



# Memo

**To:** Honorable Mayor & City Council,

**From:** Utility Superintendent Victor Kane

**CC:** City Administrator Dylan Mulfinger

**Reference:** 4th Ave NE Sanitary Sewer Task Order (Revision a)

**Date:** 12/11/2020

Greetings,

I am supplying information to questions that I did not have for the last meeting. I will start with some history for those new to this situation. The flow issues occur during heavy rain fall events, and the sewer mains involved are:

1<sup>st</sup> Ave NE from basically 2<sup>nd</sup> Street to 5<sup>th</sup> Street NE. / 2<sup>nd</sup> Ave NE from 2<sup>nd</sup> street to 3<sup>rd</sup> street NE. / 4<sup>th</sup> Ave NE from 3<sup>rd</sup> Street to 5<sup>th</sup> street NE. / 5<sup>th</sup> Ave NE from 5<sup>th</sup> Street to 6<sup>th</sup> Street NE. / 5<sup>th</sup> Street NE from 4<sup>th</sup> Ave to 5<sup>th</sup> Ave NE. The main area of focus has been 4<sup>th</sup> & 5<sup>th</sup> Ave NE.

I supply the following to reiterate the reasoning for my original recommendation. While I elaborate more on some information and address questions from the last meeting.

***Why just enlarge the pipe instead of remove the excess water?*** This is a complex question. Generally, the piping is increased due to structural or sizing issues. The mains can be technically undersized for the number of homes connected to them without backup issues. We already know the line on 5<sup>th</sup> avenue is bad and needs replaced. The 8-inch main on 4<sup>th</sup> Ave is being feed by three separate 8-inch mains carrying flow from over 220 plus homes. The fact is the amount of I&I removed is usually a very low percentage. That is why oversizing piping and adding storage is generally a cheaper and quicker resolve to most issues.

***Should we increase the scale of the I&I study and remove the excess water?*** It will delay this project as it adds dozens of block and hundreds of homes. A large scale I&I study is needed at some point just not for this project. The larger I&I study adds time and is complexity with its many layers. Even upon completion it takes years and millions to attempt to correct everything that needs addressed. Just removing sump pumps is a complex issue. Look at the situation on 13<sup>th</sup> Ave NE and they want to comply. Now multiply it city wide and most not wanting to comply due to cost. Then you have water running onto the roads, neighbor versus neighbor, court action to force compliance. This process needs to be thought through, questions asked and answers in place before it moves forward. Until that time the small-scale areas indicated by the engineering firms will suffice.

***How does the software modeling work?*** One of the reasons I recommended FOX was due to the use of software modeling. This is not available from all engineering firms. The short version of how it works is we provide them overflow levels seen in backup situations. They enter the pipe sizes, slopes etc. They then run the software increasing flow load until they replicate the surcharge situation. This then gives them more accurate information to base pipe sizing or storage needs. This is also a plus when we want to know what adding a development or industry does to the sewer in an area.

From the Desk of  
Oelwein Utility Superintendent Victor Kane

***Was the other firm given the opportunity to submit a proposal on all tasks?*** First for those new to this process engineering firms, like other professions, are generally hired for their area of expertise not expense. That is why an “RFQ” Request For Qualifications is allowed in a bid situation for professional services. Versus the required low bid requirements on contractors and what issues that can bring.

Council directed staff, close to two years ago, to proceed with looking into this area and possible funding avenues. FOX Engineering was already engaged by us at that time. They were working on water main project and that funding application. We had them look over the project and they directed us, pro bono, on how to proceed. They recommended to delay the grant application and SRF funding for a year. This was based on history showing chances of a second grant in the same year are highly unlikely. We delayed the process and it was again delayed by the pandemic, thus the February 2020 dates on the proposals.

Two proposal were not requested on this project. It was basically a cost and process check by me. To allow us some insight if the city moves forward with a city wide I&I study. Both firms provided their the I&I study area and what tasks were included. I did contact them to clarify items. I felt further time expense was not needed. It was presented to you to show we had run a check. I then explained that the comparable cost showed to be close. Based on that you can extrapolated that the preliminary design work would do the same.

***If we approve the proposal, we are just handing over \$20,000 to an Engineer?*** Let me first state that I am a professional and have never just hand over any amount of funds without understanding what is occurring. That both firms are professionals and thus have pricing points for their services. The City has a long history of working with these firms. The higher proposal included software modeling cost that I already explained. The largest difference was one included pricing of preliminary design work. A process that we would be doing in any case. I know the proposed amount is comparable to that charged for other preliminary design work. The preliminary design will need completed for the funding applications. That is why it was included. Then the scope of project is decided based on the preliminary design. We then proceed to a design task order based on that information and funding available.

***Let me summarize all this.*** I would stay with the I&I area indicated by the engineering firms. Adding an extended I&I study will just increase the cost by several thousands. It will lengthen out the process and not give you the results that you anticipate. You will get a better product due to the software modeling. The proposal from FOX is within an acceptable range for this process.

Therefore, I still recommend that we hire FOX Engineering for the reasons indicated and as we would have originally. Otherwise, I will send out an updated request as council directs. Which currently is to increase the I&I study area and having preliminary design fees included.

Thank you for your time.  
Victor Kane

