

History and Location:

This portion of the Town of Verona sewer system is located in the northeast quarter of Section 13 and was constructed in 1969 per standards defined by Strand Engineering. Manhole 10 is located within an easement owned by Dane County that is maintained by the Dane County Parks Department. Although this area is between a wetland scrape and Goose Lake, a non-draining kettle feature, the soil type is Batavia silt loam, gravelly substratum with 2 to 6 percent slopes. The drainage property for this soil class is considered as well-drained. A Well Constructor's Report from nearby 6395 Pheasant Lane from August 3, 1955 in the same area of Batavia silt loam reveals that sandstone likely extends below this structure from approximately 58 feet and beyond. Manhole 10 can be accessed from Verona Road USH 18/151 by crossing over the Military Ridge State Trail, west of the Fitchrona Road overpass.

Definition of the Problem:

Standing water was observed and the camera could not pass the entire length of the 10" diameter of vitrified clay pipe when televising this section from Manhole 11 to Manhole 10 on September 17, 2008. However, no special note or recommendation was included in this report to encourage repair or explain the inability of the camera to pass through the entire length of this section. When this section was again televised on April 22, 2016, the camera was unable to pass through the entire length; the report notes that the manhole appears to have settled. Video footage from the direction of Manhole 11 and Manhole 9 towards Manhole 10 is included in the enclosed DVD RW disk as is a printed copy of the televising report.

Detailed Soil Conditions and Decision by Town of Verona Utility Commission:

In order to provide the Utility Commission members and potential contractors better guidance on the soil conditions adjacent to Manhole 10, CGC, Inc. was contracted to conduct a single bore to the depth of 20 feet. The details of the subsurface profile and the conclusions of Michael Schultz, P.E. are enclosed. The Town of Verona Utility Commission met on July 12, 2016 to review the results of this report. Based upon the findings and range of recommendations presented by Engineer Schultz, the Commission has requested quotes to remedy the problem.

Standards Being Sought for Quotes:

Remove the affected sections of 10" vitrified clay pipe that were damaged when the manhole settled (approximately 15 to 20' on either side of Manhole 10 (the enclosed DVD should be helpful in determining the amount to be replaced

Prepare the trench for the replacement pipe that is sufficiently dewatered so that it can be properly compacted with materials that assure long-term stability and to re-establish the original slope; pipes should be replaced with a material (e.g. PVC, ABS Strut, etc.) you feel is best suited for the job; dewatering on some scale will likely be required, so include that cost and details within your quote

If dewatering requires the submission of a High Capacity Dewatering Well Application, then please include the permit cost for the Department of Natural Resources and your time to complete and submit the permit to the same; details should be provided regarding the type of planned pumping, the location where the water will be pumped to, and measures to remove sediment from the pumped water

Re-core the existing pre-cast concrete structure (a diagram is enclosed of a typical structure of this type) to restore the original 0.28% slope as stipulated in the enclosed photographs taken of Strand's sewer plan/profile between Manhole 11, Manhole, 10, and Manhole 9

Patch the existing portion of the manhole sidewalls below that which was re-cored so that it is watertight; the invert channel should be raised, if necessary, to provide a full bench

Backfill and appropriately compact the trenches containing the replaced pipe and reseed to limit erosion until local species have a chance to be re-established

Clean and televise from Manhole 11 to Manhole 10 and from Manhole 10 to Manhole 9 to assure that the proper slope has been re-established, that the affected sections are watertight, and that there are no flat spots

All work should be completed according to standards defined in the current Chapter NR 110 Sewerage Systems: https://docs.legis.wisconsin.gov/code/admin_code/nr/100/110 ; for additional guidance, consult the Standard Specification for Sewer & Water Construction in Wisconsin, 6th edition

Due Date for Quotes:

Quotes, whether delivered by hand, by mail, email (jwright@town.verona.wi.us), fax (608-845-7143), or by courier need to be received at the Town of Verona Hall, 335 N. Nine Mound Road, Verona, WI 53593 no later than Friday, August 19, 2016 at 12:00 Noon CST; quotes will be opened at that time and recorded. The Sewer Commission will meet thereafter to consider the quotes and to instruct the Town Clerk to notify the contractor with the winning bid. Please note, the lowest bid will not be the only standard taken under consideration to determine the winning bid.

Ideal Construction Completion Date:

The ideal completion date that includes reseeding is October 31, 2016.