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Enbridge Gas Inc.
500 Consumers Road
North York, Ontario M2J 1P8
Canada

VIA EMAIL, RESS and COURIER

November 1, 2019

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319,
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**Re: Enbridge Gas Inc. (Enbridge Gas)
Ontario Energy Board (Board) File No.: EB-2019-0172
Windsor Line Replacement Project – Interrogatory Responses**

In accordance with the Ontario Energy Board's (the "Board") Procedural Order No. 1 for the above noted proceeding, enclosed please find Enbridge Gas's interrogatory responses.

Please note the Company has also updated its evidence at the following references:

- Exhibit I.STAFF.8 a) – OPCC Comments filed at Exhibit C, Tab 6, Schedule 2
- Exhibit I.STAFF.10 b) – Landowner List filed at Exhibit C, Tab 7, Schedule 2 (Redacted)
- Exhibit I.STAFF.10 c) – Pipeline Location Maps filed at Exhibit C, Tab 7, Schedule 1 (Redacted)

Please note the confidential or unredacted version of the Redacted exhibits noted above will be provided to the Board under separate cover in a sealed envelope.

The submission has been filed through the Board's RESS and will be available on the Enbridge Gas website at: www.enbridgegas.com/ratecase.

Please contact the undersigned if you have any questions.

Yours truly,

(Original Signed)

Rakesh Torul
Technical Manager,
Regulatory Applications

cc: EB-2019-0172 Intervenor

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh A/Tab 2/Sch 1/p.1
Exh B/Tab 1/Sch 1/p.1

Question:

Enbridge Gas Inc. (Enbridge Gas) requests leave to construct approximately 64 kilometres of Nominal Pipe Size (NPS) 6 pipeline to replace a section of the existing Windsor NPS 10 pipeline (along with short sections of NPS 8 pipeline) between an interconnect at the existing Enbridge Gas Port Alma Transmission Station (located in the Municipality of Chatham-Kent) and the intersection of Concession 8 and County Road 46 (located in the Town of Tecumseh) (Project).

- a) Please confirm that the Project will be constructed in the following geographic areas (if an area has been omitted, please revise in your response):
- Town of Tecumseh
 - Town of Lakeshore
 - Municipality of Chatham-Kent
- b) Please provide a reference number for the applicable Municipal Franchise Agreements of the areas identified in part (a).
- c) Please provide a reference number for the applicable Certificate of Public Convenience and Necessity of the areas identified in part (a).
-

Response:

a) Confirmed. In addition to the geographic areas listed in the question, the Project will also be constructed in the County of Essex.

b) The Municipal Franchise Agreements are as follows:

Town of Tecumseh - RP-2003-0231 / EB-2003-0290

Town of Lakeshore - RP-2004-0219 / EB-2004-0469

Municipality of Chatham-Kent - RP-2005-0016 / EB-2005-0313

Enbridge Gas has an agreement with the County of Essex dated December 11, 1957, which grants Enbridge Gas the right to construct and maintain the pipeline for this project along any highway under its jurisdiction. Please see Attachment 1 for a copy of this agreement.

c) The Certificates of Public Convenience and Necessity are as follows:

Town of Tecumseh - RP-2003-0231 / EB-2003-0289

Town of Lakeshore - RP-2004-0219 / EB-2004-0514

Municipality of Chatham-Kent - RP-2005-0016 / EB-2005-0312

I HEREBY certify the attached to be true copies of
By-law # 1270 of the County of Essex,
finally passed the 11th day of December, 19 57,
and agreement pursuant thereto dated the 11th day
of December, 19 57, between the said County
of Essex and Union Gas Company of Canada,
Limited, duplicate originals of which are in the
possession of the said Union Gas Company of Canada,
Limited.

AS WITNESS my hand as Secretary and the corporate seal
of the said Union Gas Company of Canada, Limited this
11th day of May, 1965.


Secretary.

BY-LAW NUMBER 1270

- of -

1

THE CORPORATION OF THE COUNTY OF ESSEX

A By-law to authorize Union Gas Company of Canada, Limited (hereinafter called "the Company") to lay down, maintain and use pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the Council of The Corporation of the County of Essex. *LR*

FINALLY PASSED the ~~10th~~ day of December, A.D. 1957.

WHEREAS the Company has requested The Corporation of the County of Essex (hereinafter called "the Municipality") to grant it a franchise or right to lay down, maintain and use pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the said Council for the purpose of passing through the Municipality in the continuation of a line, work or system which is intended to be operated in or for the benefit of another municipality and is not used or operated in the Municipality for any other purpose except that of supplying gas in a township to persons whose land abuts on a highway along or across which gas is carried or conveyed or to persons whose land lies within such limits as the said Council by by-law passed from time to time at the request of the Company determines should be supplied with such service.

AND WHEREAS subject to the terms and conditions hereinafter set forth, the Council of the said Municipality has agreed to grant the said franchise.

BE IT THEREFORE ENACTED by the Council of The Corporation of the County of Essex as follows:-

1. Full right, power, permission and consent are hereby granted, conferred and assured unto Union Gas Company of Canada, Limited, its successors and assigns, to keep, use, operate, repair, maintain, remove, abandon, replace, reconstruct, alter and extend its existing lines, pipes and works in the highways under the jurisdiction of the Council of the Municipality and to lay down, maintain and use

- 2 -

pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the said Council for the purpose of passing through the Municipality in the continuation of a line, work or system which is intended to be operated in or for the benefit of another municipality and is not used or operated in the Municipality for any other purpose except that of supplying gas in a township to persons whose land abuts on a highway along or across which gas is carried or conveyed or to persons whose land lies within such limits as the said Council by by-law passed from time to time at the request of the Company determines should be supplied with such service.

2. Such right or franchise shall be subject to all the terms and conditions set out in an Agreement to be entered into in pursuance of this By-law.

3. The Warden and Clerk of the Municipality are hereby authorized and empowered to enter into and to execute on behalf of the Corporation an Agreement in the form hereto annexed, and to affix the corporate seal thereto.

4. This By-law shall come into force and take effect immediately after the Agreement hereto annexed shall have been executed by all the parties hereto.

THE CORPORATION OF THE COUNTY OF ESSEX



Laurence Brunet Warden.
(Signature) Clerk.

-- of --

THE CORPORATION OF THE COUNTY OF ESSEX

A By-law to authorize Union Gas Company of Canada, Limited (hereinafter called "the Company") to lay down, maintain and use pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the Council of The Corporation of the County of Essex.

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1st READING - December 10, 1957

2nd READING - December 11, 1957

3rd READING - December 11, 1957

FINALLY PASSED - December 11, 1957

-- -- -- --

McNevin, Gee & O'Connor,
Barristers, etc.
Bank of Montreal Bldg.
CHATHAM, Ontario.

AGREEMENT made in duplicate this ~~10th~~ ^{11th} day of December,

A.D. 1957.

B E T W E E N:

THE CORPORATION OF THE COUNTY OF ESSEX,
hereinafter called "the Corporation"

- OF THE FIRST PART -

2

A N D

UNION GAS COMPANY OF CANADA, LIMITED,
hereinafter called "the Company"

- OF THE SECOND PART -

WHEREAS the Company has requested The Corporation of the County of Essex (hereinafter called "the Municipality") to grant it a franchise or right to lay down, maintain and use pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the said Council for the purpose of passing through the Municipality in the continuation of a line, work or system which is intended to be operated in or for the benefit of another municipality and is not used or operated in the Municipality for any other purpose except that of supplying gas in a township to persons whose land abuts on a highway along or across which gas is carried or conveyed or to persons whose land lies within such limits as the said Council by by-law passed from time to time at the request of the Company determines should be supplied with such service.

AND WHEREAS the Council of the Corporation has by By-law passed on the ~~10th~~ ^{11th} day of December, A.D. 1957, granted the said franchise from and after the date of the execution of this Agreement and has authorized and empowered the Warden and Clerk of the Corporation to execute this Agreement and to affix the corporate seal thereto.

NOW THEREFORE THIS AGREEMENT made in consideration of the premises and of the performance of the covenants and obligations hereinafter contained on the part of the Company, WITNESSETH as follows:-

1. Full right, power, permission and consent are hereby granted, conferred and assured unto Union Gas Company of Canada, Limi-

- 2 -

ted, its successors and assigns, to keep, use, operate, repair, maintain, remove, abandon, replace, reconstruct, alter and extend its existing lines, pipes and works in the highways under the jurisdiction of the Council of the Municipality and to lay down, maintain and use pipes and other necessary works for the transmission of gas on, in, under, along or across any highway under the jurisdiction of the said Council for the purpose of passing through the Municipality in the continuation of a line, work or system which is intended to be operated in or for the benefit of another municipality and is not used or operated in the Municipality for any other purpose except that of supplying gas in a township to persons whose land abuts on a highway along or across which gas is carried or conveyed or to persons whose land lies within such limits as the said Council by by-law passed from time to time at the request of the Company determines should be supplied with such service.

2. The rights and privileges hereby granted shall continue and remain in force for a period of ten years from the date hereof and so long thereafter as the said lines are in actual use for the transportation of gas.

3. The said pipelines shall be laid across the said highways in locations approved by the Road Superintendent of the County of Essex for the time being or such other officer as may be appointed by the Council for that purpose, and the charges of such Road Superintendent or other officer attending to give such approval shall be paid by the Company.

4. All pipelines shall be placed underground, if required by the officer of the Corporation and shall be so constructed as not to obstruct or interfere with the use of the highway or with any sewers, water-pipes, drains or ditches thereon or therein, or with works of improvement or repair thereof or with the roads or bridges to property fronting thereon.

5. Upon the laying down of the said pipelines or other works hereby authorized or taking any of the same up, or moving the same from place to place in any highway, the highway shall be left unbroken on its surface and in as safe and good a state of repair as it was before

it was entered upon or opened.

6. In the event that the Corporation in pursuance of its statutory powers shall deem it expedient to alter the construction of any highway or of any municipal drain, ditch, bridge, culvert or other municipal works or improvements thereon or therein and in the course thereof it shall become reasonably necessary that the location of a main, line, pipe or works of the Company laid or operated under this By-law should be altered at a specified point to facilitate the work of the Corporation, then upon receipt of reasonable notice in writing from the Clerk of the Corporation specifying the alteration desired, the Company shall, at its own expense, alter or re-locate its main, pipe, line or works at the point specified.

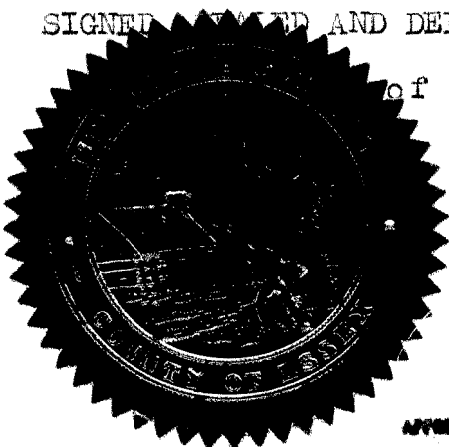
7. The Company shall and does hereby at all times indemnify and save harmless the Municipality from and against all loss, damage, injury or expense which the Municipality may bear, suffer or be put to by reason of any damage to property or injury to persons caused by the construction, repair, maintenance, removal or operation by the Company of any of its mains, pipes, lines or works in the Municipality unless such loss, damage, injury or expense is occasioned by Act of God or/ by the act, neglect, or default of some person, firm or corporation other than the Company, its servants, contractors, sub-contractors, agents or employees.

8. This agreement shall enure to the benefit of and be binding upon the parties hereto, their successors and assigns.

IN WITNESS WHEREOF the said parties have caused to be affixed hereto their respective corporate seals duly attested by the hands of their proper officers in that behalf.

SIGNED, SEALED AND DELIVERED

of



APPROVED AS TO FORM
2600

THE CORPORATION OF THE COUNTY OF ESSEX

Laurence Barrett
Warden.

[Signature]
Clerk.

UNION GAS COMPANY OF CANADA, LIMITED

[Signature]
Vice-President and General Manager.

[Signature]
Assistant Secretary.

DATED December 11th A.D. 1957.

THE CORPORATION OF THE COUNTY OF
ESSEX

-- and --

UNION GAS COMPANY OF CANADA,
LIMITED

-- AGREEMENT :-

McNevin, Gee & O'Connor,
Barristers, etc.
Bank of Montreal Bldg.
CHATHAM, Ontario.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 1/p.1

Question:

According to the application, the Windsor Line is surveyed and inspected on a regular basis. Enbridge Gas states that the results from these inspections and subsequent analysis have identified multiple integrity and depth of cover issues that could pose safety and security of supply concerns if not addressed. Enbridge Gas also states that significant effort and resources have been spent repairing leaks and some sections of the pipeline cannot be isolated because of inoperable mainline valves. In Enbridge Gas' view, the Windsor Line has been deemed an operational risk.

- a) Please confirm the date on which the Windsor Line was deemed an operational risk.
 - b) Please provide the date of the last survey and inspection and the results of this work.
 - c) Please provide evidence of the significant costs incurred to repair the line that are referenced in the application.
 - d) Please provide an estimate of the costs that are likely to be incurred to mitigate the integrity concerns identified, if the Project is delayed.
 - e) Please explain why sections of the pipeline not located in easement is considered a factor in the need for replacement.
-

Response:

- a) The Windsor Line first became a potential operational risk in 2015 during preliminary conversations regarding asset replacements that should be included in the first iteration of the Union Gas Asset plan. At the time, additional assessment was required to determine the severity of the operational risk associated with the Windsor Line. Additional assessments and surveys were completed in 2016 and the Windsor Line was officially endorsed as a high operational risk in April of 2017.
- b) The last Depth of Cover survey was completed in 2016 which identified approximately 19 km of pipe at a depth of cover of less than 0.6 metre. A total of 23 locations were also identified as exposed pipe as a result of these surveys. The Leak Survey was completed in July of 2019 and there are a total of 24 active leaks on the pipeline.
- c) As indicated in Part b), there are currently 24 active leaks and 3 inoperable mainline valves. Since these valves are inoperable and if the pipeline had to be isolated, this would result in significant customer outages. The average capital expenditure was \$150,000 to repair the last several leaks found on the Windsor line.

Notable repairs recorded on the Windsor Line were at the Puce River crossing with un-weldable pipe that resulted in a \$320,000 repair total; Naylor Valve nest repair in the amount of \$160,000; replacement of NPS10 near 7254 County Rd #46 for \$237,000 due to a leaking clamp; and, a valve and section of NPS 8 replacement for \$167,000.

- d) There is no practical way to estimate with any level of certainty the costs resulting from depth of cover resolution or leakage repairs as they are all independently estimated and responded to. Lengthy and numerous customer outages at uncontrolled times are difficult to predict due to inoperability of valves for safety and

isolation purposes.

- e) The primary reason to replace the pipeline is due to its condition and frequency of repairs. The integrity issues are present throughout the length being replaced and is consistent both in road allowance and easement.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Environmental Report Executive Summary

Exh B/Tab 1/Sch 1/p.2

Exh C/Tab 3/Sch 1/p.9

Question:

In each of the above references of the application, the evidence provided on the length of line that is being replaced is stated as approximately 60 km in the Environmental Report, approximately 62 km in Exhibit C and approximately 64 in Exhibit B.

- a) Please confirm the length of the line that is being replaced, providing reasons for the disparities in the information provided in the application.
-

Response:

- a) The disparity in the length of line is a result of timing and estimating. The Windsor Line Replacement Project involves replacing approximately 62 km of the existing 66 km Windsor Line. The new or replacement pipeline is approximately 2 km longer (approximately 64 km) in length than the section being replaced because the replacement pipeline is located entirely within road allowance.

The replacement pipeline does not cross farm fields whereas parts of the existing pipeline do. Installing in road allowance does make the replacement pipeline longer as constructing in the farm fields allowed for the pipe to be installed in a straighter line; however, removing the pipeline from farm fields eliminates existing depth of cover issues. The remaining section of the Windsor Line not being replaced did not meet the risk rating to be replaced. It is also far more expensive to replace because it is located in the west end which is a built-up area of the City of Windsor.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 1/p.2,3
Exh B/Tab 1/Sch 5/p.3

Question:

Enbridge Gas is proposing to replace the existing NPS 10 and NPS 8 pipeline currently operating at a maximum operating pressure (MOP) of 1380 kPa with NPS 6 pipeline operating at a MOP of 3450 kPa. Enbridge Gas states that the increase in the operating pressure will require upgrades to services and stations directly connected to the higher operating pressure pipeline. There will be 399 customers' services and 14 stations upgraded, five new stations installed, and the four stations will be abandoned. Enbridge Gas states that construction will be completed in stages and segments.

Enbridge Gas states that the TSSA abandonment guidelines and the applicable current edition of CSA code Z662 will be followed for all pipeline abandonment in place.

- a) Please comment on any aspects of the pipeline replacement that could adversely impact the 399 customer connections.
 - b) Please describe the measures that Enbridge Gas will have in place for the maintenance of customer supply and to ensure quality and reliability of service is met during the replacement/upgrade of these services.
 - c) Please provide a schedule of details regarding the decommissioning of the existing pipeline.
 - d) Please provide the expected in-service date of the Project.
-

Response:

- a) Provisions for access will be communicated and planned with affected customers. Restoration of properties will be completed to previous or better conditions. There will be planned short durations of gas outage for service tie-overs.
- b) Enbridge Gas will continue to operate the existing Windsor Line until all direct customer services have been transferred to the new distribution system. As described in part a) above, there will be an interruption of supply while the old service is disconnected and the new service is activated for each customer. For any construction damage to facilitate the installation and/or removal of either the pipeline or services, each customer will be asked to confirm they are satisfied with repairs to any damage.
- c) The current pipeline is planned to be decommissioned by November 1, 2021.
- d) The in-service date for the Project is November 1, 2020 and includes the activation of the new replacement pipeline and all stations.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 1/p.3

Exh B/Tab 1/Sch 4/p.1

Question:

The application states that the Project involves the installation of small plastic main extensions off the main pipeline within road allowance, to manage areas where deep drainages exist and the installation of services are significantly more costly or where land could not be obtained to install pressure regulating stations. Enbridge Gas proposes to install one of these main extensions in 2019 at an estimated cost of \$1.4M. Enbridge states that it is undertaking this work to assist in reducing the extensive workload relating to the main construction and to avoid 'time and space' concerns from the *Ontario Health and Safety Act*.

- a) Please confirm that Enbridge Gas intends to proceed with installation of the main extension referenced above in advance of the OEB's decision on this leave to construct application. If installation has commenced, please comment on the work that has been completed to date and when Enbridge Gas expects to finish this work.
 - b) Please comment on the implications on construction timelines and costs if the installation of this plastic main extension is not undertaken in Fall 2019.
 - c) Please confirm whether the cost of this main extension is included in the overall project costs of \$106.8M. If not, please explain how Enbridge Gas intends to finance this cost.
-

Response:

- a) As noted in the leave to construct application, the plan was to construct some of the plastic main extensions this year. Due to a delay in obtaining municipal consent, the work is now expected to be completed in 2020.
- b) Deferring the construction of these plans from this fall to 2020 will have no impact on the overall project schedule. The cost of deferring this work will result in an approximate 3% increase to the installation of this plastic infrastructure due to the contractor's increased labour cost through inflation.
- c) Confirmed. The cost for all plastic main extensions is included in the overall project cost of \$106.8 million.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 4/p.1

Exh C/Tab 4/Sch 1/p.1

Question:

The application states that overall costs of the Project are approximately \$106.8M, which includes the cost of the mainline of \$77.4M, and ancillary facilities (i.e. stations, services) of \$15.3M and indirect overheads of \$14.1M. Enbridge Gas states that it is not seeking approval for the costs of the ancillary facilities but has included these costs in the total Project cost for completeness.

Enbridge also states that a Discounted Cash Flow (DCF) report has not been completed as the Project is underpinned by the integrity requirements. Enbridge expects to recover the costs of the Project through an Incremental Capital Module (ICM) request in its 2020 rates application.

- a) Please provide an estimate of the costs of consultation for the Project. Please confirm whether consultation costs have been included in the total estimated costs of the Project. If this is not included in the Project costs, please explain how Enbridge Gas intends to fund the costs of consultation.
- b) Please provide a detailed rationale for not completing a DCF analysis report for projects underpinned by the integrity requirements. Please refer to the approved current cost recovery regime and compare to the approach to cost recovery for system expansion projects.

- c) Please provide comparable replacement projects that Enbridge Gas has completed in the past and that were approved by the OEB. Please provide a breakdown of the costs for these projects.
 - d) Please confirm whether this project is included in Enbridge Gas' Utility System Plan and Asset Management Plan that has been approved by the OEB.
-

Response:

- a) Consultation costs have been included as part of the overall Project budget. Areas where consultation funds have been allocated include engineering, environment, archeology, indigenous engagement as well as the cost of external consultants. The costs of consultation for the Project is approximately \$4 million.
- b) A DCF analysis as required in E.B.O. 134 and E.B.O. 188 is used to assess the financial feasibility of projects that serve to expand Enbridge Gas' natural gas system. An integrity project does not expand the natural gas system but replaces existing capacity. In the OEB Staff Submission for the 2018 Sudbury Replacement Project this rationale for not conducting an economic analysis was accepted.¹

The approved current cost recovery regime is the Incremental Capital Module ("ICM") as approved in EB-2017-0306/EB-2017-0307. The ICM mechanism makes no distinction between approaches to cost recovery of integrity projects versus system expansion projects.

- c) Please see part a) of the Board Staff.3 interrogatory response from the EB-2017-0180 proceeding, reproduced as Attachment 1.

¹ EB-2017-0180, 2018 Sudbury Replacement Project, OEB Staff Submission, Page 4.

d) Confirmed. The Windsor Line Replacement is included in the Utility System Plan and Asset Management Plan that were filed as part of the Enbridge Gas 2019 Rates application (EB-2018-0305). To clarify, the OEB does not approve the Utility System Plan and Asset Management Plan as specified in the question. Rather, as stated at page 19 of the OEB's EB-2018-0305 Decision and Order (dated September 12, 2019), *"The OEB finds the USP and AMPs acceptable for the purpose of considering the ICM funding requests, ..."*

UNION GAS LIMITED

Answers to Interrogatories from Board Staff

Interrogatory # 3

Ref: Evidence page 7, paragraph 32, pages 7-8, paragraphs 31-32: "Project Cost and Economics"

Preamble:

Union Gas estimated the total capital costs for the Project at \$74M. Union Gas stated that the incremental estimated cost of upsizing the pipeline from 10 inch to 12 inch diameter is \$1.5 M. Union Gas did not complete a Discounted Cash Flow (DCF) analysis for the Project, explaining that this Project is needed to address primarily the integrity issues and that the cost of the upsizing is not significant. Union Gas also explained that the upsize will provide incremental capacity for new, anticipated contracts (not acquired at this time). Union Gas also indicated that the increase in pipeline size will decrease the pipeline maintenance costs.

Questions:

- a) Please provide a breakdown of capital costs for comparable projects currently in-service and recently approved by the OEB.
- b) Please indicate the timing and the method for recovery of the construction costs for the Project.
- c) Is the estimate of \$ 1.5 M incremental cost based on the assumption that all costs (except materials) will be the same regardless of the difference in diameter of the replacement pipeline?
- d) Please discuss if the increased size of the replacement pipeline affects the requirements for new easements?
- e) Please explain the approach to recovering the of \$1.5 M estimated costs associated with upsizing the pipeline.
- f) Given that the considerable length of the existing pipeline in the rest of the Sudbury System will still be 10 inch diameter; does Union expect a significant decrease in maintenance costs from the Project? What is the estimated reduction in maintenance cost resulting from the Project?

Response:

a)

Case #	Project name	Length	Diameter	Cost	Cost /meter
EB-2015-0042	Sudbury NPS 10 Replacement Project	.7 Km	NPS 12	\$ 2.0 M	\$2857.00
EB-2016-0122	2016 Sudbury Replacement Project	.85 Km	NPS 12	\$ 2.2 M	\$ 2588.00
EB-2016-0222	Sudbury Maley Replacement Project	2.8 Km	NPS 12	\$ 6.3 M	\$ 2250.00
Eb-2017-0180	2018 Sudbury Replacement Project	20 Km	NPS 12	\$ 74 M	\$ 3700.00*

*Variations in cost per metre are significantly influenced by specific project scope parameters. The 2018 Sudbury Replacement Project has large proportions of rock excavation, wetland management, a specialized Cathodic Protection design and bypass installations, which are all costly activities that are not present to the same extent or not present at all in the previously approved OEB projects as indicated in the table. It is the influence of this construction scope that has increased the cost per metre for the 2018 Sudbury Replacement Project.

- b) Union will be seeking cost recovery of the Sudbury Replacement Project as part of its 2019 rates application.
- c) No, the estimate of \$1.5 M incremental cost to install a NPS 12 over a NPS 10 considers both the material and contractor costs for these specific diameter pipelines.
- d) Union is able to construct the Proposed Facilities in the existing easement. The increased size of the new pipeline does not require the existing easement to be enlarged.
- e) Union will be seeking cost recovery of the Sudbury Replacement Project as part of its 2019 rates application.

- f) The length of the NPS 10 pipeline portion of the Sudbury Transmission system is longer than the proposed replacement but it is this portion of the NPS 10 Sudbury Transmission system that is experiencing a concentration of integrity issues driven by the unique localized terrain features and localized influences from the mining activities in the Sudbury Basin. The replaced pipeline section will remove known integrity issues eliminating the need to repair the existing pipeline. The current forecast for managing known integrity concerns in this section of the Sudbury transmission system is \$8-\$10 million over the next several years. Replacing the current pipeline will also address future integrity concerns that over time will require additional repairs and future maintenance expenditures as the current pipeline continues to experience external corrosion. Having a single diameter NPS 12 pipeline will improve the effectiveness of future inline inspections.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh C/Tab 3/Sch 1/ pp.18-20, p.24

Question:

One of the alternatives presented by Enbridge Gas is the replacement of the entire Windsor Line, including the Remaining Pipeline, i.e. the section of the pipeline not part of the replacement in the proposed Project. Enbridge Gas estimates that expanding the scope of work, under this alternative results in significant cost increases, in excess of \$110 million. In Enbridge Gas' view, the incremental capacity will be underutilized. Enbridge Gas also submits that the Remaining Pipeline has decreased integrity concerns as it has not recently exhibited any major leak history and has no active leaks as well as having an adequate depth of cover.

Enbridge Gas states that the Remaining Pipeline will be replaced in phases alongside the municipal road work by the City of Windsor.

- a) Please indicate when Enbridge Gas anticipates having to replace the Remaining Pipeline based on current inspection history of the Remaining Pipeline and experiences with leaks on the Windsor Line.
- b) If Enbridge Gas were to replace the entire Windsor Line, please indicate when Enbridge Gas expects the increased capacity of the Remaining Pipeline portion to be sufficiently utilized.
- c) Please confirm whether Enbridge Gas will require leave to construct to undertake the phased replacement work for the Remaining Pipeline

- d) Please provide cost estimates of each of these phases of work that Enbridge Gas anticipates for the Remaining Pipeline portion.
-

Response:

- a) There is currently no plan to replace the Remaining Pipeline as there have been no leakage, depth or other drivers to warrant review in this section.
- b) Please see the response to part a) above.
- c) It is anticipated that Enbridge Gas will require leave to construct approval to replace the remaining section of the Windsor Line.
- d) It is not possible to accurately forecast the cost to replace the remaining portion of the Windsor Line as the scope of the replacement is not yet known.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 6/p.1

Question:

Enbridge Gas states that its Environmental Report was provided to the Ontario Pipeline Coordinating Committee (OPCC) on July 22, 2019. Enbridge Gas indicates that it has consulted with various agencies, municipalities, First Nations and landowners along the proposed Project route.

- a) Please file a summary of comments and concerns received from the public consultation and OPCC review. Please include Enbridge Gas' responses and actions to address the issues and concerns.
-

Response:

- a) The OPCC Review Summary is filed with the Board and parties along with these interrogatory responses. This document will update Exhibit C, Tab 6, Schedule 2.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 6/p.3

Environmental Report, Appendix G

Question:

Enbridge Gas states that a Stage 1 Archaeological Assessment (AA) was completed by Stantec Consulting Inc. and that the Stage 1 AA determined that a Stage 2 AA will be required. Enbridge Gas proposes to complete the majority of the AAs during the 2019 field season with any remaining assessments to be completed during spring 2020.

- a) Please identify the date on which Enbridge Gas submitted the Stage 1 AA to the Ministry of Tourism, Culture and Sport (MTCS).
- b) Please provide an update on status of the MTCS' review of the Stage 1 AA and when Enbridge Gas expects a response from the MTCS with respect to the Stage 1 AA.
- c) Please provide an update on the status of Enbridge Gas' Stage 2 AA, indicating if Enbridge Gas has submitted its Stage 2 AA to the MTCS, whether the Stage 2 AA field work is underway and when this will be completed.
- d) Please indicate when Enbridge Gas anticipates a response from the MTCS with respect to the Stage 2 AA.
- e) Please indicate the latest timeline by which Enbridge Gas must receive approval from the MTCS to start the Project on time.

- f) Please comment on the implications for the Project if Enbridge Gas is unable to receive approval from the MTCS before the timeline specified in part (e).
-

Response:

- a) The Stage 1 AA report was submitted to the MTCS on March 11, 2019.
- b) The MTCS reviewed the Stage 1 AA report and provided a compliant letter on April 12, 2019. Please see Attachment 1 for a copy of the MTCS compliant letter for the Stage 1 AA report.
- c) Stage 2 AA for the project began in June 2019 and field work is anticipated to be complete by November 2019. Submission of the Stage 2 AA report to the MTCS is anticipated in December 2019.
- d) Once the Stage 2 AA report is submitted to the MTCS, EGI anticipate a review of the report within 30 business days. Assuming the Stage 2 AA report is submitted in December 2019, as anticipated in part (c) above, EGI anticipate a MTCS review of the report in January/February 2020.
- e) The anticipated construction start date is March 2020. The MTCS is not an approval authority and does not “approve” archaeological reports. Rather, the MTCS reviews archaeological reports to determine if the work has been completed in accordance with their standards and guidelines, and provide a compliant letter to that effect. Based on anticipated timelines noted in part (c) and (d), EGI anticipate the MTCS will provide a compliant letter pertaining to the Stage 2 AA work prior to the anticipated construction start date of spring 2020.

- f) If the MTCS compliant letter for the Stage 2 AA report is not received in advance of the construction start date, Enbridge may consider initiating construction in areas that have been previously assessed or retain low to no archaeological potential in accordance to MTCS' 2011 *standards and Guidelines for Consultant Archaeologists*. As indicated in part (b), the Stage 1 AA report was deemed compliant by MTCS on April 12, 2019.

As indicated in Exhibit B, Tab 1, Schedule 6, paragraph 6, Enbridge Gas "will also continue to work with agencies as well as municipalities throughout the projects area to secure any necessary permits and authorizations prior to construction."

Ministry of Tourism, Culture and Sport

Archaeology Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel.: (416) 314-2120
Email: Andrea.Williams@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes d'archéologie
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Tél. : (416) 314-2120
Email: Andrea.Williams@ontario.ca



Apr 12, 2019

Parker S. Dickson (P256)
Stantec Consulting
171 Queens London ON N6A 5J7

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "Stage 1 Archaeological Assessment: Union Gas Windsor Line Replacement, Parts of Various Lots and Concessions, Multiple Lower Tier Municipalities, Essex County and the Municipality of Chatham-Kent, Ontario ", Dated Mar 11, 2019, Filed with MTCS Toronto Office on Mar 15, 2019, MTCS Project Information Form Number P256-0552-2018, MTCS File Number 0009900

Dear Mr. Dickson:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Figures 20.1 through 20.20 of the above titled report and recommends the following:

Stantec was retained by Union Gas to complete a Stage 1 archaeological assessment for the area to be impacted by the proposed Windsor Line Replacement Project. The Stage 1 archaeological assessment of the study area for the Project, involving background research and a property inspection, determined that much of the area retains potential for the identification and documentation of archaeological resources. In accordance with Section 1.3.1 and Section 7.7.4 of the MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), Stage 2 archaeological assessment is required for any portion of the Project's anticipated construction easement which impacts an area of archaeological potential (Figure 20).

The objective of the Stage 2 archaeological assessment will be to document any archaeological resources within the portions of the study area still retaining archaeological potential and to determine whether these archaeological resources require further assessment. The Stage 2 archaeological assessment will include the systematic walking of open ploughed fields at five metre intervals as outlined in Section 2.1.1 of the

MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). The MTCS standards further require that all agricultural land, both active and inactive, be recently ploughed and sufficiently weathered to improve the visibility of archaeological resources. Ploughing must be deep enough to provide total topsoil exposure, but not deeper than previous ploughing, and must provide at least 80% ground surface visibility.

Moreover, for areas inaccessible for ploughing, the Stage 2 archaeological assessment will include a test pit survey at five metre intervals as outlined in Section 2.1.2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). The MTCS standards require that each test pit be approximately 30 centimetres in diameter, excavated to at least five centimetres in to subsoil, and have all soil screened through six millimetre hardware cloth to facilitate the recovery of any cultural material that may be present. Prior to backfilling, each test pit will be examined for stratigraphy, cultural features, or evidence of fill.

In addition to the above, areas along the various roadways associated with the Project were examined as part of the property inspection and disturbances, such as ditching, were evident. However, the exact proposed Project impacts were not known at the time of the property inspection and so, the specific roadways and ROWs will require further archaeological assessment in accordance with Section 2.1.8 of Standard 2 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). Any portion of the ROW within agricultural or accessible land may require ploughing and pedestrian survey in accordance with Section 2.1.1 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011) noted above, depending on the specific Project impact. Confirmation of disturbance will also be required for any anticipated Project impact to other existing features (i.e., existing roads, railways, and previously constructed wind farm infrastructure; as well as farm complexes, residences, and any other existing feature that was not specifically examined during the property inspection). Areas requiring further testing in this manner have been illustrated on Figure 20 as "Area of Modern Disturbance - Archaeological Potential to be Confirmed During Stage 2 Assessment".

If the archaeological field team determines any lands to be low and wet, steeply sloped, or disturbed during the course of the Stage 2 field work, those areas will not require survey, but will be photographically documented in accordance with Section 2.1 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011).

In addition to the above, the Stage 1 archaeological assessment determined that there are areas of previously surveyed lands within the study area which retain low to no archaeological potential (TMHC 2007, 2009; ARA 2011, Golder 2015). In accordance with Section 1.3.2 and Section 7.7.4 of the MTCS' 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011), Stage 2 archaeological assessment is not required for any portion of the Project's anticipated construction easement which impacts a previously surveyed area (Figure 20).

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Andrea Williams
Archaeology Review Officer

cc. Archaeology Licensing Officer
Ryan Park, Union Gas Limited
Zora Crnojacki, Ontario Energy Board

¹ *In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.*

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 6/p.2
Exh B/Tab 1/Sch 7/p.1

Question:

Enbridge Gas states that it will continue to work with agencies as well as municipalities throughout the Project area to secure any necessary permits and authorizations prior to construction.

Enbridge Gas proposes to upgrade five stations along the route of the proposed pipeline, which requires the installation of piping facilities on private property. Enbridge Gas plans to purchase land for these station sites.

- a) Please provide a table that lists all permits and approvals that are required to complete the construction of the Project, including a description of the purpose or need for each permit and the status of each permit/approval application. Please provide dates for when Enbridge Gas expects to receive any outstanding permits/approvals required, and what impact and delays in receiving these might have on the Project schedule.
- b) Please provide an update on the negotiations with private landowners for the purchase of lands required for the project, including any concerns that have been expressed by landowners with respect to the proposed Project. Please comment on when Enbridge Gas expects these agreements to be executed.
- c) Please provide an update on the status of the temporary land use (TLU) rights required for the Project, including any concerns that have been expressed by landowners. Please indicate the number of TLU rights are required.

- d) Please discuss any concerns that Enbridge Gas has with respect to obtaining any of the required land rights and/or permits for the Project.
-

Response:

- a) Please see Attachment 1. Enbridge Gas does not anticipate any delays in obtaining any permits.
- b) A few of the landowners included on the Windsor Line Landowner List filed at Exhibit C, Tab 7, Schedule 2, did not agree to grant Enbridge Gas the necessary land rights. As a result, Enbridge Gas approached alternate landowners located within the vicinity of the Project to acquire the necessary rights. Options have been secured for all land purchases needed for the Project. There have been no further concerns expressed by landowners at this time. The updated Landowner List is filed with the Board and parties along with these interrogatory responses. This replaces the list filed at Exhibit C, Tab 7, Schedule 2. The names and addresses of landowners have been removed to safeguard landowner privacy.
- c) The list of temporary land rights has changed since the filing. The required temporary rights have changed as a result of further design reviews and an updated Landowner List as noted in part b) above. Negotiations are ongoing with 4 remaining landowners. No concerns have been raised about the Project at this time. A total of 28 properties have been identified for temporary land use. The revised Proposed Pipeline Location Map is filed with the Board and parties along with these interrogatory responses. This replaces the map filed at Exhibit C, Tab 7, Schedule 1. The revised map is not materially different from the original filed version. The names and addresses of landowners have also been removed to safeguard landowner privacy.
- d) All necessary land rights will be in place before construction begins.

WINDSOR PIPELINE REPLACEMENT PROJECT TRACKER NPS*6					
Agency	Type of Permit	Status	Details	Target Received by Date	Permit Received Date
Agency Permits					
Canadian Southern Railway	Crossing Agreement	Pending	Lakeshore - not an active rail	1-Feb-20	
Ministry of Transportation	Encroachment Permit (Pre-work)	Obtained	Pre-work for Boreholes	1-Feb-20	20-Sep-19
	Encroachment Permit	Pending	Highway 77	1-Feb-20	
	Building and Land Use	Pending	Station on Corner of Highway 77	1-Feb-20	
Plains Midstream	Crossing Agreement	Obtained	Three Plains Midstream Crossings	1-Feb-20	3-Oct-19
Municipal Permits					
Town of Tecumseh	Municipal Consent	Submitted		1-Feb-20	
	Crossing Agreement(s)	Submitted	County Road 46 (tie-in existing Windsor Line)	1-Feb-20	
			County Road 46 (outlet from station)		
			Concession Road 9		
			Concession Road 10 (Maidstone Measurement Station)		
			Concession Road 11		
			Concession Road 12		
			County Road 46		
			Manning Road South		
Middle Road (Old Hwy 14)					
Entrance Permit (Temporary)	Submitted		1-Feb-20		
Haul Route / TCP	Pending		1-Feb-20		
Tree Removal Letter	Pending		1-Feb-20		
Town of Lakeshore	Municipal Consent	Submitted		1-Feb-20	
	Crossing Agreement(s)	Submitted	Lakeshore Road 203	1-Feb-20	
			Naylor Side road (Hwy 23)		
			Lakeshore Road 209		
			Lakesore Road 217		
			County Road 46		
			Mullins Drive		
			Oriole Park Drive		
			Belle River Road		
			Myers Road		
			County Road 46		
			Lakeshore Road 231		
			French Line Road (Cty Rd 31)		
			Lakeshore Road 241		
			Rochester Townline Road		
			South Middle Road		
			Lakeshore Road 309		
			Highway 77 (MTO Road)		
			Gracey Side Road (Cty Rd 37)		
			Richardson Side Road		
			Lakeshore Road 309 (corner of Wheatley Road)		
			Wheatley Road (corner of Goodreau Line)		
	Crossing Agreement(s)	Submitted	Lakeshore Road 309 (9 open cut crossings)	1-Feb-20	
	Entrance Permit (Permanent)	Submitted	Lakeshore Rd.	1-Feb-20	
Entrance Permit (Temporary)	Submitted	All construction Accesses	1-Feb-20		
Haul Route / TCP	Pending		1-Mar-20		
Tree Removal Letter	Pending		1-Feb-20		
Municipality of Chatham Kent	Municipal Consent	Submitted		1-Feb-20	
	Crossing Agreement(s)	Submitted	Quinn Line	1-Feb-20	
			Carless Road		
			Herman Line		
			Coatsworth Road		
			Kemp Line		
			Cox Line		
			King and Wittle Road		
			Bowers Line		
			Donais Line		
			Glenwood Line		
			Goodreau Line		
			Simpson Line		
			Radmore Road		
			Port Road		
	Crossing Agreement(s)	Pending	Goodreau Line (5 open cut crossings)	1-Feb-20	
	Entrance Permit (Temporary)	Submitted		1-Feb-20	
	Entrance Permit (Permanent)	Submitted		1-Feb-20	
	Haul Route / TCP	Pending		1-Mar-20	
Tree Removal Letter	Pending		1-Feb-20		
County of Essex	Municipal Consent	Submitted		1-Feb-20	
	Crossing Agreement(s)	Submitted		1-Feb-20	
	Entrance Permit (Temporary)	Submitted		1-Feb-20	
	Entrance Permit (Permanent)	Submitted		1-Feb-20	
	Haul Route / TCP	Pending		1-Feb-20	
	Tree Removal Letter	Pending		1-Feb-20	
Environmental Permits					
Ministry of Environment Conservation and Parks	Permit to Take Water / EASR (General Dewatering)	Pending		1-Feb-20	
	ESA / Letter of Advice	Submitted		1-Feb-20	
Ministry of Tourism, Culture, and Sport	Archaeology Stage 1	Obtained		NA	NA
	Archaeology Stage 2	Pending	Stage 2 Report	1-Feb-20	
	Archaeology Stage 3	As required	Stage 3 Report	1-Feb-20	
	Build Heritage Acceptance	Obtained	Build Heritage Assessment Report	1-Feb-20	6-Sep-19
Essex Region Conservation Authority (ERCA)	Services Permit	Submitted		1-Feb-20	
	Crossing Agreement		SC1 - Hurley Relief Drain	1-Feb-20	
			SC2 - Hurley Relief Drain		
			SC3 - Washbrook Drain		
			SC4 - 9th Concession Drain		
			SC5 - Little River Drain		
			SC6 - Sullivan Creek Drain		
			SC7 - Gzowski Drain		
			SC8 - Pike Creek Drain		
			SC9 - West Townline Municipal Drain		
			SC10 - Doyle Drain		
			SC11 - 8th Concession Centreline Drain		
			SC12 - Puce River Drain		
			SC13 - 4th Concession Drain		
			SC14 - Middle Road Municipal Drain		
			SC15 - Taylor Outlet Drain		
			SC16- Belle River Drain		
			SC17 - Duck Creek		
			SC18 - Moison Creek		
			SC19- Ruscom Village Municipal Drain		
			SC20- Ruscom River		
			SC21 - Alexander Municipal Drain		
Lower Thames Valley Conservation Authority	Services Permits	Submitted	SC22 - Malden Road Drain Outlet	1-Feb-20	
	Crossing Agreement		SC23 - Malden Road Municipal Drain Outlet		
			SC24 - Big Creek Municipal Drain - West		
			SC25 - Robb-Dales Municipal Drain		
			SC26 -Plouff Municipal Drain		
			SC27- 18/19 Sideroad Hill Municipal Drain		
			SC28 - East Branch of Big Creek Drain		
			SC29 - Broullett Donais Municipal Drain		
			SC30 - Unknown Drain		
			SC31 - Government Drain		
Fisheries and Oceans Canada	LOA / Authorization	Pending		1-Feb-20	
	Outstanding				
	Received				

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh B/Tab 1/Sch 8/Attachment 2, pp.1-3

Question:

Enbridge Gas' evidence indicates that on September 10, 2018, it received a letter from the Ministry of Energy, Northern Development and Mines (MENDM) indicating that Enbridge Gas had been delegated the procedural aspects of consultation for the Project. On August 9, 2019, Enbridge Gas provided its Indigenous Consultation Report to the MENDM, requesting that the MENDM determine if the procedural aspects of the duty to consult for the Project are sufficient.

