

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
October 16, 2019

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration building at 2:00 pm on Wednesday, October 16, 2019. Chairman VeHaun presided with the following members present: Ashley, Bryson, Kelly, Manheimer, Pelly, Pressley, Valois, Watts, Whitesides and Wisler. Pennington was absent.

Others present were: William Clarke, General Counsel; Forrest Westall with McGill Associates; Marcus Jones with Cane Creek Water & Sewer District; Joseph Martin with Woodfin Sanitary Water & Sewer District; Patty Beaver with CIBO; Tom Hartye, Ed Bradford, Scott Powell, Ken Stines, Roger Edwards, Pam Thomas, Hunter Carson, Mike Stamey, Matthew Walter, Spencer Nay, Pam Nolan and Denise Moore, MSD.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the September 18, 2019 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the September 18, 2019 Board Meeting. Mr. Kelly moved for approval of the minutes as presented. Mr. Pelly seconded the motion. Voice vote in favor of the motion was unanimous.

4. Discussion and Adjustment of Agenda:

None.

5. Informal Discussion and Public Comment:

Mr. VeHaun welcomed Patty Beaver, Marcus Jones and Joe Martin. There was no public comment.

6. Report of General Manager:

Mr. Hartye reported that attached is a letter from Avril Pinder, Buncombe County Manager, inviting MSD Board Members to participate in the public engagement sessions for the new Strategic Plan. This meeting is regarding the short-term goals for the Buncombe County Commissioners and Nathan Pennington anticipates that maybe next year they will be doing a similar thing for the land use plan. Mr. Whitesides pointed out that the first session will be this Saturday, and there will be a total of 8 sessions. There are 4 primary areas for the strategic plan with 2 public sessions each. He encouraged everyone to try to attend one.

Mr. Hartye reported that attached is a copy of a card sent from Melissa Wright of Seventh Street in Black Mountain expressing her appreciation for a job

well done. Thanks to R.L. Haynes, Randy Norton, Mike Rice, Tommie Brooks, Grayson Hensley, Steve Meeks and James Norton.

Mr. Hartye reported that constructive criticism was received regarding MSD's notice to residents regarding the preventative maintenance of the sewer lines. The maps on the website were not changed quick enough to keep pace with the field crew notices, which lead to some confusion. We will ensure the website goes first in the future.

Mr. Hartye reported that a joint Planning/Finance Committee meeting was held at 12:30 today to discuss the expansion of MSD to include the Cane Creek Water & Sewer District. After the items are reviewed today at this Board Meeting, the intent is to send out the information to ensure timely consolidation due to the lengthy process involved.

Mr. Hartye reported that the next Right of Way Committee Meeting will be held on October 23rd at 9 am. The next regular Board Meeting will be held November 20th at 2 pm.

7. Consolidated Motion Agenda:

a. Consideration of Bids: South French Broad Interceptor Lining – Phase IV and Town Branch Interceptor Lining:

Mr. Hartye reported that this is the last phase of the lining of the 36" interceptor along the Biltmore Estate. It serves the south area, including Cane Creek and all of South Asheville and parts of northern Henderson County. It is comprised of lining the interceptor with Cured-in-Place-Pipe. The existing pipe is generally in good condition except for the joint areas and this will help keep this in service for many years to come. Staff is in the midst of surveying and preliminary design on the relief interceptor, which will parallel this line. That way there will be an existing line and the other can be laid in the dry and have two pipes providing for flow from the south. The Town Branch Interceptor is a major line that serves Asheville's southern downtown area. In 2018 a blockage on a section of this 21-inch clay line led to the biggest SSO we have had. MSD is looking to eliminate the root intrusion in that area which was a partial cause of that SSO. For the project on the Biltmore Estate, the work must be performed during their down season and it's pretty critical to get the work done in a short window. The contract was advertised and five bids were received on September 26, 2019 as follows: Granite Inliner, LLC in the amount of \$1,152,440.00; Insituform Technologies, LLC in the amount of \$1,125,518.70; SAK Construction, LLC in the amount of \$1,120,500.00; Am-Liner East Inc. in the amount of \$1,061,336.00; and IPR Southeast, LLC in the amount of \$922,306.00. The apparent low bidder is IPR Southeast, LLC, has performed work for the District on two previous contracts and there were significant problems with both timeliness and quality of work on those contracts. In addition, Staff called around for references and they are still apparently having problems on some of their newer jobs as well. This is such a critical job for MSD that staff recommends that

the District reject IPR's bid and award the contract to the second-low bidder, Am-Liner East Inc. Am-Liner East Inc. has performed previous work for the District on two other lining projects and done an excellent job. The combined FY19-20 Construction Budget for these two projects totals \$1,081,000.00. Staff recommends the District reject IPR Southeast, LLC's bid and award this contract to Am-Liner East Inc. in the amount of \$1,061,336.00, subject to review and approval by District Counsel.

