

## Provision of Infrastructure Review

# A G E N D A

**DATE: 5<sup>th</sup> January 2021**

|   |  | <b>Action</b> | <b>Timeline</b> |
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| <b>QMS POLICY</b>   |  |               |                 |
| <ul style="list-style-type: none"> <li>• The Town of Newmarket is committed to consistent delivery of safe drinking water through compliance with applicable legislative and regulatory requirements</li> <li>• The Town will strive to achieve this goal through the implementation, maintenance, and continuous improvement of the Drinking Water Quality Management System (DWQMS)</li> <li>• The Town commits to ensure open communication, both with the public, as well as staff concerning all policies, procedures and documentation pertaining to DWQMS</li> </ul> |  |               |                 |
| <b>Attendees</b>  | <p>Tyler Adamson (Chair), Rob Gillis, Graham Hackson., Blair Saunders, Gord MacMillan., Sepideh Majdi, Ben Pressman., Pauline Pierce (Minutes)</p> <p><b>Meeting commenced: 08:03 am</b></p> <p>Tyler A. provided background on the purpose of meeting as per DWQMS.</p>   |               |                 |
| <b>Item 1</b>   | <p><b>Review of long term forecast of major infrastructure maintenance, rehabilitation and renewal activities - Engineering's "5 Year Watermain Construction Projects" excel file</b></p> <p><b>2021 Construction Projects:</b></p> <p><b>Lorne Ave. - Phase I</b></p> <ul style="list-style-type: none"> <li>• Water main replacement from Millard Ave to Eagle St on Lorne.</li> <li>• Scope replacement of water main - like for like replacement.</li> <li>• Replacing hydrants with Stortz nozzle.</li> </ul> <p><b>Bogart Ave.</b></p> <ul style="list-style-type: none"> <li>• This project started early last year – and is complete.</li> <li>• Replaced the water main exposed at the creek from Roxborough Rd to the Legion and installed a sample station</li> <li>• Went approximately seven feet under the creek</li> <li>• Patrick Leo was involved with this project. Restoration is remaining.</li> </ul> <p><b>Cody Cres.</b></p> <ul style="list-style-type: none"> <li>• Water main replacement from the cul du sac to Armitage, like for like replacement.</li> <li>• Hydrant replacements and water service. There is no funding for this project.</li> <li>• If we can show it is ready for construction we will try to get it done this year.</li> </ul> |               |                 |

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| <ul style="list-style-type: none"> <li>• Frank Wu stated that there is unallocated funding available.</li> <li>• By spring 2021 it should be ready for tender. From Operations, perspective all agreed to start this project if funding is available.</li> <li>• Rob G. stated that a business case be put together if, required.</li> <li>• Tyler A. stated that there are many water main breaks on Cody Cres and be considered a priority based on condition.</li> <li>• Gord has a meeting on Thursday 7 January 2021 at 10.00 a.m. with Frank Wu to discuss Cody Crescent Gord McM. to send invite to Rob G.</li> <li>• Gord McM. stated on a general note, previously, 30, 60, 90 designs plans went to Darrell B. and Jeff E. for review. Gord McM. enquired if Patrick Leo will be the plan reviewer and if so a communication plan will need to be drafted to have Patrick L. as a point of contact</li> <li>• Distribution process – directly to Patrick L. while CC'ing Manager and Supervisor of W/WW.</li> </ul> <p><b>Cathodic Protection</b></p> <ul style="list-style-type: none"> <li>• This is something engineering is taking over for the time being – pending Director of Engineering input.</li> <li>• Resource needs to be hired on temporary basis.</li> </ul> <p><b>2022 – Construction Projects</b></p> <p><b>Longford Dr.</b></p> <ul style="list-style-type: none"> <li>• Longford Dr from Davis Dr to Willow Lane replacement is like for like with the exception of Willow Lane where the pipe size will increase.</li> <li>• Gord McM to circulate drawings to Patrick L. so he can review plans.</li> <li>• This project has been ready to go for years and will cost about \$8M. The scope is water main, sanitary sewer, road reconstruction, sidewalks and bike lanes.</li> <li>• The area needs a lot of work as there are many problems with water main and sanitary.</li> <li>• Discussion followed on why the water main on Willow Lane is being upsized. If it is decided that upsizing of this pipe is required then measures will need to be taken to minimize the impact this may have on water quality in the area.</li> <li>• Blair S. to discuss with Patrick L. whether to loop the dead end of Willow Lane or the use of the London design standard. Patrick L. to inform Gord McM. of decision.</li> <li>• Gord did not like the idea of upsizing and then reducing to 2" for homes. Gord to make sure Patrick L. receives the drawings for the Longford project and if Operations has any comments Patrick L. is to let Gord McM. know.</li> <li>• Graham H. enquired if all homes will have separate water and sanitary connections. Gord McM. confirmed that they are separate.</li> </ul> | <p>Gord McM.</p> <p>Gord McM.</p> <p>Gord McM.</p> <p>Blair S.</p> <p>Gord McM.</p> |          |