- a) Please provide an update on Indigenous consultation activities since August 9, 2019 and identify any concerns and issues raised in the consultation process and steps that Enbridge Gas has committed to undertake to address any concerns or issues.
 - b) Please update the evidence with any correspondence between the MENDM and Enbridge Gas after August 9, 2019, regarding the MENDM's review of Enbridge Gas' consultation activities.
 - c) Please indicate when Enbridge Gas expects to receive the consultation sufficiency letter from the MENDM.
-

Response:

- a) On July 10, 2019, a meeting was held between Enbridge Gas and representatives from Chippewas of Kettle and Stony Point First Nations (CKSPFN).

As part of this meeting, the Enbridge Gas representatives explained the location and purpose of the Project:

- the line was built in the 1940s and Enbridge Gas is applying to the Ontario Energy Board to replace the line. The existing line is a combination of 8 and 10 inch lines that would be replaced with a 6-inch high pressure line.
- The planned construction date is 2020.

The Enbridge Gas representatives explained Archaeology and Environmental surveys and the mitigation that was involved. The Enbridge Gas representatives advised that as the Project is within the road allowance, minimal archaeology is required; Enbridge Gas also invited CKSPFN monitors to attend.

The Enbridge Gas representatives explained the process of removing/replacing pipe and the steps that need to be taken to complete a pipe replacement.

An update on the consultation activities is provided in Attachment 1 to this response.

- b) The correspondence with the MENDM is provided in Attachment 2 to this response.
- c) The MENDM has not yet issued the consultation sufficiency letter for the Project. Enbridge Gas submitted the consultation report to the MENDM on August 9, 2019. Enbridge Gas will file the letter of sufficiency when it is received from the MENDM. As in past applications before the OEB (the Scugog Island Community Expansion Project, EB-2017-0261 and Georgian Sands Pipeline Project, EB-2018-0226), Enbridge Gas is seeking approval of the Windsor Line leave to construct application conditional on the OEB receiving the MENDM's letter of sufficiency.

CKSPFN Questions	Enbridge Gas Responses
The CKSPFN representative asked if Enbridge Gas would be purchasing land to complete the Project.	Advised that a parcel of land was purchased and it will be used for a new regulation station that will tie the new line into the existing line.
The CKSPN representative asked about watercourses and how they are handled.	Advised that Enbridge Gas uses the dam and pump process and explained how the process works.
The CKSPN representative asked about Species at Risk, particularly the birds.	Discussed the mitigation that was done to protect the birds identified in the area, particularly the Meadowlark and Bobolink birds.
The CKSPN representatives asked about the Fox Snake fencing that was being used.	Provided details on the mitigation for Fox Snakes, ensuring that a higher fencing was used to protect them.
The CKSPN representative asked about the distance from the existing line to the new line being installed	<p>Advised that he would take this away. The Enbridge Gas representative provided the information to CKSPFN on August 14 in an email.</p> <p>The Enbridge Gas representative advised that at this point Enbridge Gas is targeting a separation of a minimum of 2 metres between the two pipelines to ensure the safe continuous operation of the existing pipeline while the new line is installed. (see email below)</p>
The CKSPN representative asked about what "Legacy" meant.	<p>Advised that he would take this away. The Enbridge Gas representative provided the information to CKSPFN on August 14 in an email.</p> <p>The Enbridge Gas representative advised that the word "Legacy" has two meanings in our current work environment regarding natural gas. The first definition of Legacy when speaking about construction refers to existing pipe in the ground that is inactive. The second definition of Legacy refers to the Union Gas and Enbridge Gas Distribution (EGD) merging to form one company - Enbridge Gas Inc.</p>

	<p>The two previous entities are now referred to as Legacy Union Gas and Legacy EGD for purposes of identification of assets and work product. (see email below)</p>
<p>The CKSPN representative advised that they were having an issue with Stantec, the environmental agency working on behalf of Enbridge.</p>	<p>Advised that he would take this away and speak with Stantec on their behalf. The Enbridge Gas representative provided the information to CKSPFN on August 14 in an email.</p> <p>The Enbridge representative advised that they spoke with Stantec and a new agreement that removes that requirement in concern would be forwarded to CKSPFN. (see email below)</p>

From: [Ken McCorkle](#)
To: [Valerie George](#)
Cc: [Lauren Whitwham](#)
Subject: Windsor Replacement Project
Date: August-14-19 2:30:26 PM

Hello Valerie:

First let me say thank you for your kindness and respect shown in our last consultation meeting regarding the Windsor Replacement project. Your committee asked the following questions that I needed to follow up on. Please see the questions asked and my follow up:

1) What is the distance from the existing line to the new line being installed?

We have spoken with the design engineers regarding the separation between the existing nps 10 Windsor Line and the new nps 6 pipeline. At this point we are targeting a separation of a minimum of 2m between the two pipelines to ensure the safe continuous operation of the existing pipeline while the new line is installed.

2) What do you mean by the word Legacy?

The word Legacy has two meanings in our current work environment regarding Natural Gas. The first definition of Legacy when speaking about construction refers to existing pipe in the ground that is inactive. The second definition of Legacy refers to the Union Gas and Enbridge Gas Distribution merging to form one company called Enbridge Gas Inc.. Therefore the two previous entities are now referred to as Legacy Union and Legacy EGD for purposes of identification of assets and work product.

3) Stantec has requested proof of Driver's License and personal insurance for First Nation monitors. Can this be modified as the First Nation sees this as a violation of rights?

I spoke with Stantec and they will forward you a new agreement that removes that requirement.

Thank you for your questions and if you require any further information please do not hesitate to contact me at your convenience. Regarding our last discussion I will wait to hear from you to schedule a meeting in late September or early October for further discussion.

Miigwech,
Ken

From: Joel Denomy <Joel.Denomy@enbridge.com>
Sent: August 8, 2019 10:30 AM
To: McCabe, Shannon (ENDM) <Shannon.McCabe@ontario.ca>; Sharkey, Emma (ENDM) <Emma.Sharkey@ontario.ca>
Cc: Rakesh Torul <Rakesh.Torul@enbridge.com>
Subject: Windsor Line Replacement Project

Hi Shannon/Emma,

Apologize for the short notice on this one but wanted to give you a heads up that EGI will be filing with the Board an application for leave to construct the above noted project tomorrow. I will forward the ICR for this project once the application is filed with the Board. At this point I think provision of a sufficiency assessment from the Ministry by mid/late-September should line up with the interrogatory phase of the application. The Board will ask if a sufficiency letter has been provided by the Ministry and we can update them then. I note that Shereen was originally assigned to this file. Can you let me know who will be working on the file now? Thanks,

From: McCabe, Shannon (ENDM) <Shannon.McCabe@ontario.ca>
Sent: Friday, August 9, 2019 9:52 AM
To: Joel Denomy <Joel.Denomy@enbridge.com>
Cc: Rakesh Torul <Rakesh.Torul@enbridge.com>; Lazakis, Chloe (ENDM) <Chloe.Lazakis@ontario.ca>; Sharkey, Emma (ENDM) <Emma.Sharkey@ontario.ca>
Subject: [External] RE: Windsor Line Replacement Project

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Joel,

Thanks for the heads up. Chloe Lazakis, copied here, will be taking this one on.

Have a great weekend,
Shannon

From: Joel Denomy

Sent: Friday, August 9, 2019 5:26 PM

To: Chloe.Lazakis@Ontario.ca

Cc: Rakesh Torul <rakesh.torul@enbridge.com>; Ken McCorkle <KMccorkle@uniongas.com>; Lauren Whitwham <LWhitwham@uniongas.com>; McCabe, Shannon (ENERGY) (Shannon.McCabe@ontario.ca) <Shannon.McCabe@ontario.ca>

Subject: Windsor Line Replacement Project

Hi Chloe,

Today Enbridge Gas Inc. ("Enbridge Gas") filed with the Ontario Energy Board, an application for leave to construct the Windsor Line Replacement Project (the "Project"). Included in the application for leave to construct is the indigenous consultation report for the Project which I have attached for your review. Enbridge Gas is requesting the Ministry of Energy, Northern Development and Mines provide its assessment of the adequacy of Enbridge Gas' Indigenous consultations for the Project by mid-September 2019. Please contact Rakesh Torul should you have any questions related to the regulatory aspects of the leave to construct application and Ken McCorkle if you have any questions regarding the Indigenous consultation aspects of the Project.

Regards,

Joel Denomy, M.A. CFA

Technical Manager, Regulatory Applications

Regulatory Affairs

From: Lazakis, Chloe (ENDM) <Chloe.Lazakis@ontario.ca>

Sent: Monday, August 12, 2019 9:11 AM

To: Joel Denomy <Joel.Denomy@enbridge.com>

Cc: Rakesh Torul <Rakesh.Torul@enbridge.com>; Ken McCorkle <KMcCorkle@uniongas.com>; Lauren Whitwham <LWhitwham@uniongas.com>; McCabe, Shannon (ENDM) <Shannon.McCabe@ontario.ca>

Subject: [External] RE: Windsor Line Replacement Project

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Joel et al,

Thank you for notifying me and for clarifying the correct contacts for any questions I may have. I will work towards the requested mid-September timeline. Please feel free to reach out anytime with questions or comments and will do the same.

Have a great week!

Chloe

ENBRIDGE GAS INC.
Answer to Interrogatory from
Board Staff (STAFF)

Reference: Exh A/Tab 2/ Sch 1/ pp.1-3

Question:

Enbridge Gas applied for leave to construct facilities under section 90(1) of the OEB Act.

- a) Please comment on the following draft conditions of approval proposed by OEB staff. If Enbridge does not agree to any of the draft conditions of approval noted below, please identify the specific conditions that Enbridge disagrees with and explain why. For conditions in respect of which Enbridge would like to recommend changes, please provide the proposed changes.

DRAFT

**Leave to Construct Conditions of Approval under Section 90 of the OEB Act
Enbridge Gas Inc. – EB-2019-0172**

1. Enbridge Gas Inc. (Enbridge Gas) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2019-0172 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.
(b) Enbridge Gas shall give the OEB notice in writing:
 - i. of the commencement of construction, at least ten days prior to the date construction commences;
 - ii. of the planned in-service date, at least ten days prior to the date the facilities go into service;

- iii. of the date on which construction was completed, no later than 10 days following the completion of construction; and
- iv. of the in-service date, no later than 10 days after the facilities go into service.

3. Enbridge Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.
4. Enbridge Gas shall advise the OEB of any proposed change in the project, including but not limited to changes in: OEB-approved construction or restoration procedures, the proposed route, construction schedule and cost, the necessary environmental assessments and approvals, and all other approvals, permits, licences, certificates and rights required to construct the proposed facilities. Except in an emergency, Enbridge Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.
5. Concurrent with the final monitoring report referred to in Condition 6(b), Enbridge Gas shall file a Post Construction Financial Report, which shall provide a variance analysis of project cost, schedule and scope compared to the estimates filed in this proceeding, including the extent to which the project contingency was utilized. Enbridge Gas shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge Gas proposes to start collecting revenues associated with the project, whichever is earlier.

6. Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:
 - (a) A post construction report, within three months of the in-service date, which shall:
 - i. provide a certification, by a senior executive of the company, of Enbridge Gas' adherence to Condition 1;
 - ii. describe any impacts and outstanding concerns identified during construction;
 - iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;
 - iv. include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and
 - v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.
 - (b) A final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:
 - i. provide a certification, by a senior executive of the company, of Enbridge Gas' adherence to Condition 3;
 - ii. describe the condition of any rehabilitated land;
 - iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;

- iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and
 - v. include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received; a description of the complaint; any actions taken to address the complaint; and the rationale for taking such actions.
7. Enbridge Gas shall designate one of its employees as project manager who will be responsible for the fulfillment of these conditions, and shall provide the employee's name and contact information to the OEB and to all the appropriate landowners, and shall clearly post the project manager's contact information in a prominent place at the construction site.

The OEB's designated representative for the purpose of these Conditions of Approval shall be the OEB's Manager of Natural Gas (or the Manager of any OEB successor department that oversees natural gas leave to construct applications).

Response:

Enbridge Gas has reviewed the draft conditions of approval proposed by Board Staff and agrees with the proposed draft conditions. All conditions set out by the Ontario Energy Board will be adhered to by Enbridge Gas.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit A, Tab 2, Schedule 1

Question:

- a) Does Enbridge plan to file an application for OEB approval of an ICM rate rider for this project?
 - b) If the answer is yes, would Enbridge proceed with this project if it does not obtain OEB approval for an ICM rate rider?
-

Response:

a) and b) Yes. Enbridge Gas is requesting ICM funding for the Project in its 2020 Rates application. Enbridge Gas will consider the OEB's 2020 Rates decision in its entirety in determining the impacts to its capital budget.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit B, Tab 1, Schedule 1, page 4

Question:

- a) Please explain the incentives that Enbridge has in place to ensure that capital projects are completed on time and on budget.
 - b) Are there any incentives for the project manager of this project to complete the project ahead of schedule or under budget? If the answer is yes, please describe the incentives. If the answer is no, please explain why not.
-

Response:

- a) Enbridge Gas does not have incentives in place to ensure that capital projects are completed on time and on budget.
- b) There are no incentives for the project manager to complete the Project ahead of schedule or under budget. Enbridge Gas is committed to the safe, reliable, cost effective and environmentally responsible provision of natural gas service to its customers. Optimal value is delivered through a sustainable investment plan that balances cost, risk and performance, which connects to the interests of the customers and stakeholders.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit C, Tab 4, Schedule 1, page 1

Question:

Please provide supporting information for the following cost estimates including back-up calculations and sources of data.

- a) Mainline Materials \$4,164,000
 - b) Stations Materials \$1,572,000
 - c) Services Materials \$133,000
 - d) Mainline Construction and Labour \$62,521,000
 - e) Stations Construction and Labour \$9,031,000
 - f) Services Construction and Labour \$2,515,000
 - g) Mainline Contingencies \$9,975,000
 - h) Stations Contingencies \$1,591,000
 - i) Services Contingencies \$397,000
 - j) Mainline Interest During Construction \$725,000
 - k) Stations Interest During Construction \$120,000
 - l) Services Interest During Construction \$0
 - m) Mainline Indirect Overhead \$11,729,000
 - n) Stations Indirect Overhead \$1,866,000
 - o) Services Indirect Overhead \$466,000
-

Response:

Please see Attachment 1 for the supporting costing information as requested.

TOTAL ESTIMATED PROJECT COSTS

Window Line Replacement	Mainline	Stations	Services	Total
Materials	\$4,164,000 This cost consists of : - the pipe mill quote for new NPS 6 pipe - mainline fittings, estimate based on recent vendor pricing - a scrap credit for the abandoned existing NPS 10	\$1,572,000 This includes the aggregated cost of all fittings in each station based on typical drawings and materials. Unit pricing is based on recent material purchases.	\$133,000 Based on standard material costs from sourced vendors.	\$5,869,000
Construction and Labour	\$62,521,000 Costs are based on vendor and contractor courtesy quotes. - contractor + construction risk items + change order and weather allowance = 48,688,000\$ - direct internal project expenses and wages = 465,000\$ - external labour / 3rd party vendors = 12,068,000\$ - permanent easement, temporary land use = 1,300,000\$	\$9,031,000 Costs are based on vendor and contractor courtesy quotes. - contractor + construction risk items + change order and weather allowance = 7,537,000\$ - direct internal project expenses and wages = 41,000\$ - external labour / 3rd party vendors = 953,000\$ - land purchase, and temporary land use = 500,000\$	\$2,515,000 Average cost per meter for labour is based on most recent average for District work. Assumes the local alliance partner will complete this work. This is an all in cost.	\$74,067,000
Contingencies	\$9,975,000 Contingency is 15% per class 4 estimate. Has been our standard to file with 15% contingency.	\$1,591,000 Contingency is 15% per class 4 estimate. Has been our standard to file with 15% contingency.	\$397,000 Contingency is 15% per class 4 estimate. Has been our standard to file with 15% contingency.	\$11,963,000
Interest During Construction	\$725,000 Calculated using estimated cashflow with interest rate of 3.39%, the OEB prescribed interest rate in effect at the time the estimate was completed.	\$120,000 Calculated using estimated cashflow with interest rate of 3.39%, the OEB prescribed interest rate in effect at the time the estimate was completed.	\$0 No IDC as assumed service work will occur after project is in service.	\$845,000
Estimated Incremental Project Capital Costs	\$77,385,000	\$12,314,000	\$3,045,000	\$92,744,000
Indirect Overhead	\$11,729,000 Calculated using indirect overhead rate of 15% on materials, construction and labour, and contingencies estimates. [Refer to EP-6 once response is complete]	\$1,866,000 Calculated using indirect overhead rate of 15% on materials, construction and labour, and contingencies estimates. [Refer to EP-6 once response is complete]	\$466,000 Calculated using indirect overhead rate of 15% on materials, construction and labour, and contingencies estimates. [Refer to EP-6 once response is complete]	\$14,061,000
Total Estimated Project Capital Costs	\$89,114,000	\$14,180,000	\$3,511,000	\$106,805,000

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit C, Tab 4, Schedule 1, page 1

Question:

4) Please file the policy for the release of contingency funds. If no such policy exists please explain the practice for the release of contingency funds.

Response:

Enbridge Gas does not have a policy for the release of contingency funds. Rather, as items become known and discrete, EGI will determine whether the contingency funds need to be reallocated to these items.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit C, Tab 4, Schedule 1, page 1

Question:

5) The cost estimate does not include the following items: engineering, land, and regulatory costs. Are they included in other categories of costs? If they are, please explain where and provide estimates. If they are not, please explain why not.

Response:

These costs are captured under the Construction and Labour category. They are as follows:

Engineering:	\$ 1,547,000
Land:	\$ 1,800,000
Regulatory:	\$ 450,000

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit C, Tab 4, Schedule 1, page 1

Question:

- a) What costs are included in Indirect Overhead?
 - b) Why is there no Direct Overhead?
-

Response:

- a) Indirect overhead allocations ("OH") are costs that support the delivery of capital projects but cannot be tied directly to a particular project. It is the capitalization of support services such as HR, IT, Finance, Legal, etc. and capital support (Engineering, Operations)
- b) Union applies burden rates to company labour and materials costs. These burdens are included in the line items for Construction & Labour and Materials. Labour burdens include pension and benefits costs and material burdens include warehouse overheads.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Energy Probe (EP)

Reference: Exhibit C, Tab 5, Schedule 1

Question:

- a) When will the project be completed and in service?
 - b) When will the final close-out of project costs to rate base take place?
 - c) When will Enbridge file its post-construction financial report and will the report provide explanations of variances between actual and estimated costs as proposed by OEB Staff?
 - d) Will the post-construction financial report be filed on the public record under the EB-2019-0172 docket?
-

Response:

- a) The planned in-service date for the new NPS 6 replacement pipeline is November 1, 2020.
- b) The final close-out of project costs to rate base will take place when the project is completed and placed into service.
- c) Enbridge Gas will file a copy of its post-construction financial report in accordance with the Conditions of Approval specific to the Project. Post-construction financial reports show the difference between the actual costs and the costs as filed with the OEB, with explanations provided for significant variances.
- d) Yes. Enbridge Gas files items related to conditions of approval on the RESS under the docket number for each proceeding.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit B / Tab 1 / Sch. 1 / pg. 2

Question:

EGL's evidence states: "*There are a number of other factors related to its condition that are equally as relevant when considering the need for replacement. Such factors include:*

- *History of leakage with significant costs to repair*

We would like to understand better this history.

- 1) Please provide recent repair history including amount of time between detection, category and repair and cost.
-

Response:

Please see Exhibit I.STAFF.2 b) and c).

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit B / Tab 1 / Sch. 1 / pg. 3

Question:

Preamble: We would like to understand better how EGI is mitigating any risks associated with the higher operating pressure.

Are there or will there be any sources of moisture into the new 3450kPa pipe (e.g., local production, etc.? Please explain.

Response:

The proposed Windsor Line Replacement Pipeline will be supplied by the Panhandle Transmission System, which will deliver pipeline quality gas to the proposed pipeline. EGI anticipates no change in moisture content on this system as there is no change in source flow.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit B / Tab 1 / Sch. 1 / pg. 3

Preamble: We would like to understand better how EGI is mitigating any risks associated with the higher operating pressure.

Question:

3) How will EGI mitigate risk of freeze off at the initial pressure cut?

Response:

There were five stations identified to be at risk of freeze off due to their future loads and the new higher MOP. Heating systems will be included in the rebuild of these five stations.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit B / Tab 1 / Sch. 5 / pg. 1

Preamble: We would like to understand better the scale and scope of this project in relation to the capital budget of the legacy Union territory.

Question:

Please provide:

- a) The replacement capital budget for 2020
 - i. The top 5 projects by project estimate

 - b) The actual replacement capital for the years 2014-2018
 - i. The top 5 projects by actual expenditures for each year
-

Response:

- a) Replacement capital is captured in the Asset Management Plan under the categories of Municipal Replacement and General Mains. The forecasted capital expenditure for 2020 is:

	2020
Municipal Replacement	23.1
General Mains	2.4
Vintage Pipe Replacement	77.9
Total Replacement Capital	103.4

- i) On a budget basis, the categories of Municipal Main Replacement and General Main Replacement are created at an aggregate level, a more detailed breakdown is not available. The top 3 projects/categories for 2020 by order of magnitude are:

Project	Direct Capital
Windsor Line	77.9
Municipal Main Replacements	23.1
General Main Replacements	2.4

- b) The historical spend from 2014-2018 is in the table below:

	2014	2015	2016	2017	2018
Municipal Replacement	19.6	32.1	20.2	26.2	16.8
General Mains	3.5	2.3	3.9	4.9	25.5
Total Replacement Capital	23.1	34.4	24.1	31.1	42.3

- i) Top 5 projects by order to magnitude by year are:

Year	Project	Direct Capital \$
2014	SARN-Petrolia Line, leakage-Sarnia	1,397,267
	Franklin/Pinebush Roundabout	1,067,666
	LOND-Commissioners Rd Repl.-London	1,031,496
	KING - Shanley Rd. - Cardinal - TBS 2880	890,598
	WAT LRT NORTHFIELD DR WATERLOO	755,417
2015	Bay of Quinte	8,398,636
	CAMB-FRANKLIN & SHELDON ROUNDABOUT	1,807,832
	HAMI - Parkdale Replacement - Hamilton	1,577,784
	HAMI-Centennial at CN 16	1,123,572
	Seine River 10"	1,017,791

2016	AMI-West Ave Cannon Repl-Hamilton	1,687,078
	HAMI-Centennial at CN 16	1,666,777
	HALT-Steeles Ave E Replacement-Milton	1,046,025
	WIND-Cabana Rd Repl.-Windsor	692,943
	HAMI-Jarvis Replacement-Jarvis	668,532
2017	Maley Dr	4,091,161
	WIND-Sprucewood & Ojibway Repl, Windsor	2,063,087
	Oak St Replacement PH1-Leamington	2,003,241
	North Bay-Johnston Rd Repl	1,137,449
	MAIN ST NORTH REPLACEMENT HAGERSVILLE	998,070
2018	NW_Sched 10 Replacement_EM	2,533,479
	Wat_Salem Bridge Replacement	2,183,060
	HAMI-Locke St S Replacement	1,957,778
	FRANKLIN BLVD & AVENUE RD	1,835,431
	HALT-SpeersRd-Oakville	1,441,734

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit B / Tab 1 / Sch. 5 / pg. 3

Question:

Preamble: We would like to understand better the impact of the new services on the project.

How many new services will be added? What is the cost estimate for the new services portion of the project?

Response:

There are 399 existing services connected to the portion of the Windsor Line being replaced. These services will all require a new connection to a distribution pipeline. The new proposed design incorporates the NPS 6 replacement as well as smaller networks of plastic distribution. With the new design 270 service connections will connect to the new NPS 6 and 129 will connect to the new plastic network. The estimated cost for connecting the new services to the replacement pipelines is \$2.6 million.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 1 / Sch. 1 / pg. 1

Question:

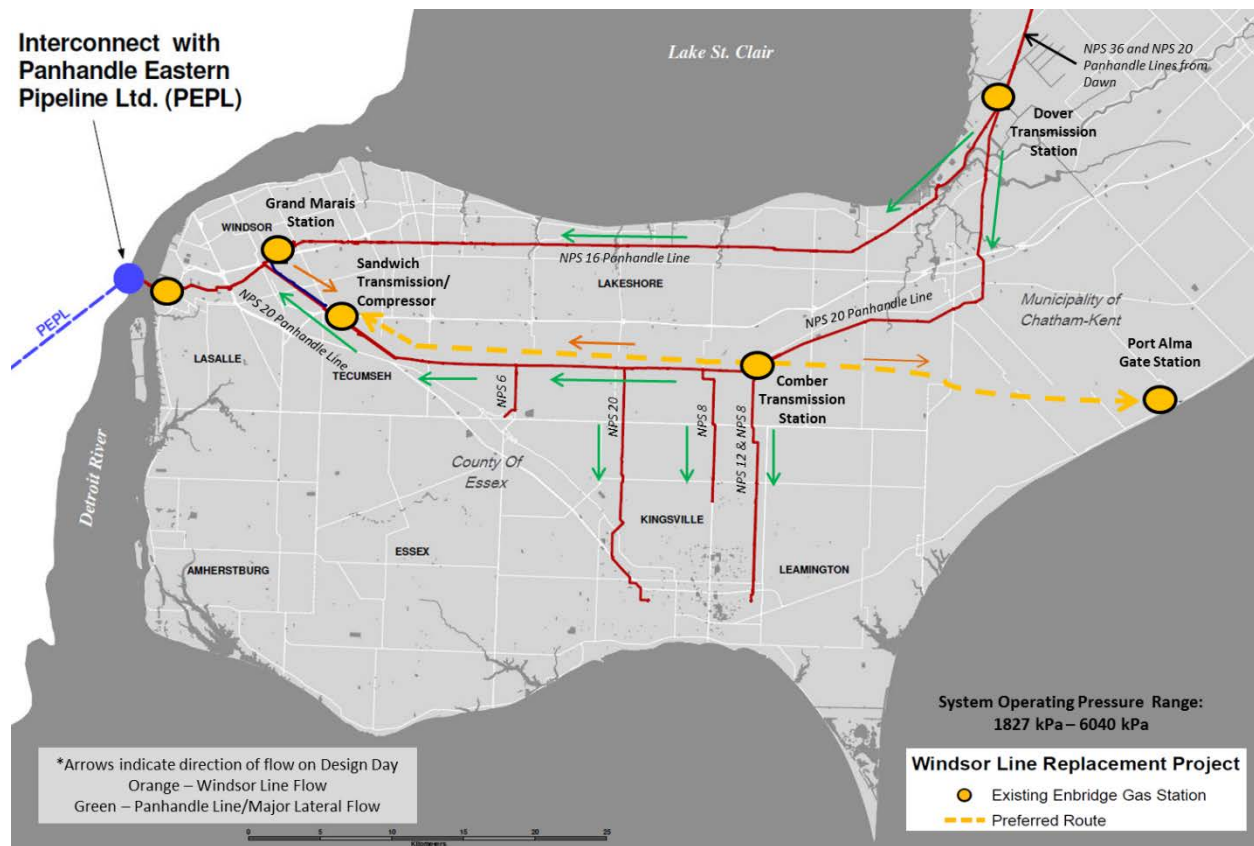
Preamble: We would like to understand better the pipeline network that supplies the area.

Please re-create this map showing all surrounding and interconnected pipelines.

- a) Please provide the size, Maximum and Minimum operating pressures and flow direction of those lines.
-

Response:

- a) Please see Attachment 1. This diagram includes the Panhandle lines and major laterals interconnected with the Windsor Line.



ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 2 / Sch. 1 / pg. 1

Question:

7) Provide the other pipelines, sizes, locations, directions of flow and MOP's including non-Enbridge pipelines. Please show the design day forecasted pressures upstream and downstream of inter-connects between pipelines for the winter of 2019/20.

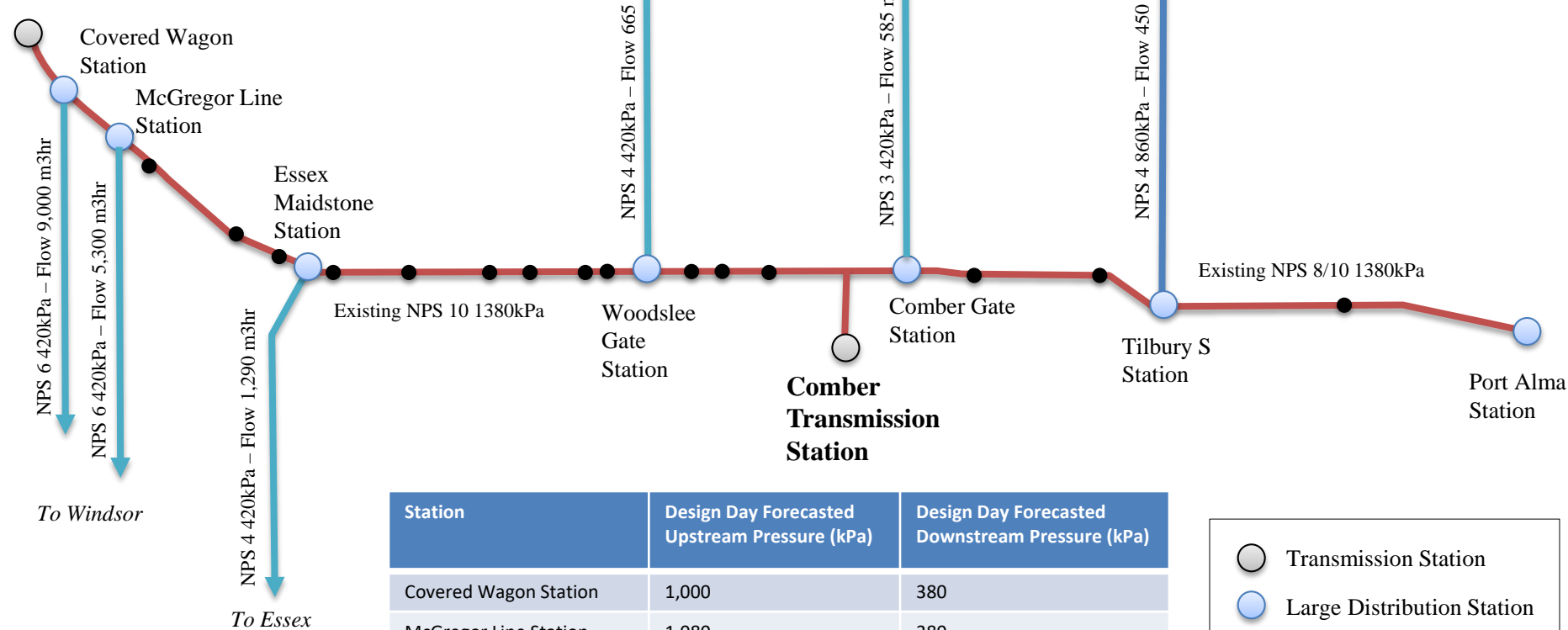
Response:

Please see Attachment 1 for an updated version of the schematic filed at Exhibit C, Tab 2, Schedule 1, page 1 showing the system operation during winter 2019/2020. The schematic has been created to display other pipelines, sizes, locations, directions of flow and MOPs. The schematic also shows additional details only for the large distribution networks. To protect the confidentiality of large customers served from smaller distribution stations, flows and pressures associated with these stations have not been included. Note this schematic represents a snapshot in time and will vary as the network demands change over time.

WINDSOR LINE – WINTER 2019/2020 SYSTEM OVERVIEW



Grand Marais Station



Station	Design Day Forecasted Upstream Pressure (kPa)	Design Day Forecasted Downstream Pressure (kPa)
Covered Wagon Station	1,000	380
McGregor Line Station	1,080	380
Essex Maidstone Station	1,130	380
Woodslee Gate Station	1,220	310
Comber Gate Station	1,295	275
Tilbury South Station	1,290	810

Transmission Station

Large Distribution Station

Small Distribution Station

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 5

Question:

Please confirm that the temperature of 25.1 is actually minus 25.1.

Response:

Confirmed.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 6

Question:

9) Please provide the design day flows at the respective connections and distribution stations on the line.

Response:

Please see Exhibit I.FRPO.7, Attachment 1.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 10

Question:

10) Please provide the simulated pressures vs. actual pressure at the distribution stations and interconnections from the verification process.

Response:

Simulated pressure vs. actual pressure at the available system verification point has been provided below. The simulated pressure reflects system pressure on the verification day which was a 36.6 Degree Day as noted in Exhibit C, Tab 3, Schedule 1, section 3.2.

Verification Location	Simulated Pressure (kPa)	Actual Pressure (kPa)
Port Alma Station	1,218	1,215

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 10

Question:

11) Please provide the flow capacity to Leamington before and after the replacement to 3450 kPa.

Response:

The Windsor Line is not designed to be a feed into the Town of Leamington or the Leamington area greenhouse market. This replacement project has a negligible effect on Leamington capacity. The Town of Leamington and the Leamington area greenhouse market are fed by the Panhandle Transmission System.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 12

Question:

12) Was NPS 4 evaluated? If not, why not? If so, please provide the distribution station pressures:

- i) with current design
- ii) with current design replacing the "Remaining Pipeline" as NPS 6

Response:

Yes. This option was rejected as an NPS 4 pipeline will not serve the existing demand requirements on design day.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 12

Question:

13) What is the cost differential of NPS 4 vs. NPS 6?

Response:

An NPS 4 was not costed as an NPS 4 pipeline was not a viable solution.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 12

Question:

14) Did EGI evaluate a hybrid of NPS 6 in some sections and NPS 4 in others?

Response:

No. As per Exhibit C, Tab 3, Schedule 1 section 3.5.1.1, "It was determined that an NPS 6 was the minimum size required for a replacement project operating at a 1380 kPa MOP."

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 16

Question:

15) Using a NPS 4 for the entire project and the forecast in Appendix 2, in what year would the pressures reach inadequate levels?

a) Leaving the new proposed pipe as NPS 4 as the majority, how much NPS 6 would be needed to extend the capacity to meet the forecasted additions in Appendix 2?

Response:

15) Using a NPS 4 for the entire project and the forecast in Appendix 2, the pressure would reach inadequate levels in 2021.

a) Approximately 40% of the pipeline would need to be installed as NPS 6. This solution would result in no capacity being available to any unforecasted commercial or industrial customers or for any customers who are outside the scope of the FBP.

ENBRIDGE GAS INC.
Answer to Interrogatory from
Federation of Rental-housing Providers of Ontario (FRPO)

Reference: Exhibit C / Tab 3 / Sch. 1 / pg. 23 / App. 1

Question:

16) Please add the cost of NPS 4 and the combined NPS 6 and NPS 4 to the table.

Response:

A cost was not determined for these alternatives as they are either not feasible or not realistic options to meet the current and forecasted demand, as outlined in Exhibit C, Tab 3, Schedule 1, Appendix 2.

UPDATED EXHIBITS

- Exhibit I.STAFF.8 a) – OPCC Comments filed at Exhibit C, Tab 6, Schedule 2
- Exhibit I.STAFF.10 c) – Pipeline Location Maps filed at Exhibit C, Tab 7, Schedule 1 (Redacted)
- Exhibit I.STAFF.10 b) – Landowner List filed at Exhibit C, Tab 7, Schedule 2 (Redacted)

OPCC Summary

Windsor Pipeline Replacement Project

RECORD	STAKEHOLDER	COMMENT SUMMARY	RESPONSE SUMMARY
1	Ellen Preuschat , Executive Assistant to the CAO, Town of Tecumseh (Email, July 22, 2010)	Acknowledged receipt of the ER. Noted that Tony Haddad had retired and the new CAO is Ms. Margaret Misk-Evans. Ms. Preuschat forwarded the letter and ER to Ms. Misk-Evans.	Laura Hill , Stantec (Email, July 22, 2019): Noted and indicated the contact list had been updated.
2	Private Individual (Phone call, July 25, 2019)	Expressed concern for a large tree in the front yard.	Laura Hill , Stantec (Phone call, August 12, 2019): Explained the pipeline is proposed to be located within the municipal road allowance and should not impact the tree. The current service line does cross under the tree, however Enbridge will discuss impacts with her directly prior to completing service connections.
3	Craig Newton , Regional Energy Planner / Regional EA Coordinator, Ministry of the Environment, Conservation and Parks (Email, July 26, 2019)	Acknowledge receipt of report and provided an updated mailing address.	Laura Hill , Stantec (Email, July 30, 2019): Noted and indicated the contact list had been updated.
4	Private Individual (Emails, July 29 and July 31, 2019)	Wished to know the location of the pipeline in relation to his property to understand potential impacts to his tile drainage.	Laura Hill , Stantec (Emails, July 31 and August 1, 2019): Explained the pipeline will be located within the municipal road allowance on the other side of the municipal drain from his property and so no impact to his tile drainage.
5	Private Individual (Phone call, August 1, 2019)	Left a voicemail requesting a call back to answer some questions.	Laura Hill , Stantec (Phone call, August 12, 2019): Individual expressed interested in a service connection to the new line. Ms. Hill committed to providing her contact information to Enbridge so someone could be in touch.

6	Private Individual (Phone Call, August 16, 2019)	Left voicemail. Wondered why there were flags in front of her property and if there would be any impact to a cabin and trees where the flags are located.	Laura Hill , Stantec (Phone call, August 16, 2019): Explained that archaeology study being completed, and flags were placed through the Ontario OneCall system to mark existing utilities. Enbridge will contact landowners directly to discuss decommissioning.
7	Private Individual (Phone Call, August 19, 2019)	Left voicemail. Wanted to know specifically what the yellow flags were signifying and indicated she had additional questions about archaeology.	Laura Hill , Stantec (Phone Call, August 21, 2019): Left voicemail. Explained the flags were placed through Ontario OneCall and mark the existing natural gas pipeline. Offered to discussed her question about archaeology.
8	Karina Cerniavskaja , District Planner, Ministry of Natural Resources and Forestry (Email, August 27, 2019)	Provided information to guide the identification of natural features and resources.	No response required.
9	Private Individual (Email, August 28, 2019)	Requested notification if access is required to her property. Asked for a copy of diagrams showing her property. Asked for reflagging of existing natural gas line. Asked why archaeological assessment was being completed and requested a meeting with an archaeologist.	Laura Hill , Stantec (Email, August 29, 2019): Noted that landowners are notified in advance of property access. Provided link to project website and highlighted where diagrams can be found. Noted that further OneCall requests are not required. Provided rationale behind completion of archaeological assessment and link to the Stage 1 Archaeological Assessment.
10	Katherine Kirzati , Heritage Planner, Ministry of Tourism, Culture and Sport (Email, September 19, 2019)	Noted that the Cultural Heritage Report (CHAR) has been undertaken. Also noted that due diligence has been undertaken by undertaking a Stage 1 Archaeological Assessment, committing to undertaking a Stage 2 Archaeological Assessment, and completing a CHAR.	No response required.

11	Private Individual (Phone Call, September 30, 2019)	Wanted to know the impact to his property (if there would be a large trench) and if it would be possible to get a contract for his arborist services.	Laura Hill , Stantec (Phone Call, September 30, 2019): Explained the work is planned to occur within the municipal road allowance and that installation will occur by a combination of open trench and direction drill, depending on location. Indicated that contracting will be done through Enbridge directly.
12	Corrine Chaisson , Resource Planner, Essex Region Conservation Authority (Email, October 16, 2019)	ERCA generally agreed with Stantec's assessment and proposed mitigation measures. ERCA identified that portions of the Project are located within the Event Based Area (EBA), as identified in the Essex Region Source Protection Plan, and that ERCA recommends contacting the Essex Region Risk Management Official/Inspector.	Laura Hill , Stantec (Email, October 21, 2019): Stantec acknowledged ERCA's letter and comment and indicated that the Essex Region Risk Management Official/Inspector had been contacted.
13	Laura Monforton , Risk Management Official / Inspector, Essex Region Conservation Authority	Laura Hill , Stantec (Phone Call, October 18, 2019) Stantec requested a teleconference to discuss the project.	Laura Monforton , ERCA (Email, October 21, 2019): ERCA agreed to a teleconference to discuss the project, the Event Based Area (vulnerable area), when a Risk Management Plan is required, fuel capacities that meet the circumstances to be considered a significant drinking water threat, requirements within a Risk Management Plan etc.

From: [Hill, Laura](#)
To: [Ellen Preuschat](#)
Subject: RE: CAO for Town of Tecumseh
Date: Monday, July 22, 2019 1:45:00 PM

Good afternoon Ellen,

Thank you for letting me know and for forwarding the information. I have updated our stakeholder list for the project.

Much appreciated,

Laura

Laura Hill M.Env.Sc.
Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

From: Ellen Preuschat <epreuschat@tecumseh.ca>
Sent: Monday, July 22, 2019 1:22 PM
To: Hill, Laura <Laura.Hill@stantec.com>
Subject: CAO for Town of Tecumseh

Good afternoon Laura:

We received the correspondence sent by Purolator to Tony Haddad regarding the Enbridge Gas Pipeline Project.

Kindly note for Stantec's corporate records that Tony has retired and our new CAO is Margaret Misek-Evans. Her email address is mevans@tecumseh.ca.

I will forward the letter and ER to Ms. Misek-Evans.

Kind regards,
Ellen Preuschat

Ellen Preuschat
Executive Assistant to CAO
epreuschat@tecumseh.ca

Town of Tecumseh - 917 Lesperance Rd. - Tecumseh, ON. - N8N 1W9
Phone: 519-735-2184 , 114 Fax: 519-735-8326 - www.tecumseh.ca

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Messages sent to and from us may be monitored.



Please consider the environment before printing this e-mail.

From:
To: [Hill, Laura](#)
Cc:
Subject: Re: Windsor Pipeline Replacement
Date: Thursday, August 1, 2019 11:38:16 AM
Attachments: [jmaoe003.png](#)

Good morning to you too, Laura. Kudos for your very quick, informative reply.

It appears that the pipeline will not lie on our property, we haven't heard from Enbridge, so there's little left to discuss.

We appreciate your offer to help clarify any future concerns. Thank you.