b. Consideration of Developer Constructed Sewer Systems: Cypress Knoll Gardens, New Salem Heights, Ricky Robinson Property; Roscraggon Road Subdivision; Wheeler Road:

Mr. Hartye reported that the Cypress Knoll Gardens project is located in the City of Asheville and consisted of extending approximately 80 linear feet of 8-inch public gravity sewer to serve the single-family residential development.

Mr. Hartye reported that the New Salem Heights project is located in Buncombe County and consisted of extending approximately 805 linear feet of 8-inch public gravity sewer to serve the 25 residential unit development.

Mr. Hartye reported that the Ricky Robinson Property project consisted of extending approximately 385 linear feet of 8-inch public gravity sewer to serve a commercial development in Woodfin.

Mr. Hartye reported that the Rosscraggon Road project consisted of extending approximately 360 linear feet of 8-inch public gravity sewer along with abandoning approximately 320 linear feet of public gravity sewer to accommodate a 4-unit residential subdivision.

Mr. Hartye reported that the Wheeler Road project is in Buncombe County and consisted of extending approximately 1,530 linear feet of 8-inch public gravity sewer to serve a 72-unit residential subdivision.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

c. Cash Commitment Investment Report – Month ended August, 2019:

Mr. Powell reported that Page 42 presents the makeup of the District's Investment Portfolio. There has been no significant change in the makeup of the portfolio from the prior month. Page 43 presents the MSD investment managers report for the month of August. The weighted average maturity of the investment portfolio is 135 days and the yield to maturity is 2.22%. Page 44 presents the analysis of the District's Cash Receipts. Monthly Domestic and Industrial Sewer Revenue is considered reasonable based on historical trends. Monthly and YTD Facility and Tap Fees are considered reasonable based on historical trends. Page 45 presents the analysis of the District's Expenditures. Monthly and YTD Expenditures are considered reasonable based on historical trends and timing of capital projects. Page 46 presents the MSD Variable Debt Service report. The

2008A Series is performing at budgeted expectations. As of the end of September, both issues have saved the District rate payers approximately \$6.1 million in debt service since April 2008.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Mr. Pelly moved, Mr. Watts seconded the motion. Roll call vote was as follows: 11 ayes; 0 Nays.

8. Expansion of MSD to include Cane Creek WSD:

Mr. Hartye reported that at the Planning/Finance Committee Meeting held today at 12:30, the Planning/Finance Committee endorsed the analysis that MSD put together and directed that this analysis be forwarded to the EMC and the Henderson County Commissioners. This analysis shows that there will be no adverse effect on the existing District customers and will result in a reduced bill for CCWSD customers. There are certain things the District will move forward on between now and then, such as developing a Consolidation Agreement much like the ones we have with the rest of the member agencies. Staff recommends moving this on to the EMC because they will be meeting in 30 days with the Water Quality Committee. Planning and Finance Committees recommendation is that the MSD Board endorse the study and direct Staff to submit this material to the EMC. With no further discussion, Mr. VeHaun called for a motion to approve Planning/Finance Committee's recommendation. Ms. Wisler moved, Ms. Bryson seconded the motion. Roll call vote was as follows: 11 ayes; 0 Nays.

9. Old Business:

None.

10. New Business:

None.

11. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:15 pm.

