12 within table 5 of the Geotechnical protocol checklist are addressed and the track settlement-monitoring plan is within the report being submitted in order to avoid delays.**
- **1 copy of the complete Geotech package is to be sent to CP Geotechnical service provider for initial review. All additional fees undertaken by CP service provider i.e. review and installation oversight will be borne by the applicant and paid directly to CP service provider.**
- Payment confirmation must accompany Utility Application, including taxes and any applicable provincial tax. Tax rate is based on physical location of the installation.
- The One-Time Permit or Agreement Fee will be invoiced once document is fully executed. If unsure of payment process or fee, send email to the regional contact below.
- Insufficient information will result in review delays and additional review fees.
- **No permit/agreement will be processed unless proof of payment is included with application.**



I have verified all required information and payment are being provided with this application and understand any missing items will result in delays or rejection of my application.

Email completed package to:

<u>Western Canada (BC, AB, SK)</u>	<u>Eastern Canada (MB, ON)</u>
<p>Attn: Graeme Dales, Supervisor, Utilities & Flagging (West) (graeme_dales@cpr.ca)</p> <p>Canadian Pacific 7550 Ogden Dale Rd SE Calgary, AB T2C 4X9</p>	<p>Attn: Jack Carello SR/WA Manager Utilities & Flagging Engineering Eastern Region (jack_carello@cpr.ca)</p> <p>Canadian Pacific 1290 Central Parkway West, Suite 800 Mississauga, ON L5C 4R3</p>

***GST and any provincial sales taxes must be included with all fees. Tax rate is based on physical location of the utility installation.**

CP Banking Information

For: EFT - Electronic Funds Transfer Instructions

Company Name: Canadian Pacific Railway Company
Company Address: 7550 Ogden Dale Rd. SE
Calgary, AB, T2C 4X9
Company Transit: 00109
Company Account #: 1967-771
Institution #: 001
Bank Address: Bank of Montreal
350 7th Avenue SW
Calgary, AB T2P 0X4

For: Wire Payment Instructions

Beneficiary Name: Canadian Pacific Railway Company
Beneficiary Address: 7550 Ogden Dale Rd. E
Calgary, AB T2P 04X
Beneficiary Transit and Account #: 00101967771
Bank Routing Code: 000100109
Beneficiary Address: Bank of Montreal
350 7th Avenue SW
Calgary, AB T2P 0X4

**Bank of Montreal Swift Code: BOFMCAM2 International Banking, Head Office
Montreal, QC**

**Bank of Montreal's USD Corresponding Bank: Wells Fargo Bank (FKA
Wachovia Bank),**

SWIFT CODE: PNBUS3NNYC, ABA/Routing #: 026005092



Flagman information sheet - Customer copy

Flagging protection is required any time a third party is conducting work on or around CP property and track which has the potential to pose a risk to the safe operation of trains and surrounding workers.

No work will be allowed, nor will personnel be permitted on the property unless proper arrangements are made in advance. CP police will be dispatched to address trespassing on CP property.

In addition, locates must be taken into account prior to any ground disturbance. Please contact your regional locate company as well as CP's CALLB4UDIG group at [Call B4UDig@cpr.ca](mailto:Call_B4UDig@cpr.ca) or 1-800-387-1833 to ensure all underground utilities in the area are protected.

Flagging resources will be supplied at CP's discretion, when they are available.

Notice Period

- For flagging requests of 30 days or more in duration, 12 months advance notice is required.
- For requests less than 30 days in duration, at least 90 day notice should be provided.
- For requests less than 5 days in duration, at least 2 weeks' notice should be provided.
- Cancellations must be received no less than 48 hours prior or 1 day full charge will occur.

When requesting flagging, it is incumbent on the applicant to provide all of the required information or the application may be rejected. An agreement for cost recovery must be in place before flagging services are provided.

Flagging flat rate: \$1,576/day + taxes (up to an 8 hour shift)

Note that the shift includes booking-in time at the flagperson's headquarters and travel time to and from the job site. The actual hours on site will vary by location. In addition, the flagperson's presence on site does not guarantee working time. The company will make every effort to accommodate the planned work but safe unhindered railway operations are paramount and available working hours will vary.

