

**THIS IS EXHIBIT "D"**  
**REFERRED TO IN THE AFFIDAVIT OF**  
**DR. WILLIAM TAPE, P.E., P. ENG.**  
**SWORN BEFORE ME THIS 24<sup>TH</sup> DAY**  
**OF JULY, 2020.**



.....  
**A Commissioner, etc.**



May 19, 2020

The Corporation of the County of Essex  
360 Fairview Avenue West  
Essex, Ontario  
N8M 1Y6

Attention: Ms. Jane Mustac, P. Eng, County Engineer  
Ms. Krystal Kalbol, P.Eng., Manager, Transportation Planning & Development

**RE: REVIEW OF ENBRIDGE RESPONSE FOR NEW GAS LINE ON  
COUNTY ROAD 46**  
Our Project No.: 20-163

Ms. Mustac, Ms. Kalbol,

Subsequent to the response received by your office from Enbridge, specific to our office's May 7, 2020 letter, please find our further comments.

As the focus of the comments from Enbridge appear to rest of the applicability of any standard other than Z662 we offer the following addition references in support of our previous comments. The focus of TAC (Transportation Association of Canada) is to aid in the development of standardized guidelines for the application of a workable and safe public right of way under the careful control of the designated Road Authority.

It is key in this process to remember that the County, as well as other Road Authorities, follows the TAC standards as a standard practice. Thus, failure to adhere to it because of another organization's report or opinion does not negate liability. Statements made in the Enbridge response specific to there being no risk to the County are arguable statements and cannot be based fully on fact.

To the next accretion made by Enbridge that the absence of past issues should deem the current argument moot we also disagree. The absence of past experiences does not meet a reasonable test of absence of potential issues. In fact, while not completed in Canada one only needs to reviewing The National Cooperative Highway Research Program Report 309 published in July 1988, that speaks to 11 uncased and 13 encased failures of pipelines in 23 reporting districts. While the function of the lines varied from water to propane gas it was noted that age, cathodic protect and installation issues were dominating factors. In each of these cases it is likely that the authority of the time felt such conditions were unlikely due to absence of past issues.

The next point we would like to add comes from our continued research on this matter specifically The Utility Policy Manual of the Ministry of Transportation and Infrastructure of British Columbia 2019. In this detailed manual Table 17.1 requires a depth of cover for pipelines of a minimum of 1.2m under pavements and shoulders. By definition under would

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require the 1.2m to be measured from the defined subgrade such can be appreciated to be anywhere from 500mm to 800mm below the surface elevation. Should the 1.2m be measured from the surface side of the pavement structure consideration also needs to be provided for re-grading of the road during construction and thus a buffer of not less than 300mm would be adopted to ensure drainage requirements are adequately addressed. This document and its contents would suggest that the TAC standard of 1.5m is generously in favour of the Utility provider. Moreover, the document itself come from a recognized Road Authority who is aligning by this requirement with TAC in terms of increased depths of bury on underground utilities.

Enbridge's response does speak to the absence of adoption of CSA Z662-19 by TSSA to date. Such a failure to modified the current standards by TSSA does not mean that it will not occur in the near future nor does it mean the current standard is flawed. Standards act as industries best knowledge and as such when information comes forth mandating a change the standards are adjusted; thus, good practice would be to follow the more stringent in the interest of all parties.

The current argument being made suggests that it is incumbent on the County to justify all standards it follows. However, it appears unreasonable for a Utility to mandate the need for the County to prove a standard or recommendation by others. It is within the right of a Road Authority to apply an industry standard or recommendation within its jurisdiction. Such actions by the County and its agents would, by doing so, be in the best interest of the rate payers and public at large. Moreover, it is important to consider that the County is taking all necessary steps in identify the proposed location relative to the expanded future travelled portions of the right of way and ensuring that relocations are not needed at a later date. Such management of the right of way is appropriate and consistent with the guidance of TAC. Therefore, we once again point to the TAC recommendation for a 1.5m depth of cover to account for the future expansion works. Such actions are in the best interest of proper right of way management.

To the comments made, by Enbridge, with regard to TSSA and their requirement of 0.75m; this is contrary to the accretion that Enbridge is to follow Z662 which per Table 4.9 notes that below a travelled surface (road) any pipeline would require a minimum cover of 1.2m. While in the current condition the placement of the pipe may be outside the travelled surface, Enbridge is, as of this time, fully aware of the intent to widen the roadway changing the current dynamics. Moreover, if we apply clause 4.12.3.1, even in the absence of such widening this depth requirement would be deemed mandatory as it is within 7m of the travelled surface of the road per subsection (c) of 4.12.3.1.

The position of Enbridge also appears to rest on their analysis of the mechanical response of the pipe. One must appreciate that the analysis as performed were based on very specific assumptions, such as soil type and response. Such an analysis fails in the presence of a non-homogeneous state or variation in the soil-structure interaction. Consideration in this analysis failed to account for the disturbed condition commonly found within the right of ways due to past works and intersecting driveways, intersections, and drainage works.

