

**THE NEW ALBANY SEWER BOARD HELD A WORK SESSION TO DISCUSS THE
STORMWATER AND SANITARY SEWER DESIGN MANUAL IN THE THIRD FLOOR
ASSEMBLY AT THE CITY-COUNTY BUILDING ON FRIDAY, MARCH 23, 2012 AT 1:00 P.M.**

Present: Sam Lahanis, Ed Wilkinson, Gary Brinkworth, Todd Solomon, Lindsey Bironas and Vicki Glotzbach

Mr. Solomon began on Chapter 12 in the design manual and stated that the first two sections are very basic.

Ms. Bironas said that they would have to change it now because it talks about sewers in the streets.

Mr. Brinkworth stated if they could convince him that is the right way to go he would but feels he is just not convinced that is the right way to go at this point.

Mr. Harbison stated that it would drive costs up but it will save conflicts with the utilities.

Mr. Brinkworth stated that every time you pave you are going to have a problem if they don't put it in the center.

Mr. Harbison stated that they don't usually put it in the center; they put it in the center of the driving line.

Mr. Brinkworth stated that he thinks the biggest problem is repair work and snow removal.

Mr. Harbison stated that he is not going to argue for it because he likes it in the lawn because it is less expensive to put in. He added that they may want to keep some of the verbiage in it because there are cases where the sewers are in the street but typically for new construction they are put in the lawns.

Mr. Lahanis stated that from the maintenance perspective it is really nice to have it in the road.

Mr. Harbison stated that it is less expensive to do it in the lawn because you don't have the asphalt to pave.

Mr. Lahanis stated that he understands but it is a lot easier to access when it is in the street.

Mr. Brinkworth stated that he works for developers and most developers don't want to spend any more money than they have to. He stated that he guarantees that on a pretty big job they could easily spend \$10,000.00 more to fill a sewer system under a road as opposed to in a lawn.

Mr. Lahanis stated that he understands what Mr. Brinkworth is saying but it is easier to do maintenance when it is in the roadway and would be nice to have that access.

Mr. Brinkworth stated that another issue is that if there is not someone standing over some (not many) of these contractors, they don't back fill the way they are supposed to and then you have the road sinking. He added that it is a lot easier to fix a sinking yard than a sinking road.

Mr. Harbison stated that MSD has inspectors on a full-time basis to monitor that but we don't do that because we are not geared up to do so. He added that unfortunately, some contractors do cut corners.

Mr. Brinkworth stated that the city doesn't have a city engineer or inspectors that can go out on the job sites.

Mr. Harbison stated to that they could discuss it but right now leave it as a possibility to leave it outside of the road.

Mr. Solomon then went over horizontal and vertical alignment criteria. He also went over the minimum water main clearance which is within the state's requirements. He went over the general procedures for developing design flow and drainage map requirements. He went over the design flow criteria and the equivalent population sewer design method. He went over the hydraulic design criteria which includes some of the design basics such as pipe size and minimum slopes. He also explained the hydraulic computations and stated that they will attach a form that engineers working in Louisville will go through to show how the sewer is sized so it is a standard form that everyone will be able to use to turn in with the

plans to make certain that the sewers are sized properly. He then went over the sewer piping and asked if there are any certain pipe materials that they don't want to see in the sewers.

Mr. Harbison asked if they use clay in some chemical type settings.

Mr. Solomon replied in a few specialty settings like industrial situations.

Mr. Harbison stated that he doesn't like A2000 pipe because it is potential maintenance issues as far as he is concerned.

Mr. Solomon said that is a common reaction. He added that they can exclude it. He then moved on to pipe testing and stated that they have a copy of the New Albany pump station specifications and will coordinate that information with the design manual.

Mr. Harbison asked the minimum diameter be clarified at 8".

Mr. Solomon stated that he would make a note of that.

Mr. Harbison stated that it has to be 6" for the public portion of it in the State of Indiana.

Mr. Lahanis stated that they need to make sure that there aren't any changes in the ordinances.

Mr. Solomon stated that he would get with Mr. Wood and Mr. Lopp and make sure that is all coordinated properly. He then went over the section on manholes.

Mr. Wilkinson stated that one of the things that we get into in relining is that the 48" manholes are really tight when you get all of the equipment down there. He added that one more foot of clearance in the manhole would be nice.

Mr. Harbison suggested leaving new construction at 4' but relining at 5'.

Mr. Brinkworth asked if you could have a 5' manhole and then come up to 4' for the rest of it to where they can actually work on it at 5'.

Mr. Harbison stated that in deep manholes they sometimes will have 5' or 6' come up and have the flag top lid which will transition to 4'.

Mr. Lahanis stated that if you are replacing a manhole on an existing sewer the extra foot would be very advantageous.

There was a lengthy discussion regarding manhole sizes and it was determined that they should come up with some verbiage that in new construction the manhole should be 48" but as they are replacing older manholes they would upsize to a minimum of 5'.

Mr. Harbison added that after 8' in height then they should transition to the 4' diameter.