- 1) Minimum charge
 - a. 8 hour shift – Includes travel time to and from site.
 - b. Any exception to the minimum of 8 hour flat rate must be confirmed by CP Representative sign-off in advance.
- 2) The \$1,576 + taxes fee includes:
 - a. Flagperson for up to 8 hours (07:00 – 15:00)
 - b. Overhead expenses
 - c. Standard vehicle/transportation (includes vehicle rental and gas if necessary)
 - d. Crew Radios
 - e. Flagperson's expenses including when necessary: Lodging, Fringe Benefits and expenses
- 3) What the flat rate fee does NOT include:
 - a. OT hours worked – overtime rate is: \$237/hr + taxes - CP Roadmaster to provide approval.
 - b. Flagging on Weekend & Statutory Holidays
 - c. Specialty vehicles (i.e.: High Rail Bus or non-standard vehicle and or remote control flags, etc.)

Flagging Rates:	Days	Flat Fee + Taxes	General Comments
5 & 2 Shift*	Mon - Fri	\$1,576.00 + Taxes	Standard - 8 hours shift – no overtime (07:00 – 15:00)
4 & 3 Shift**	Mon-Thurs	\$1,970.00 + Taxes	10 hours shifts must be approved by CP under contract
7 & 7 Shift***	Tues- Mon	\$2,461.00 + Taxes	11 ½ hrs shifts must be approved by CP under contract

All flagging shall be billed per the above UNLESS there is an existing agreement in force, in which case the terms of the agreement will be honored until such time that it is cancelled, expires or is subject to renewal.



Flagging Work Order Template

CP Permit/Agreement No*: _____ Approval Date*: Click or tap to enter a date.

CP CALLB4UDIG Ticket No*: _____ (*please provide, if applicable)

1) Description of CP Work:

* Requested Flagging Start date: (Click or tap to enter a date.) * Requested Flagging End date: (Click or tap to enter a date.) Requested dates above are not guaranteed to be scheduled. Refer to notice period on page 1.	No. of days to be charged for CP flagging:()
* Meeting Point: Click or tap here to enter text. * Street Location (or nearest intersection): Click or tap here to enter text.	
Mileage & Subdivision: Click or tap here to enter text.	
Description of work/notes: Click or tap here to enter text.	

2) Company to be charged for CP flagging (MUST be with the Agency or Permit/Agreement holder only):

* Company Name: Click or tap here to enter text.	
* Address (in full): Click or tap here to enter text.	
* PRIMARY CONTACT NAME (Requestor of Work): Click or tap here to enter text.	
* Telephone: Click or tap here to enter text.	* Email: Click or tap here to enter text.
* PO or Customer Ref #: Click or tap here (must be provided to book flagging)	

3) 3rd Party Work Done By i.e. being performed other than Applicant.

* Company Name: Click or tap here to enter text.	
* Description of 3rd Party Work/notes: Click or tap here to enter text.	
* NAME (Person responsible from 3rd Party): Click or tap here to enter text.	
* Telephone: Click or tap here to enter text.	* Email: Click or tap here to enter text.
* PO or Project #: Click or tap here to enter	* Dates Required: Click or tap here to enter

* Note: Any item marked with an asterisk (*) is a mandatory field.

CP USE ONLY: Is there parallel fibre? Details: Click or tap here to enter text.

Overtime/Holiday Authorization Form

* Company Name: Click or tap here to enter text.
* Dates OT flagging required: Click or tap here to enter text.
* PO or Customer Ref #: Click or tap here to enter text.

This flagging form must be signed by both parties if work is being conducted other than permit holder. Scheduling will not proceed without both signatures.

Click or tap here to enter text.

Agreement/Permit holder - Name (print)

Signature

Date

Click or tap here to enter text.

3rd Party/Contractor or Sub - Name (print)

Signature

Date

**THIS IS EXHIBIT "L" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

**Emily
Crawford**

Digitally signed by Emily
Crawford
Date: 2024.03.27
20:53:48 -04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

Emily Crawford

From: Blaise Chevalier
Sent: January 19, 2022 2:03 PM
To: Mary Jane Moynahan
Cc: Dave Taylor; Brigian Barlow
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.
Attachments: 20220117160806478.pdf

For your records.