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To further add to our last submission and following additional points are offered. Referring again to TAC – Guidelines for Underground Utility Installations Crossing Highway Rights of way (TAC 2013):

Per the Abstract:

*“The responsibility of road authorities includes operating the highway rights of way in a manner that ensures the safety, traffic carrying ability and physical integrity of their installation. The presence of a utility within the right of way can affect these characteristics so it is necessary for road authorities to reasonably regulate the presence of utilities”*

As from the above it is not just within the County’s right but rather in their mandate to set standards that may affect the regulated zones. As such given the County applies TAC recommendations as a standard it is reasonable to expect those Utilities wishing to be within the ROW (cross through it, inclusive of crossing along it) to adhere to these guidelines. The County cannot be reasonably asked to justify every standard on a project by project basis otherwise no work within the ROW could effectively proceed.

Also from the Abstract: *“The purpose of this general guideline is to assist the various road authorities in establishing and administering reasonably uniform criteria for the accommodation of utilities crossing highway rights of way. Ideally, existing utility accommodation guidelines should be updated in light of these guidelines as appropriate”*

Such a statement speaks directly to the County’s responsibility to adhere to the most updated version of recommendations being made.

In further support of the County position consideration may also be given to section 3.22 of the TAC 2013 document which states:

*“3.2.2 Present and Future Impacts Consideration*

*The potential impact on the highway and its use should be considered in the design and location of utility installations within the highway rights-of-way. Likewise, the impact of a new or reconstructed highway on existing utility installations should be considered in an attempt to avoid utility relocations. On new installations or adjustments of existing utility facilities, provisions should be made for known or planned expansion of the utilities. They should be planned so as to minimize hazards and interference with highway traffic when additional overhead or underground facilities are installed at some future date.”*

By advising Enbridge to lower the pipe in support of future road expansion the County has responsibly performed all needed due diligence and continue to do so in response to Enbridge’s assertions.

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In attempt to reiterate our May 7 comment Section 4.1.8 of TAC 2013 is repeated here for clarity:

*4.1.8 Underground Utility Cover*

*The minimum utility cover depths should be as specified hereafter (see Table 1 and Figure 4) for each utility installation type. The provisions should apply for new utility installations, additions to or alterations of existing installations, adjustments or relocations of utilities incidental to highway construction and to existing utility installations within highway (and freeway) rights-of-way. Utility installations should conform to all conditions described in columns A, B, C and D of Table 1. The minimum utility cover depths specified by a road authority may be greater when installed within freeway rights-of-way. The road authority may approve other protection designed by the utility in lieu of the minimum cover depth specified.*

This statement is in further support of the County's position and by applying these depths the County is maintaining compliance with an industry standard and with its own policies.

Not to belabor the point one may also look to the TAC Management of Utilities in and Adjacent to the Public Right-of-way: Survey of Practices (TAC 2008) of which the Ontario Ministry of Transportation (the Governing Road Authority in Ontario) was a part. The following points can be pulled directly from TAC 2008)

In the executive summary it states:

*In Canada, road authorities are charged with ensuring the safety and convenience of road users. It is in the public interest to accommodate others, notably utility companies, within the right-of-way whenever practical. Management of utilities in the right-of-way is the responsibility of the road authority and it has become increasingly complex in recent years as growth continues at a rapid pace in most regions.*

From this statement it fully supports that the direction of the County as the Road Authority is the responsibility of the County and they are not freed from their responsibility to do so by the demands of any Utility. Moreover, adding to the above statement the comment regarding "it has become increasingly complex in recent years" further supports the County's position of the 1.5m TAC depth recommendation as you seek to standardize all utilities in the ROW to avoid future conflicts and issues.

In the deliberation of all submissions offered in this document and those before consideration should be given to the following additional facts:

1. There are several private accesses and public intersections which will cross over the proposed pipeline
2. The proposed construction of the pipeline should be done with consideration for any potential required grading changes and pavement structures without compromise due to insufficient depth.

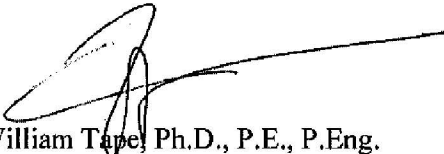
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3. Following from point 2 the proposed 1.5m depth would provide the abilities to modify cover without concern during the road expansion and associated regrading process.
4. Should the 1m be used the County may have to compromise on its soil-structural system and or drainage plan for the roadway via modified grading, which could result in encroachment into private lands to compensate. In addition, the County would have to accept the liability of proceed with an act it knew to be contrary to the best practices and its own guidelines.

### Closing

We trust that the above meets your needs at this time. Should you have any questions or comments please do not hesitate to contact our office.

Yours Truly  
Haddad, Morgan and Associates Ltd.



William Tape, Ph.D., P.E., P.Eng.  
Engineer