On Thu, Aug 1, 2019 at 9:51 AM Hill, Laura <Laura.Hill@stantec.com> wrote:

Good morning

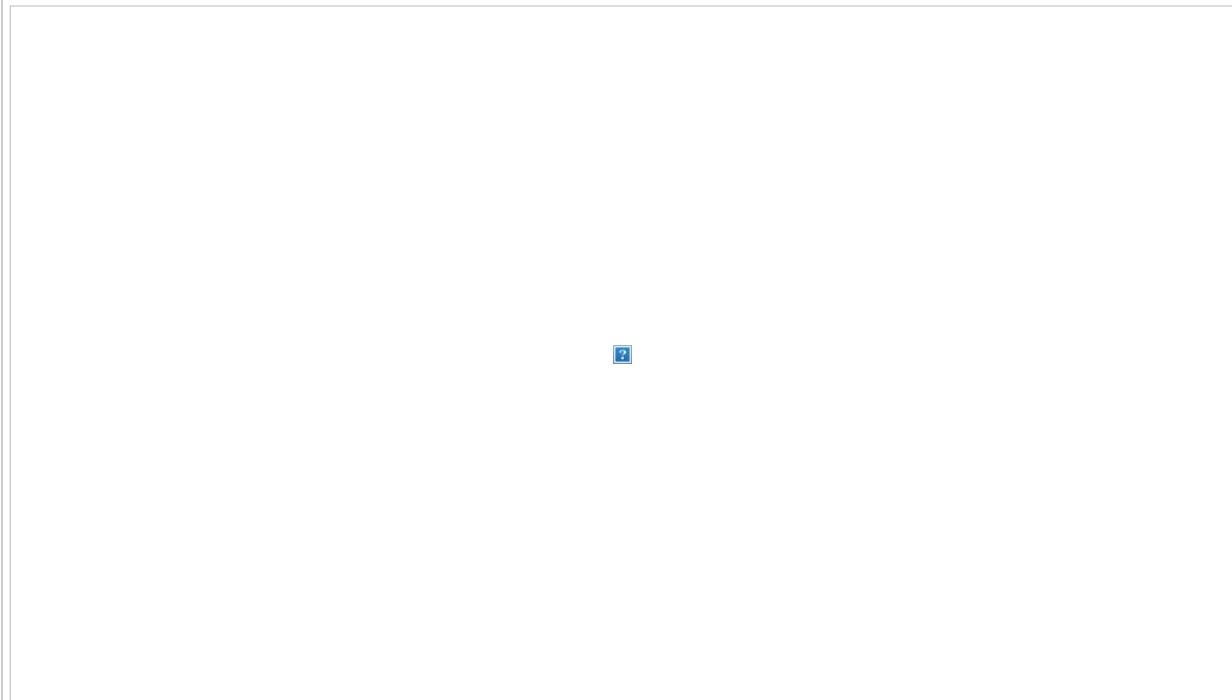
Yes, the intent is to place the pipeline within the municipal road allowance. I've gone into our system and pulled a screenshot for you that shows the property boundary that we have, the drain and the pipeline. These lines are accurate to within a few metres, but at the time of construction, the municipal road allowance boundary will be surveyed and there will be no construction outside of that. Should that change in the future for some reason, Enbridge would not access your property without discussing with you directly.

Enbridge has uploaded Appendix H to the [project website](#). You can access the Appendix directly, [here](#). Your property is on page 33.

With this information, do you have any lingering concern about the potential for impacts to your field tile?

Let me know,

Laura



Laura Hill [M.Env.Sc.](#)

Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

From: >
Sent: Wednesday, July 31, 2019 10:58 PM
To: Hill, Laura <Laura.Hill@stantec.com>
Cc:
Subject: Re: Windsor Pipeline Replacement

Thank you, Ms Hill, for your quick response.

I should have been more specific about the location of our property. In fact, it lies on the south side of from the intersection with to just past

Therefore, from your description it appears that the pipeline will run on the south side of only where our property is located, of . Is this correct? If so, will the pipeline be placed within the road allowance in the wide margin between that runs along the south side of the road and the edge of the road? That way, there shouldn't be any issues for our field tile. We have attached a Google Maps screen grab that shows this margin; the drain is the darker piece parallel to the road.

Thank you,

On Wed, Jul 31, 2019 at 2:45 PM Hill, Laura <Laura.Hill@stantec.com> wrote:

Good afternoon ,

I'm sorry that Appendix H was not on the website. I will let Enbridge know.

Currently, the pipeline is proposed to be located on the south side of . Immediately west of , the pipeline is proposed to cross the roadway to the north, and then run . Enbridge is still negotiating the final location for the proposed pipeline.

I hope this helps. Please let me know if you have any further questions.

Laura Hill [M.Env.Sc.](#)

Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

From: >
Sent: Monday, July 29, 2019 1:28 PM
To: Hill, Laura <Laura.Hill@stantec.com>;
Subject: Windsor Pipeline Replacement

We received your letter, dated July 22, about the pipeline replacement project. We own a property on the . This is along the proposed pipeline route.

Your project web site indicates that, "The proposed pipeline would be situated within these existing road allowance easements; the currently proposed side of road is presented in the mitigation photomosaic (see Appendix H)." However, a link to Appendix H is not included on the web site at this time.

Can you inform us which side of is proposed?

Thank you.

||

From: [Hill, Laura](#)
To: [Newton, Craig \(MECP\)](#)
Cc: [Lafrance, Crystal \(MECP\)](#)
Bcc: [Corr, Jacqueline](#)
Subject: RE: Enbridge Gas Pipeline Project - Environmental Report: Windsor Pipeline Replacement Dated July 16th, 2019
Date: Tuesday, July 30, 2019 3:52:00 PM

Good afternoon Craig,

I'm sorry for the confusion and thank you for bringing this to my attention. We received the OPCC members list, including Ms. Lafrance's contact information, from Ms. Zora Crnojacki at the Ontario Energy Board in June of 2019. I will correct our contact list.

To prevent future mis-direction of reports from others, you may wish to follow-up directly with the OEB. My apologies if you have done this already.

I appreciate your understanding and thanks again,

Laura

Laura Hill M.Env.Sc.
Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

From: Newton, Craig (MECP) <Craig.Newton@ontario.ca>
Sent: Friday, July 26, 2019 9:54 AM
To: Hill, Laura <Laura.Hill@stantec.com>
Cc: Lafrance, Crystal (MECP) <Crystal.Lafrance@ontario.ca>
Subject: Enbridge Gas Pipeline Project - Environmental Report: Windsor Pipeline Replacement Dated July 16th, 2019

Good Morning Laura:

This e-mail acknowledges, this ministry's receipt, with thanks of the above noted Report. That said, please be advised that the Report was sent to the incorrect address.

Fortunately MECP SWR was still able to receive it due to the kindness of staff at 659 Exeter Road (Government of Ontario Multi-Ministry Building) to advise us (Crystal Lafrance) that it was incorrectly sent to them.

The correct address for MECP Southwestern Region office is:

Ministry of Environment, Conservation and Parks
Southwestern Region
733 Exeter Road
London, Ontario

N6E 1L3

Attention: Ms. Crystal Lafrance, Supervisor, Air, Pesticides & Environmental Planning

Moving forward, please use the 733 Exeter Road address for future correspondence for both this and any other projects that you are seeking comments from MECP SWR's Air, Pesticides and Environmental Planning Unit's comments on.

Thank you in advance.

Yours truly,

Craig Newton
Regional Environmental Planner / Regional EA Coordinator
Ministry of the Environment, Conservation and Parks
Southwestern Region
733 Exeter Road
London, Ontario
N6E 1L3

Telephone: (519) 873-5014
E-mail: craig.newton@ontario.ca

From: MNRF Ayl Planners (MNRF)
To: [Hill, Laura](#)
Subject: MNRF Comments: Enbridge Gas Pipeline Project - Environmental Report: Windsor Pipeline Replacement
Date: Tuesday, August 27, 2019 1:56:23 PM
Attachments: [image004.wmz](#)
[image005.png](#)

**Ministry of Natural
Resources and Forestry**

**Ministère des Richesses
naturelles et des Forêts**

615 John Street North
Aylmer, ON N5H 2S8
Tel: 519-773-9241
Fax: 519-773-9014

615, rue John Nord
Aylmer ON N5H 2S8
Tél: 519-773-9241
Télec: 519-773-9014

August 27, 2019

Laura Hill
Project Manager
Stantec Consulting Ltd.
400-1331 Clyde Avenue, Ottawa ON K2C 3G4

Subject: Enbridge Gas Pipeline Project - Environmental Report: Windsor Pipeline Replacement

Dear Laura Hill,

The Ministry of Natural Resources and Forestry (MNRF) Aylmer District received the Environmental Report Notice for the proposed Windsor Pipeline Replacement project on July 22nd, 2019. Thank you for circulating this notice to our office, however, **please note that we have not completed a screening of natural heritage or other resource values for the project at this time.** Please also note that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

This response provides information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with MNRF Aylmer District for advice as needed.

Natural Heritage & Endangered Species Act

In order to provide the most efficient service possible, the attached Natural Heritage Information Request Guide has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary

field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Land Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. To ensure access to reliable and up to date information, please contact the Ministry of Environment, Conservation and Parks at SAROntario@ontario.ca.

Petroleum Wells & Oil, Gas and Salt Resource Act

There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) for the best known data on any wells recorded by MNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the Library website in order to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at 519-873-4634.

Public Lands Act & Lakes and Rivers Improvement Act

Some Municipal projects may be subject to the provisions of the *Public Lands Act* or *Lakes and Rivers Improvement Act*. Please review the information on MNRF's web pages provided below regarding when an approval is required or not. Please note that many of the authorizations issued under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: <https://www.ontario.ca/page/crown-land-work-permits>
- For more information about the *Lakes and Rivers Improvement Act*: <https://www.ontario.ca/document/lakes-and-rivers-improvement-act-administrative-guide>

After reviewing the information provided, if you have not identified any of MNRF's interests stated above, there is no need to circulate any subsequent notices to our office. If you have any questions or concerns, please feel free to contact me.

Sincerely,
Karina

Karina Cerniavskaja, District Planner

Ministry of Natural Resources and Forestry, Aylmer District

615 John St. N. Aylmer, ON N5H 2S8

Tel: 519-773-4757 | Fax: 519-773-9014 | Email: karina.cerniavskaja@ontario.ca

As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: [Hill, Laura](#)
To:
Subject: RE: Gas line replacement
Date: Thursday, August 29, 2019 10:50:00 AM

Hi

Thank you for your comments/questions regarding Enbridge's proposed Windsor Pipeline Replacement Project. I have responded to your questions in accordance with your numbering:

1. We have not accessed your property and will not access it without obtaining landowner (your) approval first.
2. You can see all of the project information, including all available mapping, at the project website, here: <https://www.uniongas.com/projects/windsor-line-replacement>. At that link, under "Latest Updates" for July 19, 2019, you can view the proposed pipeline in a number of figures provided with the Environmental Report, including Appendices A, C, G and H. In [Appendix H](#), your property is located on .
3. The flags were placed through our use of [Ontario OneCall](#). Here is a link to an [FAQ about Ontario OneCall](#). Our archaeological investigation took place only within the municipal road allowance, not on your property, and it was determined that photographic documentation was sufficient – no ground disturbance was required. As we do not need to return to this location, we will not be contacting Ontario OneCall again.
4. Enbridge is completing archaeological investigations because it is required under the *Ontario Heritage Act* in advance of new developments. The Stage 1 Archaeological Assessment that was completed for the proposed Windsor Pipeline Replacement Project is available for your review at the project website; specifically, as Environmental Report [Appendix G](#). There is a lot of very interesting information about the history of the project area. I am partial to the old maps, which begin on PDF page 53, but Section 1.0 Project Context also provides great information. As I said above, we only took photographs of the area in front of your property, so no artefacts were collected.

If you have any further questions regarding the proposed Windsor Pipeline Replacement Project, please let me know.

Regards,

Laura

Laura Hill M.Env.Sc.
Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

Vacation Alert: I will be away from the office on holidays from September 2 to 13, inclusive.

From:
Sent: Wednesday, August 28, 2019 11:06 PM
To: Hill, Laura <Laura.Hill@stantec.com>

Subject: Gas line replacement

Hi Laura.

1. I would like to be notified at _____ and advised when anyone attends my property.
2. Can you send me by email a copy of any diagrams of my property that show the existing and proposed route of the gas lines or pipes on or near my property please?
3. If the yellow lines show the existing gas line, can you please have this double checked since it appears to go through my century old log cabin!!!
4. Are you an archaeologist? Would you be able to send me in writing the reasons for this archaeological survey and a copy of your plans for any historical items found. I can tell you now that my property is historically significant and I would welcome a meeting with an archaeologist who might actually be interested in this unique part of Ontario. Is this possible? Please let me know.

Thanks

From: Kirzati, Katherine (MTCS)
To: [Hill, Laura](#); zora.crnojacki@oeb.ca
Subject: 0011281 -Windsor -Enbridge Gas Pipeline -EA Report -MTCS Comments
Date: Thursday, September 19, 2019 4:27:07 PM
Attachments: [0010281 -Windsor -Gas Pipeline Replacement -Final EA Rpt \(61289\) -MTCS Comments.pdf](#)

Good Afternoon Laura:

Attached please find our comments on the above-noted project.

Regards, Katherine

Katherine Kirzati
Heritage Planner
Programs and Services Branch
Ministry of Tourism, Culture and Sport
401 Bay St, Suite 1700
Toronto, ON M7A 2R9
416.314.7643
katherine.kirzati@ontario.ca

**Ministry of Tourism,
Culture and Sport**

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416.314.7643

**Ministère du Tourisme,
de la Culture et du Sport**

Direction des programmes et des
services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tel: 416.314.7643



19 September 2019

Email Only

Laura Hill
Environmental Scientist
Stantec Consulting Ltd.
400-1331 Clyde Avenue
Ottawa, ON K2C 3G4
laura.hill@stantec.com

MTCS File : 0010281
Your File : 160961289
Proponent : Enbridge Gas
Subject : Environmental Report
Project : Windsor Pipeline Replacement Project
Location : From the Sandwich Compressor Station between Del Duca Drive and County Road 46, Town of Tecumseh, following County Road 46 to Lakeshore Road 309, Town of Lakeshore, following Goodreau Line to the Alma Gate Station, Municipality of Chatham-Kent

Dear Ms. Hill:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with a copy of the environmental report (Stantec, July 16, 2019) for the above-referenced project. MTCS has reviewed the document with respect to the protection and conservation of cultural heritage resources, which include archaeological resources, built heritage resources and cultural heritage landscapes.

Comments**4.4.10 Cultural Heritage Resources**

MTCS recommends replacing “is in progress” with “has been undertaken”, as the Cultural Heritage Assessment Report (CHAR) has been completed and MTCS has provided comments. Additionally, please ensure that the number of cultural heritage resources found within 50 m of the project aligns with that noted in the CHAR.

Final Remarks

MTCS finds that due diligence has been undertaken by:

- undertaking a Stage 1 archaeological assessment and report (under Project Information Form Number P256-0552-2018), which has been entered into the Ontario Public Register of Archaeological Reports
- committing to undertaking a Stage 2 archaeological assessment for any portions of the study area that still retain archaeological potential
- completing a CHAR that identified known and potential cultural heritage resources within the study area and recommended avoidance and/or mitigation measures for any negative impacts

MTCS has no additional comments at this time.

Should you have any questions, please contact the undersigned.

Regards,

Katherine Kirzati
Heritage Planner
Heritage Planning Unit
katherine.kirzati@ontario.ca

c: Zora Crnojacki, Ontario Energy Board

From: [Hill, Laura](#)
To: [Corinne Chiasson](#)
Cc: [Ryan Park](#)
Subject: RE: Windsor Pipeline Replacement Project - ESR Review
Date: Monday, October 21, 2019 4:26:00 PM

Hi Corrine,

This email is to confirm that Stantec is in receipt of your letter dated October 16, 2019 which outlines the outcome of ERCA's review of Stantec's Environmental Report. We appreciate and understand that ERCA generally concurs with our assessment and our proposed mitigation and protective measures.

We also understand that ERCA has identified that portions of the Project are located within the Event Based Area (EBA), as identified in the Essex Region Source Protection Plan, and that ERCA recommends contacting the Essex Region Risk Management Official/Inspector. Enbridge has contacted the Essex Region Risk Management Official/Inspector to discuss the Project and appropriate risk management measures.

Thank you for your comments and we look forward to working with ERCA on our permit submission.

Laura

Laura Hill M.Env.Sc.
Environmental Scientist

Direct: 613 784-2256
Mobile: 613 862-9895
Laura.Hill@stantec.com

From: Corinne Chiasson <CChiasson@erca.org>
Sent: Wednesday, October 16, 2019 4:26 PM
To: Hill, Laura <Laura.Hill@stantec.com>
Subject: Windsor Pipeline Replacement Project - ESR Review

Hi Laura, please accept my apology for this late entry for our review of the ESR. Our formal comments are attached. Your ERCA permit application is in the queue for review with our regulation team.

We have no issues with the ESR except for the recommendation included in our comments that refers to one Source Water Protection item. Please give me a call if you need further details.



CORINNE CHIASSON
Resource Planner
Essex Region Conservation Authority
360 Fairview Avenue West, Suite 311
Essex, Ontario N8M 1Y6
P. 519-776-5209 x 330 F. 519-776-8688
essexregionconservation.ca cchiasson@erca.org

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October 16, 2019

Laura Hill, M.Env.Sc
Project Manager
Stantec Consulting Ltd
400-1331 Clyde Avenue,
Ottawa, ON, K2C 3G4

Dear Ms. Hill:

RE: Enbridge Gas Pipeline Project - Environmental Report Ontario Energy Board Review

This letter is in response to our receipt and review of the Environmental Report for the Enbridge Gas Pipeline Project. It is our understanding that this process will fulfill the requirements of the Ontario Energy Board's (OEB) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016).

We understand that the purpose of the Environmental Report is to identify the following mitigation and protection measures during the construction of the project:

1. Identify a preferred route that minimizes potential environmental impacts in areas where the existing Windsor pipeline is not located within a road allowance.
2. Complete a detailed review of environmental features along the preferred route and assess the potential environmental impacts of the project on these features.
3. Establish mitigation and protective measures that may be used to minimize or eliminate potential environmental impact of the project.
4. Develop a consultation program to receive input from interested and potentially affected parties.
5. Identify any necessary supplemental studies, monitoring and contingency plans.

We provide the following information based on our role as a regulatory authority, a watershed based resource management agency, and public commenting body.

REGULATORY APPROVAL UNDER SECTION 28 OF THE CONSERVATION AUTHORITIES ACT

It is our understanding that the majority of the identified preferred route (approximately 60 km in length), for the installation of a new 6 inch diameter natural gas pipeline will be constructed within the existing municipal road allowances.

With respect to natural hazard issues for this project, it is our understanding that there will be approximately 127 crossings proposed for various municipal drains and watercourses. Each of these crossings is located within an area that is under the jurisdiction of the Essex Region Conservation



October 16, 2019

Authority (ERCA) and subject to Section 28 of the Conservation Authorities Act. Prior to undertaking a crossing, a permit (or Clearance) is required from this office.

Through a preconsultation meeting with Enbridge, Stantec, and ERCA staff, it was determined that a permit is required for the placement and grading of fill material within ERCA regulated areas and any areas that are proposed to utilize the dam and pump method for watercourse crossings and culvert installations. A clearance may only be necessary for any crossings that are proposed to utilize the directional drilling technique. ERCA staff will work with the project managers to issue a single permit per each Municipality. At this time we have received a permit submission from Enbridge and Stantec Consulting and will be undertaking our review. Given our past experiences with Enbridge Gas Inc. (Union Gas), we are confident that all ERCA issues can be satisfactorily addressed through our permit process. We understand that appropriate restoration plans and contingency plans will also be supplied as part of the submission for approval.

We are supportive of the presented routine mitigation measures and critical weather monitoring to ensure best management practices for any of the open cut crossings that are proposed. We are satisfied that no works will be undertaken if rain is predicted in the weather forecast as determined by the Environmental Inspector.

NATURAL HERITAGE - PUBLIC AGENCY REVIEW

We understand that the proposed pipeline route will be in proximity (within 120 metres) to 7 woodlots, and 50 locations where the pipeline will intersect hedgerows, as well as one Provincially Significant Wetland at the Ruscom River. According to the information in the ESR, the majority of the works will be conducted within the municipal road allowance and that "no significant natural features intersect with the proposed temporary work areas". Therefore minimal impacts to the natural heritage features are anticipated. We support the proposed references noted in Table 4-12, Summary of Potential Impacts and Mitigation and Protective Measures on pages 99 through 101, that identify clearing in sensitive areas will be minimized to the extent possible, and that a tree compensation plan will be utilized with consultation with ERCA. We support the proposal that if the landowner is not interested in the tree compensation plan that ERCA be contacted, and an alternative measure will be determined.

As stated in the ESR, "Field surveys will be conducted prior to construction to assess the presence or absence of wetlands. ELC and botanical surveys will be conducted prior to construction to assess the significance and boundaries of vegetation communities and to identify vascular plant species, including plant species of concern. The results of the surveys will be used to confirm mitigation and protection measures", the report further states that, "mitigation or protection measures, will be summarized in a report and shared with the MECP to determine any regulatory requirements. We ask that ERCA be provided with the field survey information for our natural heritage inventory records. We agree



October 16, 2019

that through the implementation of the proposed mitigation and protective measures noted in the ESR, no significant adverse residual impacts on designated natural areas and vegetation are anticipated.

ESSEX SOURCE WATER PROTECTION PLAN 2015 - CLEAN WATER ACT

We acknowledge that the ESR report refers to the Essex Source Protection Region and states that the project sites are identified as "minimum significant ground water recharge area, and that no highly vulnerable aquifers are along the route". We concur with this assessment.

We do however note that portions of the project are located within the Event Based Area (EBA) as identified in the Essex Region Source Protection Plan, which came into effect October 1, 2015. The Source Protection Plan was developed to provide measures to protect Essex Region's municipal drinking water sources. As a result of these policies, new projects in these areas may require approval by the Essex Region Risk Management Official (RMO) to ensure that appropriate actions are taken to mitigate any potential drinking water threats. The Handling and Storage of Fuel is considered a Significant Drinking Water Threat in all Event Based Areas in the Essex Region Source Protection Area and a s.58 Risk Management Plan may be required if the handling and storage of fuel on-site meet the specific risk circumstances in the Essex Region Source Protection Plan.

Through our review of the ESR we understand that the following mitigation is being proposed with regard to the handling and storage of fuel:

- "Refueling of equipment should be undertaken **50 m** from wetlands and watercourses to reduce potential impacts to surface water and groundwater quality in the event that an accidental spill occurs. If a **50 m** refueling distance is not possible, under approval from on-site environmental personnel, special refueling procedures for sensitive areas should be undertaken that include, at a minimum, using a two-person refueling system with one worker at each end of the hose.
- To reduce the impact of potential contaminant spills, the contractor should implement spill management protocols such as secondary containment of any temporary fuel storage and preparation of a spill response plan.
- Work should be limited or stopped during and immediately following significant precipitation events (i.e. 100 year storm event), at the discretion of on-site environmental personnel.
- Equipment maintenance and refueling should be controlled to prevent entry of petroleum products or other deleterious substances, including any debris, waste, rubble or concrete material, into a watercourse, unless otherwise specified in the contract.
- Deleterious substances (fuel, oil, spoil) should be stored **>30 m** from the watercourse. Any such material that inadvertently enters a watercourse should be removed in a manner satisfactory to the environmental inspector.
- In the unlikely event of a spill, spills containment and clean-up procedures should be implemented immediately.



October 16, 2019

Enbridge will contact the MECP Spills Action Centre. The MECP Spills Action Centre is the first point of contact for spills at the provincial and federal level.

As it has been noted in the ESR that you wish to store or handle fuel storage within 120m from an open watercourse, we would advise you to contact the Risk Management Official to develop a Risk Management Plan. The Risk Management Official will guide you through the Risk Management Plan process.

It will be the responsibility of the 'proponent/project coordinator/manager' to contact Laura Monforton, Essex Region Risk Management Official/Inspector to ensure the Handling and Storage of fuel will not pose a significant risk to local sources of municipal drinking water. Ms. Monforton can be reached by email at: riskmanagement@erca.org or 519-776-5209 ext 214.

We also note for the project manager's information, that **if** the following recommendations are implemented for this project, a risk management plan may not be necessary:

- That portable utility tanks (e.g. 4 600L, 2 300L, 1 360 L or greater gasoline/diesel/oil, etc.) used for equipment and fleet vehicles are installed **120m** away from any open watercourses.
- That project managers instruct contractors and other on-site personnel to refuel on-site fleet vehicles/equipment **120m** away from any open watercourses.
- Any fuel trucks on the project site should be parked **120m** away from water courses.
- Fuel trucks stored on-site and/ or stored on-site overnight throughout the phases of the project are parked **120m** away from any open watercourses or removed off-site completely.

If you require further information or need clarification on the above information provided please contact the undersigned. We thank you for the opportunity to review and respond to this Environmental Study Report.

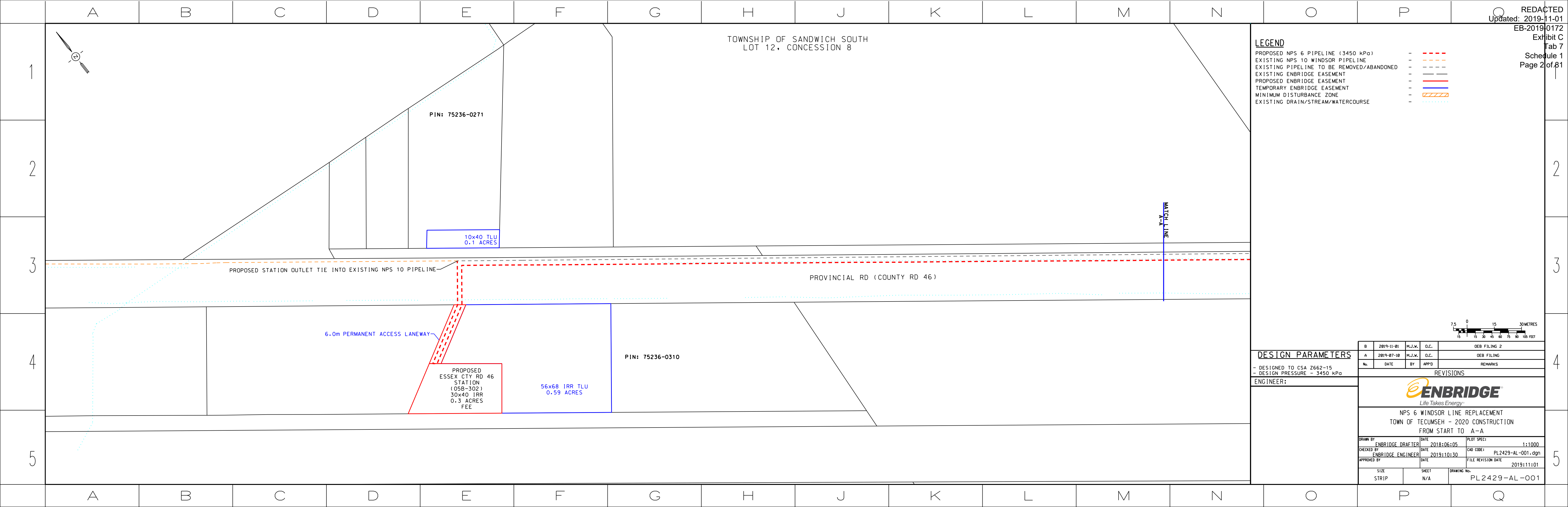
Sincerely,



Corinne Chiasson
Resource Planner
/cor



PROPOSED PIPELINE LOCATION



TOWNSHIP OF SANDWICH SOUTH
LOT 12, CONCESSION 8

PIN: 75236-0271

10x40 TLU
0.1 ACRES

PROPOSED STATION OUTLET TIE INTO EXISTING NPS 10 PIPELINE

PROVINCIAL RD (COUNTY RD 46)

6.0m PERMANENT ACCESS LANEWAY

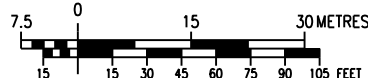
PROPOSED
ESSEX CTY RD 46
STATION
(05B-302)
30x40 IRR
0.3 ACRES
FEE

56x68 IRR TLU
0.59 ACRES

PIN: 75236-0310

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

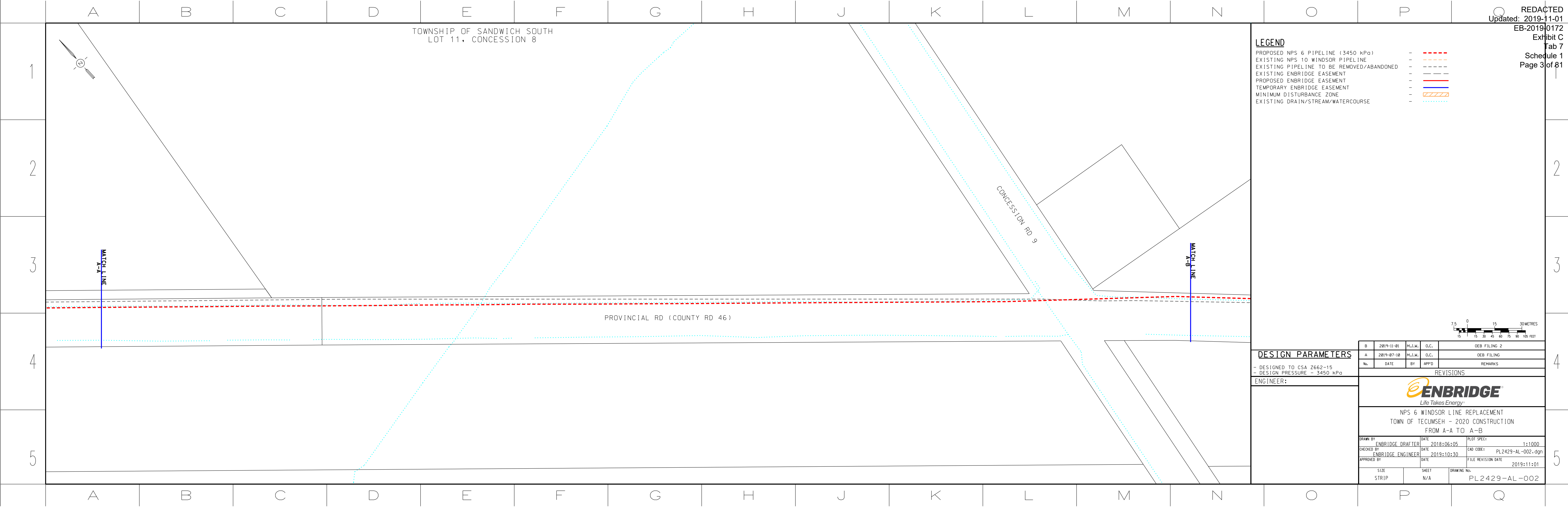
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM START TO A-A

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-001.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-001



TOWNSHIP OF SANDWICH SOUTH
LOT 11, CONCESSION 8

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Black dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Blue solid line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

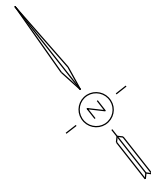


NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-A TO A-B

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-002.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-002
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TOWNSHIP OF SANDWICH EAST
LOT 10, CONCESSION 9



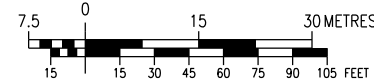
CONCESSION RD 9

MATCH LINE
A-B

MATCH LINE
A-C

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

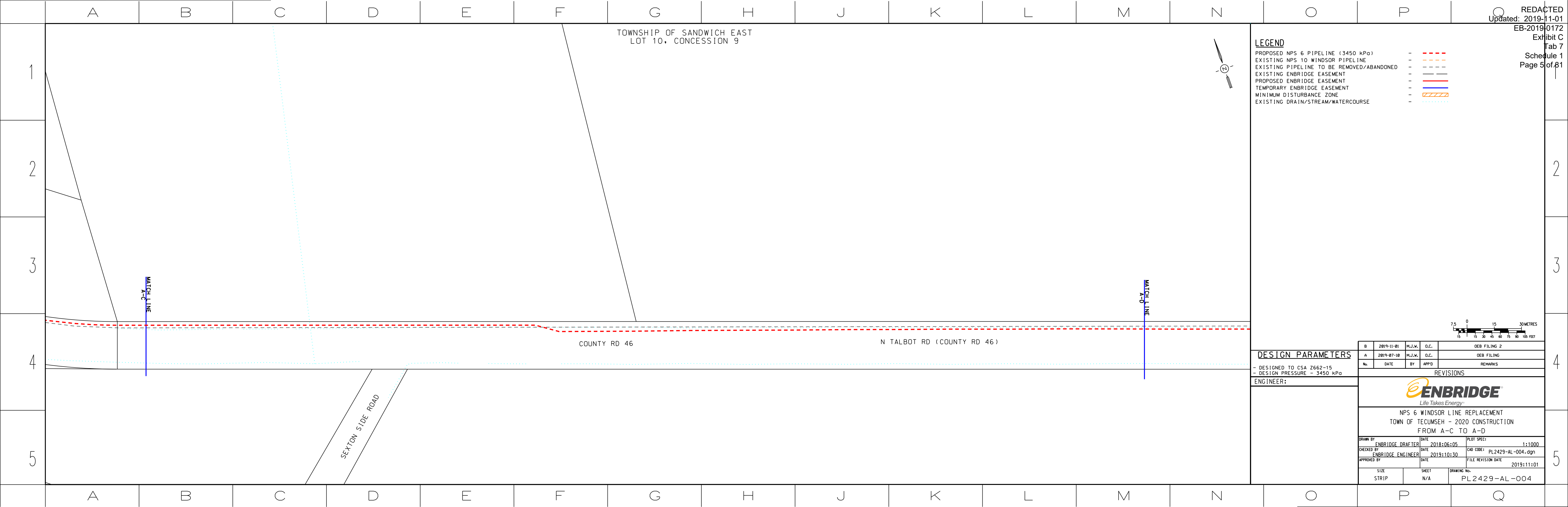
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-B TO A-C

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

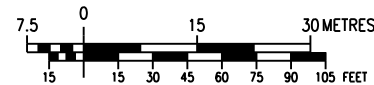
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-003
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TOWNSHIP OF SANDWICH EAST
LOT 10, CONCESSION 9

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

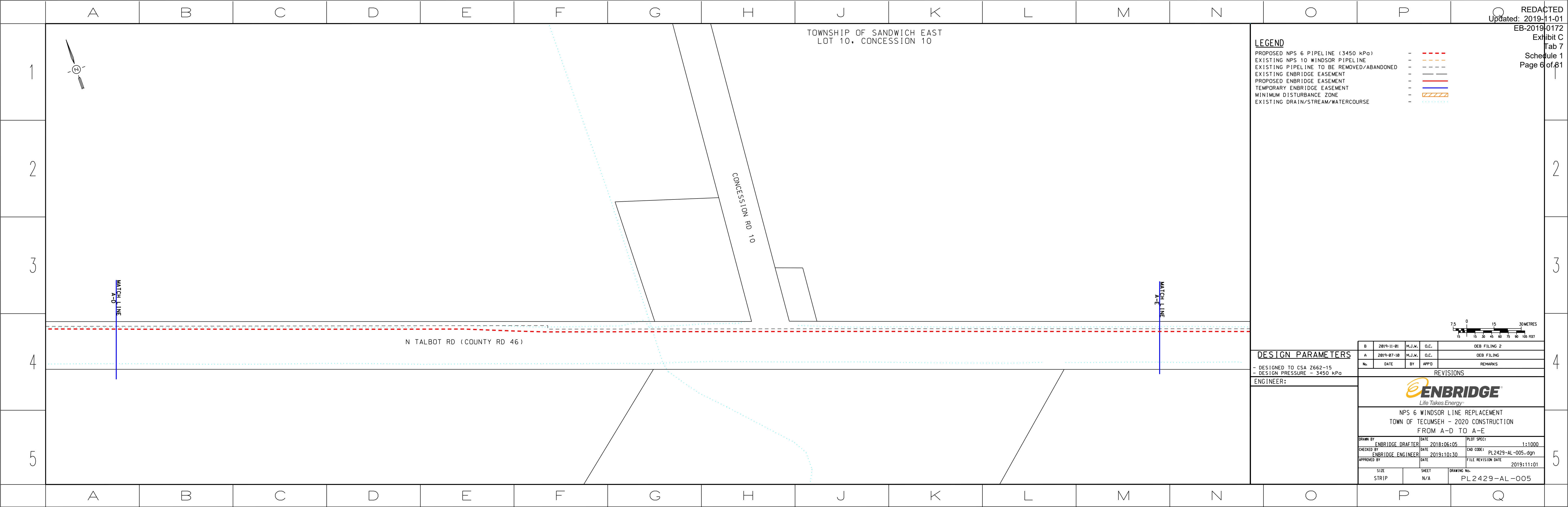
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-C TO A-D

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-004.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-004




- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

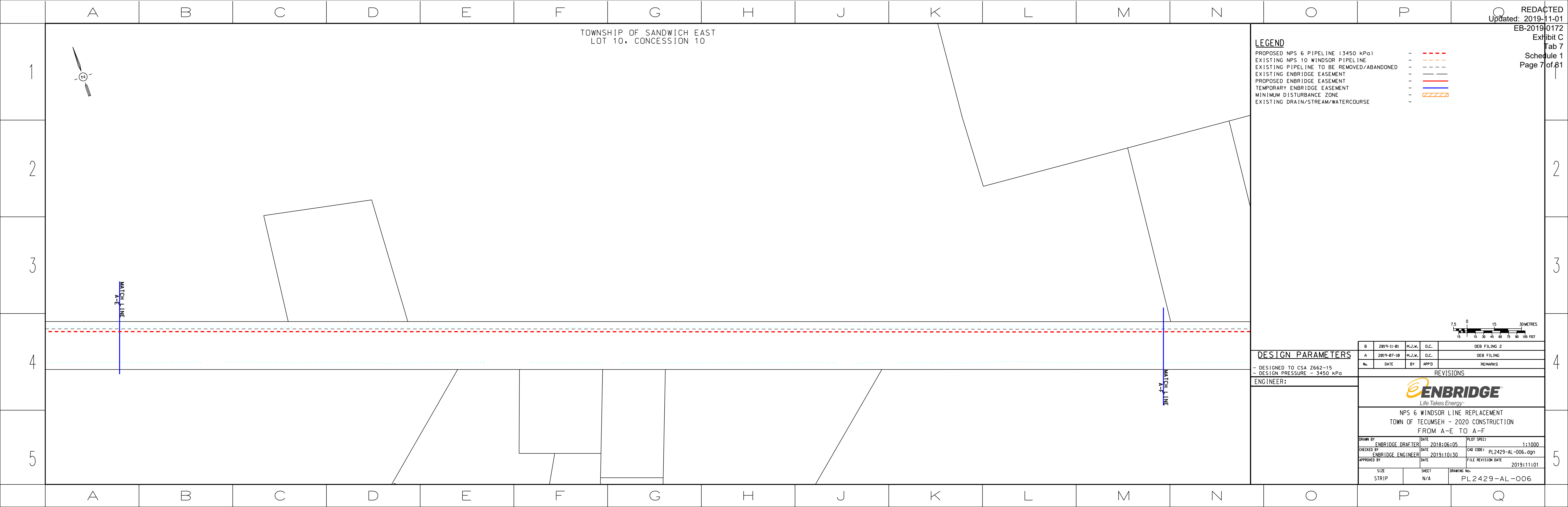


Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-D TO A-E

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-005.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-005



- LEGEND
- PROPOSED NPS 6 PIPELINE (3450 kPa)

-
- EXISTING NPS 10 WINDSOR PIPELINE

-
- EXISTING PIPELINE TO BE REMOVED/ABANDONED

-
- EXISTING ENBRIDGE EASEMENT

-
- PROPOSED ENBRIDGE EASEMENT

-
- TEMPORARY ENBRIDGE EASEMENT

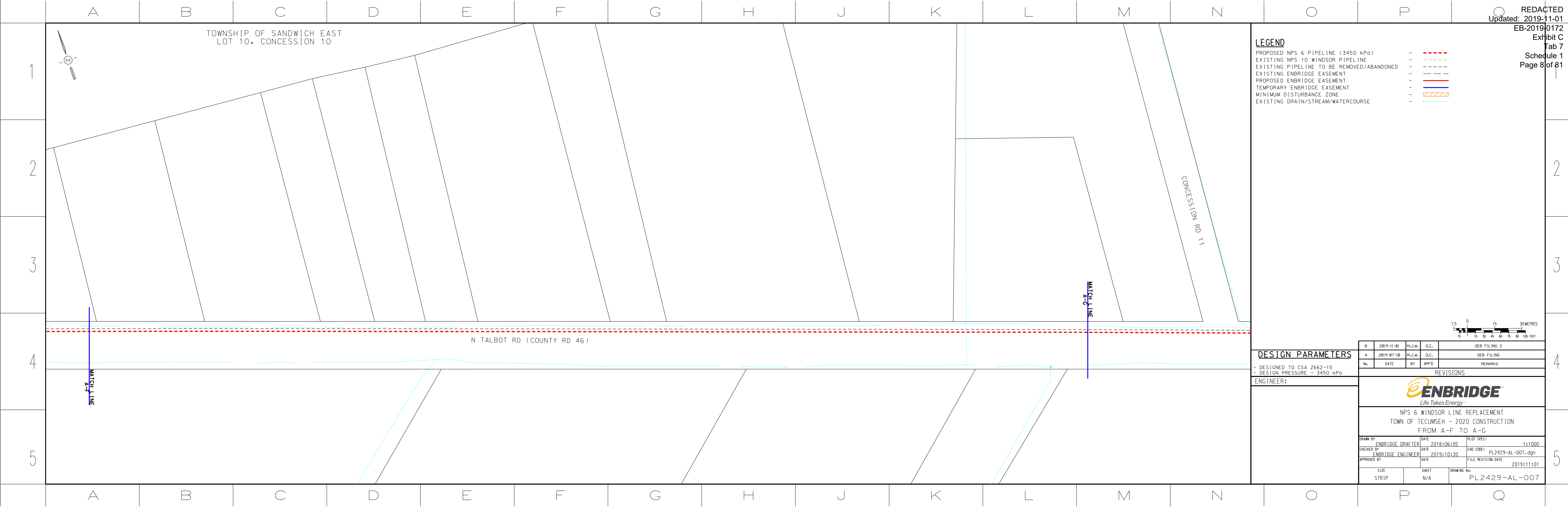
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- MINIMUM DISTURBANCE ZONE

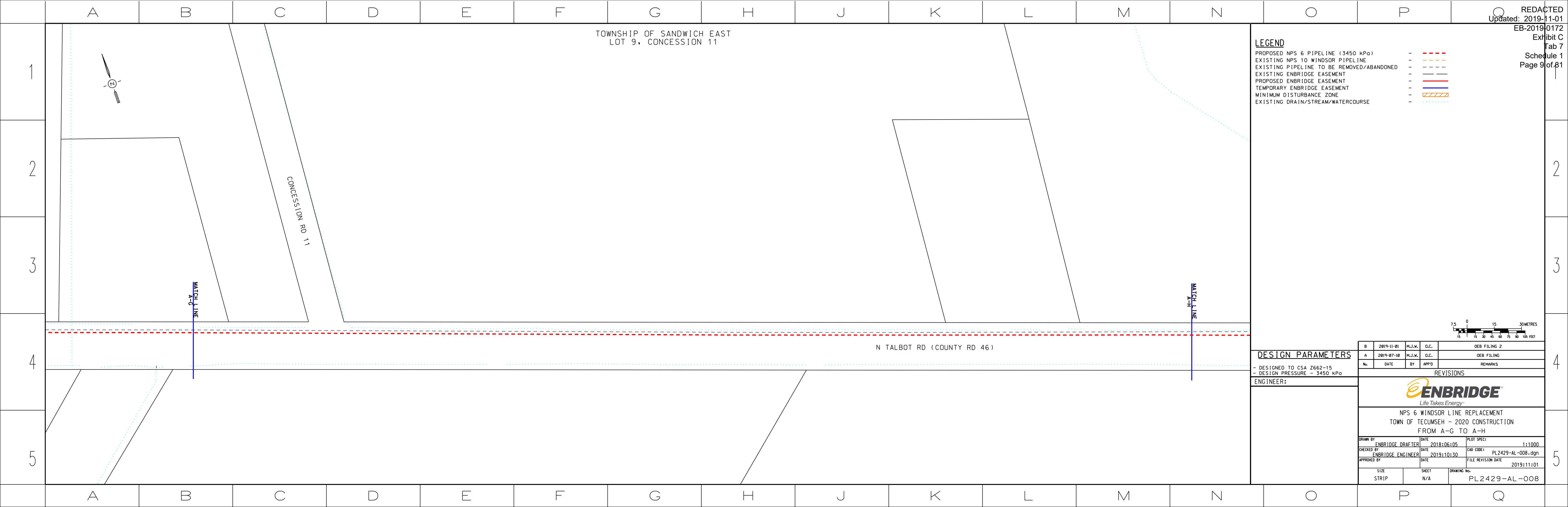
-
- EXISTING DRAIN/STREAM/WATERCOURSE

-



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
<div><div><div></div></div><div>ENBRIDGE</div><div>Life Takes Energy®</div></div>				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF TECUMSEH - 2020 CONSTRUCTION FROM A-E TO A-F				
DRAWN BY	DATE	PLOT SPEC:		
ENBRIDGE DRAFTER	2018:06:05			1:1000
CHECKED BY	DATE	CAD CODE:		
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-006.dgn		
APPROVED BY	DATE	FILE REVISION DATE		
		2019:11:01		
SIZE STRIP		SHEET N/A	DRAWING No. PL2429-AL-006	