Thanks,

From: Blaise Chevalier
Sent: January 19, 2022 2:03 PM
To: 'Jack Carello' <Jack_Carello@cpr.ca>
Cc: Brigian Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Jack,

I have now had an opportunity to consider the contents of your letter of November 26, 2021 and respond as follows.

In response to your claim that CP maintains its own drainage infrastructure, please see attached letter of J.M. Spriet, dated January 14, 2022 which explains the assessments regarding their report regarding this matter, and your land that drains into the works.

It is the position of the Municipality of Chatham-Kent that the *Drainage Act* does not restrict its definition of railway to a provincial railway. It is further our position that your reliance on s. 101 of the *Canada Transportation Act* is in error, as s. 3 of that Act clearly states that the Act applies regarding transportation matters. Clearly this is a drainage matter and not a matter of transportation.

We continue to rely on your past conduct in support of our position as well, as set out in my October 26 letter.

We look forward to your reconsideration of your position so that these drainage works might proceed and to avoid negative impact to the related lands.

Thanks,

From: Jack Carello <Jack_Carello@cpr.ca>
Sent: November 26, 2021 5:24 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Brigian Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

Attached letter in response to Chatham-Kents letter of October 26, 2021.

Stay Safe!



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
750 Runnymede Road - 2nd Floor
Toronto, ON M6N 3V4
905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>

Sent: Tuesday, October 26, 2021 1:59 PM

To: Jack Carello <Jack_Carello@cpr.ca>

Cc: Brigant Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Can you please review the attached letter and provide us with confirmation at your earliest convenience?

Thanks,

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca



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From: Jack Carello <Jack_Carello@cpr.ca>

Sent: July 6, 2021 11:33 AM

To: Blaise Chevalier <blaisec@chatham-kent.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

To follow the utility protocol, CP will require an agreement to be put in place to cover this pipe installation and all future maintenance. Attached the latest utility application form to commence the process. All submission and payments are being handled electronically in these times of uncertainty. Keep in mind that all expenses for this proposed installation will be borne by the applicant including CP flagging fees.

Regards,



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
1290 Central Pkwy West - Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Tuesday, June 15, 2021 3:40 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hey Rheal and Jack,

Just following up in regards to this project now that it has cleared some of it's legislated timelines we're in a position to get organized for construction. I'm sure you have it somewhere but I've attached a copy of the plan as refresher. Clarke Construction will be the general contractor completing the work.

I'm wondering who I should be speaking with to get organized for an encroachment permit for working in the CP Rail right-of-way and what forms/information I should have the contractor submit.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: February 10, 2021 1:47 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

If possible make 10"

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, February 10, 2021 12:51 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Thanks for the response - to confirm, is that inclusive of 12" (meaning 12" and smaller)? The current sizing proposal is for a 12" diameter crossing.

Thanks,

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Wednesday, Feb 10, 2021, 9:33 AM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

If the proposed installation pipe stays under 12" then a Geotechnical report and track settlement plan would not be required.

Regards,



Jack Carello, Civil Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: February 8, 2021 12:37 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Good afternoon gentlemen,

Thanks for coming down and meeting with us Rheal, despite the new position (and slightly larger geographic area).

Spriets are currently working towards finishing a preliminary report and wanted to confirm that a geotechnical report is NOT required from your end. I just wanted to follow up with you two since, as Rheal indicated at our meeting, it was a little unclear whether this work falls under Rheal or Jack's department. I know Rheal indicated that this wouldn't be required for him.

Can you confirm this?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: January 19, 2021 1:51 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise, I can meet with you on Feb February 03 around 11:00 at the nearest road crossing of mile 47.59 Windsor Sub.

Rheal Lemelin | Manager Bridge Maintenance Toronto | 2025 McCown Rd., Scarborough, ON. M1S 5K3
C 416 525 9094 | O 416 609 7880



From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, January 13, 2021 11:36 AM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Rheal,

With the new COVID regulations coming into effect, I was wondering if a site visit was still a possibility for you? Just hoping to keep this project moving along if possible.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Blaise Chevalier
Sent: December 18, 2020 3:07 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; 'Jack Carello' <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Good morning Rheal,

Just following up to our call we had earlier this week with Jack. Based on our discussion, Jack suggested it might be beneficial to have a site visit to review the proposal with you as all as any potential alternatives.