Mr. Solomon stated that they could work up some criteria on that. He added that MSD does require chimney seals on their manholes and he thinks that is a good idea. He stated that chemical chimney seals are to be used only for rehabilitation and only in non-paved areas. He then moved on to the requirements for property service connections.

Mr. Brinkworth asked to have the allowable length for cul-de-sac stubs explained to him.

Mr. Harbison explained that coming out of the last manhole you can't run 100' and catch the last 6 lots; you can only run a maximum of 20' to catch the last 2 or 3 lots.

Mr. Solomon stated that sounds correct but he would check into it.

Mr. Harbison asked if we want a two way clean out.

Mr. Lahanis said that whatever you think is best.

Mr. Harbison stated that for the city's sake all that is needed is the one coming back to the main but no more than the cost is it is a nice feature.

Mr. Solomon stated that it is good to have as much cleaning and inspection capability as you can get.

Mr. Lahanis stated that he would like two cleanouts; one at the house and one at the street.

Mr. Brinkworth asked about the difference in the minimum slope on a service connection. He added that we have always used 1% to a property line. He stated that he sees where it says 2% but then it says the minimum slope for the house connection is 1%.

Mr. Solomon replied that the house connection is from the house to the city's lateral and the city's lateral is from that point to the sewer in the street.

Mr. Brinkworth stated that typically your lateral line to the property line is a 6" and 1% is the minimum on a 6" and the house probably has a 4" coming to it and minimum on a 4" is 2%. He added that he felt that these were backwards.

Mr. Harbison stated the reason may be that MSD allows those to be 4". He added that they made us start putting them in at 2% some years ago but since ours are going to be 6", we might be able to go down to 1%.

Mr. Solomon stated that he would check on that to make sure that it reflects 6" instead of 4". He then moved on to floatation and anchors.

Mr. Brinkworth asked what is the steepest you can go on a sewer line.

Mr. Solomon stated that he believes they can be as steep as you want as long as it is designed properly.

Mr. Harbison stated that he thinks they are hard to construct when they are so steep and it is also difficult to maintain.

Mr. Solomon agreed and stated that you could have some internal hydraulic problems too. He added that you could have some hydraulic jumps at the manholes and get trash built up.

Mr. Harbison stated that he thinks anything over 40% should have special board approval.

Mr. Solomon stated that he would put in 40% but if they decide it should be less then he can change it. He then moved on to concrete encasements and trenchless pipe installation. He added that MSD requires back filling with pea gravel or grout but a lot of places just will let you use spacers and he feels that spacers are fine. He also suggested that they leave it in for tunneling because the space between tunnel liner plates and carrier pipe should really be filled in with grout.

Mr. Harbison agreed.

Mr. Wilkinson asked if that comes into play on Charlestown Road with the new extension.

Mr. Brinkworth replied that they will need spacers in that.

Mr. Harbison stated that MSD puts a drainage pipe through it if they do grout so that it allows drainage from one side of the street to the other.

Mr. Solomon then moved on to railroad crossings and stated that he would get rid of the MSD wording. He went over creek, stream or ditch crossing.

Mr. Wilkinson stated that we need to get the pipe under the stream in basin 35 encased.

Mr. Solomon then began going over Chapter 13, Development Sanitary Sewer Construction. He stated that he thought a lot of this territory would need to be covered with Scott to coordinate with existing ordinances that are in place. He also stated that MSD requires property service connection inlet sheets.

Mr. Brinkworth asked if that is an as-built drawing.

Mr. Solomon stated that is an original plan.

Mr. Brinkworth asked if it was the original plan of where you show where it is coming off the main.

Mr. Solomon replied yes.

Mr. Harbison stated it will have a table and list where the station comes off and the length that it is supposed to be and certain things like that. He added that a lot engineers don't even show the sewer taps so this will require them to do it.

Mr. Solomon stated that they use MSD as a baseline but if the board doesn't want to do that it is okay.

Mr. Brinkworth stated that they would like to take a look at it.

Mr. Harbison added that the table actually gives you a place to fill in kind of as the as-built so you put the elevation of the sewer tap and if there are any changes made like if it was put in with a Y, T or anything else. He added that it is good information that kind of becomes the as-built drawing for the laterals.

Mr. Solomon then moved on to proposed project plan which requires you to get a submittal plan identifying the limits of the proposed project.

Mr. Harbison stated that the lateral extension would have to be coordinated with Scott to see if they even do that because MSD has a specific contract for lateral extensions and he doesn't know if they do that here. He added that some of that may have to change depending on how he wants to deal with those kinds of things.

Mr. Solomon stated that the health department doesn't need to have the plans sent to them so that portion in 13.6 does not apply. He then stated that the notice- to-proceed will have to be coordinated with Scott. He then moved on to inspection of construction and stated that New Albany doesn't have the resources that MSD does so that is not feasible.

Mr. Lahanis asked if this was construction being done in-house or with a contractor or is this new site development.

Mr. Solomon replied that it is new development like if you put in a new subdivision, the city is not going to have a full-time inspection.