TOWNSHIP OF SANDWICH EAST
LOT 9, CONCESSION 11

CONCESSION RD 11

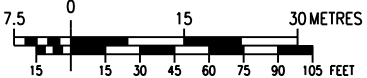
N TALBOT RD (COUNTY RD 46)

MATCH LINE
A-G

MATCH LINE
A-H

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

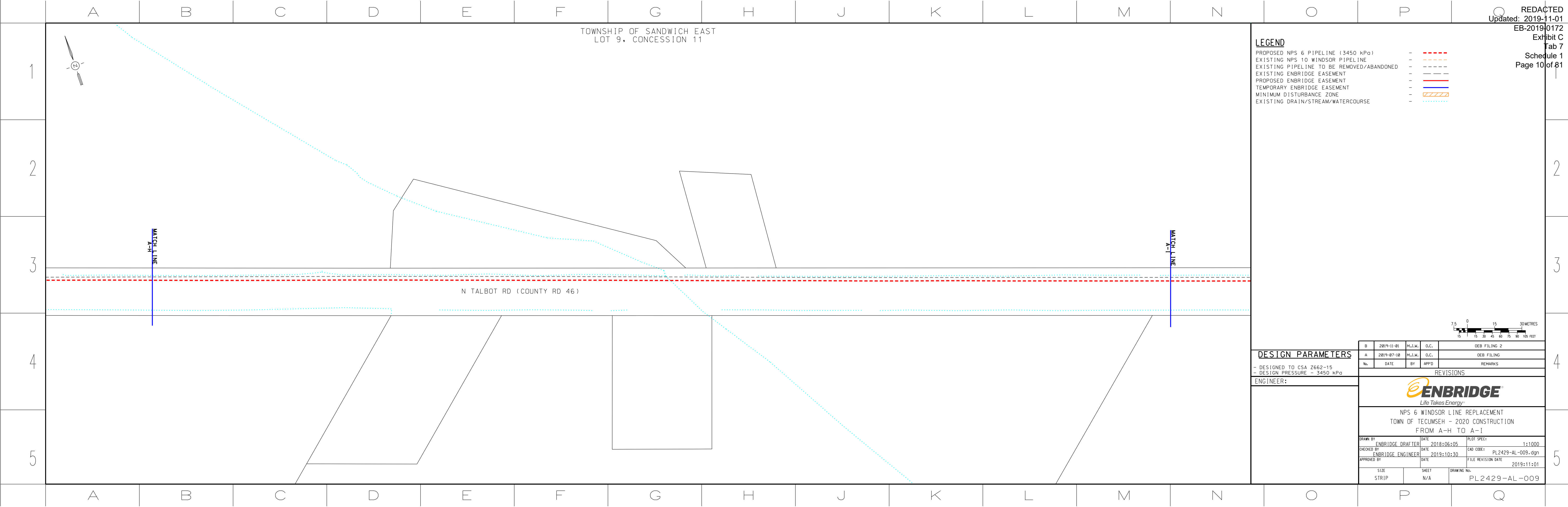
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-G TO A-H

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-008.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-008



TOWNSHIP OF SANDWICH EAST
LOT 9, CONCESSION 11

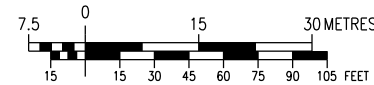
LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Black dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black solid line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

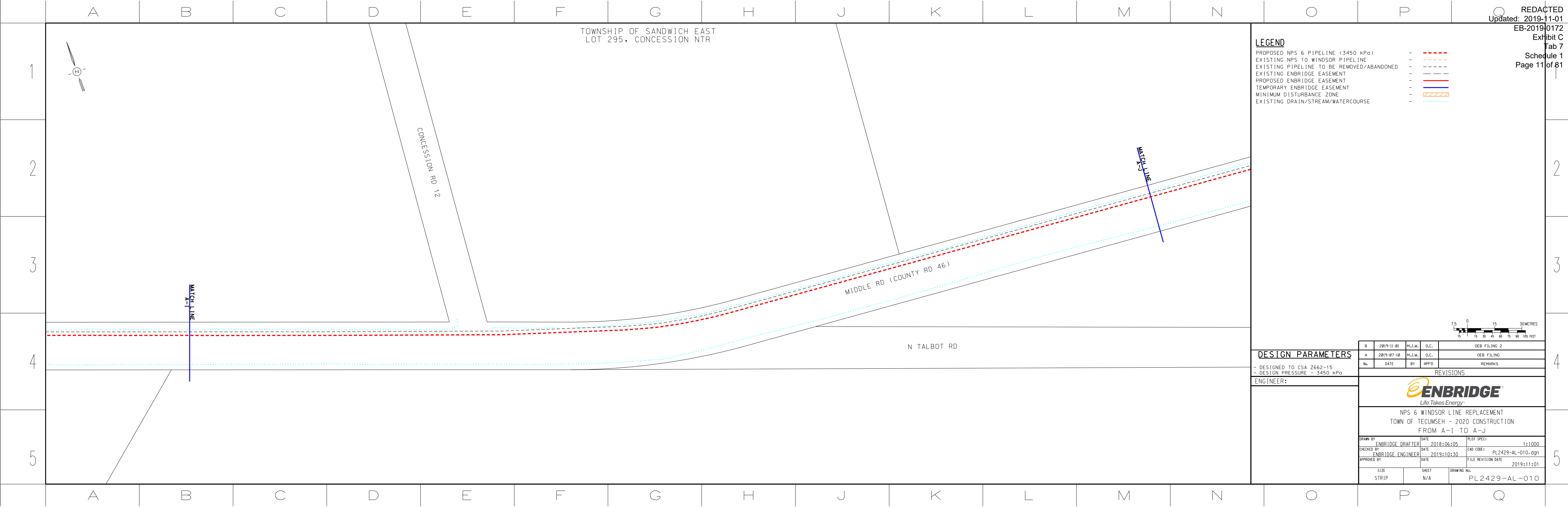
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-H TO A-I

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-009.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-009
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TOWNSHIP OF SANDWICH EAST
LOT 295, CONCESSION NTR

CONCESSION RD 12

MIDDLE RD (COUNTY RD 46)

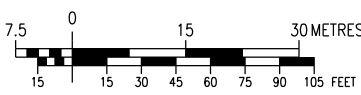
N TALBOT RD

MATCH LINE
A-I

MATCH LINE
A-J

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

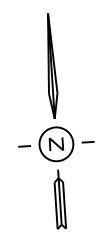
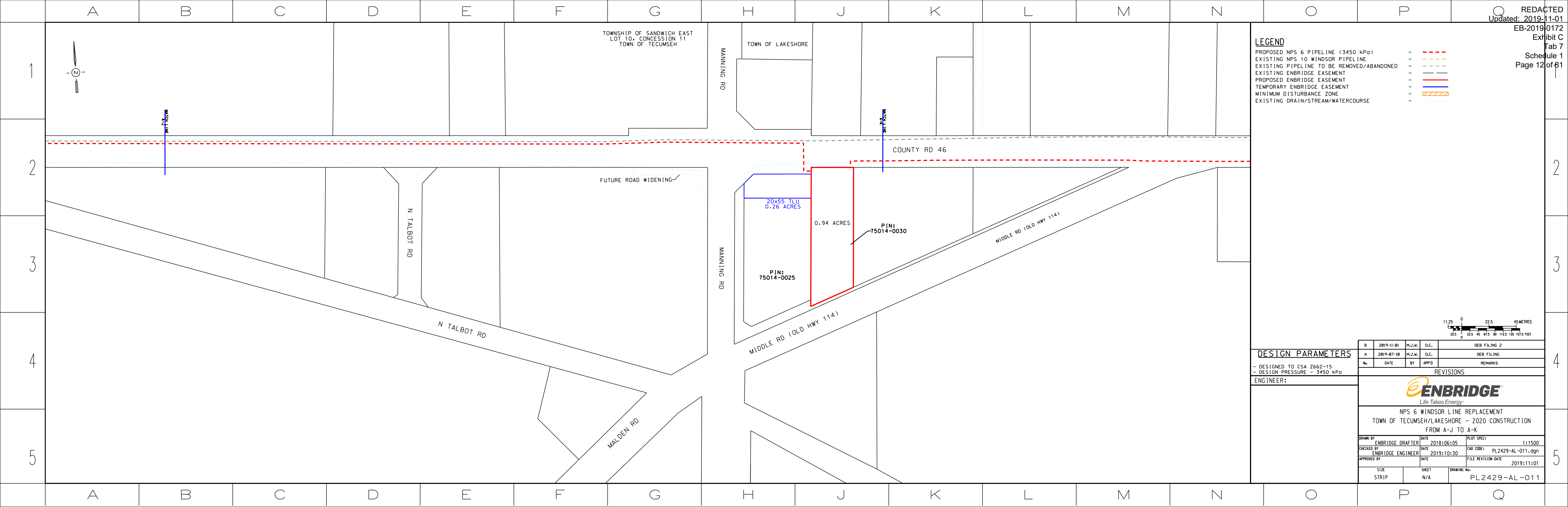
REVISIONS



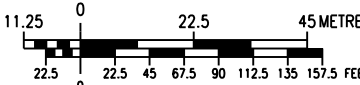
NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH - 2020 CONSTRUCTION
FROM A-I TO A-J

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-010.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-010
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- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

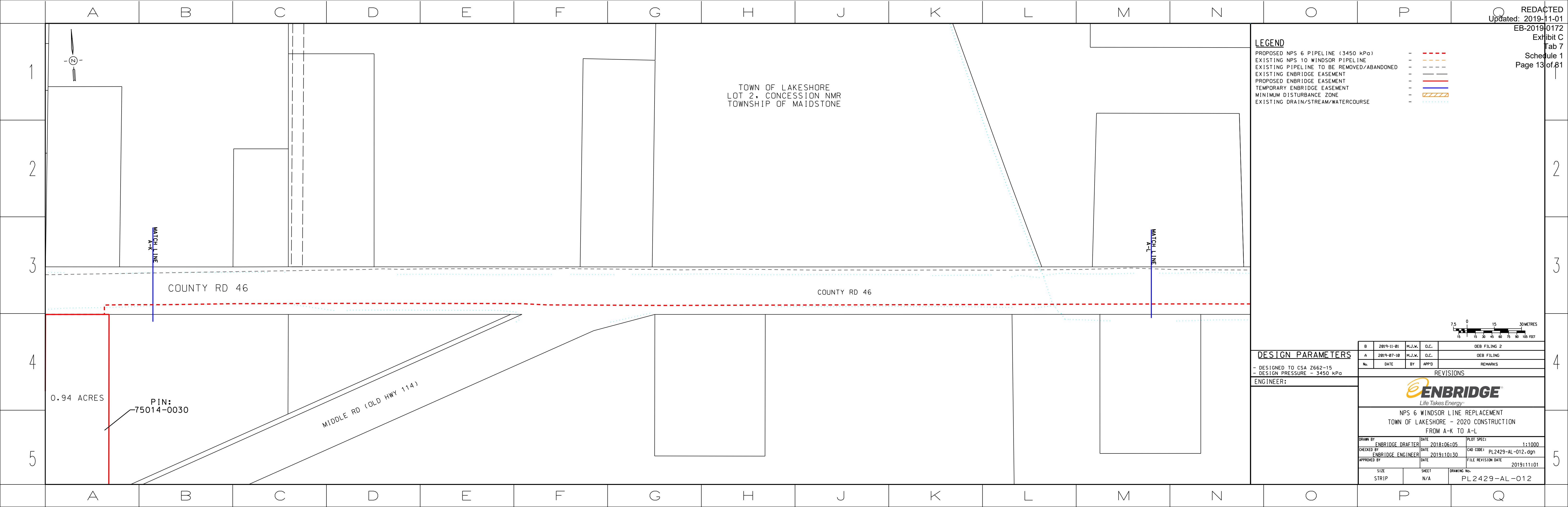
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No.	DATE	BY	APP'D	REMARKS

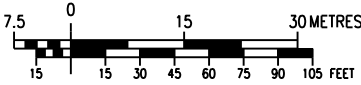
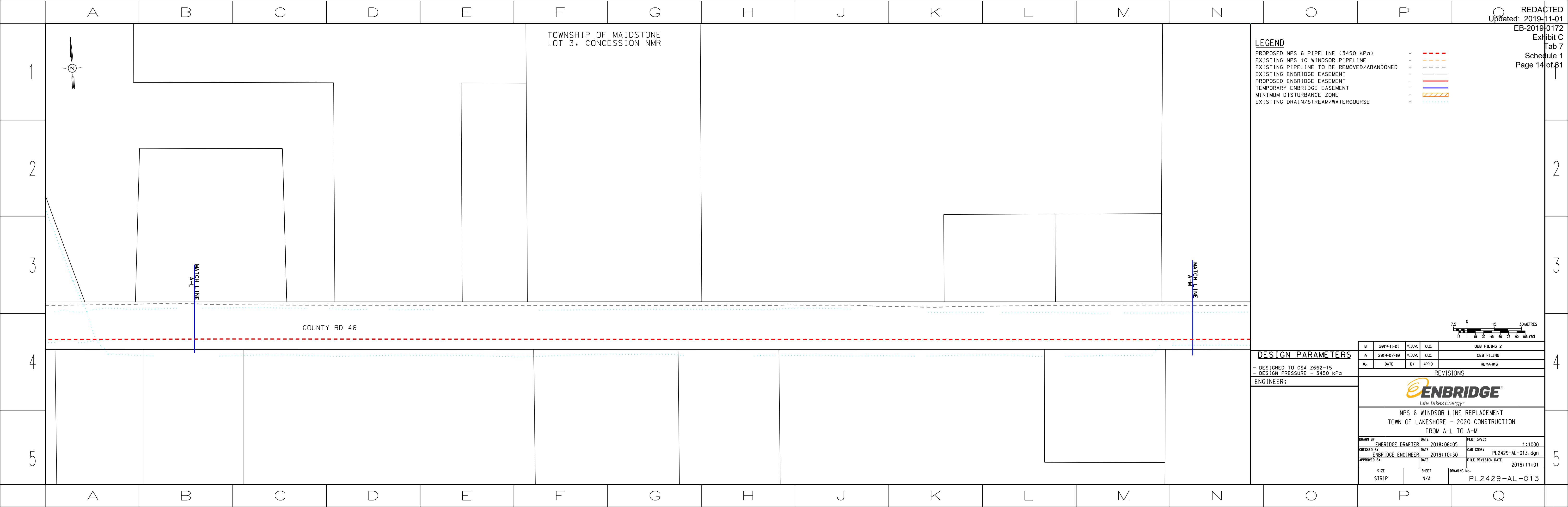
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF TECUMSEH/LAKESHORE - 2020 CONSTRUCTION
FROM A-J TO A-K


DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1500
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-011.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01
SIZE	STRIP	SHEET	N/A	DRAWING No.	PL2429-AL-011





B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS


Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-L TO A-M

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-013.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
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LEGEND

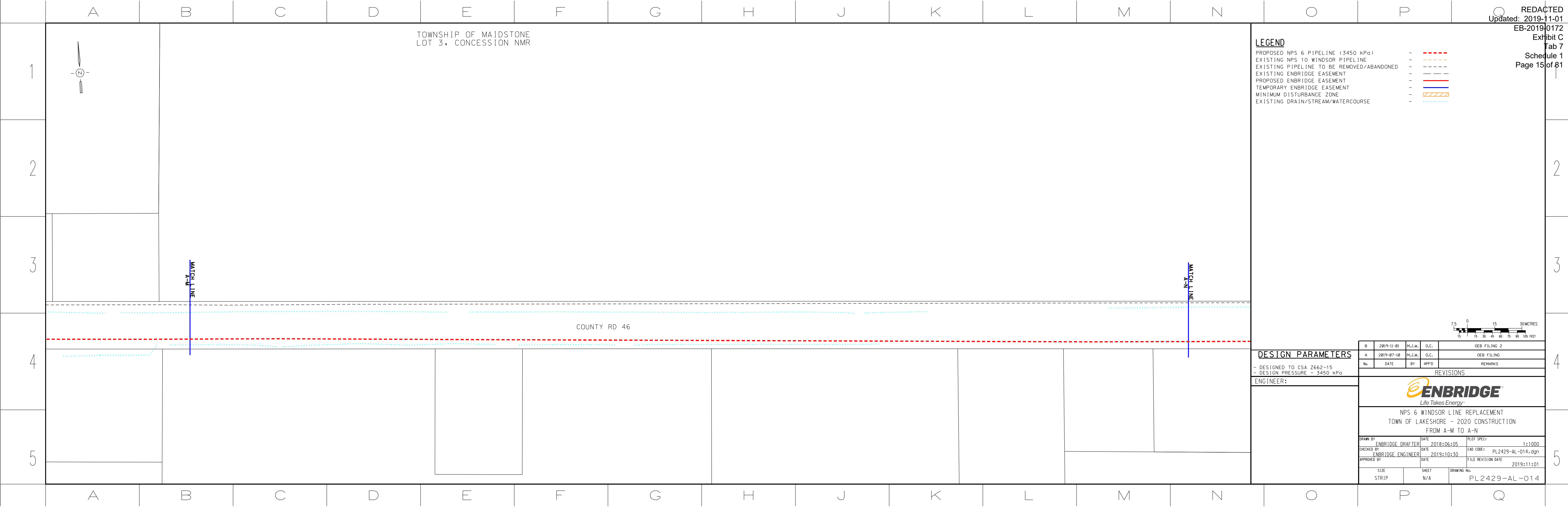
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

TOWNSHIP OF MAIDSTONE
LOT 3, CONCESSION NMR

COUNTY RD 46

MATCH LINE
A-L

MATCH LINE
A-M



TOWNSHIP OF MAIDSTONE
LOT 3, CONCESSION NMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Blue dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Blue solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Cyan dotted line]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Green dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

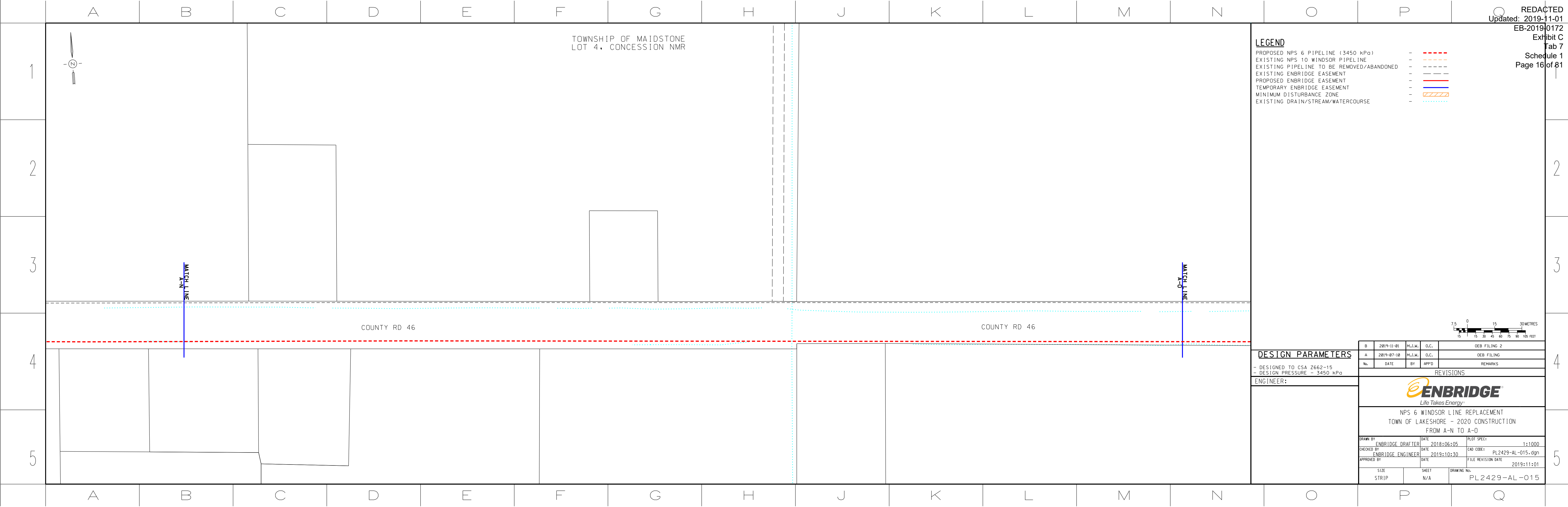
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A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-M TO A-N

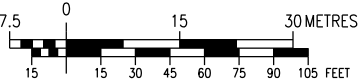
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CHECKED BY	DATE	CAD CODE:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-014



TOWNSHIP OF MAIDSTONE
LOT 4, CONCESSION NMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

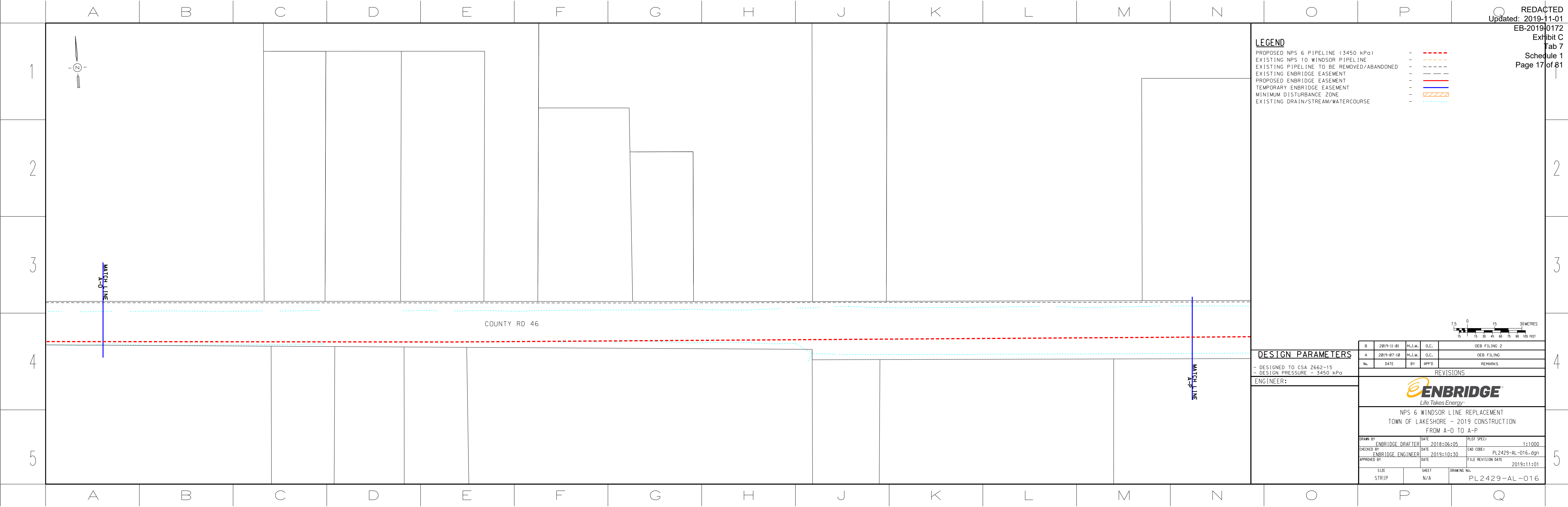
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-N TO A-0

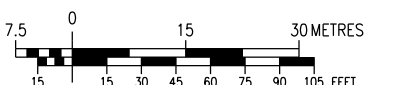
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CHECKED BY	DATE	CAD CODE:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-015
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LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	- - - -
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	- - - -
EXISTING ENBRIDGE EASEMENT	-	- - - -
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	///
EXISTING DRAIN/STREAM/WATERCOURSE	-	...



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

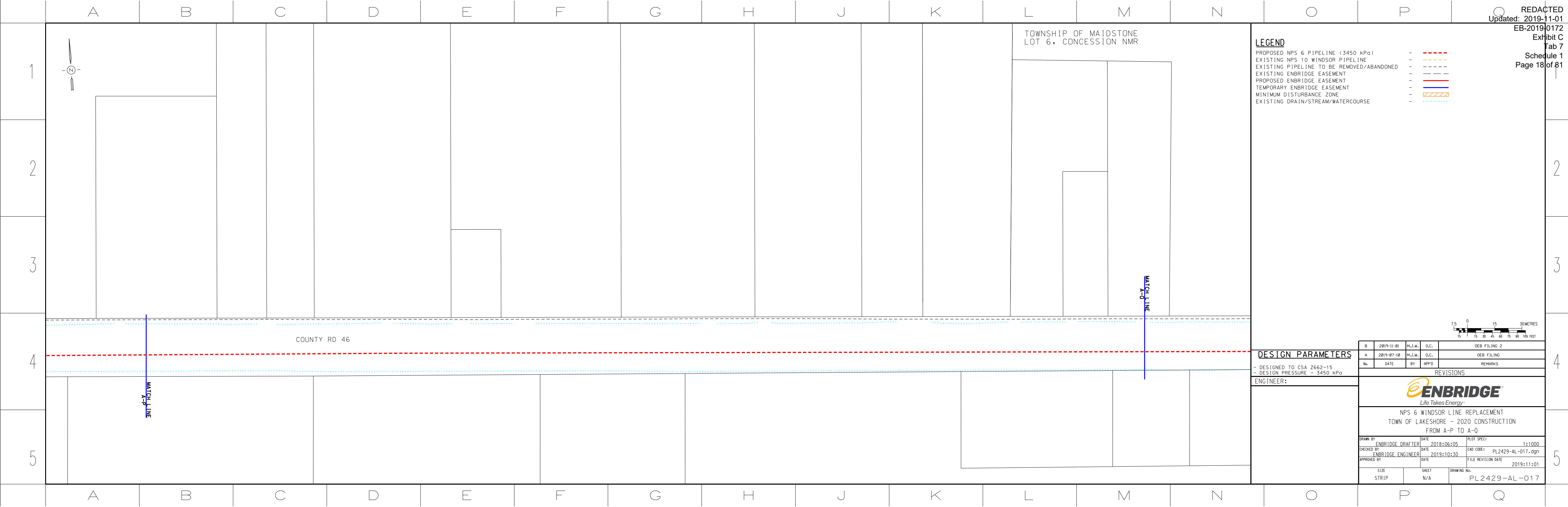
REVISIONS

ENBRIDGE
Life Takes Energy

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2019 CONSTRUCTION
FROM A-0 TO A-P

DRAWN BY	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	DATE	2019:10:30	CAD CODE:	PL2429-AL-016.dgn
APPROVED BY	DATE		FILE REVISION DATE	2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-016
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LEGEND		
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

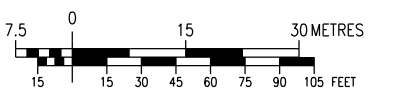


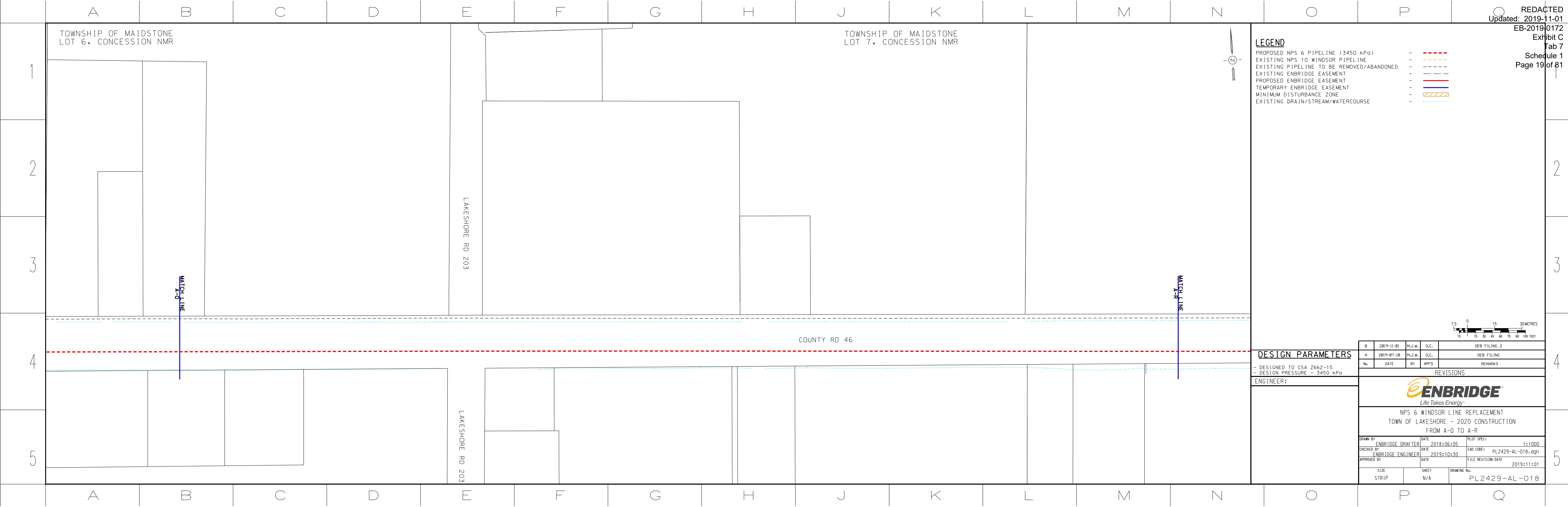
Life Takes Energy

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-P TO A-Q

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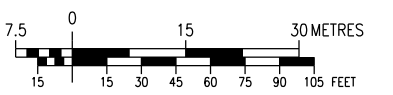


TOWNSHIP OF MAIDSTONE
LOT 6, CONCESSION NMR

TOWNSHIP OF MAIDSTONE
LOT 7, CONCESSION NMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Blue dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

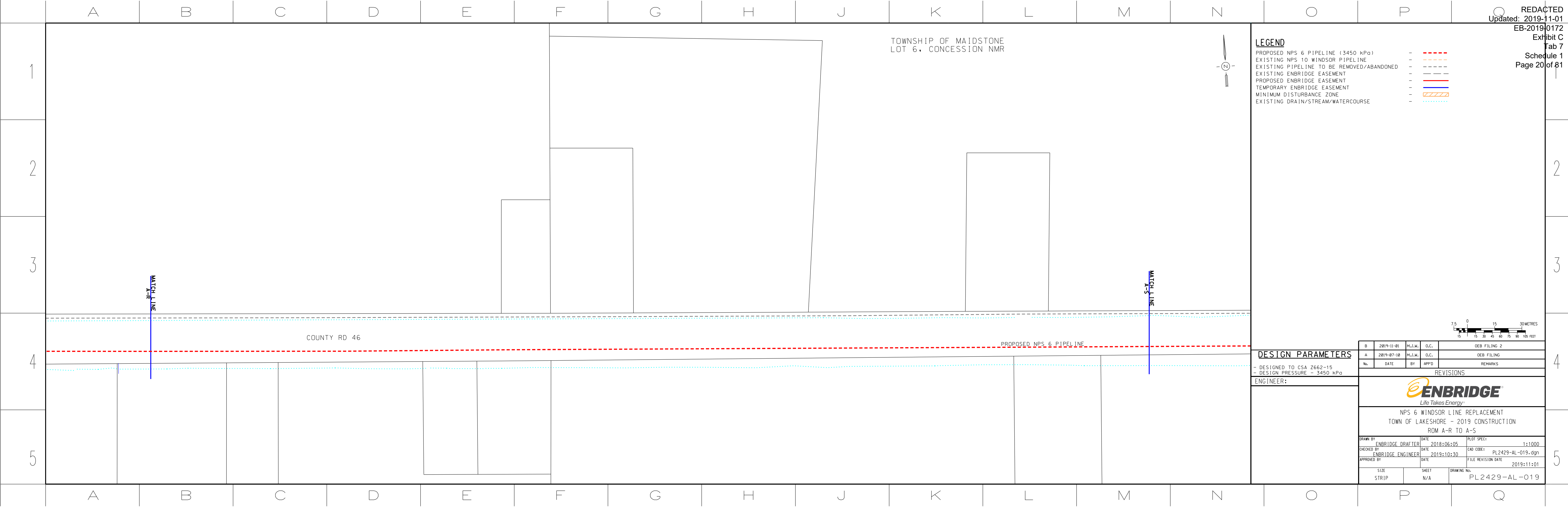
REVISIONS

ENBRIDGE
Life Takes Energy

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-Q TO A-R

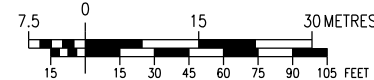
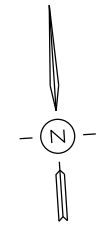
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-018
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LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

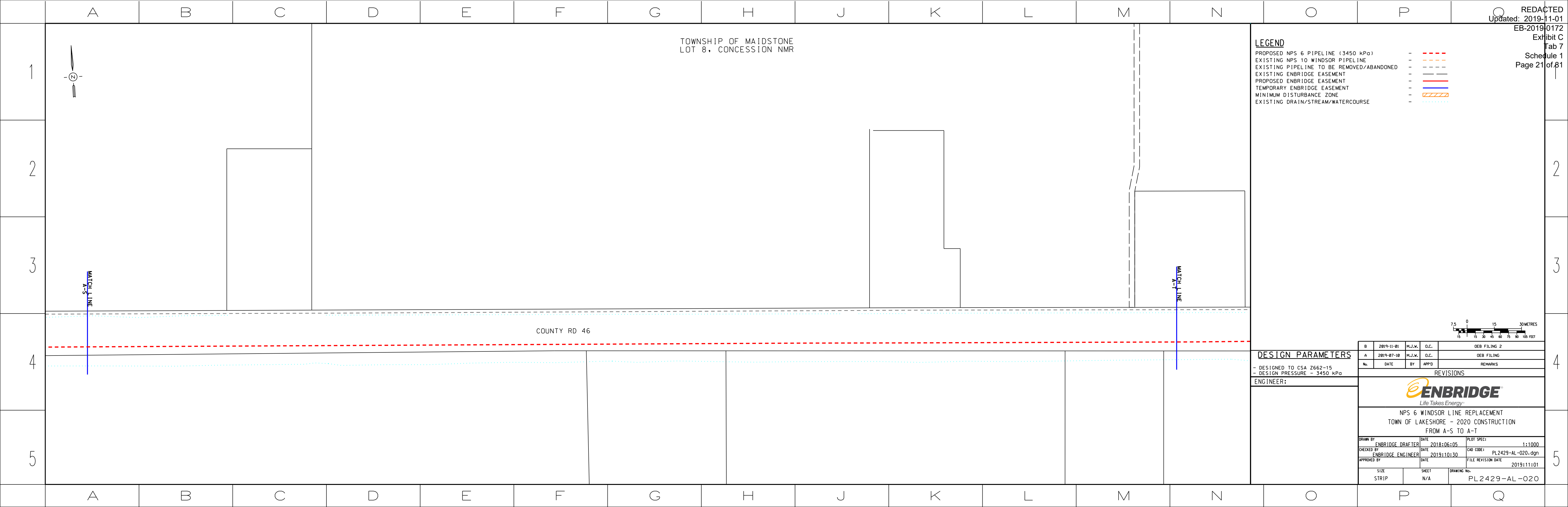
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2019 CONSTRUCTION
ROM A-R TO A-S

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-019.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-019



- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

7.50

0

15

30

45

60

75

90

105

15

30

45

60

75

90

105

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15

- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B

2019-11-01

M.J.W.

O.C.

OEB FILING 2

A

2019-07-10

M.J.W.

O.C.

OEB FILING

No.

DATE

BY

APP'D

REMARKS

REVISIONS

ENBRIDGE

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NPS 6 WINDSOR LINE REPLACEMENT

TOWN OF LAKESHORE - 2020 CONSTRUCTION

FROM A-S TO A-T

DRAWN BY

ENBRIDGE DRAFTER

DATE

2018:06:05

PLOT SPEC:

1:1000

CHECKED BY

ENBRIDGE ENGINEER

DATE

2019:10:30

CAD CODE:

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APPROVED BY

DATE

2019:11:01

FILE REVISION DATE

SIZE

STRIP

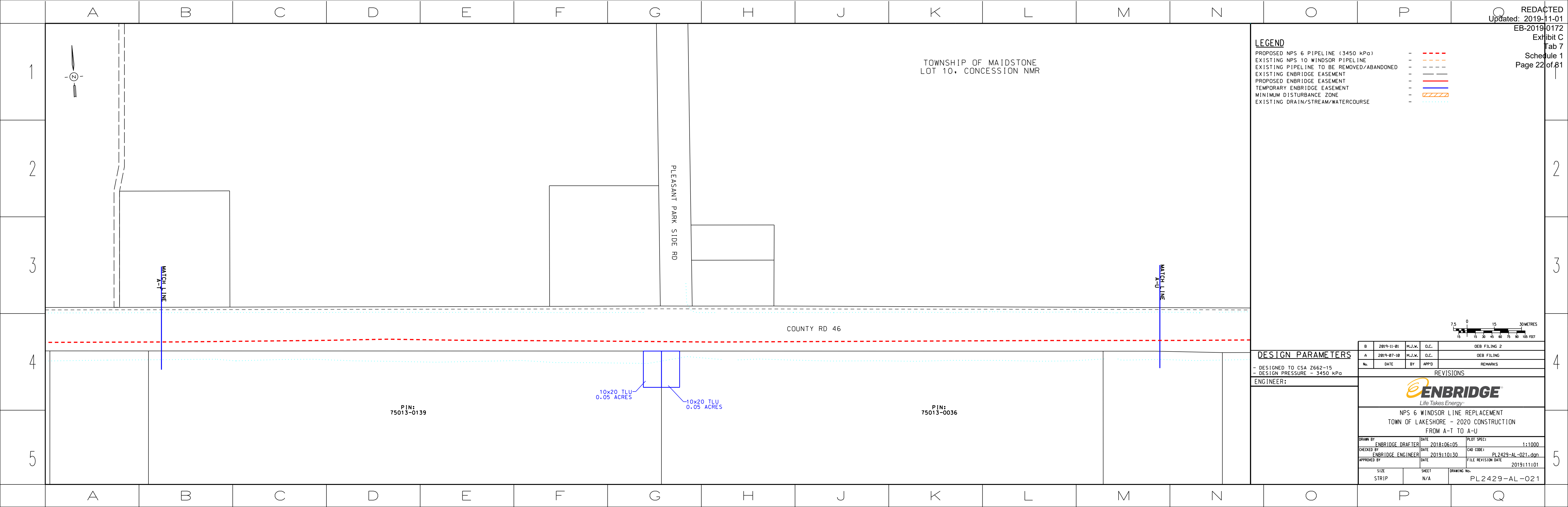
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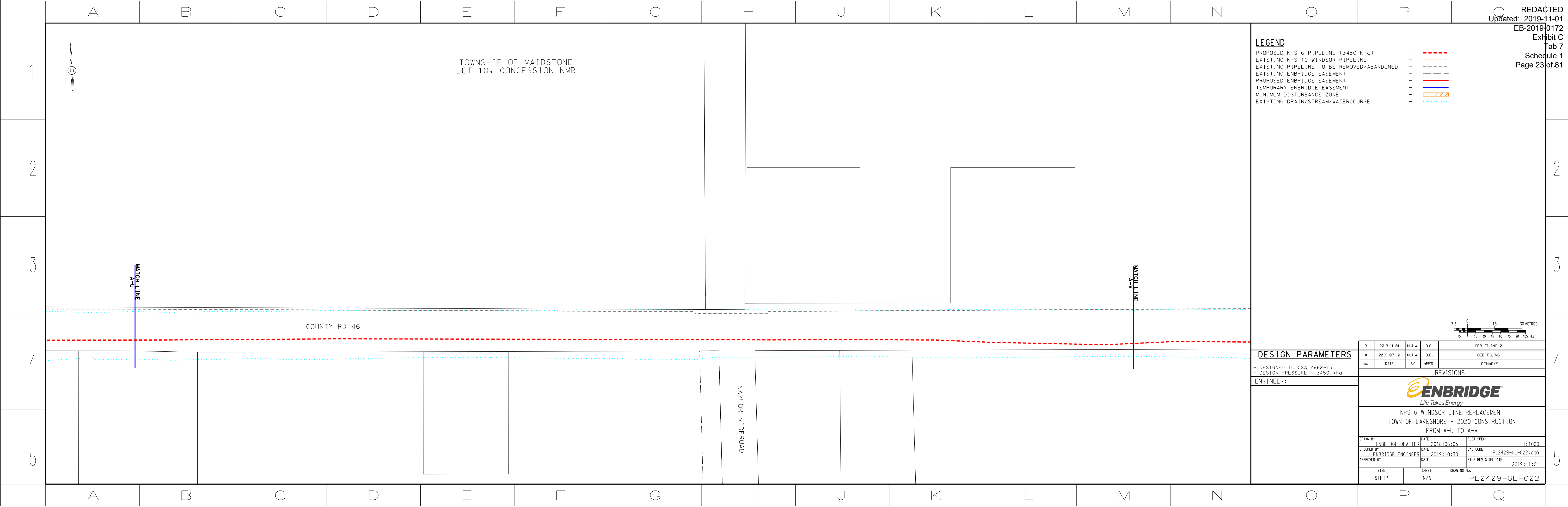
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DRAWING No.