Would you happen to have some availability in the new year to meet at this location?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
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From: Jack Carello <Jack_Carello@cpr.ca>
Sent: December 3, 2020 5:10 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Let's try the week after. Mon/Tues btwn 1pm – 3pm.

From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: December 2, 2020 5:13 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Blaise Chevalier <blaisec@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: Re: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Jack, I will not be back to work till next Thursday, off on bereavement leave.

Rheal

Sent from my iPhone

On Dec 2, 2020, at 5:10 PM, Jack Carello <Jack_Carello@cpr.ca> wrote:

Next Wed/Thurs btwn 10:30 & noon works for me.

Rheal - Do these dates/times work with your schedule.

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: December 1, 2020 7:37 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

That works for me - do you have any potential dates/times that would work for you and I can coordinate with Spriets?

Thanks

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Tuesday, Dec 01, 2020, 5:09 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca <brandon@spriet.on.ca>; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

It would be best to set up a conference call to discuss this proposal further.

Regards,

<image002.png>

Jack Carello, SR/WA
Manager Utilities & Flagging
Engineering Public Works
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

Blaise Chevalier <blaisec@chatham-kent.ca>

Sent: November 27, 2020 1:44 PM

To: Jack Carello <Jack_Carello@cpr.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Glenna Hall had forwarded me your way a few weeks ago. I just wanted to forward a copy the preliminary drawings for this project I just received from Spriet Associates to add to this file. I know she said you guys are likely backed up to January for new files at this point so just let me know once you've had the chance to get a look at this.

Thanks,

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca

<image003.png>

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From: Glenna Hall <Glenna_Hall@cpr.ca>

Sent: November 18, 2020 6:15 PM

To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; Jack Carello <Jack_Carello@cpr.ca>
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

Hello Blaise,

I've copied in your regional contact Jack Carello who will be able to assist with your general queries.

Please note due to end of year wrap-ups and higher than usual application requests, newly submitted utility application forms will be reviewed beginning of year 2021, unless in the case of an emergency.

Regards,
Glenna

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, November 18, 2020 9:39 AM
To: Glenna Hall <Glenna_Hall@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; Brandon Widner <brandon@spriet.on.ca>
Subject: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Glenna,

I've been given your contact information from our drainage consultant, Spriet Associates, who indicated they had worked with you on previous Drainage Act projects. They had recommended I reach out to you first as you may be able to direct me through the appropriate channels at CP Rail.

We've received a petition under Section 4 of the Drainage Act for outlet to a property located at the north-east corner of the intersection of Zone Rd 2 and the CP rail line, located between the villages of Bothwell and Kent Bridge. Based on preliminary site reviews and survey, the proposed project scope generally includes the installation of a new rail crossing consisting of a 400mm diameter pipe (there is an existing 900mm diameter concrete in the same vicinity) and some drainage swale improvements.

I've attached a site map detailing the location (yellow line). Can you advise who we should be reaching out to at CP at this point for review and comments?

Thanks.

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca

<image003.png>

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SPRIET
ASSOCIATES
ENGINEERS & ARCHITECTS
155 York Street
London, Ontario N6A 1A8
Tel. (519) 672-4100
Fax (519) 433-9351
Email: mail@spriet.on.ca
www.spriet.on.ca

January 14, 2022

Blaise Chevalier, Drainage Supt.
Municipality of Chatham – Kent
315 King Street West, Box 640
Chatham, Ontario
N7M 5K8

Re: Shaw Branch of the Facey Drain
Our Job No. 220060

Dear Sir,

Further to your request we are pleased to provide you with an explanation of our assessments for the above noted report.

Our assessments are prepared in accordance with the Todgham Method which assesses benefit and outlet to the affected lands. The assessment definitions, including applicable drainage sections, can be found on Pages 4 and 5 of the report. The methodology is described in further detail on Page 5 under 'Assessment.' Furthermore, special assessments were assessed under Section 26 of the Drainage Act.