Mr. Lahanis stated that they do inspect as they go but they do not have someone on hand all the time to be on site.

Mr. Solomon then went over record plans. He stated that the as-built drawings be submitted and must be completed and approved before the city will make the sewers available for connection.

Mr. Harbison stated that he thinks that needs to happen.

Mr. Lahanis asked if they could get those done electronically as well as a hard copy.

Mr. Solomon stated that they could require that. He then went on to discuss pump stations. He explained that on the concept plan submittals MSD requires a project background be submitted, a narrative of the drainage areas, the flows, the proposed service and description of any master plan or capacity assurance plan requirements. He then moved on to information on floodplains, geology, surface conditions, etc. which are under existing environment and are required. He also discussed future conditions and that they require you to consider future conditions when the pump station is designed to make sure that you can accommodate future population growth and flow projections.

Mr. Brinkworth asked if it tells you how far in advance you should plan for that.

Mr. Solomon stated that it does and they look at ultimate saturation for that area. He then discussed pump station justification to ensure that a pump station is the right way to go as opposed to a gravity sewer because it is obviously easier to maintain a gravity sewer. He also went over final design submittals and stated that they require a whole series of requirements which is good to have in the file so that the owner knows why that was built and how much capacity it has available. He mentioned the design approach and stated that you have to make sure the project is in accordance with the master plan and capacity assurance plan. He also stated that the project must receive approval and be sealed by a PE in the state of Indiana. He added that New Albany and IDEM have to approve it also. He went over service level and explained that MSD's design manual applies to pump stations up to 700 gpm and up to 80' TDH. He stated that if it goes beyond that they consider it a little more specialized and they have to

go outside of the requirements for this in order to design for a bigger pump station. He added that some of the electrical requirements may be more stringent.

Mr. Brinkworth asked if they look at the pump curves to tell if it is an efficient system.

Mr. Solomon stated that there are standard drawings for these pump stations and standard electrical requirements that may not suffice for the pump stations over 700 gpm and 80' TDH. He stated that you may need to modify the wetwell layout with the valve layout.

Mr. Brinkworth stated that the pumps may be running too often with a normal wetwell and asked Mr. Solomon if that is what he is saying.

Mr. Solomon replied yes.

Mr. Wilkinson stated that there were 2 big ones that they had to change the pump, electric gear box and even the standby generator.

Mr. Solomon stated that the design criteria is geared to make sure that you have enough capacity to try to last 20 years but you need to make provisions to expand pumping to the saturation population.

Mr. Brinkworth stated that you make your wetwells big enough to get bigger pumps in maybe 10 years from now. He added that may be something that needs to be done at Chapel Creek.

Mr. Harbison stated that it sounds like there is not enough storage capacity.

Mr. Brinkworth stated that he thinks there is water coming into the system too.

There was a lengthy discussion regarding the Chapel Creek Pump Station.

Mr. Solomon then discussed the design criteria. He also stated that MSD requires emergency storage volume in the wetwell of 2 hours unless you have an emergency generator. He stated that under general you will see standard drawings and specifications and they will coordinate with New Albany's standards. He went over process which talks about wetwell sizing. He went over force main and said it was very basic as well as system head curve and buoyancy. He then went on to odor control and stated that odor control shall be considered if detention time > 30 minutes. He went over the electrical section and explained that MSD has sample electrical design drawings and at some point we can look at those to see if you want to adopt them. He added that it can cause confusion on the electrical engineers part because electrical items have a very short lifespan and references become invalid in a very short time so if you rely on that you always have to keep it updated. He added that MSD did just update their standards a couple of years ago.

Mr. Brinkworth asked should if we should depend on the pump supplier to give us that information.

Mr. Solomon replied that a standard spec is really okay if it is up-to-date and you want to keep it current by revising it pretty frequently. He added that most vendors are reliable enough to give you what you need without overcharging you. He then went on to the emergency generator and stated that if you go with the emergency generator then you won't have to do the 2 hour wetwell detention time and he thinks that is a good feature of their design requirements. He then went over opinions of cost and that this one is geared toward capital project and you have to kind of keep that in mind. He then went over the odor control section and stated that we could basically just reference MSD's manual. He added that he thinks that it is a good thing to require because it makes the design engineers, developers, and owners think about it before it becomes an issue.

Mr. Brinkworth stated that this section refers to the wetwell detention time of > 45 minutes and it was reference as >30 minutes earlier and asked which one to use.

Mr. Solomon stated that he would like to think about that and make a recommendation.

Mr. Harbison asked how that it is determined because there are certain times of the day that everyone is at work and at nighttime there is hardly any flow.

Mr. Solomon replied stated that Mr. Harbison is right and you have to develop something that says when we have this average condition then detention time should be > 30 or 45 minutes then you are getting into

the area where you need to consider odor control. He then stated that they will make some edits based on the work session today and that the schedule shows the next meeting will be in about a month.

ADJOURN

There being no further business before the board, the meeting adjourned at 2:35 p.m.

Gary Brinkworth, Vice President

Vicki Glotzbach, City Clerk