PL2429-AL-020

REDACTED
Updated: 2019-11-01
EB-2019-0172
Exhibit C
Tab 7
Schedule 1
Page 21 of 81





LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	----
EXISTING NPS 10 WINDSOR PIPELINE	-	----
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	----
EXISTING ENBRIDGE EASEMENT	-	----
PROPOSED ENBRIDGE EASEMENT	-	----
TEMPORARY ENBRIDGE EASEMENT	-	----
MINIMUM DISTURBANCE ZONE	-	----
EXISTING DRAIN/STREAM/WATERCOURSE	-	----

DESIGN PARAMETERS

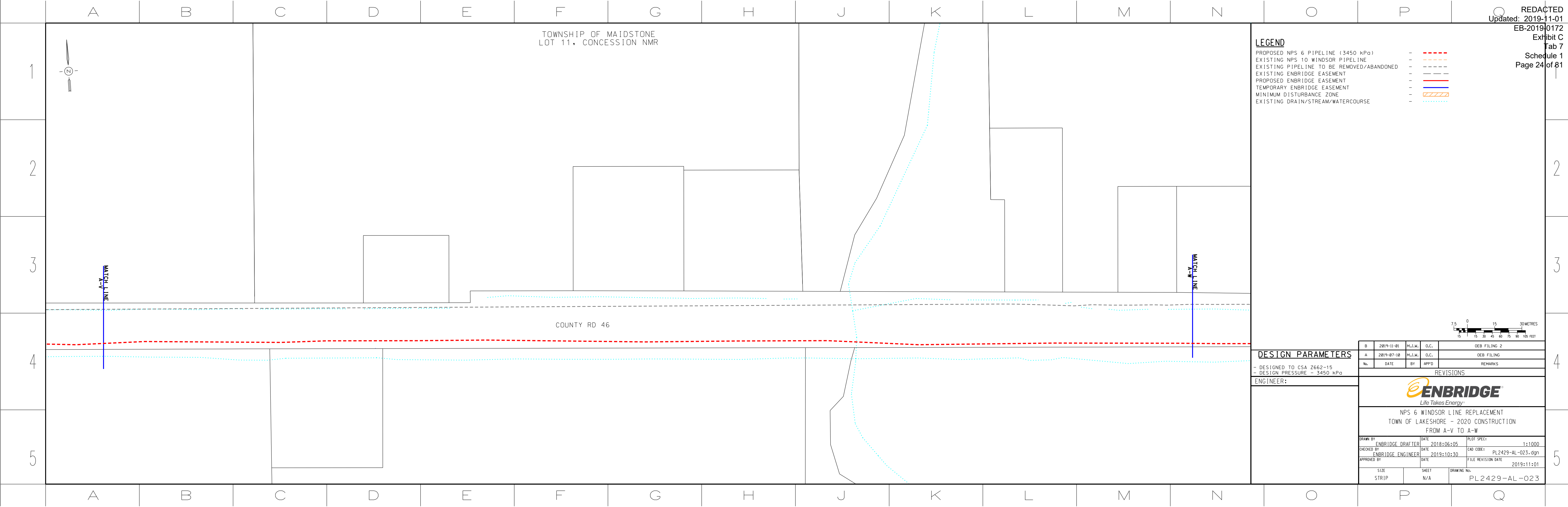
- DESIGNED TO CSA Z662-15			
- DESIGN PRESSURE - 3450 kPa			

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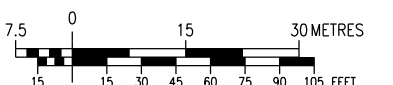
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A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM A-U TO A-V			
DRAWN BY	DATE	PLOT SPEC:	
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CHECKED BY	DATE	CAD CODE:	
ENBRIDGE ENGINEER	2019:10:30	PL2429-GL-022.dgn	
APPROVED BY	DATE	FILE REVISION DATE	
		2019:11:01	
SIZE STRIP	SHEET N/A	DRAWING No.	
		PL2429-GL-022	



- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

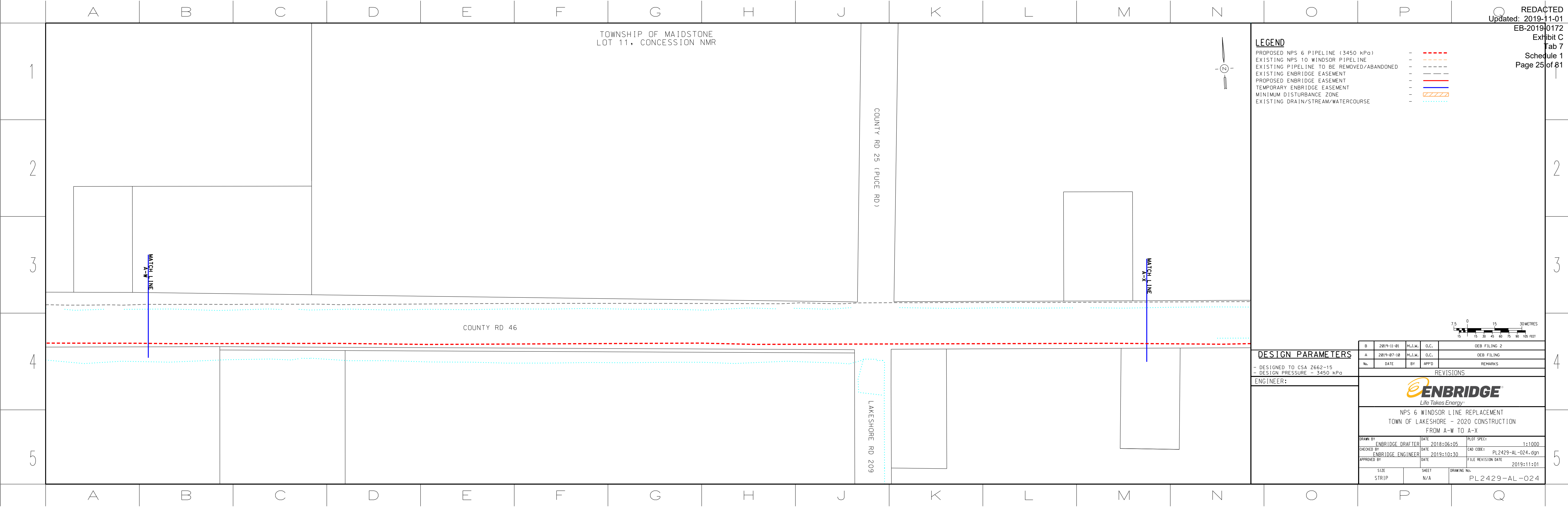
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A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-V TO A-W

DRAWN BY ENBRIDGE DRAFTER	DATE 2018:06:05	PLOT SPEC: 1:1000
CHECKED BY ENBRIDGE ENGINEER	DATE 2019:10:30	CAD CODE: PL2429-AL-023.dgn
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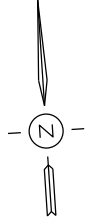


TOWNSHIP OF MAIDSTONE
LOT 11, CONCESSION NMR

COUNTY RD 25 (PUCE RD)

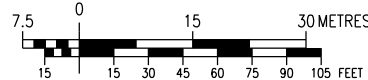
COUNTY RD 46

LAKESHORE RD 209



LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

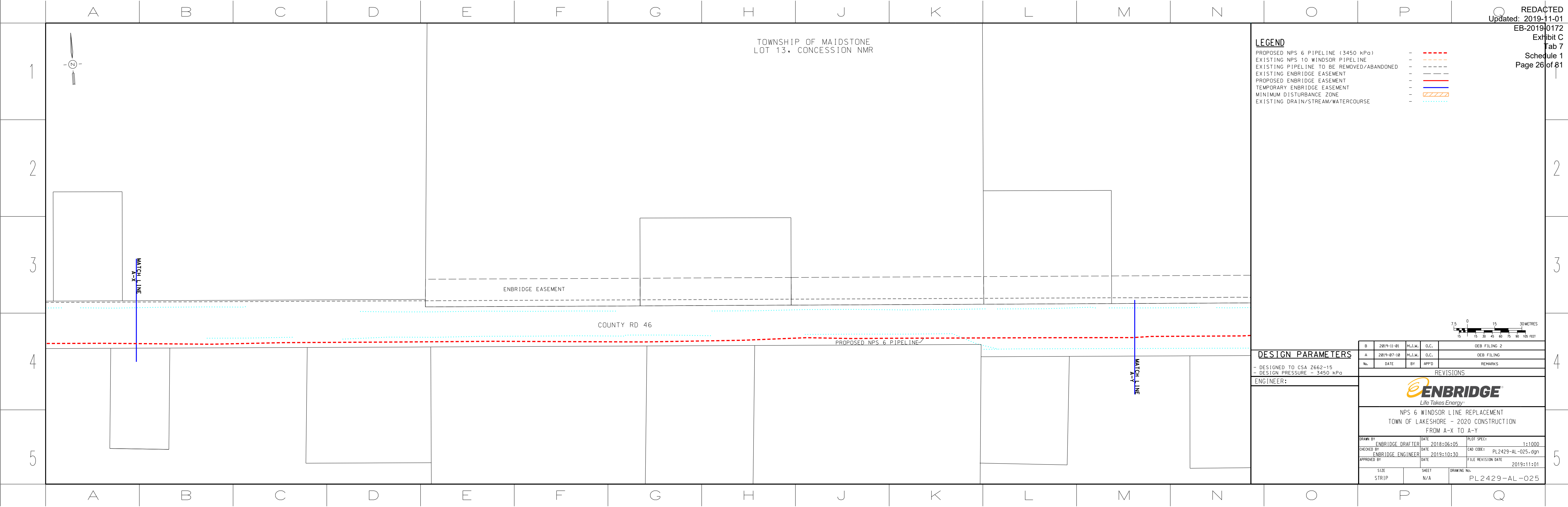
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-W TO A-X

DRAWN BY	DATE	PLOT SPEC:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-024



LEGEND	
PROPOSED NPS 6 PIPELINE (3450 kPa)	- - - - -
EXISTING NPS 10 WINDSOR PIPELINE	- - - - -
EXISTING PIPELINE TO BE REMOVED/ABANDONED	- - - - -
EXISTING ENBRIDGE EASEMENT	- - - - -
PROPOSED ENBRIDGE EASEMENT	- - - - -
TEMPORARY ENBRIDGE EASEMENT	- - - - -
MINIMUM DISTURBANCE ZONE	- - - - -
EXISTING DRAIN/STREAM/WATERCOURSE	- - - - -


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

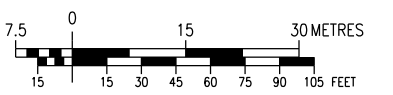


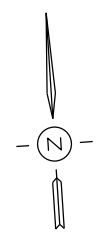
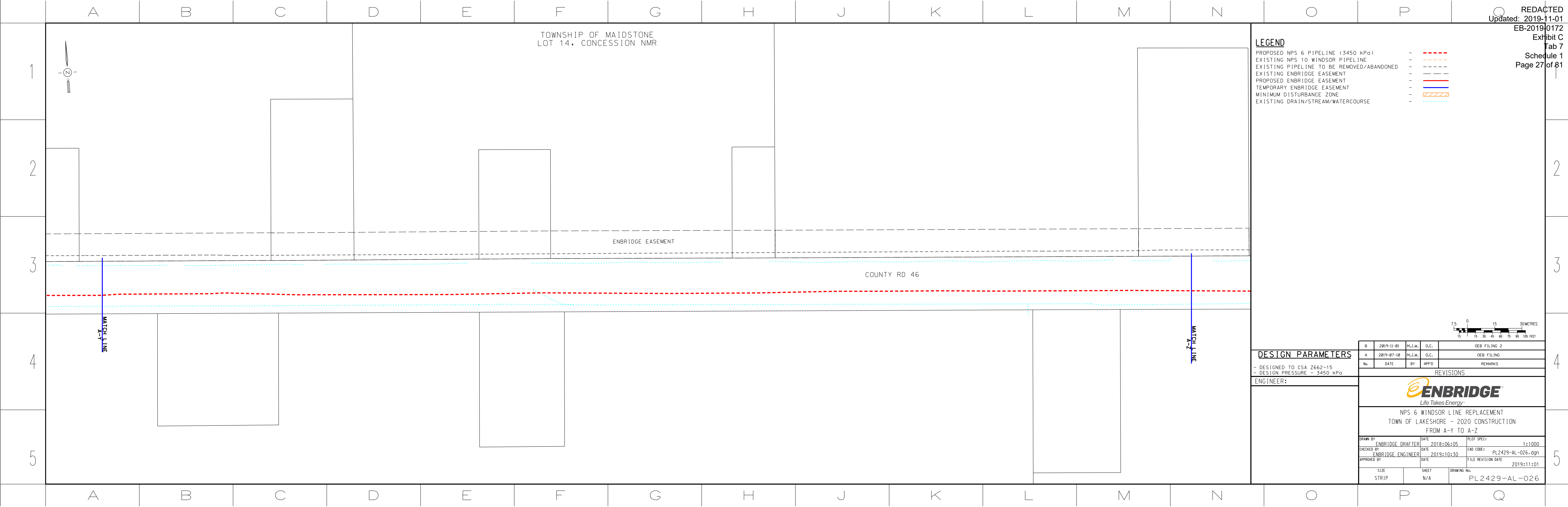
Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-X TO A-Y

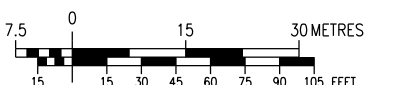
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-025





- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

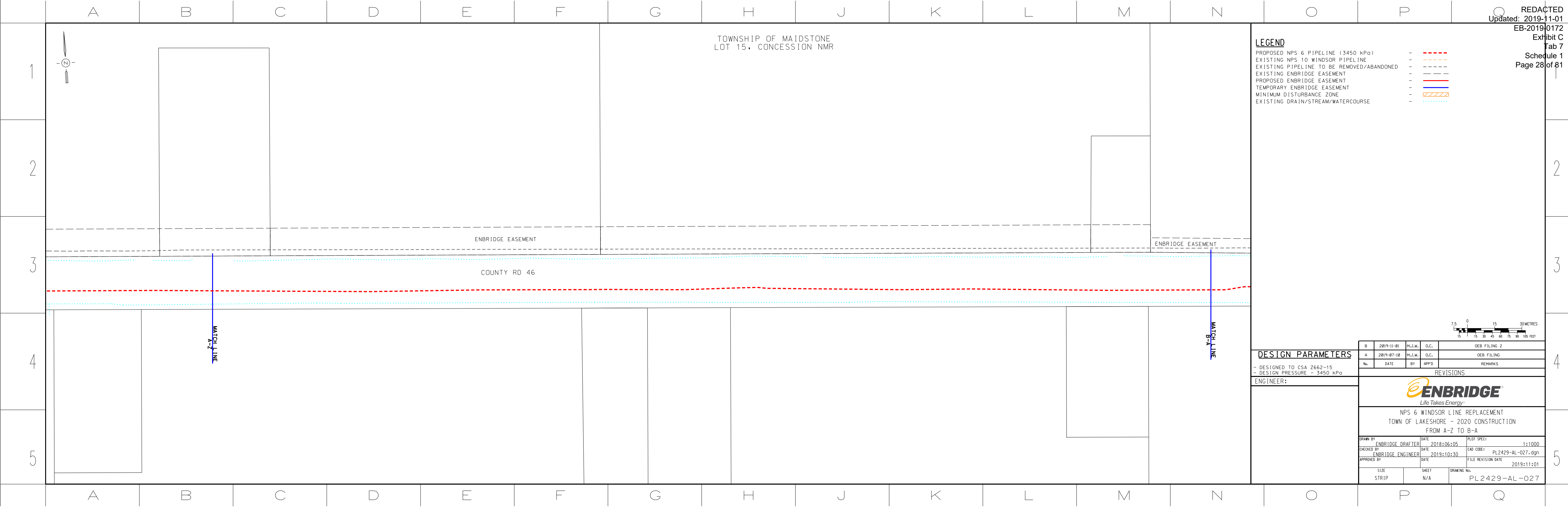
REVISIONS

ENBRIDGE
Life Takes Energy

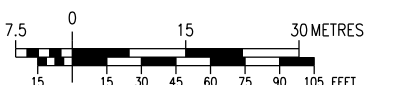
NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-Y TO A-Z

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CHECKED BY	DATE	CAD CODE:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-026
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LEGEND		
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

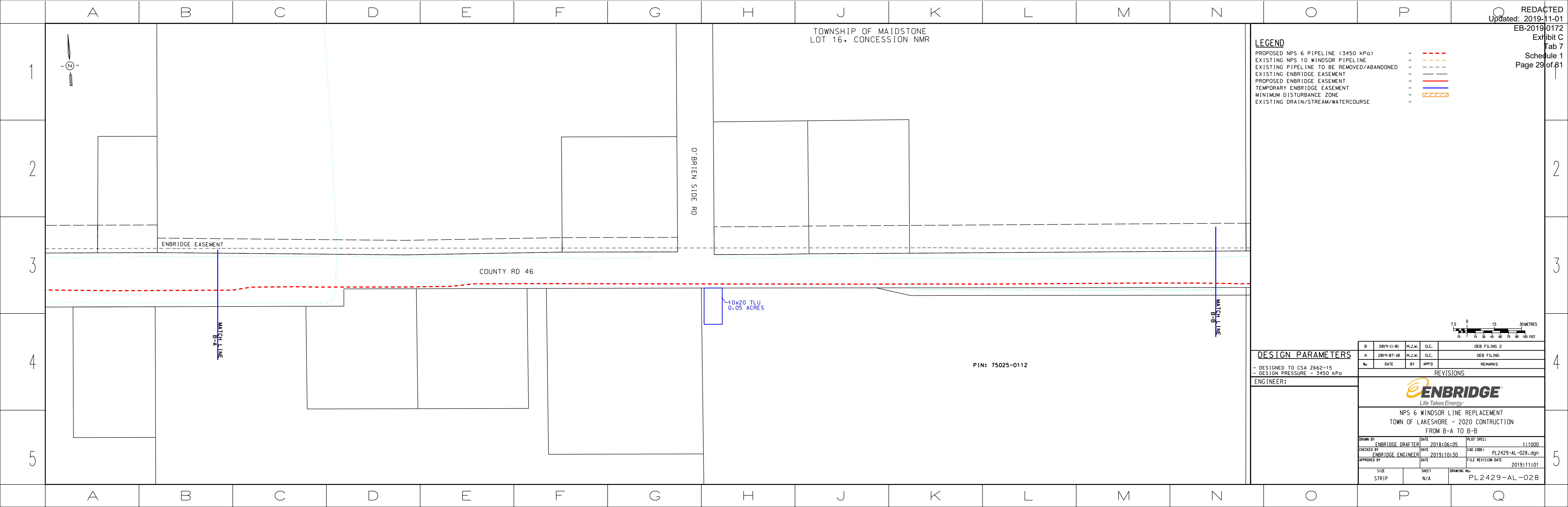
REVISIONS

Life Takes Energy

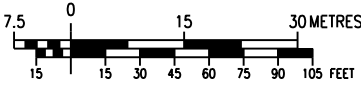
NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM A-Z TO B-A

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-027.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-027
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- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

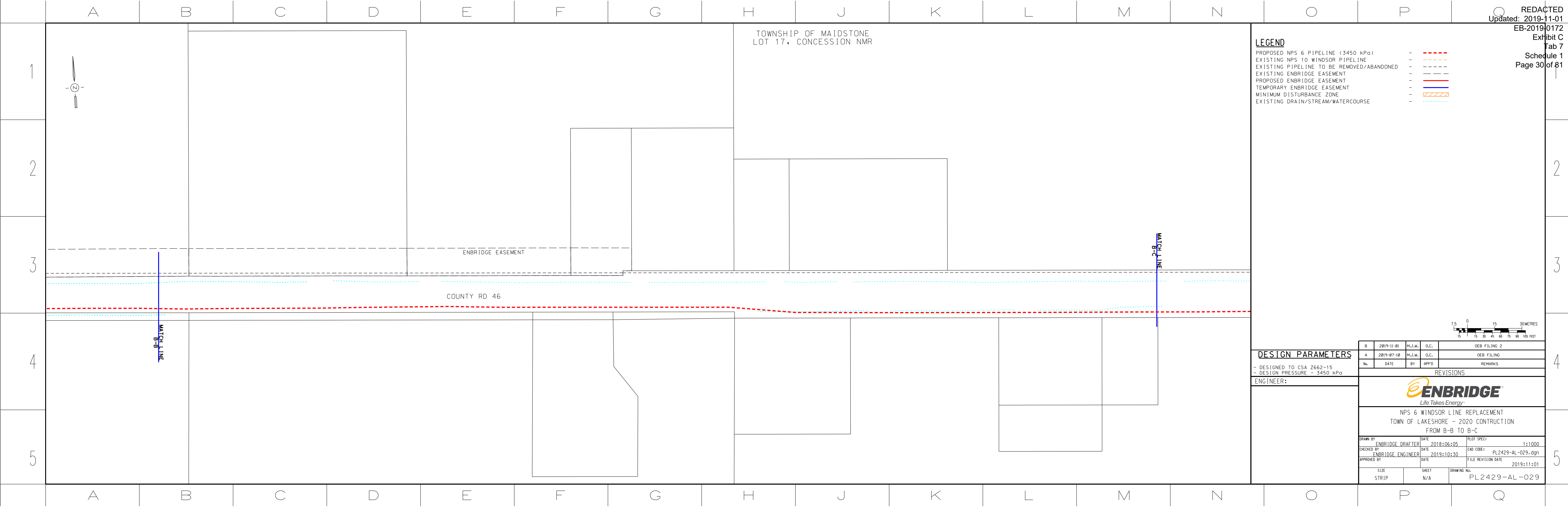
REVISIONS

ENBRIDGE
Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-A TO B-B

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CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-028.dgn
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SIZE	SHEET	DRAWING No.
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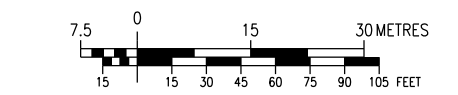
LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa)
- EXISTING NPS 10 WINDSOR PIPELINE
- EXISTING PIPELINE TO BE REMOVED/ABANDONED
- EXISTING ENBRIDGE EASEMENT
- PROPOSED ENBRIDGE EASEMENT
- TEMPORARY ENBRIDGE EASEMENT
- MINIMUM DISTURBANCE ZONE
- EXISTING DRAIN/STREAM/WATERCOURSE

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

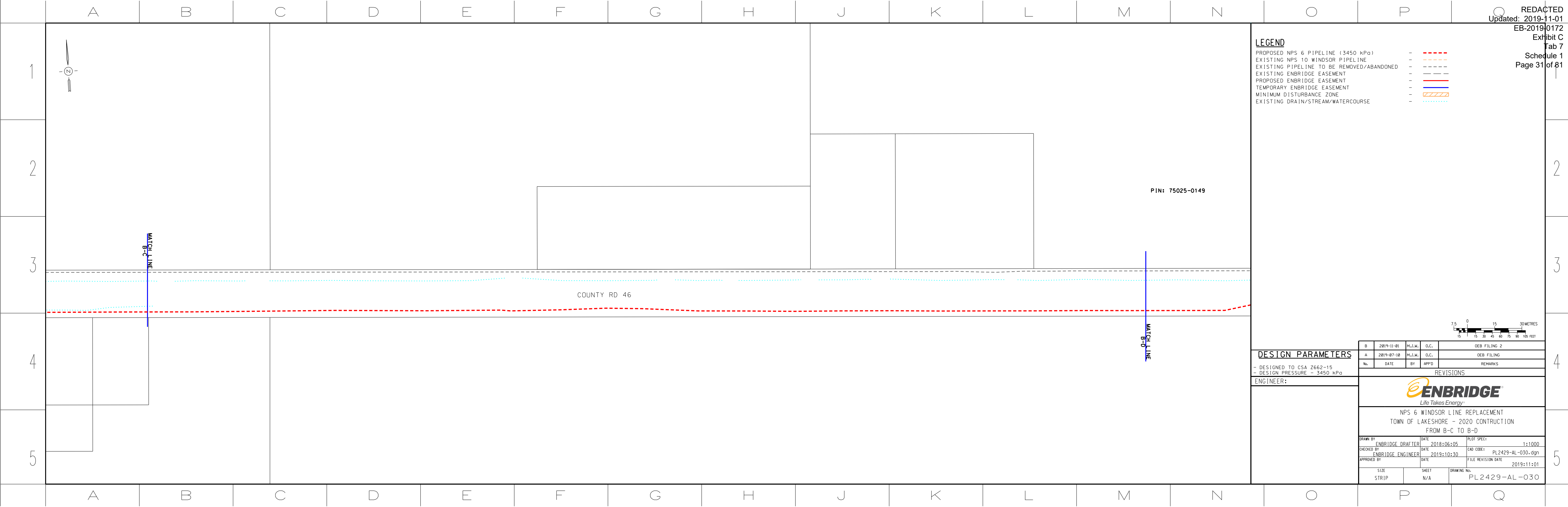
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-B TO B-C

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-029.dgn
APPROVED BY	DATE	FILE REVISION DATE
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SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-029
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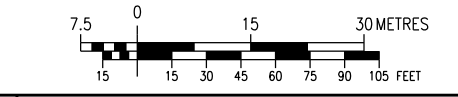
LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) -
- EXISTING NPS 10 WINDSOR PIPELINE -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED -
- EXISTING ENBRIDGE EASEMENT -
- PROPOSED ENBRIDGE EASEMENT -
- TEMPORARY ENBRIDGE EASEMENT -
- MINIMUM DISTURBANCE ZONE -
- EXISTING DRAIN/STREAM/WATERCOURSE -

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

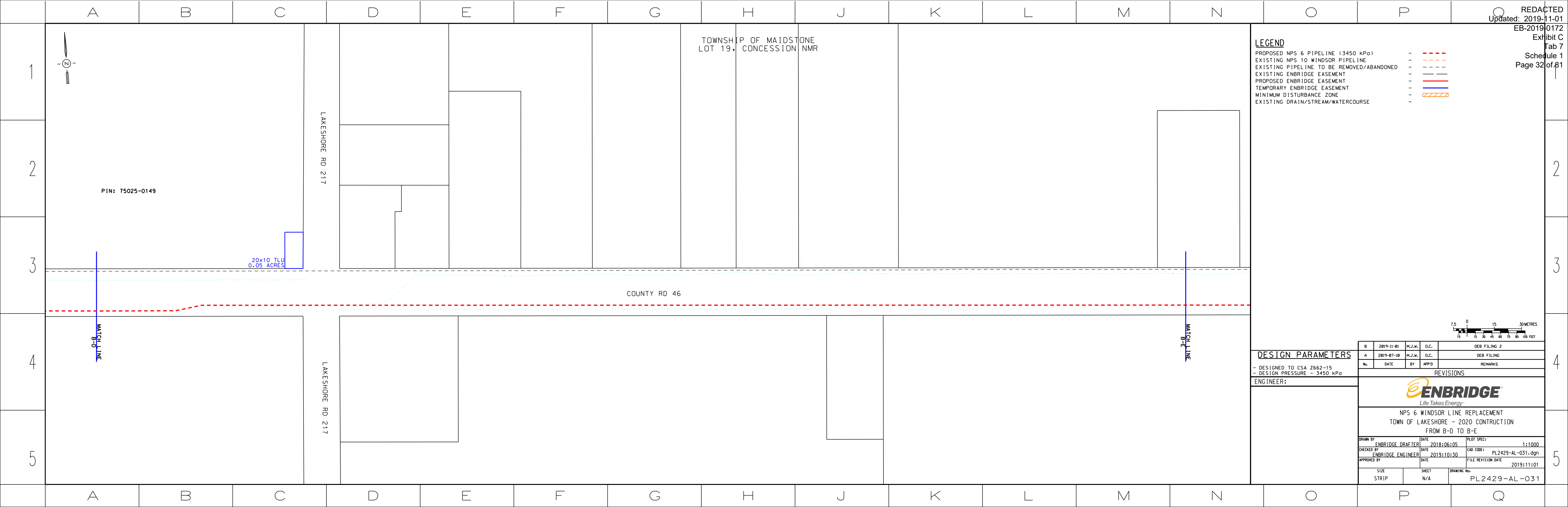
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-C TO B-D

DRAWN BY	DATE	PLOT SPEC:
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APPROVED BY	DATE	FILE REVISION DATE
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SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-030
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- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

7.5015153045607590105 FEET

0153045607590105 METRES

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

ENBRIDGE

Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-D TO B-E

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-031.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

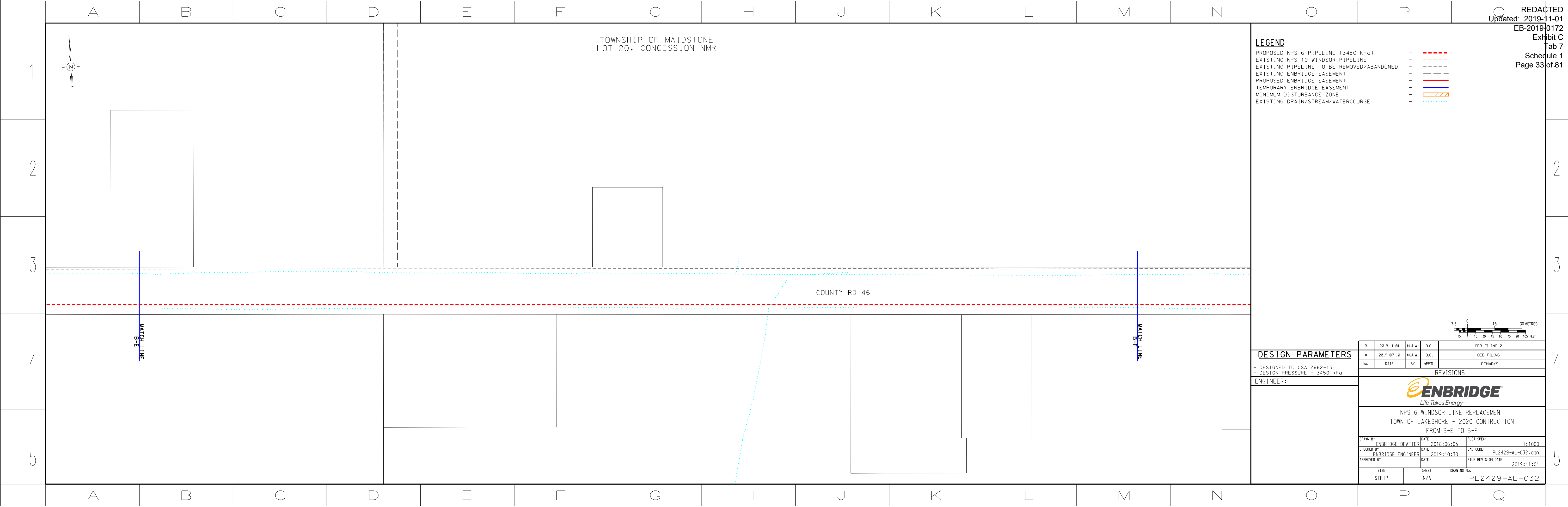
SIZE	SHEET	DRAWING No.
STRIP	N/A	PL 2429-AL-031

2

3

4

5



- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
 - EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
 - EXISTING ENBRIDGE EASEMENT - [Black dashed line]
 - PROPOSED ENBRIDGE EASEMENT - [Red solid line]
 - TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
 - MINIMUM DISTURBANCE ZONE - [Orange hatched area]
 - EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]

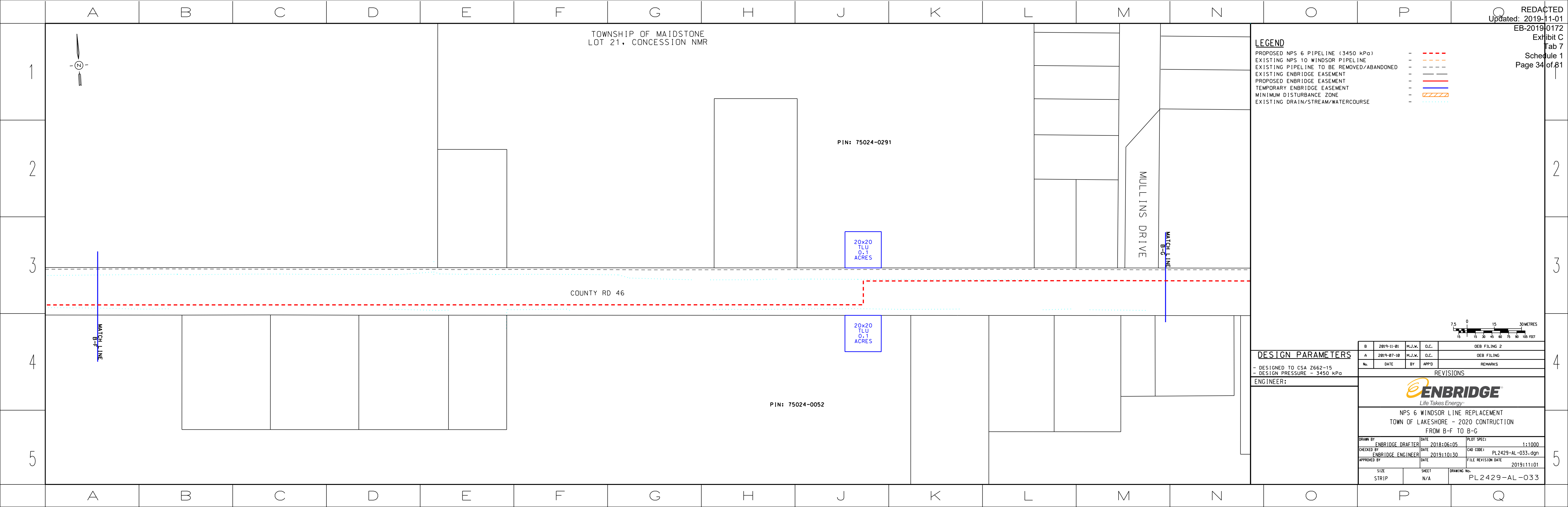
DESIGN PARAMETERS					
B	2019-11-01	M.J.W.	O.C.	OEB FILING 2	
A	2019-07-10	M.J.W.	O.C.	OEB FILING	
No.	DATE	BY	APP'D	REMARKS	

ENGINEER:

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-E TO B-F

DRAWN BY ENBRIDGE DRAFTER	DATE 2018:06:05	PLOT SPEC: 1:1000
CHECKED BY ENBRIDGE ENGINEER	DATE 2019:10:30	CAD CODE: PL2429-AL-032.dgn
APPROVED BY	DATE	FILE REVISION DATE 2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-032
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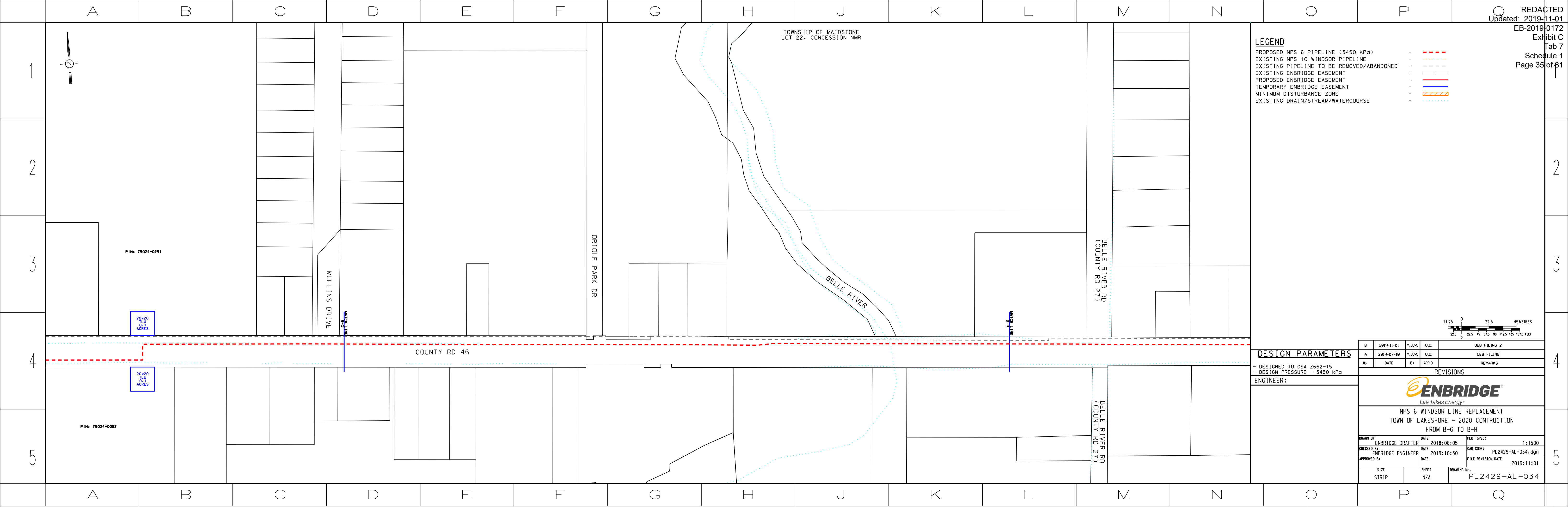


- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

7.5 0 15 30 METRES

15 15 30 45 60 75 90 105 FEET

DESIGN PARAMETERS				
- DESIGNED TO CSA Z662-15				
- DESIGN PRESSURE - 3450 kPa				
ENGINEER:				
REVISIONS				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-F TO B-G				
DRAWN BY ENBRIDGE DRAFTER		DATE 2018:06:05	PLOT SPEC: 1:1000	
CHECKED BY ENBRIDGE ENGINEER		DATE 2019:10:30	CAD CODE: PL2429-AL-033.dgn	
APPROVED BY		DATE	FILE REVISION DATE 2019:11:01	
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-033		



LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)

EXISTING NPS 10 WINDSOR PIPELINE

EXISTING PIPELINE TO BE REMOVED/ABANDONED

EXISTING ENBRIDGE EASEMENT

PROPOSED ENBRIDGE EASEMENT

TEMPORARY ENBRIDGE EASEMENT

MINIMUM DISTURBANCE ZONE

EXISTING DRAIN/STREAM/WATERCOURSE

-

-

-

-

-

-

-

-

DESIGN PARAMETERS


- DESIGNED TO CSA Z662-15

- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS



Life Takes Energy®

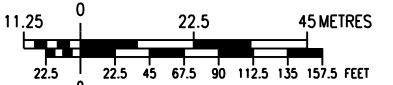
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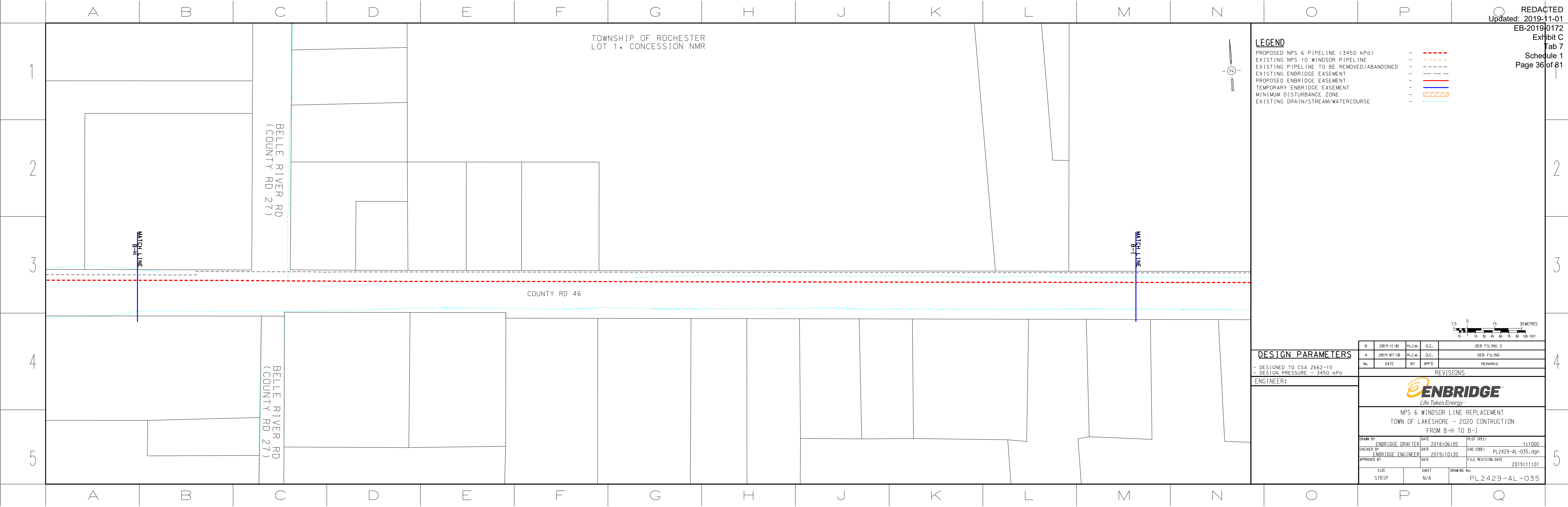
TOWN OF LAKESHORE - 2020 CONSTRUCTION

FROM B-G TO B-H

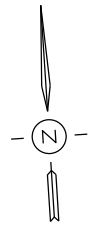
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APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-034



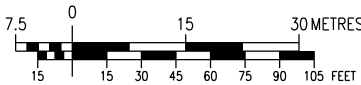


TOWNSHIP OF ROCHESTER
LOT 1, CONCESSION NMR



LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

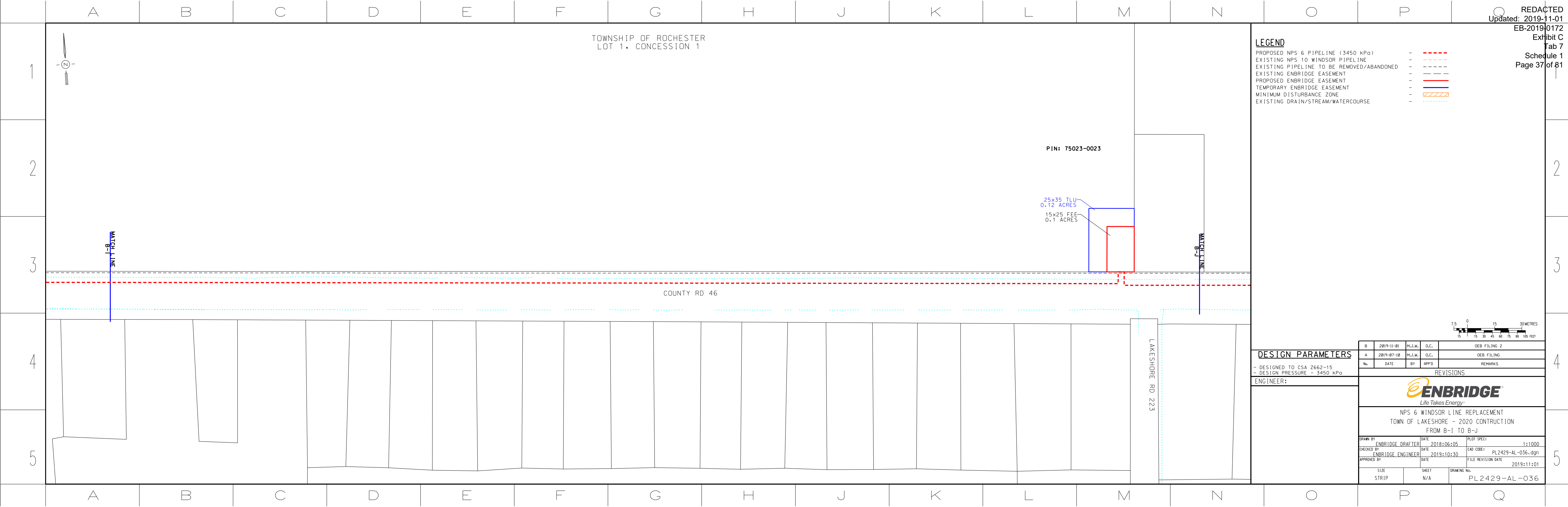
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-H TO B-I

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-035.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-035
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TOWNSHIP OF ROCHESTER
LOT 1, CONCESSION 1