In the report, the total cost of the drainage was \$36,500.00, of which these costs are divided as follows:

Benefit Assessment

Houston Farms Inc.	\$ 300.00
A. & D. Miller	\$2,870.00
Canadian Pacific Railway	\$5,860.00

The above assessments are based on having the drain on your lands or right-of-way or, in the case of A. & D. Miller, the ability to connect to the drain, in accordance with the definition of benefit on Page 4 of the report.

Outlet Assessment

A. & D. Miller	\$4,731.00
Canadian Pacific Railway	\$2,629.00

The above assessments are based on the applicable land area that would drain into the works (the watershed area). The upstream landowner, A. & D. Miller (Roll No. 1-093) has 9.3 hectares draining into the works, and the Railway has 1.0 hectares contributing. Run-off rates have been applied to reflect the greater run-off from railway lands versus farmlands. These assessments are termed outlet as noted on Page 5 of the report.

Special Assessment

In accordance with Section 26 of the Drainage Act the increased cost to the drainage works have been assessed against the railway. The costs to traverse the railway lands are estimated to be \$14,000.00 using a trenchless method. This method is only required due to the presence of the railway and is not required on agricultural farmlands where the drain can be installed using conventional methods. Therefore, the increased costs are the difference between the two methods, being \$14,000.00 versus \$1,280.00. In addition, an administrative cost (engineering, inspection, etc.) and applicable taxes are assessed to the lands. The administration costs stem from the additional time required to design the proposed crossing and to inspect it during construction.

In summary, the above represents the breakdown of costs assessed in accordance with the Drainage Act.

I trust you will find the above sufficient. If you should have any questions, please contact the undersigned.

Yours truly,

SPRIET ASSOCIATES LONDON LIMITED

J.M. Spriet, P. Eng.

JMS:bv

**THIS IS EXHIBIT "M" REFERRED TO IN THE AFFIDAVIT OF JOHN M. SPRIET
SWORN BEFORE ME THIS 27th DAY OF MARCH 2024**

Emily Crawford Digitally signed by Emily
Crawford
Date: 2024.03.27 20:54:17
-04'00'

A COMMISSIONER FOR TAKING AFFIDAVITS

Emily Crawford

From: Blaise Chevalier
Sent: April 20, 2022 4:21 PM
To: Ann Ford
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

From: Dave Taylor <davet@chatham-kent.ca>
Sent: April 13, 2022 11:05 AM
To: Jack_Carello@cpr.ca
Cc: Lynn Kalp <lynnk@chatham-kent.ca>; Brigian Barlow <brigianb@chatham-kent.ca>; Blaise Chevalier <blaisec@chatham-kent.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Mr. Carello,

I am legal counsel for the Municipality of Chatham-Kent. Your email below has been provided to me for review. If you have a lawyer acting on this matter, I would ask that you please pass this correspondence on to them.

Your comments about the year of passing of the former Drainage Act, being 1975, and the age of this railroad corridor predating the legislation, is faulty on two fronts. First, drainage legislation in Ontario has existed since as early as 1859. Second, and far more significantly, the existence of infrastructure before the passing of an Act does not in any way undermine the application of that legislation, unless there is a relevant transitional provision in the legislation which provides for a non-application of the Act. No such transition provision exists within the Drainage Act, and as a result, the Act applies to CP lands.

You have requested that our Drainage Department produce some additional studies for your review. No such studies are required at law, or otherwise. You have possession of the approved engineer's report that provides for the Section 26 assessments. Our Drainage team has also taken the further step of providing you a letter from J.M. Spriet to help explain how that assessment was calculated. No further background work will be performed in relation to this matter as such reports would just attract further costs to the drainage project. Should CP wish to get its own drainage modelling performed, it is free to do so.

However, before undertaking such further drainage modelling work, I would like to clarify that CP is out of time to appeal this report. The report was provided in accordance with the Drainage Act, and CP has a limited appeal right. Those appeal rights have now been extinguished, and as such, there is no avenue for adjusting the Section 26 assessment amounts. Should CP wish to challenge such assessments for future projects, it is important that it raise those appeals through the process established under the Drainage Act.