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| <ul style="list-style-type: none"> <li>• There is potential to include a sample station as part of the Longford project near the intersection of Willow Lane and Longford Dr.</li> </ul> <p><b>Roywood Cres.</b></p> <ul style="list-style-type: none"> <li>• Structural lining for Roywood will be expensive as there are a lot of breaks in the area and the water main is in bad shape</li> <li>• Engineering are working with procurement to obtain a consultant once done we can look at this area. Gord ask for comments from Ben P. regarding lining or replacement.</li> <li>• Ben P. stated depending on depth it might be better to replace. Structural lining can cause future complications Blair S. agreed.</li> <li>• Graham H. stated that there are no secondary's on the hydrants in that area.</li> <li>• Gord McM. Asked for a consensus on prioritising the timing of these water main projects</li> <li>• Gord McM. Stated Roywood is not a major priority and thinks the work will not be done for a couple of years.</li> <li>• Ben P. stated he had a preliminary framework in mind:               <ul style="list-style-type: none"> <li>• Newmarket Heights area;</li> <li>• Longford area;</li> <li>• Patterson and Eagle/Roywood.</li> </ul> </li> <li>• Only comment on Roywood – looking at one contractor over multiple years.</li> <li>• Construction for Roywood could be completed over a three-year period – done in different zones. Need to also consider sewers and roads in those areas.</li> <li>• Gord McM. identified that there is a need to better align the prioritization of drinking water infrastructure upgrades with other infrastructure upgrades. There is a lot of pressure from various internal/external stakeholders who want sanitary sewers upsized for development purposes.</li> <li>• Sepideh M. stated that the Longford area is high priority area for replacement and future development intensification. Need to make sure infrastructure is there to accommodate developer's needs.</li> <li>• Gord McM. Discussed the areas that need sewer upgrades:               <ul style="list-style-type: none"> <li>• 201 Davis east of Tim Hortons – vacant land – sewers need to be replaced developers want to start 2021.</li> <li>• Upper Canada mall area.</li> <li>• 345 -351 Davis sewer runs up to Franklin needs to be upsized and developer wants to start work late 2021 to start.</li> <li>• Charles and Prospect – west of Queen behind Youth Centre.</li> <li>• Sewer on Pickering College.</li> </ul> </li> <li>• Sepideh M. stated that the projects identified by Gord McM. are also identified as infrastructure needs in the Town's Water/Waste Water Master Plan.</li> </ul> |        |          |

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| <ul style="list-style-type: none"> <li>• Roywood will not happen for quite a while. Structural relining is not a great idea. Needs replacement and road will have to be re-done.</li> <li>• Ben P. stated maybe a good idea to look at projects from a geographical perspective.</li> <li>• Blair S. stated from a water quality perspective the northern parts and downtown areas are where we have water age issues.</li> <li>• Longford can go ahead it is just a case of funding.</li> <li>• Gord stated Lorne should start this year, Longford and Cody will be next.</li> <li>• Gord McM. Requested consensus from the groups – we can put Longford as next from a water main perspective. Lorne and then Cody if funding is available.</li> <li>• Tyler A. stated a long-term infrastructure maintenance rehabilitation and renewal forecast needed to be in place; but that didn't mean that the forecast couldn't be modified periodically based upon justifiable inputs such as Operational concerns and evolving Corporate Asset Management principals.</li> <li>• Blair S. stated Lorne/Longford areas from operational standpoint it would be beneficial to have a sample station installed as well as an auto-flusher to assist with the water quality monitoring/improvement. Gord confirmed that there is a sample station for Ontario St in design.</li> <li>• There is a sample station near Cody Crescent and there is no obvious need for an auto-flusher at this time.</li> <li>• In Longford area there is currently a sample station on/near Penn Ave.</li> <li>• Will need a sample station close to Willow Lane or end of Longford at Willow Lane. Gord McM. to let Eric E. know and one will be installed as part of contract.</li> <li>• Tyler A. identified that small sections of old watermain, which could have been replaced under the scope of historically completed contracts, were sometimes left in place. This results in operational concerns as these sections of old watermain are often in difficult to access locations, such as intersections, and are difficult to repair; it is easier to replace them under the scope of applicable contracts. Gord McM. stated that moving forward contracts could be more specific to identify "valve to valve" replacement.</li> <li>• Tyler A. stated moving forward that situations such as this could be flagged by Patrick L. during his design drawing reviews as well.</li> <li>• Tyler A. identified concerns with respect to how shave and pave road projects were identified and what consideration was taken for underlying infrastructure condition.</li> <li>• Ben P. stated he is working through asset management on a plan to bring more cohesion and coordination.</li> </ul> | <p><b>Gord McM.</b></p> |          |