LEGEND

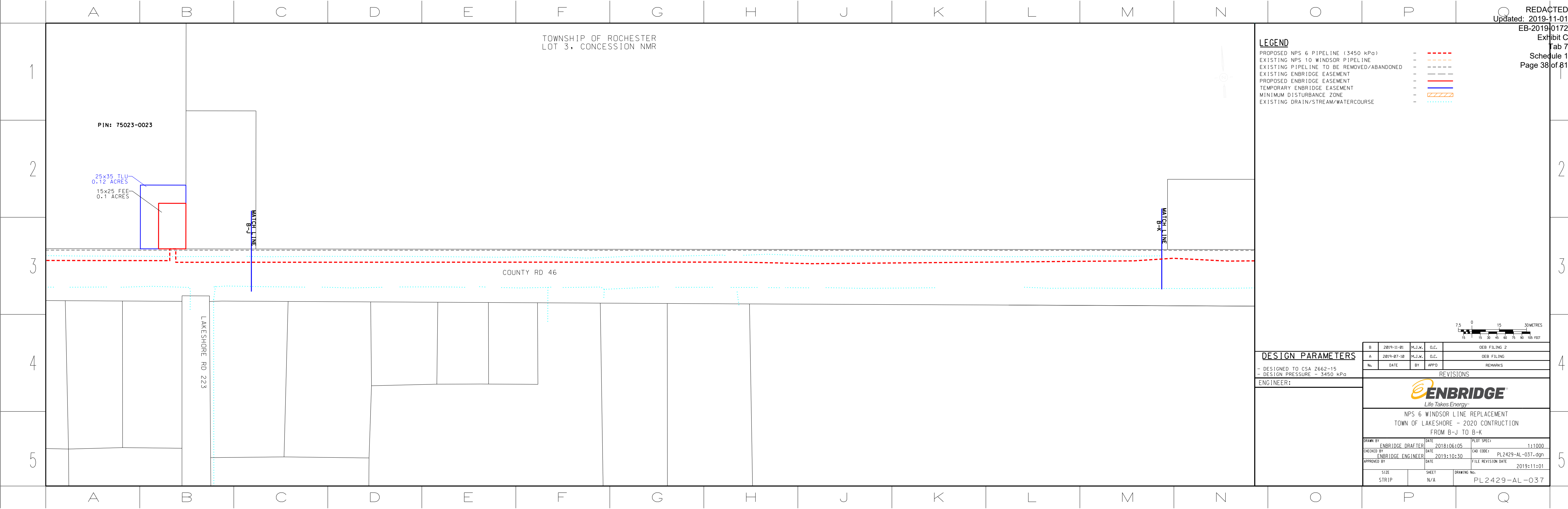
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

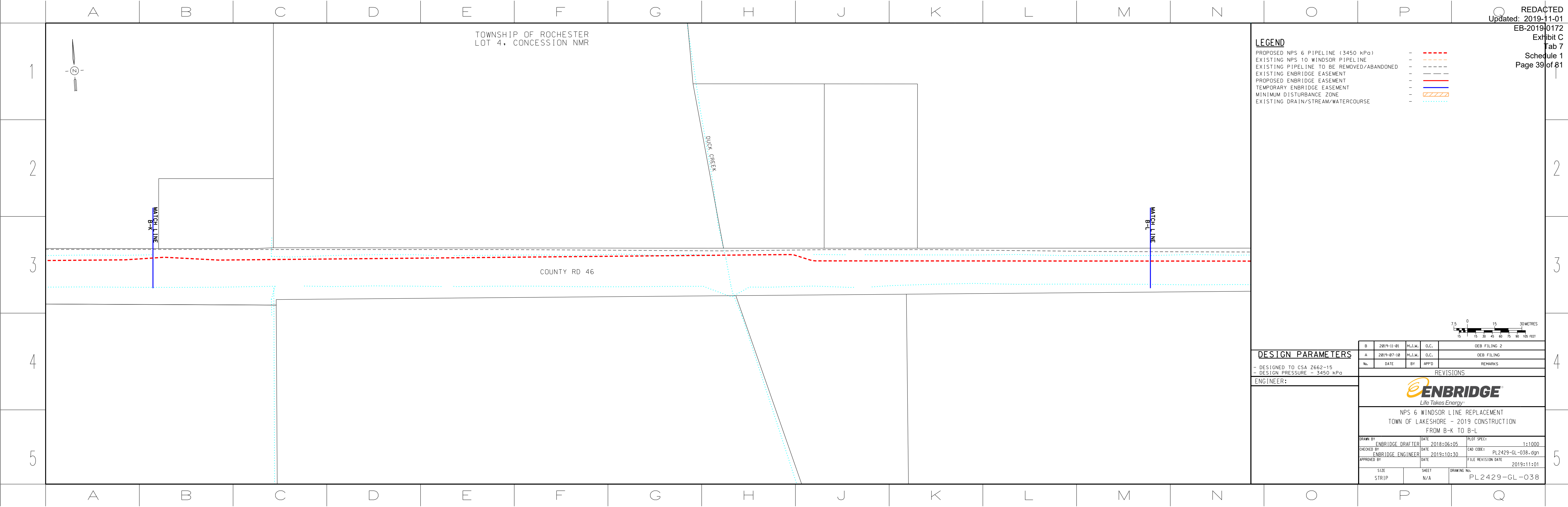
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-I TO B-J				
DRAWN BY	DATE	DATE	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	2019:10:30	2019:11:01	1:1000
CHECKED BY	DATE	DATE	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	2019:11:01	2019:11:01	PL2429-AL-036.dgn
APPROVED BY	DATE	DATE	DATE	FILE REVISION DATE
2019:11:01	2019:11:01	2019:11:01	2019:11:01	2019:11:01
SIZE	SHEET	DRAWING No.		
STRIP	N/A	PL2429-AL-036		





LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa)
- EXISTING NPS 10 WINDSOR PIPELINE
- EXISTING PIPELINE TO BE REMOVED/ABANDONED
- EXISTING ENBRIDGE EASEMENT
- PROPOSED ENBRIDGE EASEMENT
- TEMPORARY ENBRIDGE EASEMENT
- MINIMUM DISTURBANCE ZONE
- EXISTING DRAIN/STREAM/WATERCOURSE

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

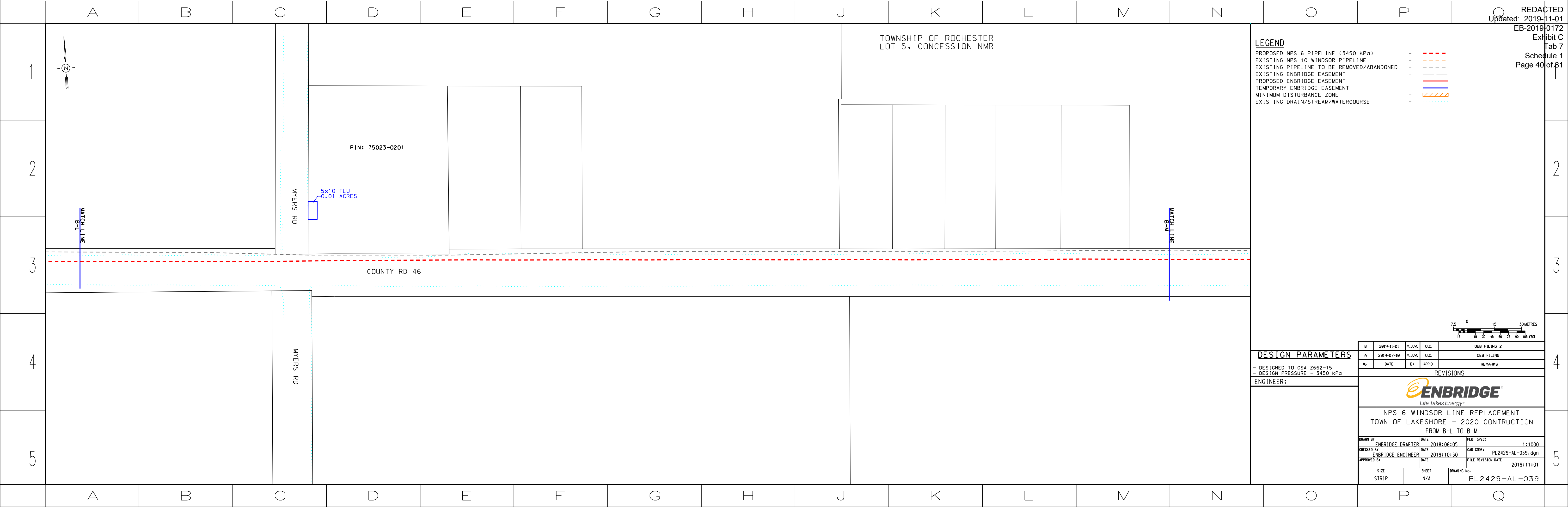
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2019 CONSTRUCTION
FROM B-K TO B-L

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-GL-038.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-GL-038
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- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

7.50 0 15 30 METRES

15 15 30 45 60 75 90 105 FEET

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

ENGINEER:

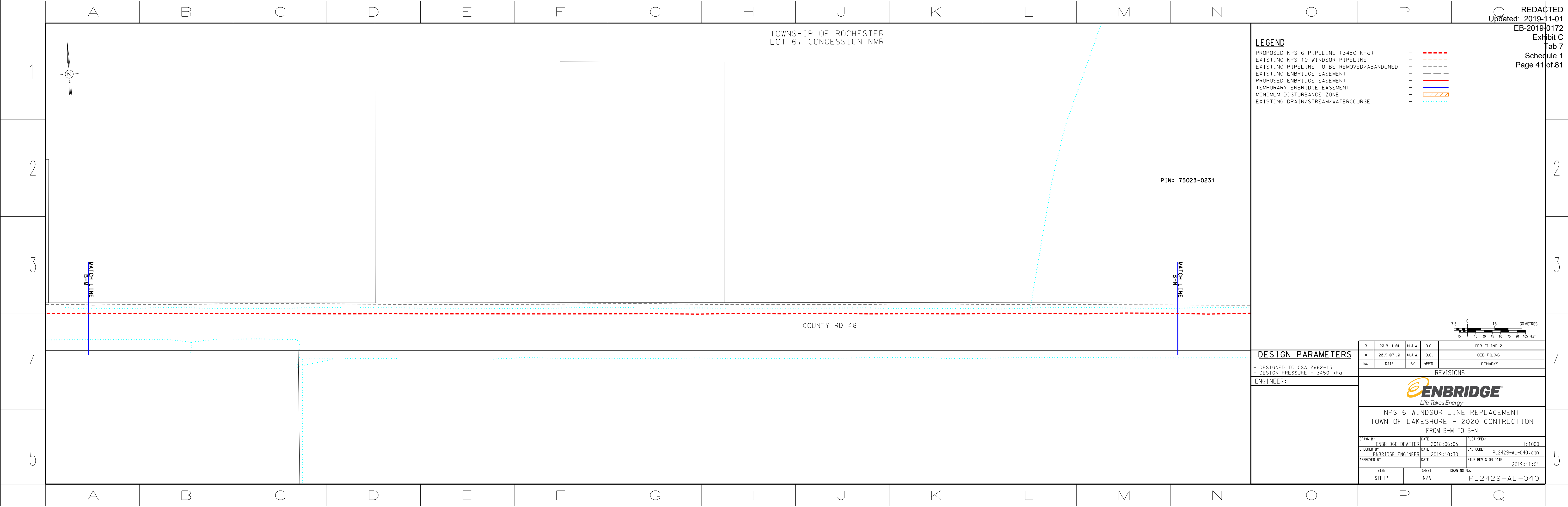
ENBRIDGE

Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-L TO B-M

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-039.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-039
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LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Blue dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

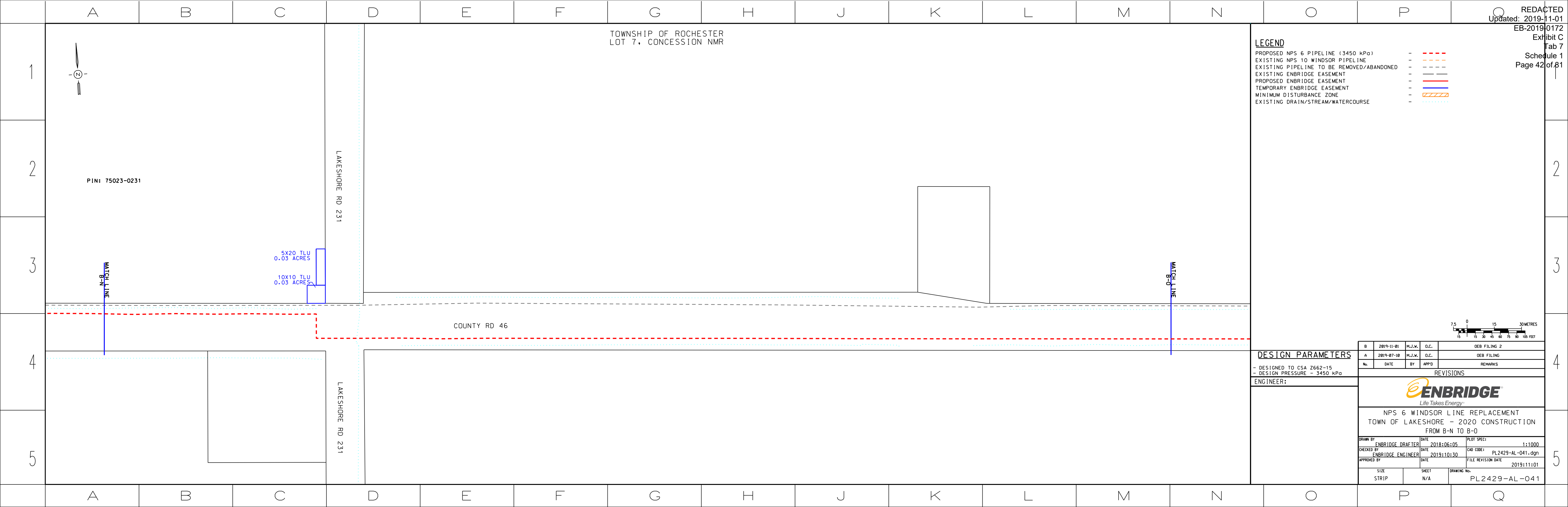
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A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS




NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-M TO B-N

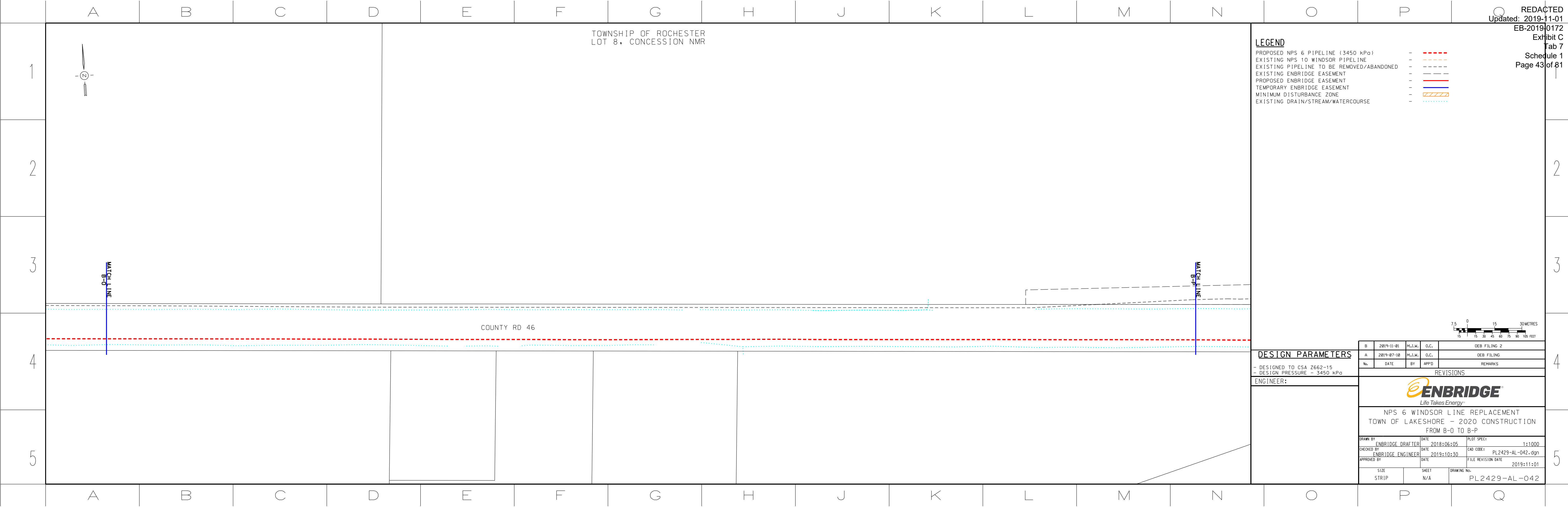
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CHECKED BY	DATE	CAD CODE:
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APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-040



LEGEND		
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-N TO B-O				
DRAWN BY	DATE	PLOT SPEC:		
ENBRIDGE DRAFTER	2018:06:05		1:1000	
CHECKED BY	DATE	CAD CODE:		
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-041.dgn		
APPROVED BY	DATE	FILE REVISION DATE		
		2019:11:01		
SIZE STRIP	SHEET N/A	DRAWING No.		
		PL2429-AL-041		



TOWNSHIP OF ROCHESTER
LOT 8, CONCESSION NMR


LEGEND

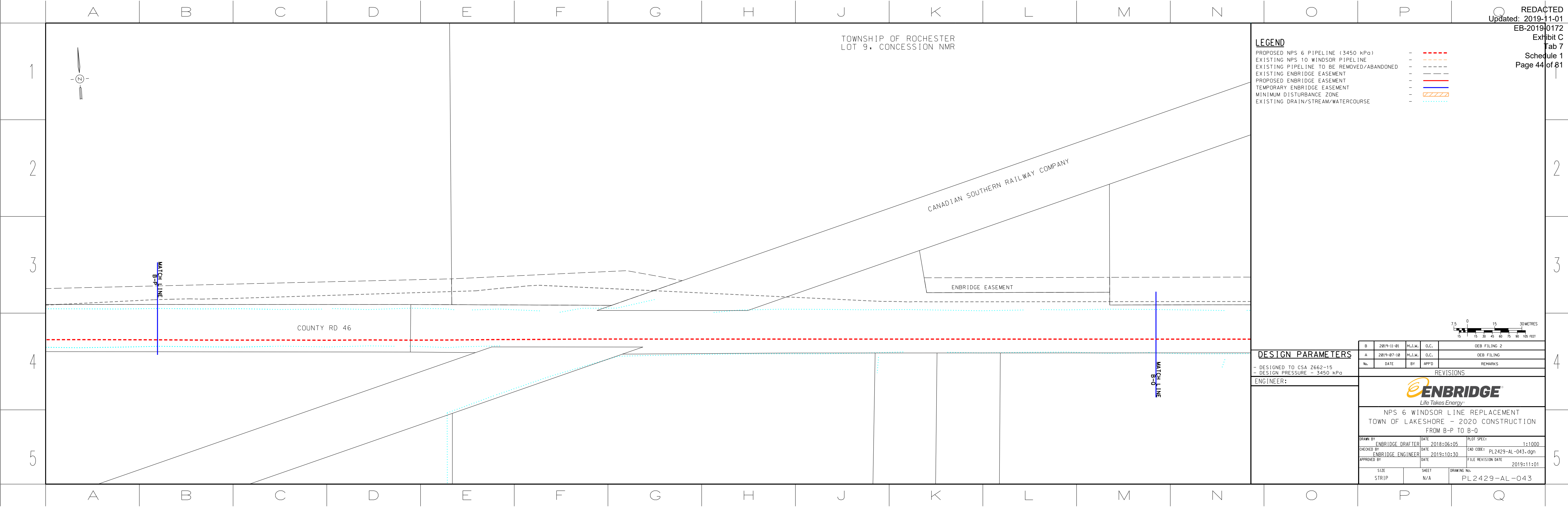
- PROPOSED NPS 6 PIPELINE (3450 kPa) - ---
- EXISTING NPS 10 WINDSOR PIPELINE - ---
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - ---
- EXISTING ENBRIDGE EASEMENT - ---
- PROPOSED ENBRIDGE EASEMENT - ---
- TEMPORARY ENBRIDGE EASEMENT - ---
- MINIMUM DISTURBANCE ZONE - ---
- EXISTING DRAIN/STREAM/WATERCOURSE - ---

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-0 TO B-P				
DRAWN BY	DATE	PLOT SPEC:		
ENBRIDGE DRAFTER	2018:06:05	1:1000		
CHECKED BY	DATE	CAD CODE:		
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-042.dgn		
APPROVED BY	DATE	FILE REVISION DATE		
		2019:11:01		
SIZE STRIP	SHEET N/A	DRAWING No.		
		PL2429-AL-042		



LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

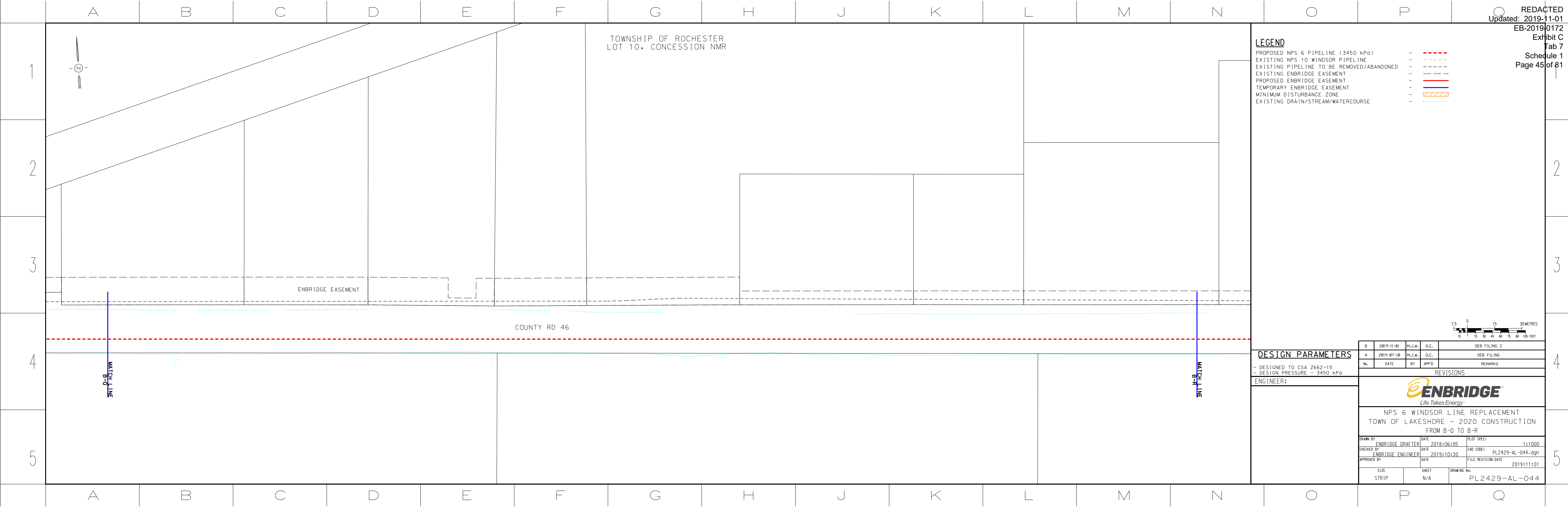
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-P TO B-O

DRAWN BY	DATE	PLOT SPEC:
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CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-043.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-043



TOWNSHIP OF ROCHESTER
LOT 10, CONCESSION NMR

ENBRIDGE EASEMENT

COUNTY RD 46

MATCH LINE
B-Q

MATCH LINE
B-R

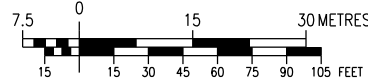
LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Black dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black solid line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:



B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

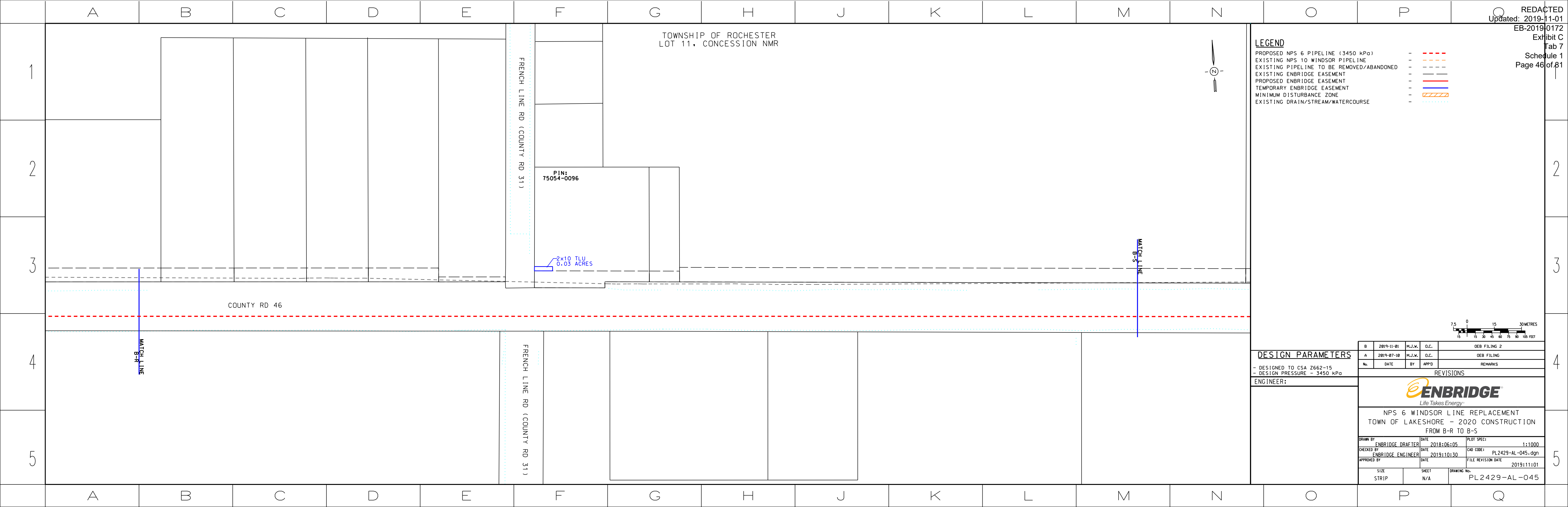
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-Q TO B-R


DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-044.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-044
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- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

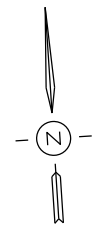
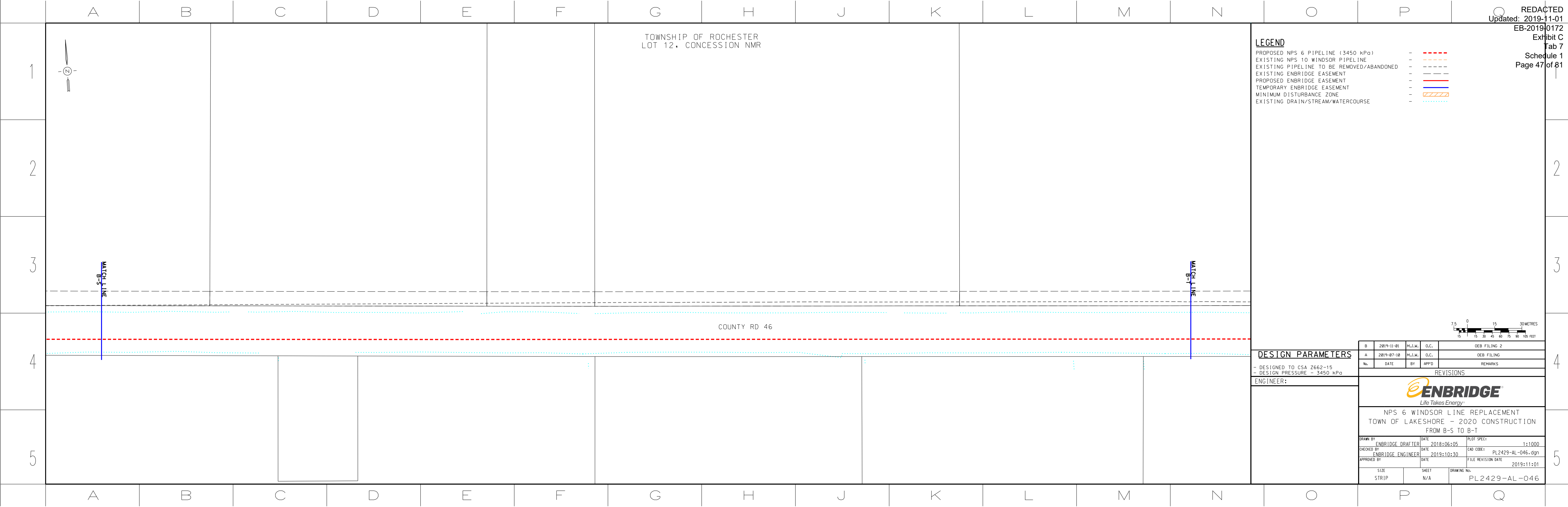
B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS			
			
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-R TO B-S			
DRAWN BY	DATE	PLOT SPEC:	
ENBRIDGE DRAFTER	2018:06:05	1:1000	
CHECKED BY	DATE	CAD CODE:	
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-045.dgn	
APPROVED BY	DATE	FILE REVISION DATE	
		2019:11:01	
SIZE	SHEET	DRAWING No.	
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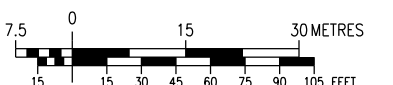
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:



- LEGEND**
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
 - EXISTING NPS 10 WINDSOR PIPELINE - - - - -
 - EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
 - EXISTING ENBRIDGE EASEMENT - - - - -
 - PROPOSED ENBRIDGE EASEMENT - - - - -
 - TEMPORARY ENBRIDGE EASEMENT - - - - -
 - MINIMUM DISTURBANCE ZONE - - - - -
 - EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

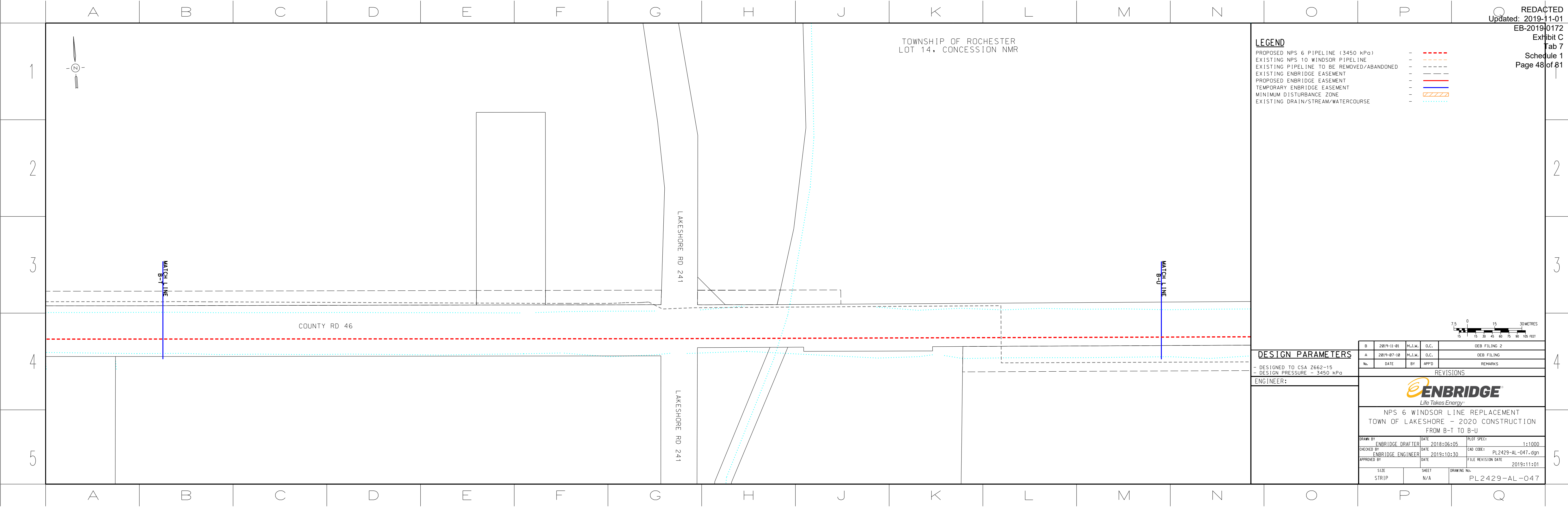
B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-S TO B-T

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-046.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01

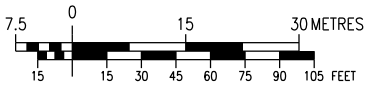
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-046
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TOWNSHIP OF ROCHESTER
LOT 14, CONCESSION NMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

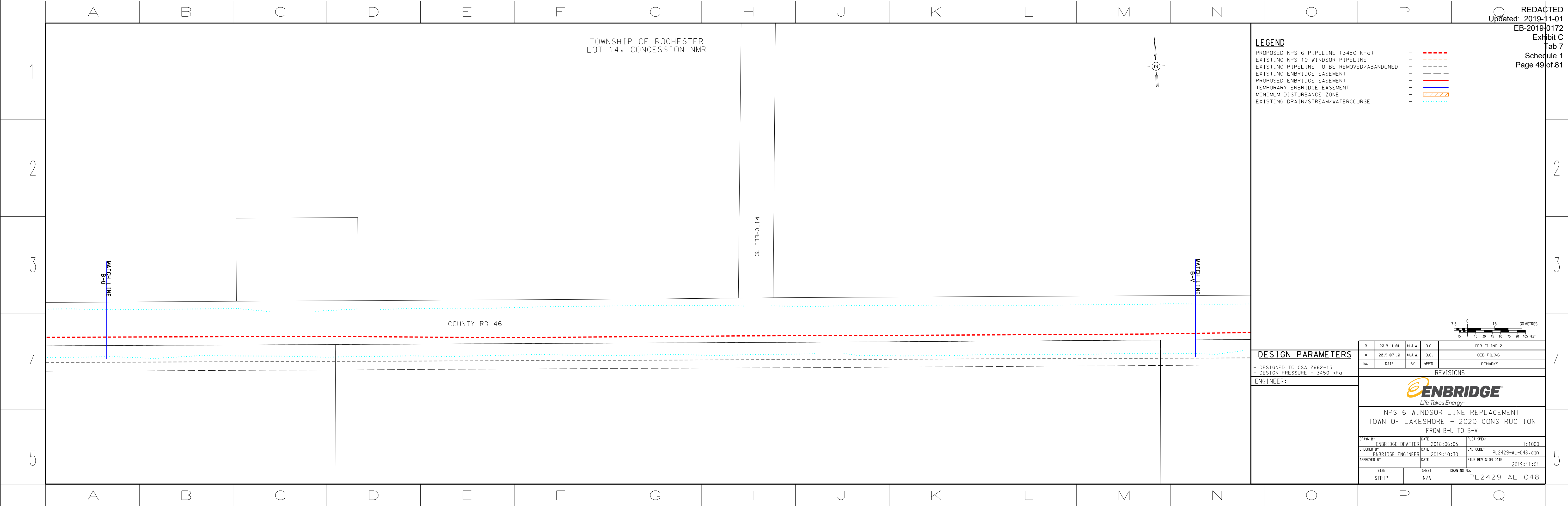
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A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

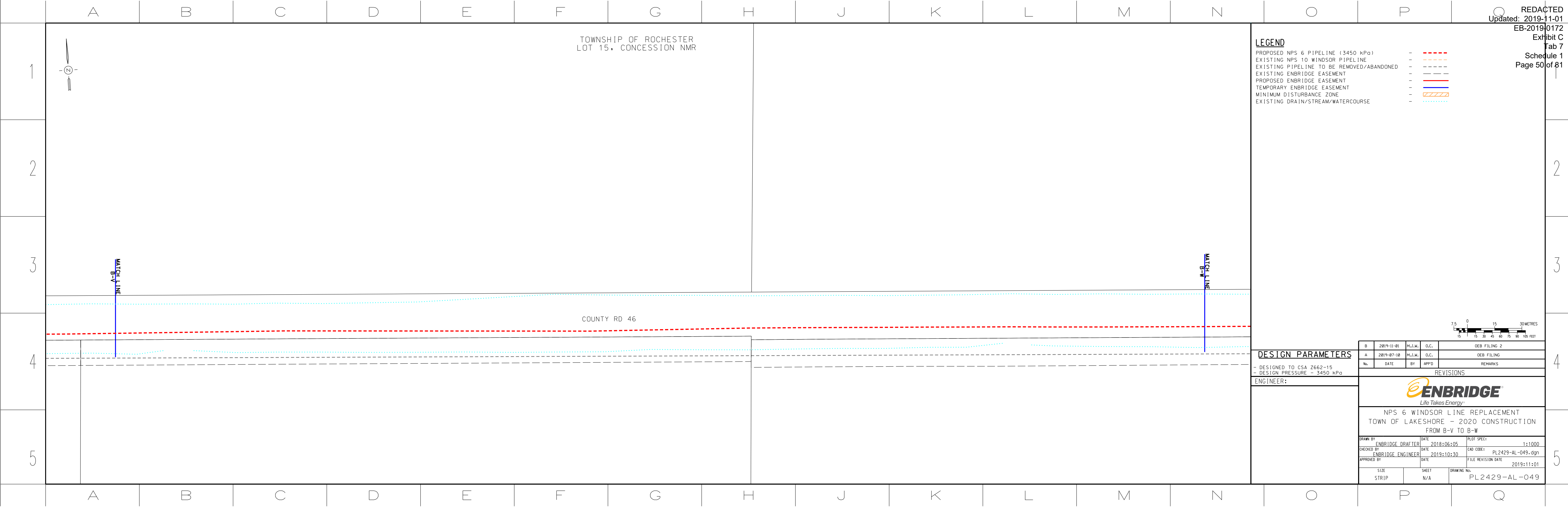
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-T TO B-U

DRAWN BY	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	1:1000
CHECKED BY	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	PL2429-AL-047.dgn
APPROVED BY	DATE	FILE REVISION DATE
		2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-047






LEGEND

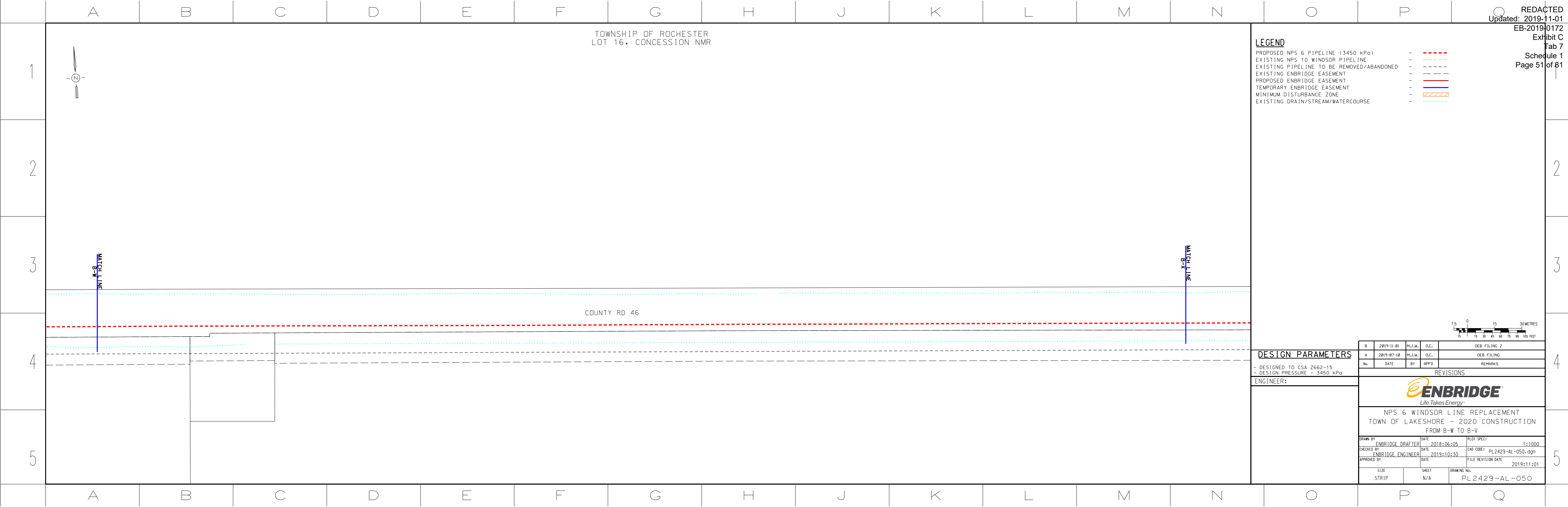
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

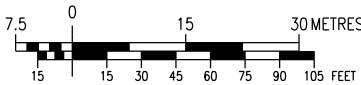
B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-V TO B-W				
DRAWN BY	DATE	DATE	PLOT SPEC:	
ENBRIDGE DRAFTER	2018:06:05		1:1000	
CHECKED BY	DATE	DATE	CAD CODE:	
ENBRIDGE ENGINEER	2019:10:30		PL2429-AL-049.dgn	
APPROVED BY	DATE		FILE REVISION DATE	
			2019:11:01	
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-049	



TOWNSHIP OF ROCHESTER
LOT 16, CONCESSION NMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Blue solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Red solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

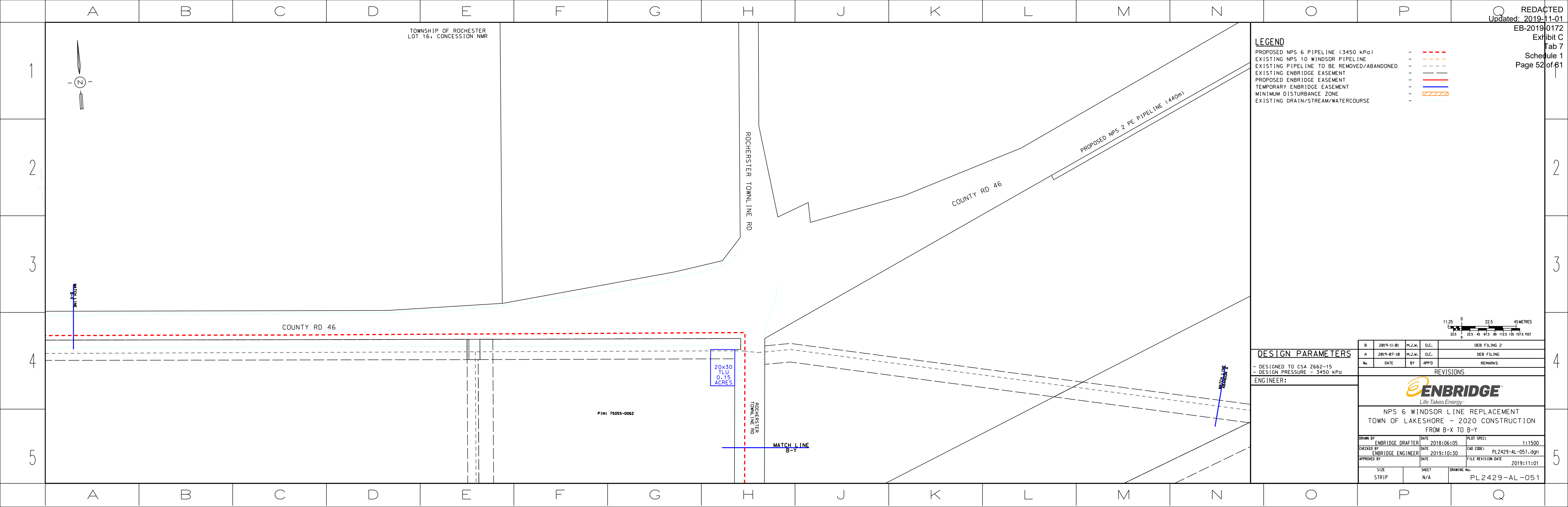
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-W TO B-V

DRAWN BY	DATE	DATE	DATE	PLOT SPEC:
ENBRIDGE DRAFTER	2018:06:05	2019:10:30	2019:11:01	1:1000
CHECKED BY	DATE	DATE	DATE	CAD CODE:
ENBRIDGE ENGINEER	2019:10:30	2019:11:01	2019:11:01	PL2429-AL-050.dgn
APPROVED BY	DATE	DATE	DATE	FILE REVISION DATE
				2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-050



TOWNSHIP OF ROCHESTER
LOT 16, CONCESSION NMR

ROCHESTER TOWNLINE RD

COUNTY RD 46

PROPOSED NPS 2 PE PIPELINE (440m)

COUNTY RD 46

20x30
TLU
0.15
ACRES

PIN: 75055-0062

MATCH LINE
B-Y


LEGEND

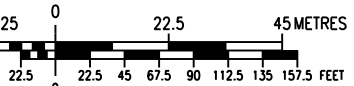
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