We are prepared to enter into an encroachment agreement, with reasonable terms that are consistent with the Drainage Act. I understand that your company has, to date, not provided an encroachment agreement to perform this drainage work. I must insist that you initiate the process to grant such an encroachment. Failure to do so amounts to a breach of your company's legal obligations and likely amounts to an obstruction, subject to fines under Section 96 of the Drainage Act. Should you continue to refuse to permit this work on CP lands we will have no option but to seek a Court order compelling CP to grant the encroachment agreement, or otherwise to grant access for these purposes. Of course, we would also seek our legal costs against CP in such an application to Court.

Additionally, your company's ongoing failure to meet its legal obligations may result in damages suffered by property owners who rely on this drainage work. In lights of its continued refusal to grant the required land access, CP would be liable for such damages.

I trust that none of these steps will be needed, and the CP will meet its legal obligations. I would be happy to discuss this matter with your legal counsel and look forward to our office receiving confirmation that an encroachment agreement will be issued as soon as possible.

Thank you,

David Taylor (he/him)
Director, Legal Services
Barrister & Solicitor
Municipality of Chatham-Kent

P 519.352.8401 x3808
C 226.229.0404
E davet@chatham-kent.ca
www.chatham-kent.ca



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From: Jack Carello <Jack_Carello@cpr.ca>
Date: Friday, Mar 11, 2022, 6:03 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Brigant Barlow <brigantb@chatham-kent.ca>, Ann Ford <ANNF@chatham-kent.ca>, brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheel Lemelin <Rheel_Lemelin@cpr.ca>, Brian Chowdhury <Brian_Chowdhury@cpr.ca>, Cameron Greaves <Cameron_Greaves@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

The Chatham-Kent Municipalities new culvert request and interpretation of the Provincial Drainage Act is being reviewed by our legal department. In addition, an internal Engineering review is being conducted on the railway's existing drainage and history of the drainage pattern within the operating corridor for which has been in place since 1889 prior to the Provincial Drainage Act of 1975. Although an assessment, and deviation of funds was put together by J.M. Spriet, CP requests a full surface drainage water report/hydrological study that depicts a 1:100 year storm for this section of property to the north and south of the active railway corridor. CP is of the position that its existing culverts can manage existing surface water and drainage ditches are functioning to handle existing flows in order to operate a Railroad safely. As I understand it, CP past conduct relates to existing drainage within the Municipal/County Road ditches that traverse at grade over the CP tracks, and not for a new culvert installation to be drilled under property

owned by the Railway. This being said, CP is not in a position to participate monetarily with the Municipalities new culvert proposal.

Kind Regards,



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
750 Runnymede Road – 2nd Floor
Toronto, ON M6N 3V4
905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, January 19, 2022 2:03 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Brigian Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheel Lemelin <Rheel_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Jack,

I have now had an opportunity to consider the contents of your letter of November 26, 2021 and respond as follows.

In response to your claim that CP maintains its own drainage infrastructure, please see attached letter of J.M. Spriet, dated January 14, 2022 which explains the assessments regarding their report regarding this matter, and your land that drains into the works.

It is the position of the Municipality of Chatham-Kent that the *Drainage Act* does not restrict its definition of railway to a provincial railway. It is further our position that your reliance on s. 101 of the *Canada Transportation Act* is in error, as s. 3 of that Act clearly states that the Act applies regarding transportation matters. Clearly this is a drainage matter and not a matter of transportation.

We continue to rely on your past conduct in support of our position as well, as set out in my October 26 letter.

We look forward to your reconsideration of your position so that these drainage works might proceed and to avoid negative impact to the related lands.

Thanks,

From: Jack Carello <Jack_Carello@cpr.ca>
Sent: November 26, 2021 5:24 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Brigian Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheel Lemelin <Rheel_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

[Attached letter in response to Chatham-Kents letter of October 26, 2021.](#)

Stay Safe!



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
750 Runnymede Road - 2nd Floor
Toronto, ON M6N 3V4
905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>

Sent: Tuesday, October 26, 2021 1:59 PM

To: Jack Carello <Jack_Carello@cpr.ca>

Cc: Brigian Barlow <briganb@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Can you please review the attached letter and provide us with confirmation at your earliest convenience?