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|                      | <p>The asset management plan will likely address matters like these.</p> <ul style="list-style-type: none"> <li>• Gord McM. stated that the streets determined by the condition of road. If there is a metallic water mains Darrell B. would cathodically protect the main and resurface road. In recent years it has been dropped. Now we are looking at the infrastructure below surface before the work commences.</li> <li>• It was agreed that there was no need to discuss infrastructure maintenance, rehabilitation and renewal projects planned beyond 2022 as these are subject to change.</li> <li>• No opportunity for the inclusion of another bulk water station was identified in relation to the above projects due to them being located in predominately residential areas.</li> </ul>   |               |                 |
| <p><b>Item 2</b></p> | <p><b>W/WW drinking water infrastructure operational input - adequacy of the infrastructure necessary to operate and maintain the drinking water system</b></p> <ul style="list-style-type: none"> <li>• Tyler sent out an email to W/WW staff for input and feedback for their operational observations to provide to engineering and asset management. There were no responses.</li> <li>• Anything that can be incorporated as part of drinking water infrastructure maintenance, rehabilitation and renewal project/program to reduce water age/improve water quality in the should be considered.</li> <li>• Gord McM. inquired about the regional water main on Main St. and Bristol Rd (Second Concession) and why it was not being utilized. W/WW would like to have it opened as it would reduce water age in the Central West Pressure Zone. The Town has had discussions with the Region and East Gwillimbury regarding this to no avail.</li> <li>• Tyler A. discussed the requirement for temporary water mains as part of the structural lining process. Any time temporary water mains are being considered there needs to be more communication between Engineering and PWS to ensure we have an adequate operational strategy in place to ensure the continued delivery of safe drinking water to consumers (i.e. enhanced flushing, residual sampling and microbiological sampling). It would also be beneficial to develop a Town standard for temporary watermain. Tyler A. posed it to group for discussion understanding W/WW would prefer that temporary mains be used only if there is no other option.</li> <li>• Ben P. suggested only use structural lining in small instances were we cannot replace main for whatever reason (ex. railway and transportation corridors). Develop of standard for temp. mains would be beneficial for instances where we need to use them.</li> <li>• Gord – Agreed that the restriction/elimination of Temp. mains and the develop of a Town standard is a good idea. Park Ave. project resulted in a \$250,000 cost due</li> </ul> |               |                 |

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|               | <p>to flushing needed to maintain water quality in the temp. main.</p> <ul style="list-style-type: none"> <li>Blair S. indicated that water quality should be taken into consideration as part of all capital and new development projects – future consumption demands need to be addressed while ensuring that any interim water quality challenges created by increasing watermain sizing, etc. are addressed.</li> </ul>   |               |                 |
| <b>Item 3</b> | <p><b>Consideration for the outcomes of the Risk Assessment documented within DWQMS Operational Plan that are applicable to the Review and Provision of Infrastructure Process</b></p> <ul style="list-style-type: none"> <li>Number of risks within the Operational Plan where mainline valves are considered critical infrastructure to mitigate hazards to the drinking water system.</li> <li>Tyler A. inquired if all mainline valves are replaced as part of the scope for capital projects involving water main replacement. Gord McM. Confirmed that they were.</li> <li>Tyler A. inquired if all mainline valves are replaced as part of capital projects involving water main relining. Gord McM. confirmed that they were.</li> <li>Unapproved use of hydrants for water theft is a potentially hazardous event identified within the DWQMS Operational Plan Risk Assessment. Water theft is most likely to occur in quieter areas of Town and within close proximity to capital/new development construction projects. A proposed future control measure to mitigate the likelihood, and other potential consequences of this potentially hazardous event, is to have anti tampering devices installed on hydrants within close proximity to capital/new development construction projects for the duration of a project to discourage theft. We have bulk water station and hydrant permits there is no need to steal it. This is considered a potential future control measure – future discussions to be had between Engineering and W/WW regarding this subject matter.</li> </ul> |               |                 |
| <b>Item 4</b> | <p><b>Opportunities for enhancing synergy between W/WW, Engineering and Corporate Asset Management - drinking water infrastructure maintenance, rehabilitation and renewal activities and initiatives</b></p> <ul style="list-style-type: none"> <li>Rob G. and Graham H. discussed work management system.</li> <li>Having discussion like this is very valuable. Synergy is excellent between all areas. Rob G. stated that capital projects should not have to seek funding or be delayed. The water quality issues need to be addressed to get them resolved through collaboration with York Region and capital projects.</li> </ul>   |               |                 |

