
District of Lantzville

REPORT TO CAO

Regular Council Agenda Item
July 26th, 2010

File: 5330-20-SPH2
G: Reports/10/SSCS_Phase2_Status Update_July26

AUTHOR: Fred Spears, Director of Public Works

SUBJECT: District of Lantzville Sanitary Sewer Collection System Phase 2
Construction Update - Storm Drainage Installation – Bayview/Huddleston
Road & Lancewood Avenue

Recommendation:

THAT Council receive this report for information.

Purpose:

To provide Council with an update on the construction works associated with Phase 2 of the District's Sanitary Sewer Collection System, specifically storm drainage installation. Further, to provide clarification to comments expressed by Council at their Regular Meeting held July 12th, 2010 pertaining to Bayview Road/Huddleston Road area and to address concerns expressed by Councillor Griffey on behalf of residents in the Lancewood Avenue area.

Background:

Phase 2 of the District's Sanitary Sewer Collection System Project was awarded to Knappett Industries (2006) on June 26, 2009. During 2009 and 2010, Knappett has been working diligently to complete the project.

Works associated with the sanitary sewer collection system included the installation of two sections of storm drainage - one being at Bayview Road (to the north), and the other being a section on Lancewood Ave.

Discussion:

Lancewood Avenue

The Lancewood Ave. section of the storm drainage was initially completed in early December of 2009. Following construction completion, it was found that with the trench for the sanitary sewer collection line being so close to the storm drainage ditch the sanitary sewer line trench became inundated with water and had pushed the wall of the trench into the storm drainage ditch (see photo 1 attached).

The initial location/construction of the sewer line trench became inundated with water which resulted in causing pressure in the trench; this pressure caused the weakest point in the trench wall to fail. The failure happened at the bottom end of Lancewood Ave. where the storm drainage ditch and the sewer line trench wall were in close proximity to each other (approx. 1.5m) and reflected the original engineered design.

Upon review the only solution was to fill the recently constructed drainage ditch in with pipe and move the head wall further south on Lancewood Avenue. This solution gave staff and the engineers confidence that the sewer trench was now secure.

Safety Concerns

There has been a concern of safety from the public with regards to the storm water upgrades along Lancewood Ave., including the proximity of the trail that goes from Lancewood Ave. to the school property. Prior to moving the headwall and riprap further south on Lancewood Ave. that same design was on the north side of Lynn Road, about the same distance away, for the past eight months. There were no safety concerns expressed at that time however, the property owner did have a fence separating private property from the storm drainage ditch.

Bayview Road/Huddleston

The portion of the storm drain that runs from the north side of Bayview Road to the south side of Bayview Road was added to the scope of work to protect the sewer lift station and mitigate the flooding issues along Bayview and Huddleston Roads. An additional benefit of the storm works at the Bayview and Huddleston intersection was the removal of the old rusted culvert.

Due to weather conditions, storm drainage upgrades on the Bayview Road section were postponed until water levels within the ditch subsided. During the first week of July, Knappett began construction on the storm drainage upgrades.

During construction the contractor failed to have the correct piece of equipment to conduct the remainder of the works which resulted in the contractor temporarily abandoning the site while waiting for the appropriate piece of machinery. Some residents appeared to have interpreted this to mean that the works in this area had been completed and were then concerned with the state of the site. At the writing of this report the contractor has now completed the majority of the remedial works in this area with only seeding and minor clean-up remaining.

Summary

Due to the volume and speed of the water traversing down the storm drainage ditch along Lancewood Ave. and Huddleston Road, an unfortunate side affect is the need for large riprap (rocks) and angled headwalls.

Staff and the District's engineer have designed an unobtrusive and safe method in dealing with the volume of water that flows through the ditches in the two areas identified in this report. Future options were limited given the topography, the need to ensure that erosion does not occur, and the potential of extending the storm drain piping in the future. Regardless of where the drainage pipe was installed, it would not have eliminated the need for a headwall and riprap.

With the upgraded portions of the ditch along Bayview/Huddleston Roads and Lancewood Ave., safety hazards to children and blockage issues causing flooding to properties and other infrastructure are far less likely than in storm drainage ditches in the majority of other parts of the District.

Staff will continue to work with the neighborhood to ensure storm drain upgrades are more aesthetically pleasing by utilizing plants and shrubbery without compromising functionality. This will also be accomplished once natural vegetation growth reestablishes itself.

Respectfully submitted



Fred Spears
Director of Public Works
District of Lantzville

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Slump Area - Photo #1

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View from Huddlestone Road looking North

Photo #2



Looking North East Edge of District
Right-of-Way Huddleston Road
Photo # 3



Looking East from Lynn Road to Pathway to School Photo #4



Trail to School -----

Looking North on Lancewood. Trail to School on the Right.

Photo #5



Ditch upstream of 6995 Lancewood Ave.

Photo #6