Thanks,

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca



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From: Jack Carello <Jack_Carello@cpr.ca>

Sent: July 6, 2021 11:33 AM

To: Blaise Chevalier <blaisec@chatham-kent.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin

<Rheal_Lemelin@cpr.ca>; Brian Chowdhury <Brian_Chowdhury@cpr.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

To follow the utility protocol, CP will require an agreement to be put in place to cover this pipe installation and all future maintenance. Attached the latest utility application form to commence the process. All submission and payments are being handled electronically in these times of uncertainty. Keep in mind that all expenses for this proposed installation will be borne by the applicant including CP flagging fees.

Regards,



Jack Carello, Civil Eng. Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
1290 Central Pkwy West - Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>

Sent: Tuesday, June 15, 2021 3:40 PM

To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hey Rheal and Jack,

Just following up in regards to this project now that it has cleared some of it's legislated timelines we're in a position to get organized for construction. I'm sure you have it somewhere but I've attached a copy of the plan as refresher. Clarke Construction will be the general contractor completing the work.

I'm wondering who I should be speaking with to get organized for an encroachment permit for working in the CP Rail right-of-way and what forms/information I should have the contractor submit.

Thanks,

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: February 10, 2021 1:47 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

If possible make 10"

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, February 10, 2021 12:51 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Thanks for the response - to confirm, is that inclusive of 12" (meaning 12" and smaller)? The current sizing proposal is for a 12" diameter crossing.

Thanks,

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Wednesday, Feb 10, 2021, 9:33 AM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca <brandon@spriet.on.ca>, John M Spriet <john@spriet.ca>, Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

If the proposed installation pipe stays under 12" then a Geotechnical report and track settlement plan would not be required.

Regards,



Jack Carello, Civil Tech, SR/WA
Manager Utilities & Flagging
Engineering - Eastern & Western Region
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: February 8, 2021 12:37 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Good afternoon gentlemen,

Thanks for coming down and meeting with us Rheal, despite the new position (and slightly larger geographic area).

Spriets are currently working towards finishing a preliminary report and wanted to confirm that a geotechnical report is NOT required from your end. I just wanted to follow up with you two since, as Rheal indicated at our meeting, it was a little unclear whether this work falls under Rheal or Jack's department. I know Rheal indicated that this wouldn't be required for him.

Can you confirm this?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: January 19, 2021 1:51 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise, I can meet with you on Feb February 03 around 11:00 at the nearest road crossing of mile 47.59 Windsor Sub.

Rheal Lemelin | Manager Bridge Maintenance Toronto | 2025 McCown Rd., Scarborough, ON. M1S 5K3
C 416 525 9094 | O 416 609 7880



From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, January 13, 2021 11:36 AM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Rheal,

With the new COVID regulations coming into effect, I was wondering if a site visit was still a possibility for you? Just hoping to keep this project moving along if possible.

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
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From: Blaise Chevalier
Sent: December 18, 2020 3:07 PM
To: Rheal Lemelin <Rheal_Lemelin@cpr.ca>; 'Jack Carello' <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Good morning Rheal,

Just following up to our call we had earlier this week with Jack. Based on our discussion, Jack suggested it might be beneficial to have a site visit to review the proposal with you as all as any potential alternatives.

Would you happen to have some availability in the new year to meet at this location?

Thanks,

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca



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From: Jack Carello <Jack_Carello@cpr.ca>
Sent: December 3, 2020 5:10 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Let's try the week after. Mon/Tues btwn 1pm – 3pm.

From: Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Sent: December 2, 2020 5:13 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Blaise Chevalier <blaisec@chatham-kent.ca>; Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>
Subject: Re: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Jack, I will not be back to work till next Thursday, off on bereavement leave.

Rheal

Sent from my iPhone

On Dec 2, 2020, at 5:10 PM, Jack Carello <Jack_Carello@cpr.ca> wrote:

Next Wed/Thurs btwn 10:30 & noon works for me.

Rheal - Do these dates/times work with your schedule.

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: December 1, 2020 7:37 PM
To: Jack Carello <Jack_Carello@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

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Hi Jack,

That works for me - do you have any potential dates/times that would work for you and I can coordinate with Spriets?

Thanks

Sent with BlackBerry Work
(www.blackberry.com)

From: Jack Carello <Jack_Carello@cpr.ca>
Date: Tuesday, Dec 01, 2020, 5:09 PM
To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca <brandon@spriet.on.ca>; John M Spriet <john@spriet.ca>; Rheal Lemelin <Rheal_Lemelin@cpr.ca>
Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell) - CP Mile +/- 47.59 Windsor Sub.

