

Water and Wastewater Plant Improvements Projects

October 3, 2014

Work continues at a fast pace at the water and sewer plant due to the schedule and the favorable construction weather over the past several weeks. Actual construction at the water plant is now underway as the Contractor prepares the foundation for the future pretreatment tank. On October 2nd the Contractor set the 6' manhole into place which will become the vault needed to install the new chlorine injection ports on the raw water line entering the treatment train at the plant.



Over at the wastewater plant, work is underway on many fronts. The most obvious construction underway is the preparation and execution of the concrete forming and placement of the walls for the future twin digesters. The digesters are two concrete, partially buried, tanks each of which will hold ½ million of wastewater for treatment.



The construction of the walls is a critical component of the overall work. The contractor must first place the steel reinforcing in the proper location and secure it so that it doesn't move as the forms are filled with concrete. The forms themselves are rented on an as need basis and used over and over. In order to *place* the concrete, a concrete pumper truck is used to direct the concrete into the form from the bottom up. Contractors use mechanical vibrators to consolidate the concrete and help reduce the occurrence of voids and other defects in the final product.



Other work ongoing at the wastewater plant includes the pouring of the floor for the future solids handling building. Much of the summer was spent on preparing the foundation for this particular structure. This building will be the “core” to the overall project and as a result, it has taken nearly all summer to install the electrical conduits, process piping and plumbing which will be covered over once the concrete floors are poured. A mistake in the placement of any of those components would be extremely difficult to fix later.

One item we were very happy to see was the installation of the new primary transformer for the project. Early in the design process it was found that the existing transformer was nearly at its full capacity and that the addition of any equipment at the plant would likely overtax the unit.



The transformer setting is critical to the work in that it has to be done by Duke Power. Duke Power’s schedule is very much weather dependent so that their need to respond to events such as hurricanes and ice storms can materially affect construction plans.



Last, but not least, the new roof for the operations building is nearly complete as well. The old roof leaked profusely during rain events, damaging ceiling tiles and causing mold and mildew problems. The new roof has already seen some rain and, although not quite complete, did not show any evidence of leaking. The new roof is a hot-mop asphalt roof which used to be common, but went out of style with the new membrane roof systems. Time though has shown the “old school” system to be more durable and less maintenance intensive.