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|                      | <ul style="list-style-type: none"> <li>Gord McM. stated we do have challenges with budgeting and resources. Water quality has to be a priority as it is health and safety issue.</li> <li>To improve the synergy between groups, if there is a water main break Engineering would like to get the mail notification. Pauline P. to add the following staff to the distribution group:               <ul style="list-style-type: none"> <li>Sebastian S., Eric E., Hossan Mossa, Robert D., Ben Pressman</li> <li><b>Post meeting note: names have been added to the distribution group.</b></li> </ul> </li> <li>Graham H. stated that it was a good idea to have Engineering staff on site for water main breaks to get a better understanding of the system.</li> <li>PWS staff do not understand the current rating scheme associated with infrastructure condition assessments. Tyler A. indicated that a detailed rating scheme should be developed to ensure staff understanding and consistency when PWS staff are required to do ad hoc condition assessments of infrastructure in the field – this will increase the reliability of the data collected.</li> <li>Tyler A. inquired if January was a good time to have the Provision of Infrastructure Review meetings, Gord McM. Confirmed that it was a good time of year.</li> <li>Gord McM. discussed the possibility of secondments of staff from W/WW and Engineering and vice versa which could help staff understand the workings of their departments and possible promotions within departments.</li> </ul> | <p><b>Pauline P.</b></p> |                 |
| <p><b>Item 5</b></p> | <p><b>Additional Items of Discussion</b></p> <ul style="list-style-type: none"> <li>Gord McM. enquired if Tyler A. could provide training to his department on the Form 1 process. His departments conducts “huddles” three times a week with his project managers to discuss issues and would like to have Tyler A. as a guest to go through the process. Tyler A. stated that the process was still in draft form. Gord McM. Stated that he could still provide the training on the draft form and if staff had input, they could provide it for the final version. Gord McM. to send invite to Tyler A. for a “huddle” meeting towards the end of February 2021.</li> <li>Ben P. discussed the synergy between the two groups to help improve the communication is a great idea. There can be discussion about bringing awareness to the infrastructure risk and generate conversation. For example if there is an issue with a hydrant or water main break – getting staff out to the field and getting a better understanding.</li> <li>Empirical condition data is great for long-term plans.</li> <li>Tyler A. indicated that it would likely be beneficial for Patrick L. to attend applicable lessons learned</li> </ul>   | <p><b>Gord McM.</b></p>  |                 |

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|               | <p>meetings that Gord McM schedules upon completion of capital projects.</p> <ul style="list-style-type: none"> <li>• Discussion surrounding Patrick L. participation in the 30/60/90 review process – would be beneficial from a W/WW standpoint as our needs/interests would be better communicated through the Participation of Patrick L. in this process.</li> <li>• We are required to have this meeting annually at a minimum – would it benefit to have more meetings during the year. Would it have any benefit for the group.</li> <li>• Gord McM. suggested supplementing the meeting with the Infrastructure Management Committee meetings. If there is discussion on a water main, Tyler A. can attend. Tyler A. to speak with Irene V. to be added to the group and attend when it is deemed necessary.</li> <li>• Ben P. stated that there is an opportunity to get ARC GIS Explorer to help discuss further about infrastructure. Ben P. will try push this out and make more use of it.</li> <li>• Sepideh M. stated that she is planning to have meetings with W/WW department to review operations requirements, commissioning, decommission – to ensure we have all the requirements and coordinators are aware and include staff in design standards. Patrick L. will be involved with meetings. Tyler A. can answer any compliance related matters. Rob G. and Graham H. also to be involved in the meetings</li> <li>• Sepideh M. is looking for checklists – for Operations procedures. Rob G. stated there are some gaps in the procedures, which are a priority for 2021. Sepideh M. to invite Ben P. to the meetings.</li> <li>• Discussion occurred surrounding the need to prioritize drinking water system infrastructure maintenance, rehabilitation and renewal with that of other Town owned infrastructure.</li> </ul> | <p><b>Tyler A.</b></p> <p><b>Ben P.</b></p> <p><b>Sepideh M.</b></p> |          |
| <b>Item 6</b> | <p><b>Results of the Infrastructure Review - Meeting Summary and Conclusion</b></p> <p>See action items above.</p> <p><b>Meeting concluded: 10:05 a.m.</b></p>   |  |          |