Hi Blaise,

It would be best to set up a conference call to discuss this proposal further.

Regards,

<image002.png>

Jack Carello, SR/WA
Manager Utilities & Flagging
Engineering Public Works
1290 Central Pkwy West – Suite 800
Mississauga ON L5C 4R3
O 905-803-3417 C 416-992-2676

Blaise Chevalier <blaisec@chatham-kent.ca>

Sent: November 27, 2020 1:44 PM

To: Jack Carello <Jack_Carello@cpr.ca>

Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; John M Spriet <john@spriet.ca>

Subject: RE: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

This email did not originate from Canadian Pacific. Please exercise caution with any links or attachments.

Hi Jack,

Glenna Hall had forwarded me your way a few weeks ago. I just wanted to forward a copy the preliminary drawings for this project I just received from Spriet Associates to add to this file. I know she said you guys are likely backed up to January for new files at this point so just let me know once you've had the chance to get a look at this.

Thanks,

Blaise Chevalier

Drainage Superintendent

Drainage, Asset and Waste Management

Municipality of Chatham-Kent

315 King St. West, PO Box 640

Chatham, ON N7M 5K8

Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240

E-mail: blaisec@chatham-kent.ca

www.chatham-kent.ca

<image003.png>

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From: Glenna Hall <Glenna_Hall@cpr.ca>

Sent: November 18, 2020 6:15 PM

To: Blaise Chevalier <blaisec@chatham-kent.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; brandon@spriet.on.ca; Jack Carello <Jack_Carello@cpr.ca>
Subject: FW: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

Hello Blaise,

I've copied in your regional contact Jack Carello who will be able to assist with your general queries.

Please note due to end of year wrap-ups and higher than usual application requests, newly submitted utility application forms will be reviewed beginning of year 2021, unless in the case of an emergency.

Regards,
Glenna

From: Blaise Chevalier <blaisec@chatham-kent.ca>
Sent: Wednesday, November 18, 2020 9:39 AM
To: Glenna Hall <Glenna_Hall@cpr.ca>
Cc: Ann Ford <ANNF@chatham-kent.ca>; Brandon Widner <brandon@spriet.on.ca>
Subject: Shaw Branch of Facey Drain East Branch (Zone Rd 2 - Bothwell)

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Hi Glenna,

I've been given your contact information from our drainage consultant, Spriet Associates, who indicated they had worked with you on previous Drainage Act projects. They had recommended I reach out to you first as you may be able to direct me through the appropriate channels at CP Rail.

We've received a petition under Section 4 of the Drainage Act for outlet to a property located at the north-east corner of the intersection of Zone Rd 2 and the CP rail line, located between the villages of Bothwell and Kent Bridge. Based on preliminary site reviews and survey, the proposed project scope generally includes the installation of a new rail crossing consisting of a 400mm diameter pipe (there is an existing 900mm diameter concrete in the same vicinity) and some drainage swale improvements.

I've attached a site map detailing the location (yellow line). Can you advise who we should be reaching out to at CP at this point for review and comments?

Thanks.

Blaise Chevalier
Drainage Superintendent
Drainage, Asset and Waste Management
Municipality of Chatham-Kent

315 King St. West, PO Box 640
Chatham, ON N7M 5K8
Phone: 519.360.1998 Ext. 3318 Fax: 519.436.3240
E-mail: blaisec@chatham-kent.ca
www.chatham-kent.ca

<image003.png>

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**CORPORATION OF THE MUNICIPALITY OF
CHATHAM-KENT**
Applicant

-and-

COURT FILE NO. CV-23-00001165-0000 (Chatham)
CANADIAN PACIFIC RAILWAY COMPANY

Respondent

ONTARIO
SUPERIOR COURT OF JUSTICE
COURT OF THE DRAINAGE REFEREE

PROCEEDING COMMENCED AT
CHATHAM, ONTARIO

AFFIDAVIT OF JOHN SPRIET

**CORPORATION OF THE MUNICIPALITY OF
CHATHAM-KENT**

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