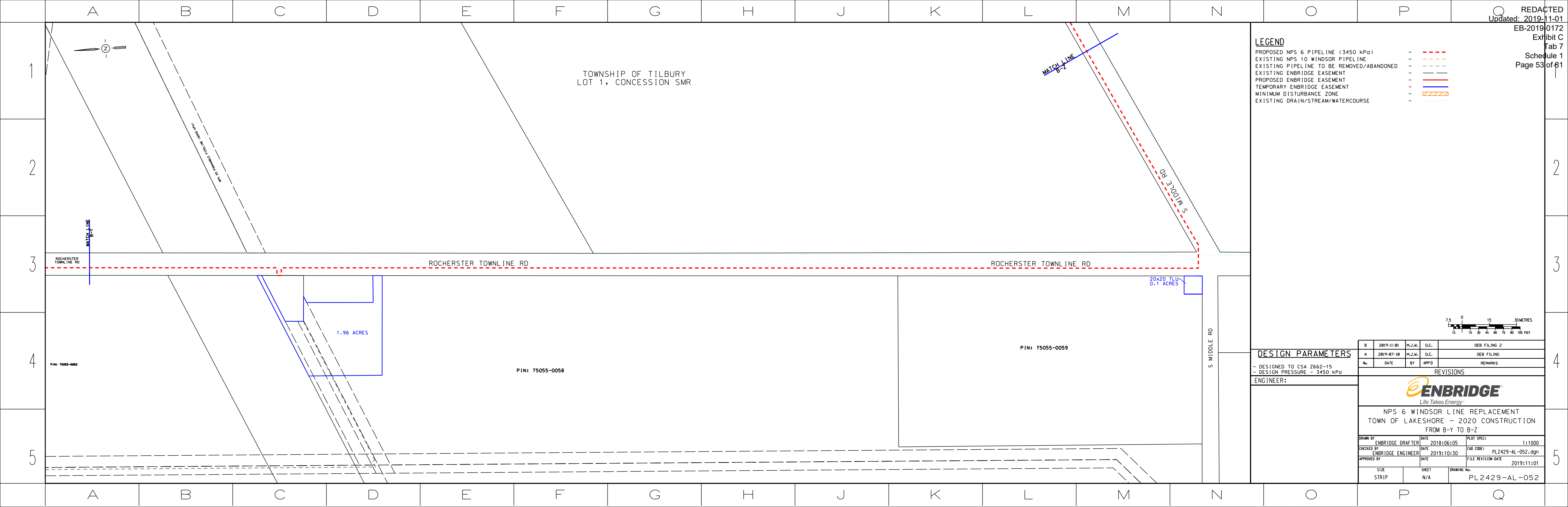
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM B-X TO B-Y				
DRAWN BY	DATE	2018:06:05	PLOT SPEC:	1:1500
CHECKED BY	DATE	2019:10:30	CAD CODE:	PL2429-AL-051.dgn
APPROVED BY	DATE		FILE REVISION DATE	2019:11:01
SIZE	SHEET	DRAWING No.		
STRIP	N/A	PL 2429-AL-051		






LEGEND			
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---	
EXISTING NPS 10 WINDSOR PIPELINE	-	---	
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---	
EXISTING ENBRIDGE EASEMENT	-	---	
PROPOSED ENBRIDGE EASEMENT	-	---	
TEMPORARY ENBRIDGE EASEMENT	-	---	
MINIMUM DISTURBANCE ZONE	-	---	
EXISTING DRAIN/STREAM/WATERCOURSE	-	---	

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS			
ENGINEER:			



Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-Y TO B-Z

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-052.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-052

TOWNSHIP OF TILBURY
LOT 1, CONCESSION SMR

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

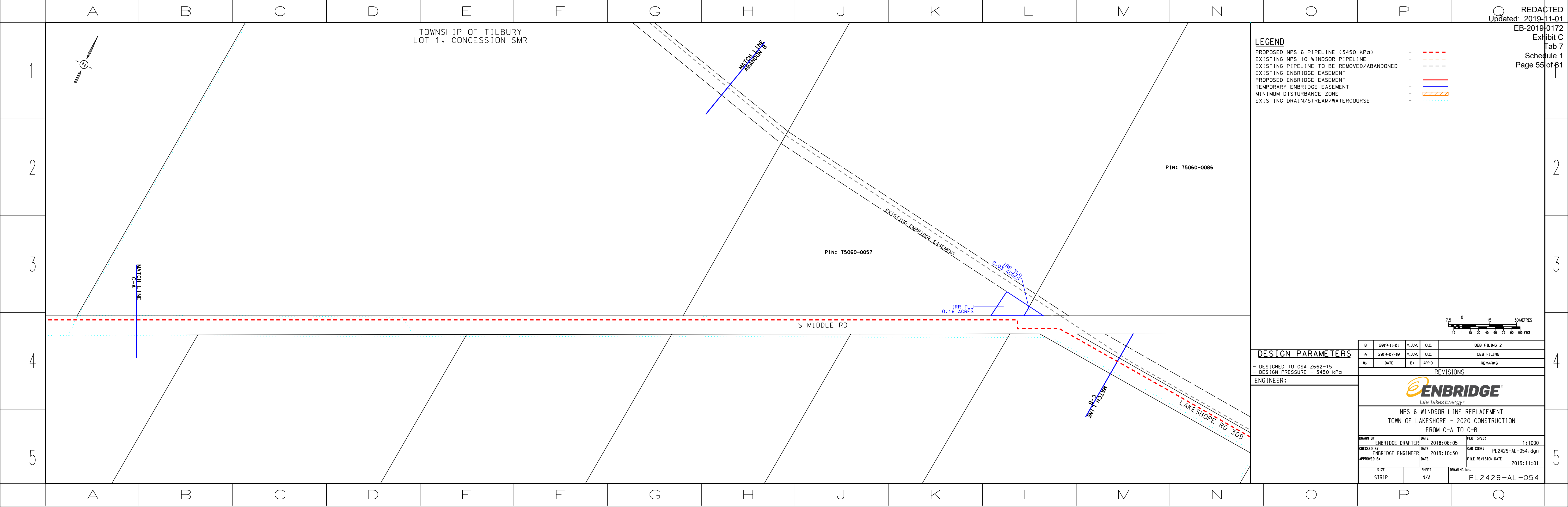
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM B-Z TO C-A

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-053.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-053



LEGEND			
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---	
EXISTING NPS 10 WINDSOR PIPELINE	-	---	
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---	
EXISTING ENBRIDGE EASEMENT	-	---	
PROPOSED ENBRIDGE EASEMENT	-	---	
TEMPORARY ENBRIDGE EASEMENT	-	---	
MINIMUM DISTURBANCE ZONE	-	---	
EXISTING DRAIN/STREAM/WATERCOURSE	-	---	

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

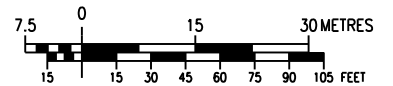
REVISIONS

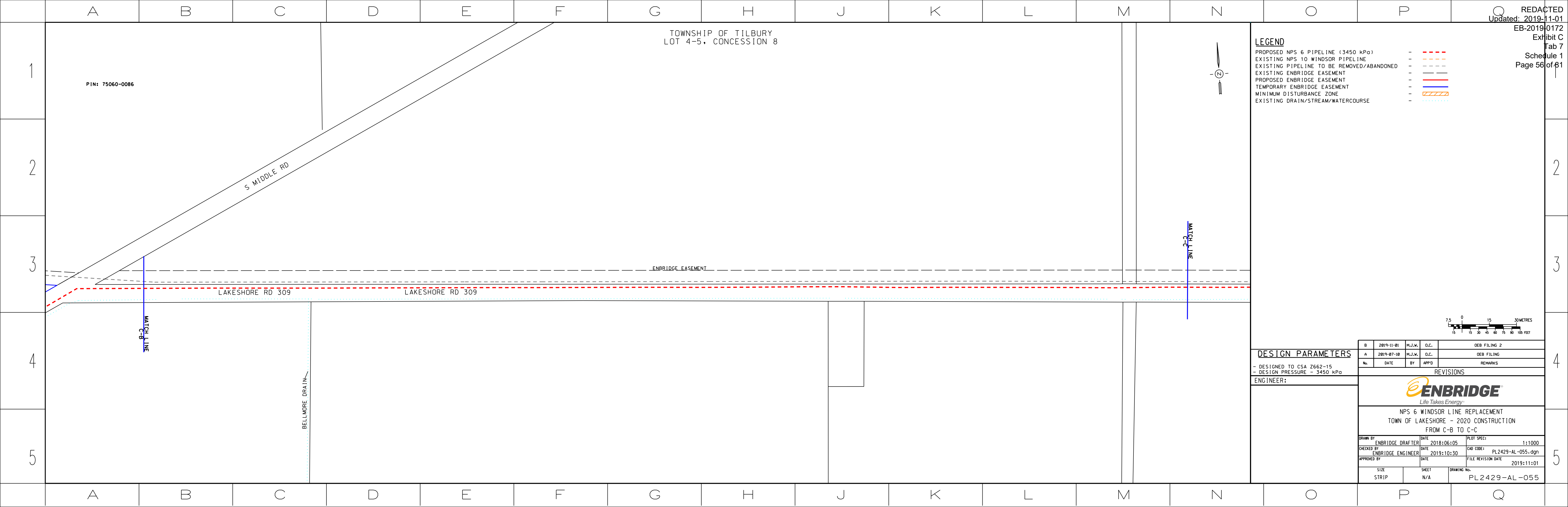


NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM C-A TO C-B

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-054.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-054





- LEGEND
- PROPOSED NPS 6 PIPELINE (3450 kPa)

EXISTING NPS 10 WINDSOR PIPELINE

EXISTING PIPELINE TO BE REMOVED/ABANDONED

EXISTING ENBRIDGE EASEMENT

PROPOSED ENBRIDGE EASEMENT

TEMPORARY ENBRIDGE EASEMENT

MINIMUM DISTURBANCE ZONE

EXISTING DRAIN/STREAM/WATERCOURSE
- -

-


-

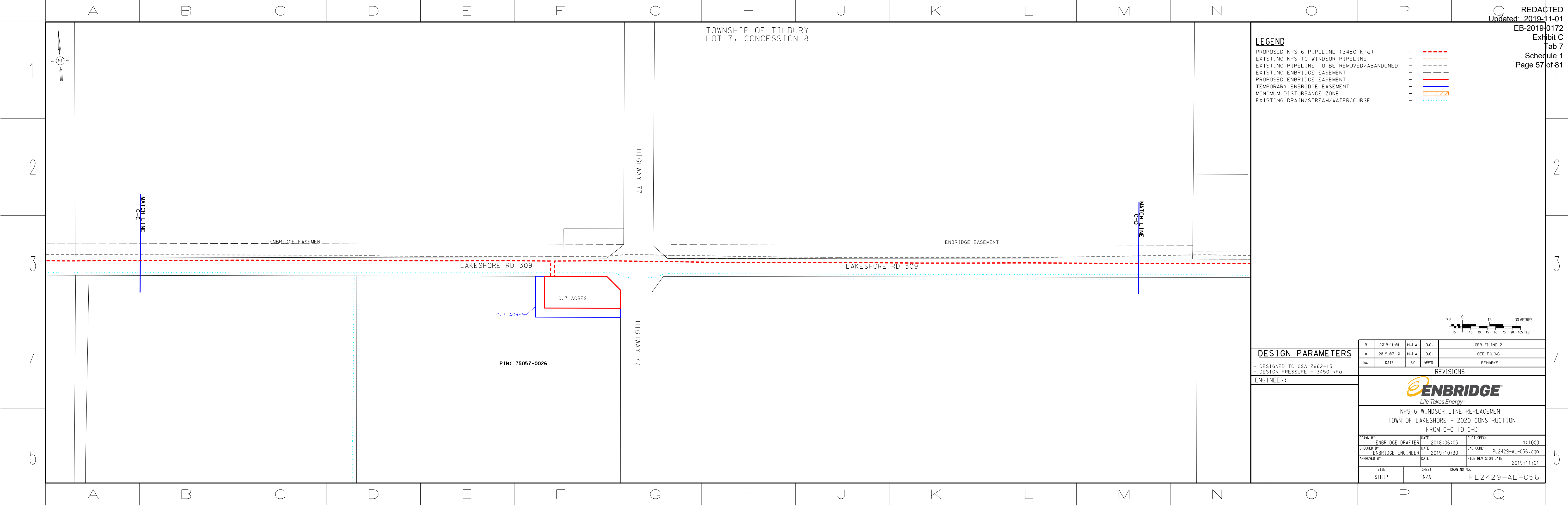
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-

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-
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<u>DESIGN PARAMETERS</u>				<u>REVISIONS</u>							
- DESIGNED TO CSA Z662-15 - DESIGN PRESSURE - 3450 kPa				<div><div> Life Takes Energy®</div><div>NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM C-B TO C-C</div></div>							
ENGINEER:											
DRAWN BY		ENBRIDGE DRAFTER		DATE		2018:06:05		PLOT SPEC:		1:1000	
CHECKED BY		ENBRIDGE ENGINEER		DATE		2019:10:30		CAD CODE:		PL2429-AL-055.dgn	
APPROVED BY				DATE				FILE REVISION DATE		2019:11:01	
SIZE		SHEET		DRAWING NO.							
STRIP		N/A		PL2429-AL-055							



TOWNSHIP OF TILBURY
LOT 7, CONCESSION 8

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

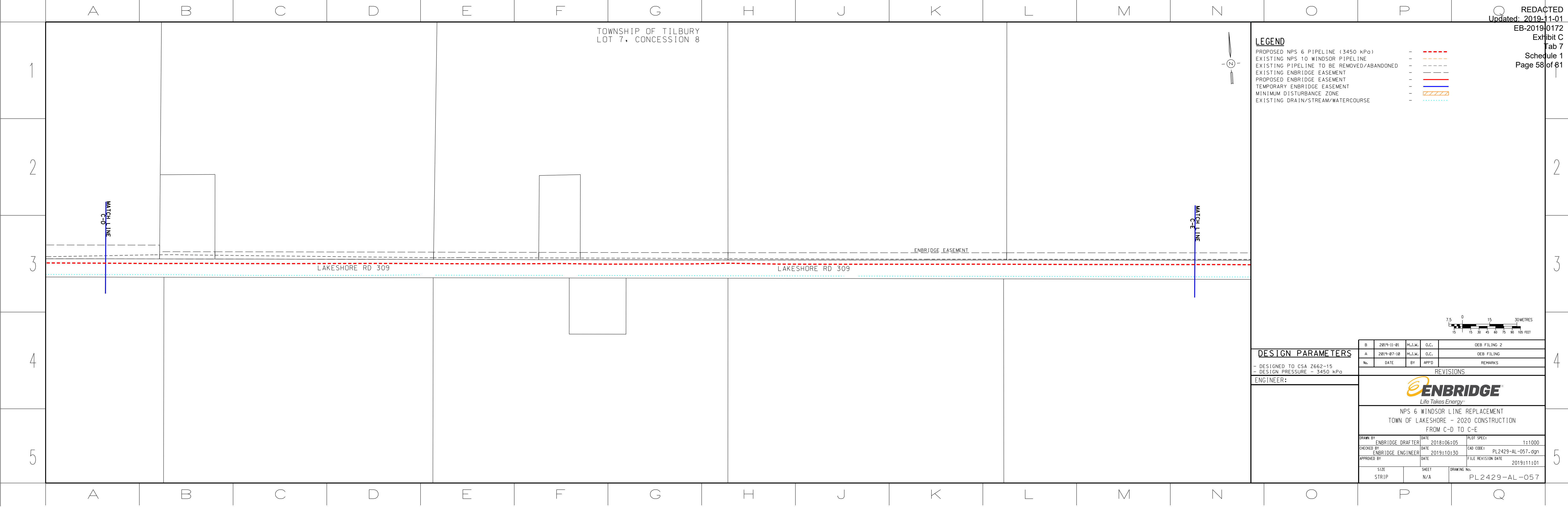
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM C-C TO C-D

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-056.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-056



LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

REVISIONS

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

ENGINEER:

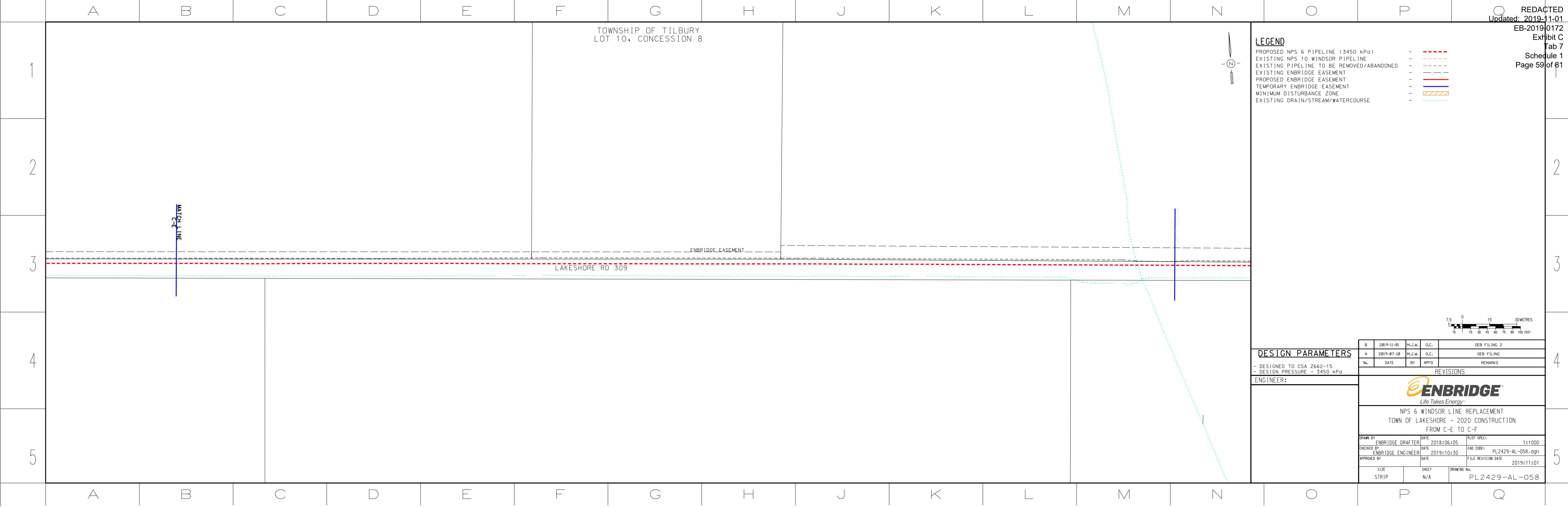
ENBRIDGE
Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM C-D TO C-E

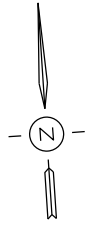
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CHECKED BY ENBRIDGE ENGINEER	DATE 2019:10:30	CAD CODE: PL2429-AL-057.dgn
APPROVED BY	DATE	FILE REVISION DATE 2019:11:01

SIZE STRIP	SHEET N/A	DRAWING No. PL2429-AL-057
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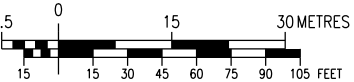


TOWNSHIP OF TILBURY
LOT 10, CONCESSION 8



LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

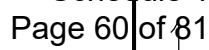


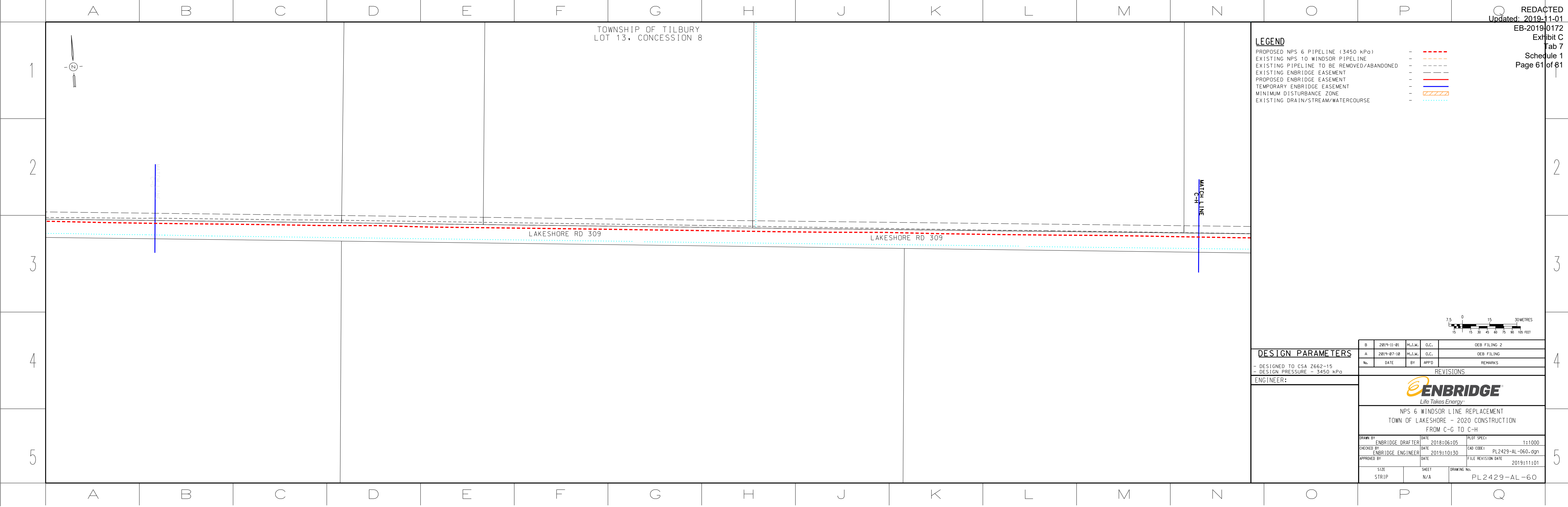
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM C-E TO C-F				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-058.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-058	





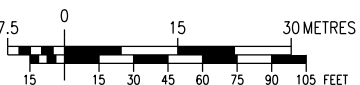
TOWNSHIP OF TILBURY
LOT 13, CONCESSION 8

LAKESHORE RD 309

LAKESHORE RD 309

LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

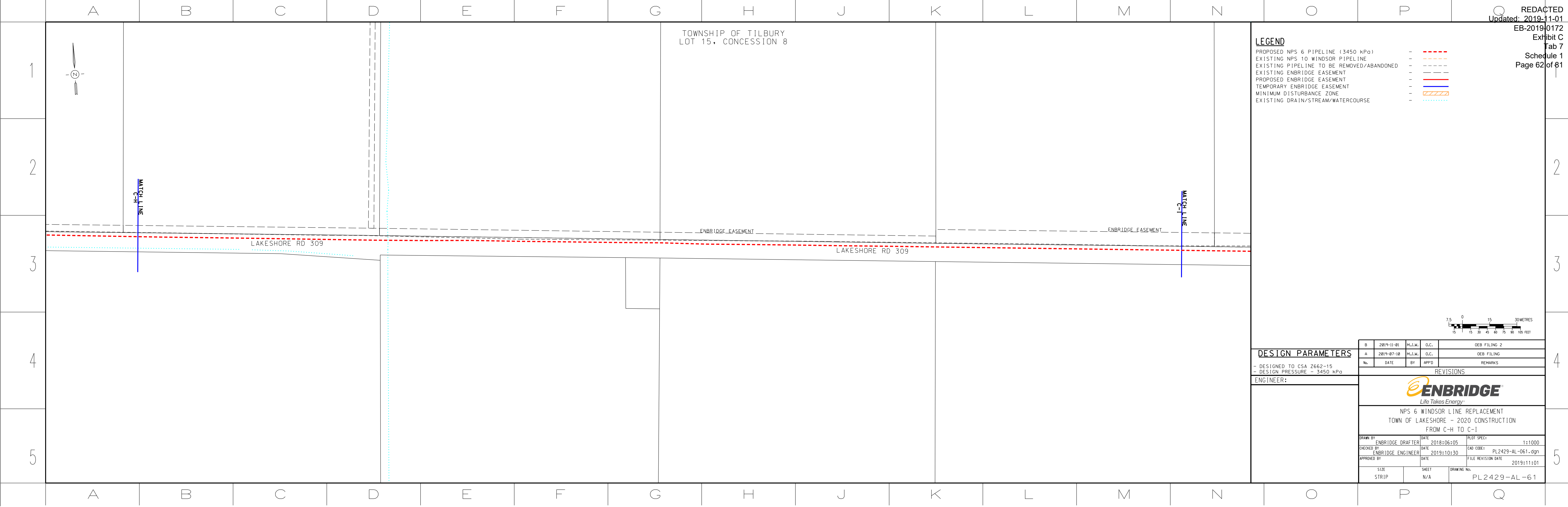


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

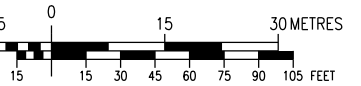
ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
 Life Takes Energy®				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM C-G TO C-H				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-060.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE	STRIP	SHEET	N/A	DRAWING No. PL 2429-AL-60



LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

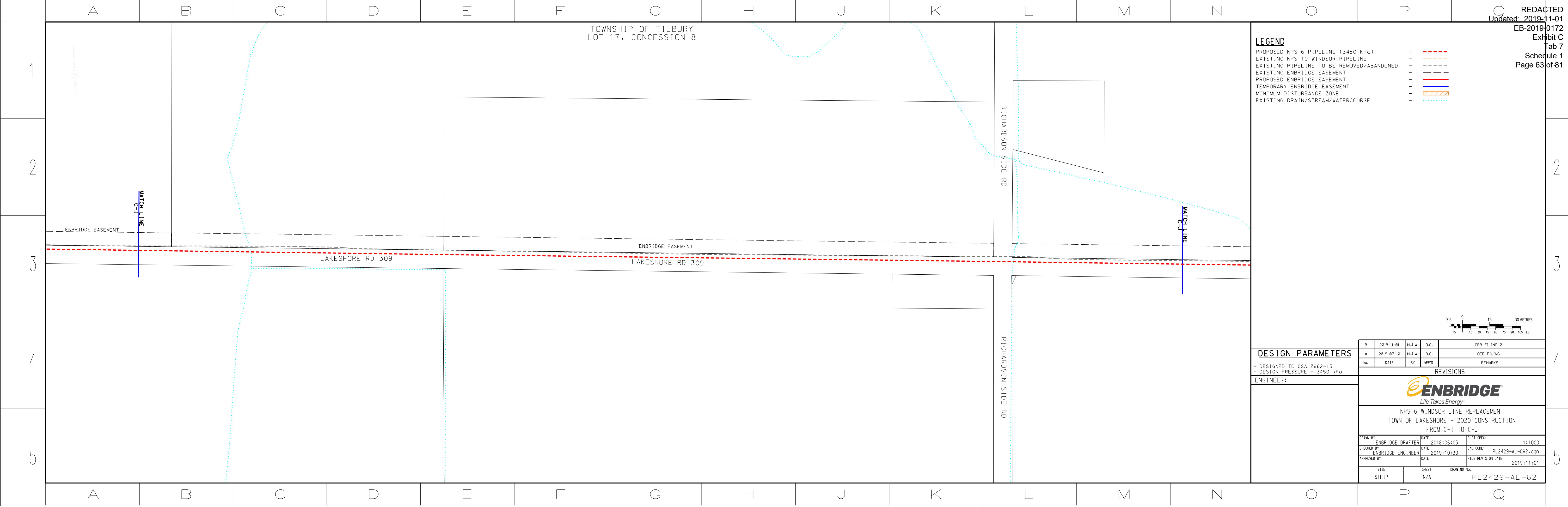
B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE - 2020 CONSTRUCTION
FROM C-H TO C-I

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-061.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

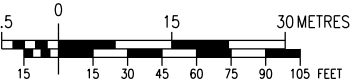
SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-61



TOWNSHIP OF TILBURY
LOT 17, CONCESSION 8

LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]

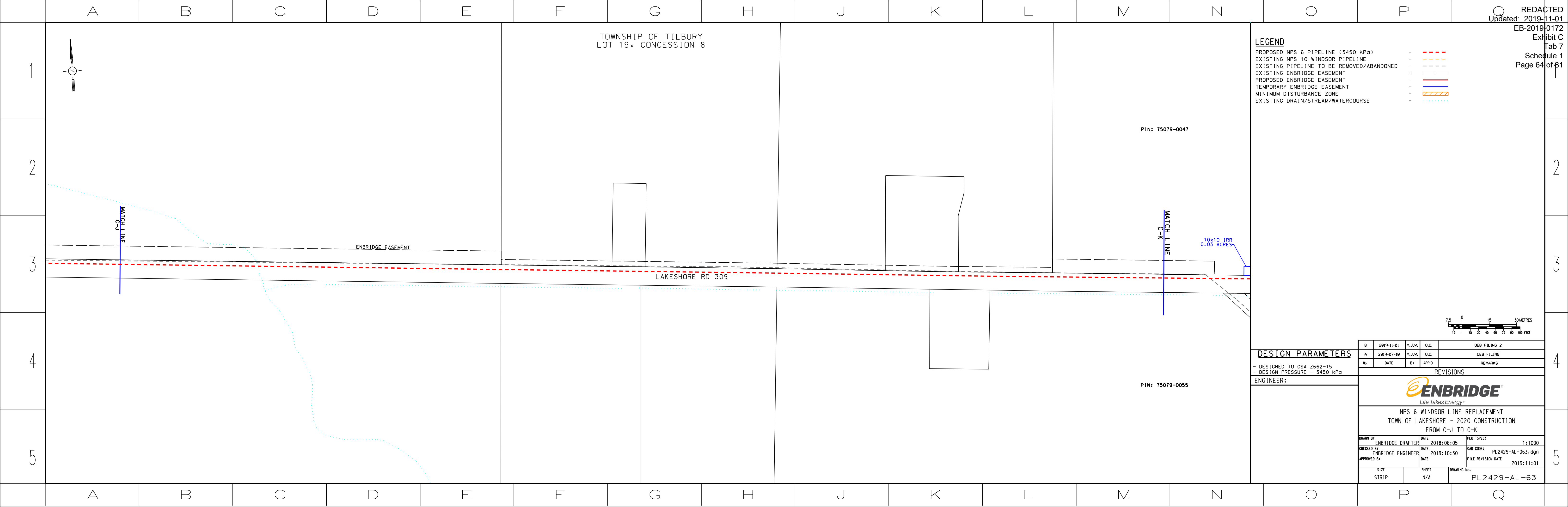


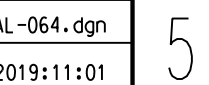
DESIGN PARAMETERS

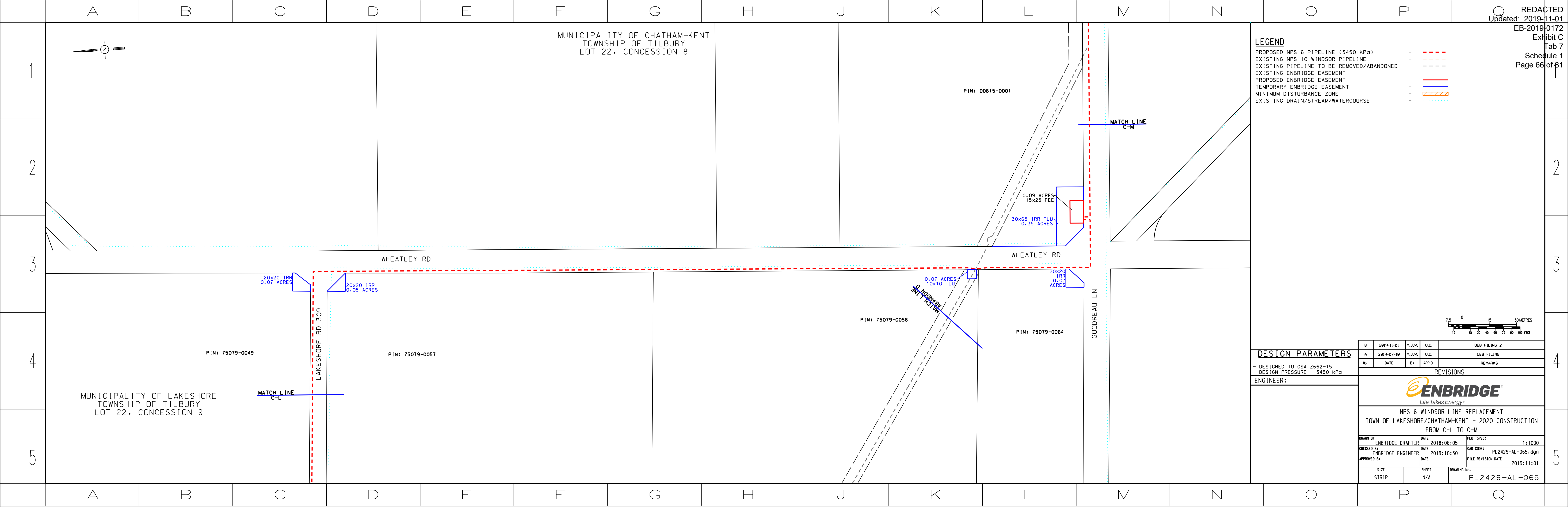
- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT TOWN OF LAKESHORE - 2020 CONSTRUCTION FROM C-I TO C-J				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-062.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL 2429-AL-62	

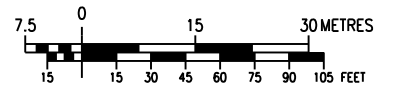






LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	- - - - -
EXISTING NPS 10 WINDSOR PIPELINE	-	- - - - -
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	- - - - -
EXISTING ENBRIDGE EASEMENT	-	- - - - -
PROPOSED ENBRIDGE EASEMENT	-	- - - - -
TEMPORARY ENBRIDGE EASEMENT	-	- - - - -
MINIMUM DISTURBANCE ZONE	-	- - - - -
EXISTING DRAIN/STREAM/WATERCOURSE	-	- - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

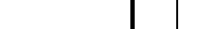
REVISIONS

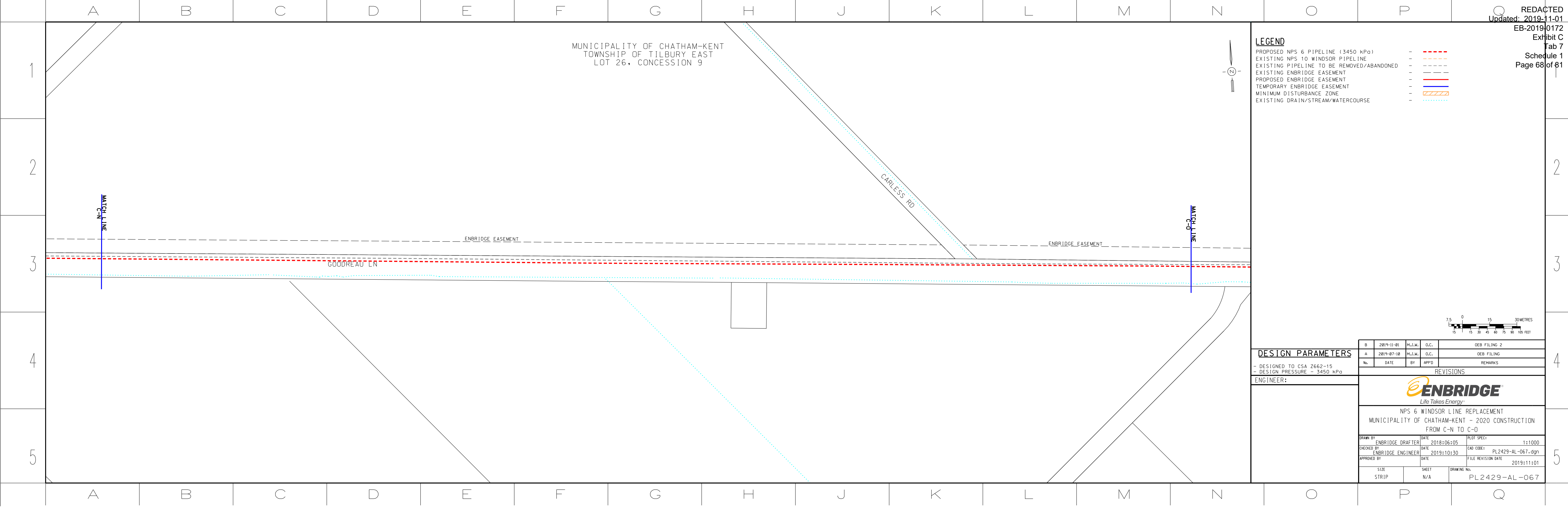


NPS 6 WINDSOR LINE REPLACEMENT
TOWN OF LAKESHORE/CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-L TO C-M

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-065.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	STRIP	SHEET	N/A	DRAWING No.	PL2429-AL-065
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MUNICIPALITY OF CHATHAM-KENT
TOWNSHIP OF TILBURY EAST
LOT 26, CONCESSION 9

CARLESS RD

GOODREAU LN

ENBRIDGE EASEMENT

ENBRIDGE EASEMENT

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

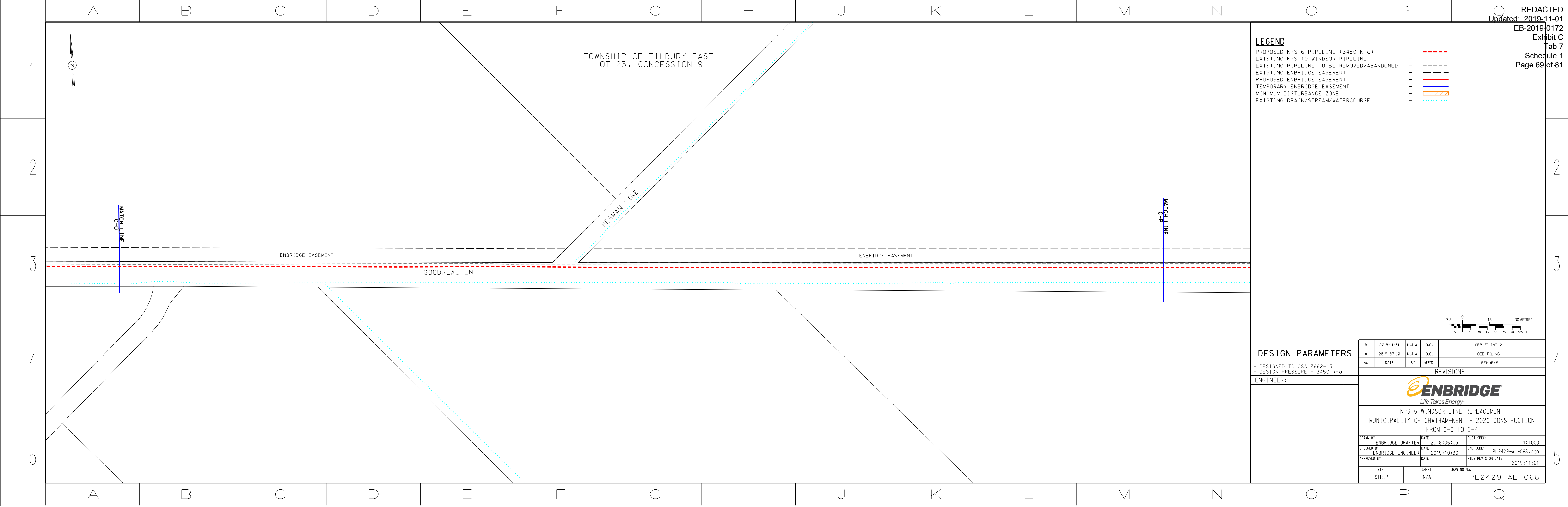
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-N TO C-O

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-067.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-067



TOWNSHIP OF TILBURY EAST
LOT 23, CONCESSION 9

HERMAN LN

GOODREAU LN

ENBRIDGE EASEMENT

ENBRIDGE EASEMENT

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Blue dotted line]


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS

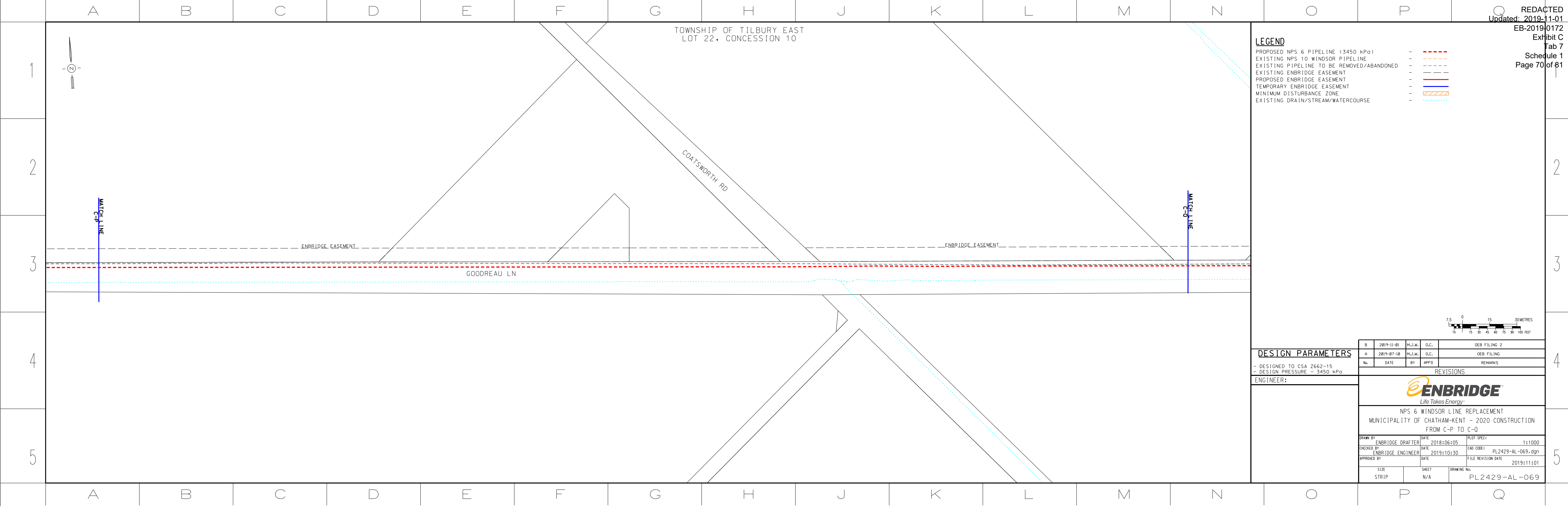


ENBRIDGE
Life Takes Energy®

NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-0 TO C-P

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-068.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-068




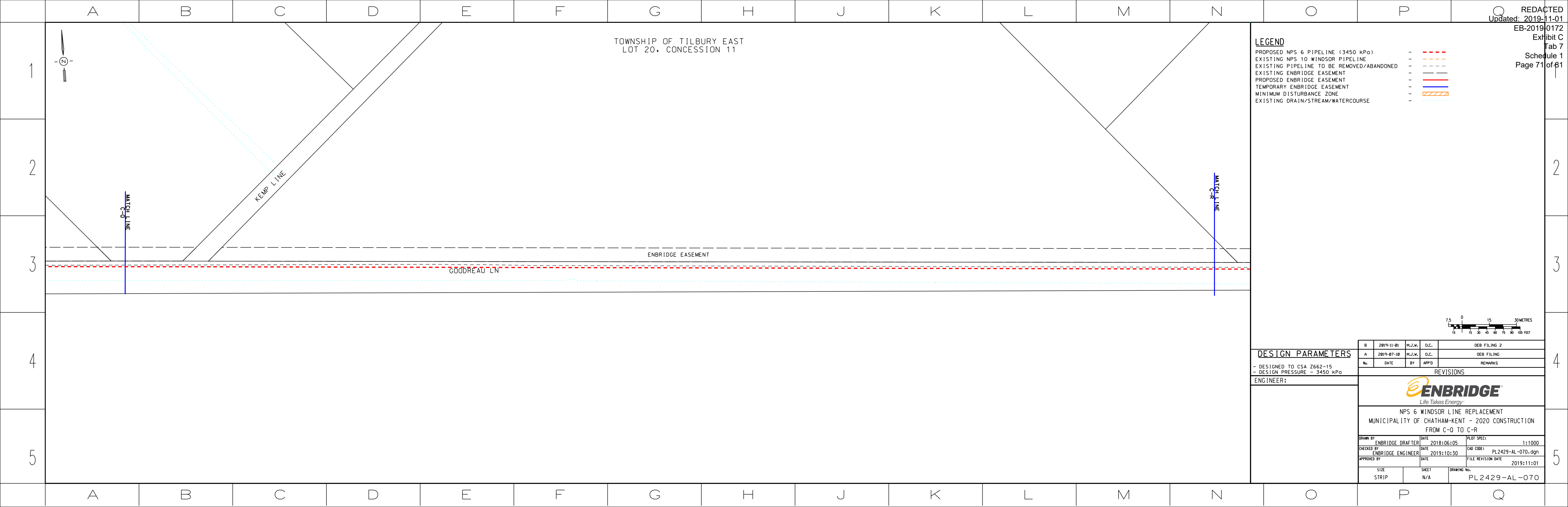
LEGEND		
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-P TO C-Q				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-069.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-069	



TOWNSHIP OF TILBURY EAST
LOT 20, CONCESSION 11


LEGEND

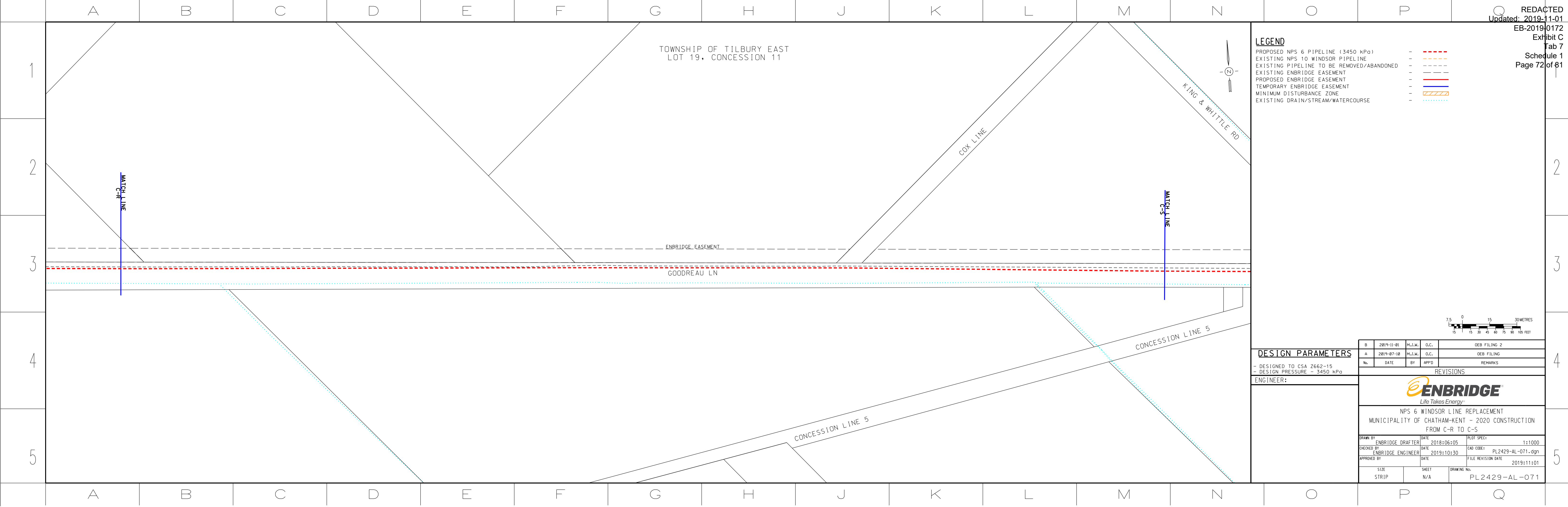
- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

DESIGN PARAMETERS

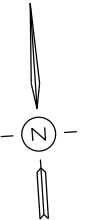
- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-Q TO C-R				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-070.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-070	



TOWNSHIP OF TILBURY EAST
LOT 19, CONCESSION 11



MATCH LINE
C-R

MATCH LINE
C-S

ENBRIDGE EASEMENT

GOODREAU LN

COX LINE

KING & WHITTLE RD

CONCESSION LINE 5

CONCESSION LINE 5

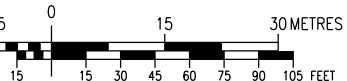
LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

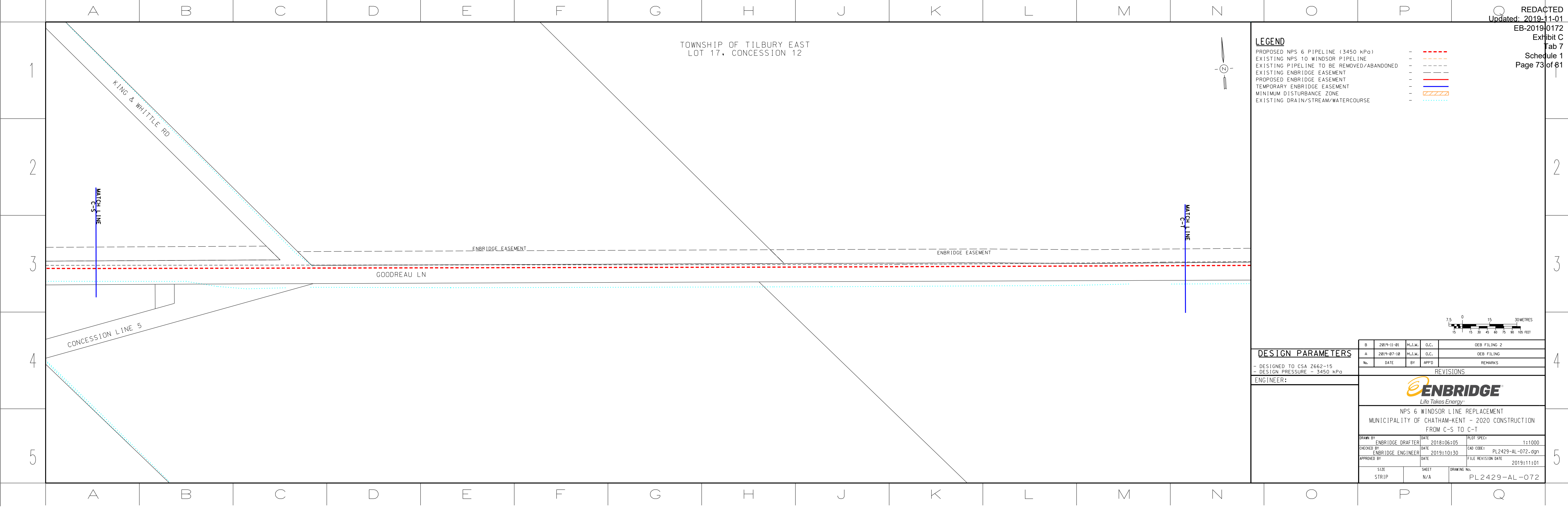
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

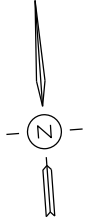
ENGINEER:



B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-R TO C-S				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-071.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-071	



TOWNSHIP OF TILBURY EAST
LOT 17, CONCESSION 12



LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - [Red dashed line]
- EXISTING NPS 10 WINDSOR PIPELINE - [Orange dashed line]
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - [Grey dashed line]
- EXISTING ENBRIDGE EASEMENT - [Black dashed line]
- PROPOSED ENBRIDGE EASEMENT - [Red solid line]
- TEMPORARY ENBRIDGE EASEMENT - [Blue solid line]
- MINIMUM DISTURBANCE ZONE - [Orange hatched area]
- EXISTING DRAIN/STREAM/WATERCOURSE - [Cyan dotted line]

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

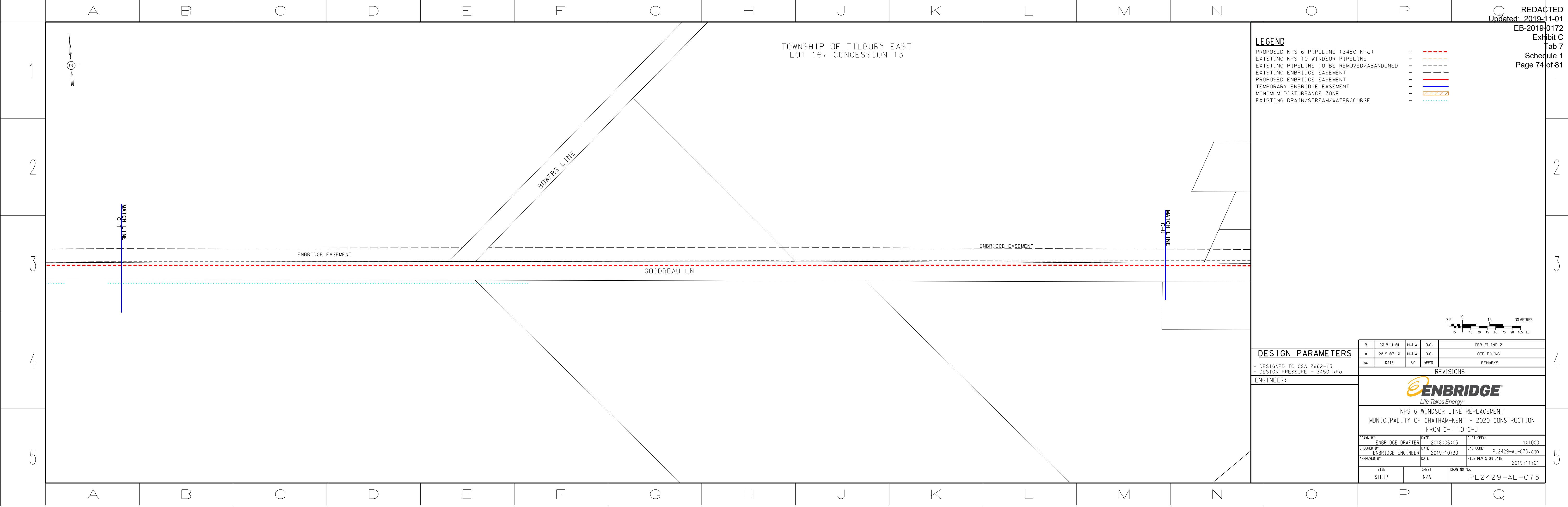
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-S TO C-T

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-072.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

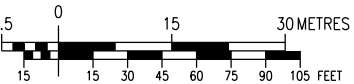
SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-072



TOWNSHIP OF TILBURY EAST
LOT 16, CONCESSION 13

LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

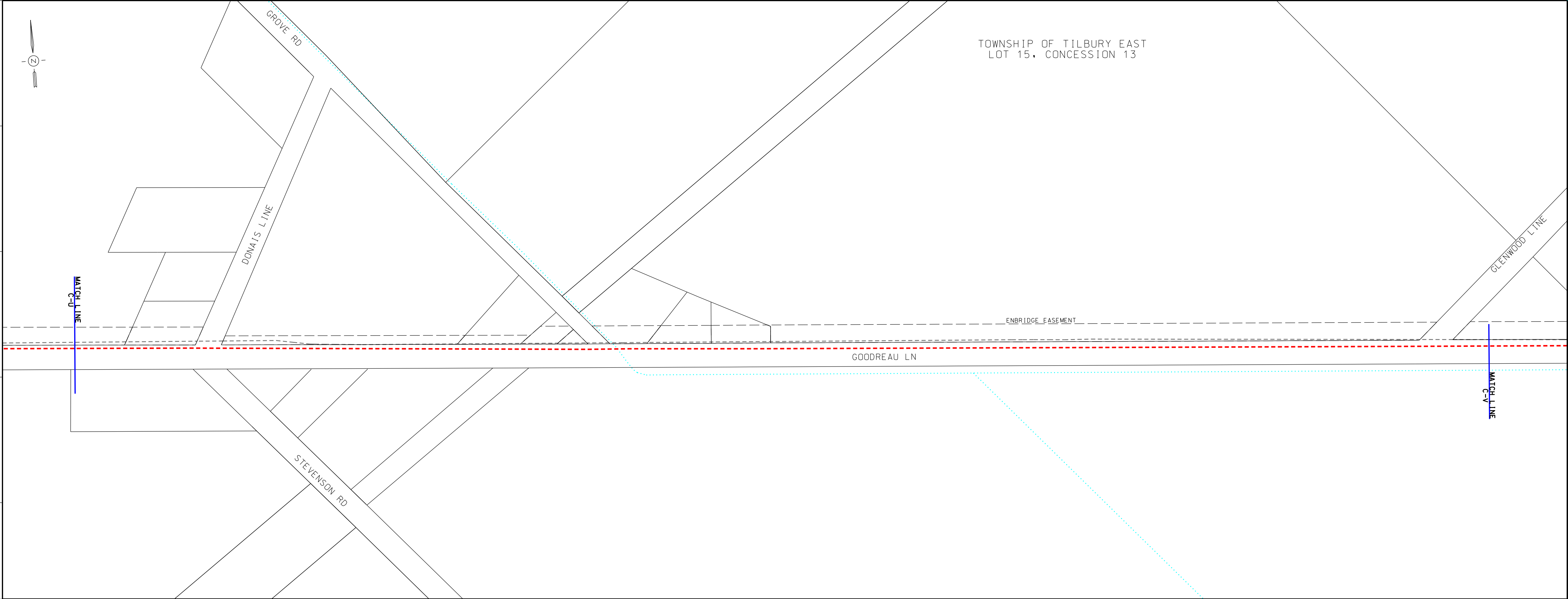


DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-T TO C-U				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-073.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE	STRIP	SHEET	N/A	DRAWING No. PL2429-AL-073



LEGEND

PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-U TO C-V

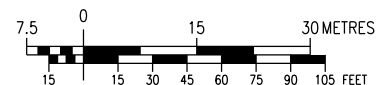
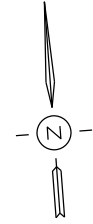
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APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	STRIP	SHEET	N/A	DRAWING No.	PL2429-AL-074
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TOWNSHIP OF TILBURY EAST
LOT 14, CONCESSION 14

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



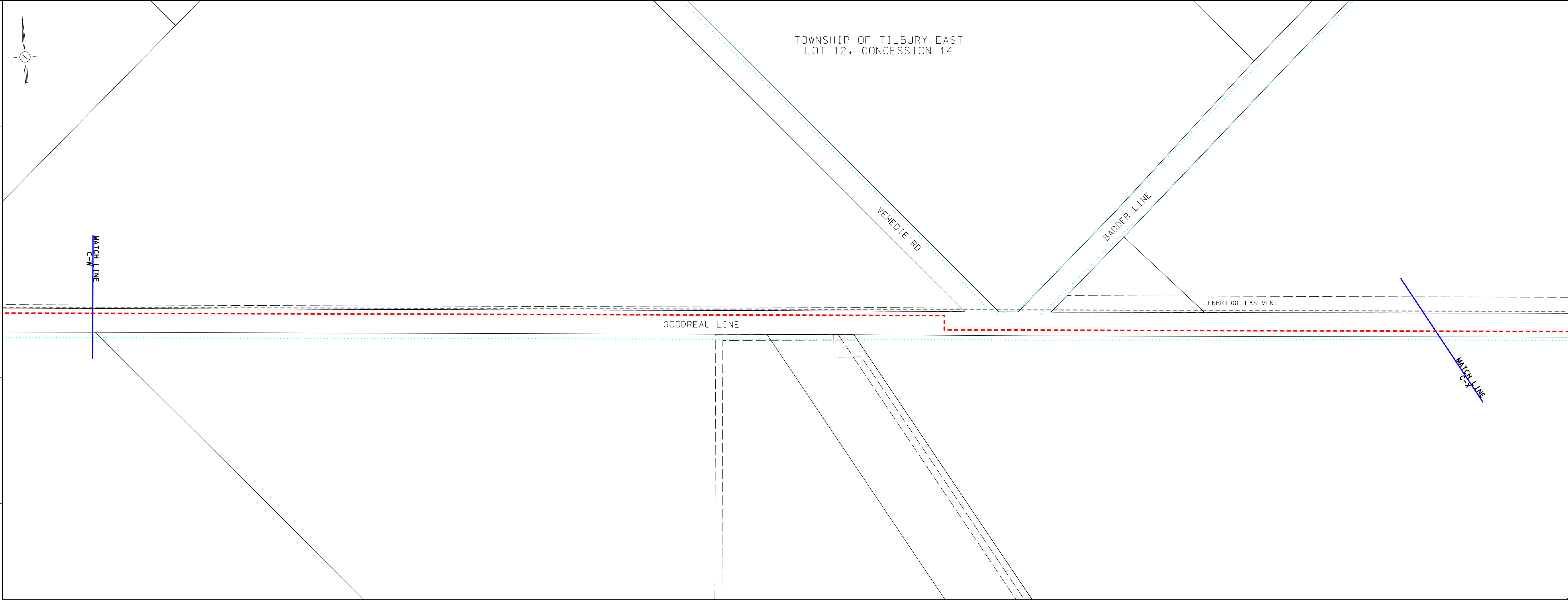
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

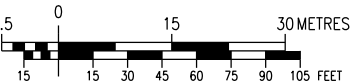
REVISIONS

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
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NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-V TO C-W				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-075.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-075	



LEGEND


- PROPOSED NPS 6 PIPELINE (3450 kPa) - Red dashed line
- EXISTING NPS 10 WINDSOR PIPELINE - Grey dashed line
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - Dotted line
- EXISTING ENBRIDGE EASEMENT - Thin grey dashed line
- PROPOSED ENBRIDGE EASEMENT - Red solid line
- TEMPORARY ENBRIDGE EASEMENT - Blue solid line
- MINIMUM DISTURBANCE ZONE - Orange hatched area
- EXISTING DRAIN/STREAM/WATERCOURSE - Cyan dotted line

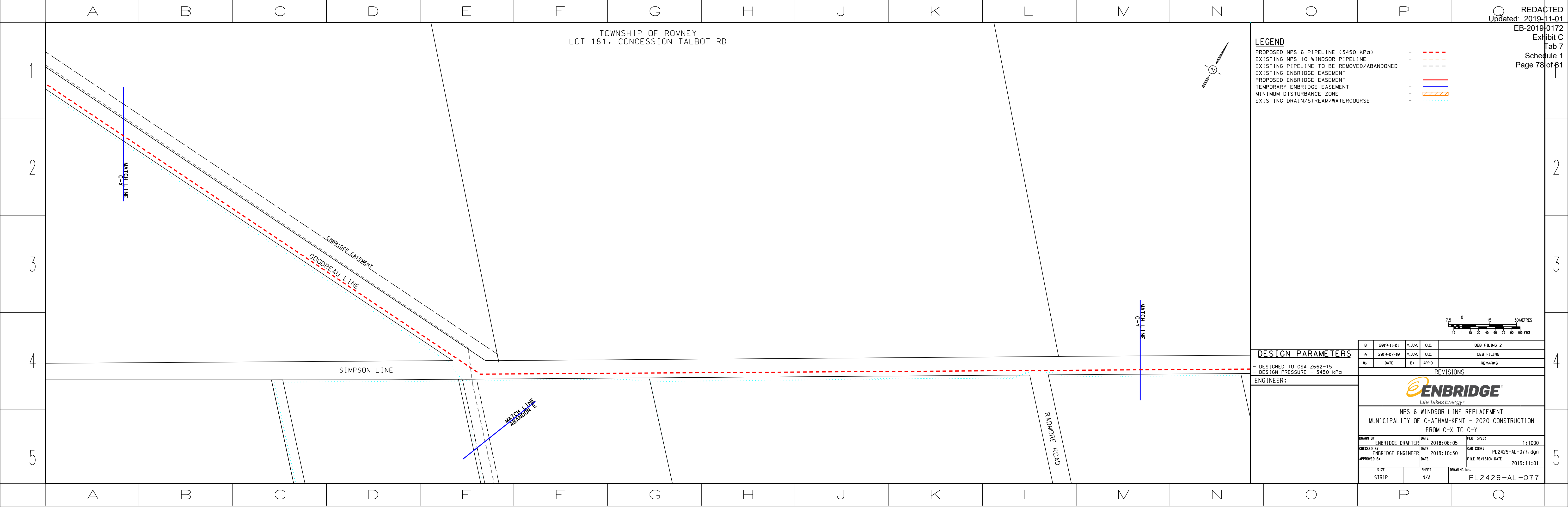


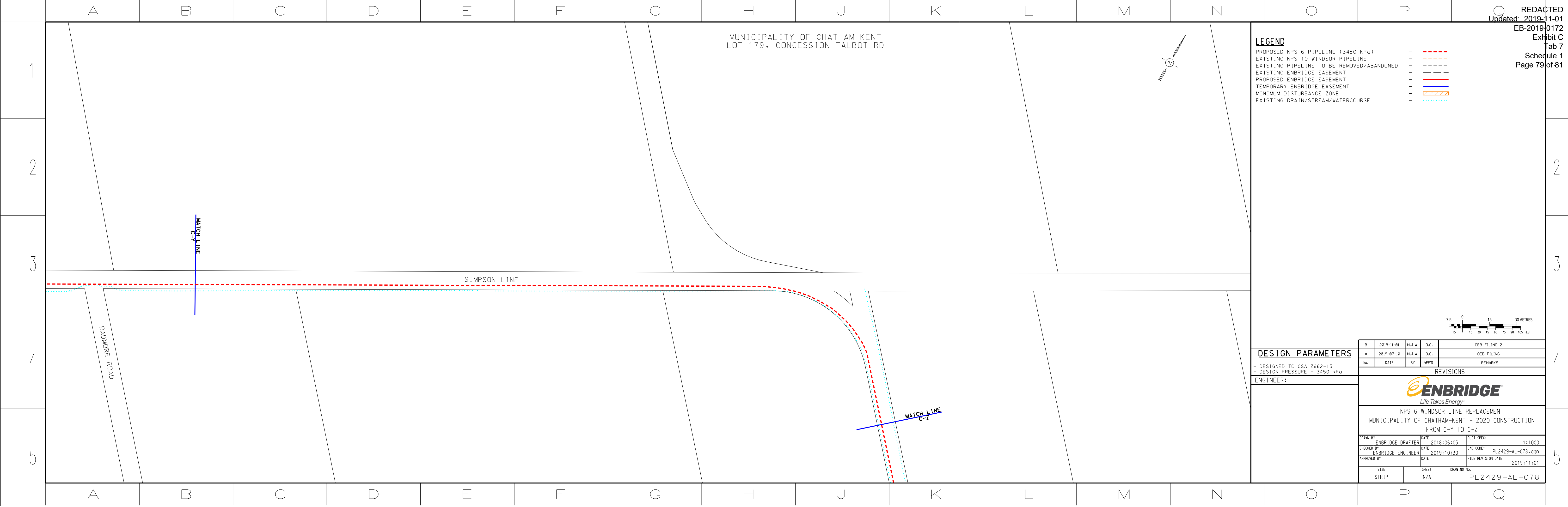
DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

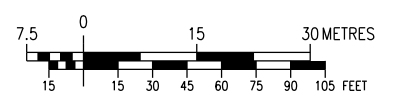
ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS
REVISIONS				
				
NPS 6 WINDSOR LINE REPLACEMENT MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION FROM C-W TO C-X				
DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC: 1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE: PL2429-AL-076.dgn
APPROVED BY		DATE		FILE REVISION DATE 2019:11:01
SIZE STRIP	SHEET N/A	DRAWING No.	PL2429-AL-076	





LEGEND		
PROPOSED NPS 6 PIPELINE (3450 kPa)	-	---
EXISTING NPS 10 WINDSOR PIPELINE	-	---
EXISTING PIPELINE TO BE REMOVED/ABANDONED	-	---
EXISTING ENBRIDGE EASEMENT	-	---
PROPOSED ENBRIDGE EASEMENT	-	---
TEMPORARY ENBRIDGE EASEMENT	-	---
MINIMUM DISTURBANCE ZONE	-	---
EXISTING DRAIN/STREAM/WATERCOURSE	-	---



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

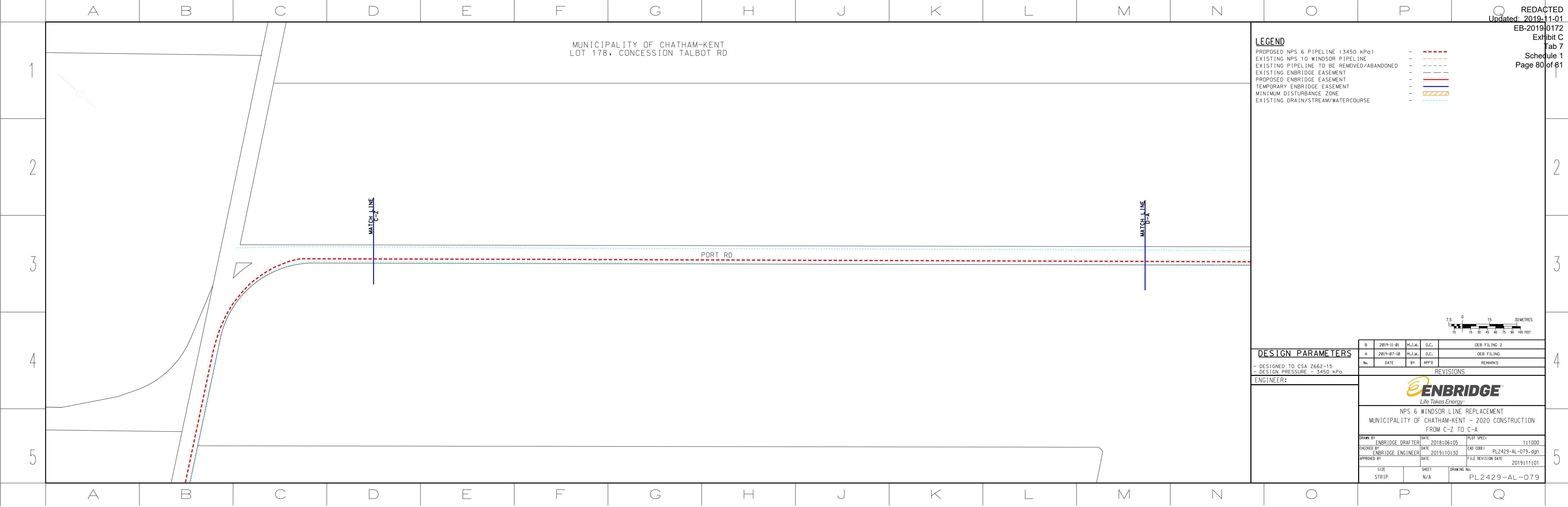
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-Y TO C-Z

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-078.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

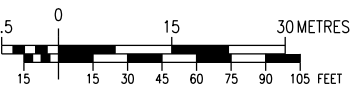
SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-078



MUNICIPALITY OF CHATHAM-KENT
LOT 178, CONCESSION TALBOT RD

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -



DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	DEB FILING 2
A	2019-07-10	M.J.W.	O.C.	DEB FILING
No.	DATE	BY	APP'D	REMARKS

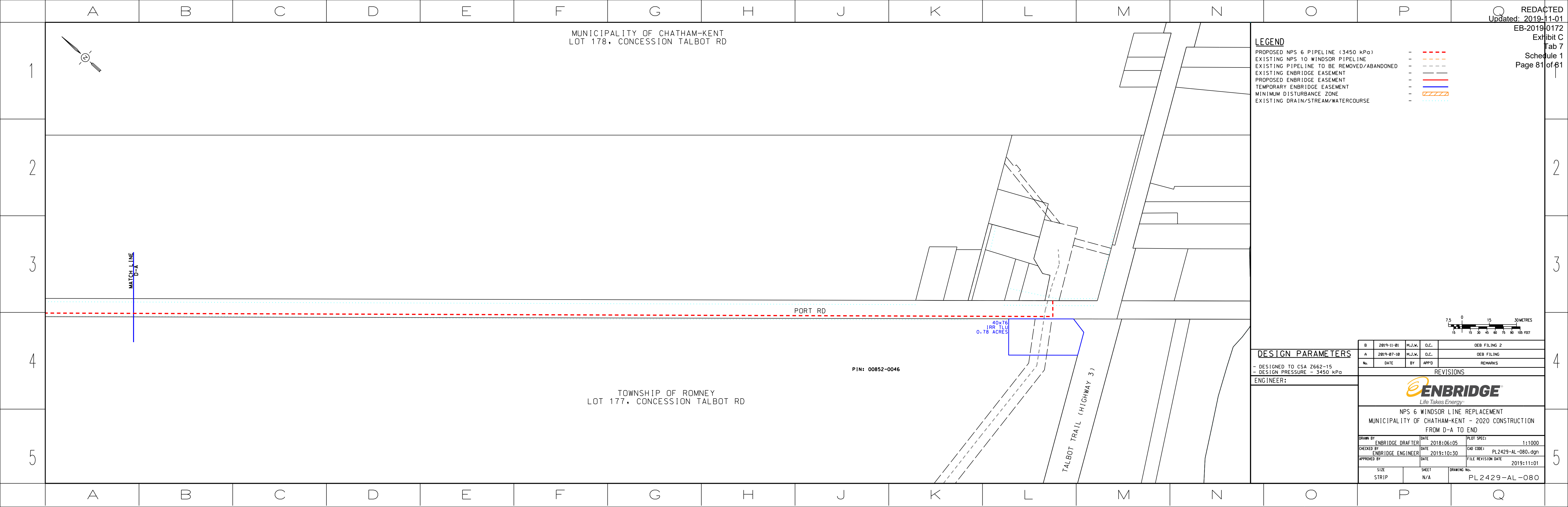
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM C-Z TO C-A

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-079.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-079



MUNICIPALITY OF CHATHAM-KENT
LOT 178, CONCESSION TALBOT RD

TOWNSHIP OF ROMNEY
LOT 177, CONCESSION TALBOT RD

PIN: 00852-0046

PORT RD

TALBOT TRAIL (HIGHWAY 3)

40x76
IRR. TLU
0.78 ACRES

LEGEND

- PROPOSED NPS 6 PIPELINE (3450 kPa) - - - - -
- EXISTING NPS 10 WINDSOR PIPELINE - - - - -
- EXISTING PIPELINE TO BE REMOVED/ABANDONED - - - - -
- EXISTING ENBRIDGE EASEMENT - - - - -
- PROPOSED ENBRIDGE EASEMENT - - - - -
- TEMPORARY ENBRIDGE EASEMENT - - - - -
- MINIMUM DISTURBANCE ZONE - - - - -
- EXISTING DRAIN/STREAM/WATERCOURSE - - - - -

DESIGN PARAMETERS

- DESIGNED TO CSA Z662-15
- DESIGN PRESSURE - 3450 kPa

ENGINEER:

B	2019-11-01	M.J.W.	O.C.	OEB FILING 2
A	2019-07-10	M.J.W.	O.C.	OEB FILING
No.	DATE	BY	APP'D	REMARKS

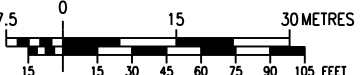
REVISIONS



NPS 6 WINDSOR LINE REPLACEMENT
MUNICIPALITY OF CHATHAM-KENT - 2020 CONSTRUCTION
FROM D-A TO END

DRAWN BY	ENBRIDGE DRAFTER	DATE	2018:06:05	PLOT SPEC:	1:1000
CHECKED BY	ENBRIDGE ENGINEER	DATE	2019:10:30	CAD CODE:	PL2429-AL-080.dgn
APPROVED BY		DATE		FILE REVISION DATE	2019:11:01

SIZE	SHEET	DRAWING No.
STRIP	N/A	PL2429-AL-080



WINDSOR LINE NPS6 REPLACEMENT 2020

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE EASEMENT Dimensions (Metres) Area Length x Width Hectares			TEMPORARY EASEMENT Dimensions (Metres) Area Length x Width Hectares			MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
CONCESSION ROAD 8										
W1	75236-0310		PT LT 11 CON 8 SANDWICH EAST PT 2 12R9105; TECUMSEH	30	x	40	62	x	80	Toronto Dominion Bank 1907 Oxford St. E., London, ON N5V 4L9
W2	75236-0271		PT LT 11 CON 8 SANDWICH EAST PT 3 12R7816; TECUMSEH				40	x	10	HER MAJESTY THE QUEEN IN RIGHT OF CANADA AS REPRESENTED BY THE MINISTER OF NATIONAL REVENUE
CONCESSION ROAD 9										
CONCESSION ROAD 10										
CONCESSION ROAD 11										
CONCESSION ROAD 12										
MANNING ROAD										
W4	75014-0025		PT S1/2 LT 1 CON NMR MAIDSTONE AS IN R983393; LAKESHORE				55	x	20	
W5	75014-0030		PT S1/2 LT 1 CON NMR MAIDSTONE AS IN R1450506; LAKESHORE	115	x	35				BLG Canada Corporation
MIDDLE ROAD (OLD HWY 114)										
LAKESHORE ROAD 203										
W6	75013-0139		PART N1/2 LOT 9 CON SMR MAIDSTONE AS IN R199440 EXCEPT R468633, R562540, PT 1 12R14599, PT 2 12R24471; S/T R851108E TOWN OF LAKESHORE				20	x	10	Woodslee Credit Union 148 Talbot Street North, Essex, ON N8M 2C7 United Communities Credit Union Limited 154 Talbot Street North, Essex, ON N8M 2C7
W7	75013-0036		PT N1/2 LT 10 CON SMR MAIDSTONE AS IN R1108062 EXCEPT PT 1 12R17824; S/T MB13780, R187557; LAKESHORE				20	x	10	Town of Lakeshore 419 Notre Dame, Belle River, ON N0R 1A0 Canadian Imperial Bank of Commerce 100 Ouellette Ave., Windsor, ON N9A 6K5
NAYLOR SIDEROAD										
LAKESHORE ROAD 209										
W8	75025-0112		PT N 1/2 LT 16 CON SMR AS IN R341988 EXCEPT PT 7 PL 12R673 AND PT 1 12R22147; LAKESHORE				20	x	10	Woodslee Credit Union Limited 148 Talbot Street North, Essex, ON N8M 2C7
W9	75025-0149		PART LOT 18, CONCESSION NORTH MIDDLE ROAD, MAIDSTONE DESIGNATED AS PART 3, PLAN 12R26391 TOWN OF LAKESHORE				20	x	10	
LAKESHORE ROAD 217										
W10	75024-0291	SAUVE,	PT LT 21 CON NMR MAIDSTONE AS IN R883691; EXCEPT PART 1 ON 12R4994; SAVE AND EXCEPT PART 1 ON				20	x	20	Town of Lakeshore 419 Notre Dame, Belle River, ON N0R 1A0

WINDSOR LINE NPS6 REPLACEMENT 2020

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE EASEMENT Dimensions (Metres) Area Length x Width Hectares		TEMPORARY EASEMENT Dimensions (Metres) Area Length x Width Hectares		MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
			12R21169; LAKESHORE.					United Communities Credit Union Ltd. 154 Talbot Street North, Essex, ON N8M 2C7
W11	75024-0052		PT N1/2 LT 20-21 CON SMR MAIDSTONE AS IN R1466605; S/T MB19748, R656636E; LAKESHORE			20 x 20	0.04	Ontario Hydro 185 Clegg Road, Markham, ON L6G 1B7 National Bank of Canada 555 Notre Dame, Belle River, ON NOR 1A0
MULLINS DRIVE								
ORIOLE PARK DRIVE								
BELLE RIVER ROAD (CNTY RD 27)								
W12	75023-0023		PT LT 20 CON 1 EBR ROCHESTER; PT N PT LT 2 CON NMR ROCHESTER; PT S PT LT 2 CON NMR ROCHESTER; PT RDAL BTN CON 1 EBR & CON NMR ROCHESTER PT 1, 2 12R11112; LAKESHORE	25 x 15	0.04	25 x 35	0.05	
MYERS ROAD								
W13	75023-0201		PT LT 5 CON NMR ROCHESTER AS IN R759069; S/T R800935; S/T EXECUTION 97-00817, IF ENFORCEABLE; LAKESHORE			10 x 5	0.05	
W14	75023-0231		PT S1/2 LT 6 CON NMR ROCHESTER AS IN R1234780; S/T RESERVATIONS IN R1234780; S/T R1367756; LAKESHORE			10 x 10 20 x 5	0.01 0.01	Woodslee Credit Union 148 Talbot Street North, Essex, ON N8M 2C7 R1298291 Dundee Oil and Gas Limited 21st Floor, Dundee Place 1 Adelaide Street East Toronto, ON M5C 2V9
LAKESHORE ROAD 231								
FRENCH LINE ROAD (CNTY RD 31)								
W15	75054-0096		PT S1/2 LT 11 CON NMR ROCHESTER PT 1 & 2 12R7213; S/T R1149259, R886936; LAKESHORE			10 x 10	0.01	Bell Canada 100 Dundas Street, London, ON N6A 5B6
W16	75055-0062		PT LT 15 CON SMR ROCHESTER; PT N1/2 LT 16 CON SMR ROCHESTER; PT LT 17 CON SMR ROCHESTER AS IN R1344070 N OF 12R603; S/T & T/W R1344070; S/T R425001; LAKESHORE			30 x 20	0.06	Victor Wind Holding Corporation 480 Boulevard de la Cite Gatineau, Quebec J8T 8R3

WINDSOR LINE NPS6 REPLACEMENT 2020

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE EASEMENT Dimensions (Metres) Area Length x Width Hectares	TEMPORARY EASEMENT Dimensions (Metres) Area Length x Width Hectares	MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
W17	75055-0058		PT LT 15 CON SMR ROCHESTER; PT N1/2 LT 16 CON SMR ROCHESTER; PT S1/2 LT 16 CON SMR ROCHESTER; PT LT 17 CON SMR ROCHESTER AS IN R1344070 S OF 12R603; T/W & S/T R1344070; LAKESHORE SUBJECT TO AN EASEMENT IN GROSS OVER PTS 1 TO 6 PL 12R26623 AS IN R1553571 SUBJECT TO AN EASEMENT IN GROSS OVER PTS 1 TO 8 PL 12R27317 AS IN R1554141		110 x 78 0.8	Victor Wind Holding Corporation 480 Boulevard de la Cite Gatineau, Quebec J8T 8R3
W18	75055-0059		PT LT 17 CON SMR ROCHESTER AS IN R941432; LAKESHORE		20 x 20 0.04	Clearbeach Resources Inc. London, ON, N6J 1Y4 Royal Bank of Canada 10 York Mills Road, Toronto, ON, M2P 0A2
ROCHESTER TOWNLINE ROAD						
W19	75060-0064		PT S1/2 LT 1 CON SMR TILBURY; PT LT 2 CON SMR TILBURY AS IN TW16684, R235989 EXCEPT PT 1 12R17232 & PTS 1, 2, 3 12R12904 & PTS 8 TO 12 12R599; S/T R474150; LAKESHORE		863 x 6 0.47	Canadian Imperial Bank of Commerce 69 Erie Street South Leamington, ON N8H 3B2 Wind Lease
W20	75060-0057		PT LT 3 CON SMR TILBURY PT 3 12R8850; LAKESHORE		30 x 22 0.07	Dundee Oil and Gas Limited 21st Floor, Dundee Place 1 Adelaide Street East Toronto, ON M5C 2V9
from S MIDDLE ROAD TO LAKESHORE ROAD 309						
W21	75060-0098		LT 4-5 CON 8 TILBURY EXCEPT PTS 10, 11 12R19211; SUBJECT TO AN EASEMENT OVER PART 1 PL 12R25052 AS IN CE539174 TOWN OF LAKESHORE		IRR x IRR 0.04	
W22	75057-0026		PT LT 6 CON 9 TILBURY AS IN R1259996; LAKESHORE	83.92 x 35 0.3	44 x 35 0.35	Farm Credit Corporation 1133 St. George Blvd, Suite 200 Moncton, New Brunswick E1E 4E1 Wind Lease
HIGHWAY 77						
GRACEY SIDEROAD (CNTY RD 37)						
RICHARDSON SIDEROAD						
W24	75079-0047		PT S1/2 LT 21 CON 8 TILBURY PT 1 12R8429; EXCEPT 12R19086; S/T R980214; T/W RIGHT IN R436166; LAKESHORE		10 x 10 0.01	Victor Wind Holding Corporation 480 Boulevard de la Cite Gatineau, Quebec J8T 8R3

WINDSOR LINE NPS6 REPLACEMENT 2020

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE EASEMENT Dimensions (Metres) Area Length x Width Hectares	TEMPORARY EASEMENT Dimensions (Metres) Area Length x Width Hectares	MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
W25	75079-0049	[REDACTED]	PT LT 22 CON 8 TILBURY AS IN R1503089; LAKESHORE		20 x irr 0.03	Bank of Montreal 3 Queen Street North, Tilbury, ON NOP 2L0 Victor Wind Holding Corporation 480 Boulevard de la Cite Gatineau, Quebec J8T 8R3
LAKESHORE ROAD 309						
W26	75079-0057	[REDACTED]	PT N PT LT 22 CON 9 TILBURY AS IN R774262; LAKESHORE		20 x irr 0.02	Town of Lakeshore 419 Notre Dame, Belle River, ON NOR 1A0 Transcanada Energy Ltd. 55 Yonge Street, 8th Floor, Toronto, ON M5E 1J4
W27	75079-0058	[REDACTED]	PT N PT LT 22 CON 9 TILBURY AS IN R1488461; LAKESHORE		10 x 10 0.01	Farm Credit Corporation 1133 St. George Blvd, Suite 200 Moncton, New Brunswick E1E 4E1
W28	75079-0064	[REDACTED]	PT S PT LT 22 CON 9 TILBURY AS IN R676931; LAKESHORE		20 x irr 0.03	Wind Lease Canadian Imperial Bank of Commerce 69 Erie Street South Leamington, ON N8H 3B2 Wind Lease

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE EASEMENT Dimensions (Metres) Area Length x Width Hectares	TEMPORARY EASEMENT Dimensions (Metres) Area Length x Width Hectares	MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
WHEATLEY ROAD						
W29	00815-0001		PT LT 26, CON 8, AS IN 498078 ; S/T TE12129, TE15114, TE18025, TE20285, TE 20292 TILBURY EAST	25 x 15 0.04	65 x 25 0.14 66 x 5 0.03	
CARLESS ROAD						
KEMP LINE						
COX LINE						
KING & WHITTLE ROAD						
BOWERS LINE						
DONAIS LINE / STEVENSON ROAD						
GLENWOOD LINE						
VENEDIE ROAD / BADDER LINE						
SIMPSON LINE						
W30	00852-0046		PT LT 178, CON TALBOT RD SURVEY, GEOGRAPHIC TOWNSHIP OF ROMNEY, LYING NW OF HWY #3 AS PARTLY DESCRIBED IN 462575 & 540652 EXCEPT 83814 & 95892 ; S/T RO11698 & 76280 ; S/T 109128, RO7264, RO9402, RO9486 ; CHATHAM-KENT		76 X 40 0.31	Onco Petroleum Inc. 782 Richmond Street, London, ON N6A 3H5 Kruger Energy Inc. 3285 Chemin Bedford, Montreal, Quebec H3S 1G5
PORT ROAD						