Jackie W. Bryson, Secretary/Treasurer

MSD

Regular Board Meeting

Metropolitan Sewerage District
of Buncombe County, NC

AGENDA FOR 10/16/19

✓	Agenda Item	Presenter	Time	
	Call to Order and Roll Call	VeHaun	2:00	
	01. Inquiry as to Conflict of Interest	VeHaun	2:05	
	02. Approval of Minutes of the September 18, 2019 Board Meeting	VeHaun	2:10	
	03. Discussion and Adjustment of Agenda	VeHaun	2:15	
	04. Informal Discussion and Public Comment	VeHaun	2:20	
	05. Report of General Manager	Hartye	2:25	
	06. Consolidated Motion Agenda	Hartye	2:35	
	a. Consideration of Bids: South French Broad Interceptor Lining (Phase 4) and Town Branch Interceptor Lining	Hartye		
	b. Consideration of Developer Constructed Sewer Systems: Cypress Knoll Gardens; New Salem Heights; Ricky Robinson Property; Rosscraggon Road Subdivision; Wheeler Road	Hartye		
	c. Cash Commitment/Investment Report-Month ended August, 2019	Powell		
	07. Expansion of MSD to include Cane Creek WSD	Hartye	2:45	
	08. Old Business:	VeHaun	2:55	
	09. New Business:	VeHaun	3:00	
	10. Adjournment: (Next Meeting 11/20/19)	VeHaun	3:05	
	STATUS REPORTS			

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
September 18, 2019

1. Call to Order and Roll Call:

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration building at 2:00 pm on Wednesday, September 18, 2019. Chairman VeHaun presided with the following members present: Ashley, Bryson, Kelly, Manheimer, Pelly, Pennington, Valois, Watts and Wisler. Pressley and Whitesides were absent.

Others present were: William Clarke, Roberts & Stevens; Marcus Jones with Cane Creek Water & Sewer District; Joseph Martin with Woodfin Sanitary Water & Sewer District; Matt Shultz with HDR Engineering Inc. of the Carolinas (HDR); Barry Bialik, Developer and Chair of the City of Asheville Affordable Housing Advisory Committee; Drew Crawford with DIY Tiny; Tom Hartye, Ed Bradford, Angel Banks, Scott Powell, Ken Stines, Kevin Johnson, Roger Edwards, Pam Thomas, Hunter Carson, Mike Stamey, Darin Prosser, Matthew Walter, Spencer Nay and Pam Nolan and Denise Moore, MSD.

2. Inquiry as to Conflict of Interest:

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

3. Approval of Minutes of the August 21, 2019 Board Meeting:

Mr. VeHaun asked if there were any changes to the Minutes of the August 21, 2019 Board Meeting. Mr. Kelly moved for approval of the minutes as presented. Mr. Pennington seconded the motion. Voice vote in favor of the motion was unanimous.

4. Discussion and Adjustment of Agenda:

None.

5. Informal Discussion and Public Comment:

Mr. VeHaun welcomed Matt Schultz, Marcus Jones, Joe Martin, Barry Bialik and Drew Crawford.

Mr. Bialik introduced himself and stated that he is CEO of Thirsty Monk, a private developer building affordable housing, and is Chair of the City of Asheville Affordable Housing Advisory Committee. He stated that one thing being pushed in Committee to help with affordable housing is interdepartmental communication, meaning there are many things that come through planning in the City that don't always connect with things from development services. MSD is a big part of that with things being driven by sewer. He stated he is seeking MSD's guidance in aiding with a conflict. The State Administrative Code says that you can only have one structure per single service line and doesn't allow a second structure. You can have a large 20-unit multi-family building and it may only need a single 4-inch line but if you build 2 small houses then you must have 2 separate service lines or have

Minutes

September 18, 2019

Page Two

to install a minimum 6-inch to 8-inch private main, which must be prepared by an Engineer. He noted that in 2015, this Board looked at and worked with the State and came up with a way to get an exemption to allow an Accessory Dwelling Unit (ADU), meaning there is an effective way to have 2 structures on the same parcel that share a service line. The State Administrative Code is clear in that you can't have 2 structures on one line. The State Plumbing Code says multiple buildings on the same lot shall not be prohibited from connecting to a common building sewer that connects to the public sewer. There is a conflict in these codes. Other municipalities such as Henderson, Brunswick and Raleigh have each come up with their own exceptions list. Brunswick County wrote an exception that a common sewer connection will be permitted to serve more than one building in the following categories: apartments, condos, townhomes, planning and developments, hotels, motels, hospitals, schools, mobile homes, shopping centers, churches, etc. He stated that he ran into this issue building ADU's, which means if you have a house on the same property you can build a guest house that then could be used for rental, personal use, etc. Last week the building code passed an amendment that now allows, if you have one piece of property, to put multiple houses on the property. According to plumbing codes, you can tie them onto the same line if it is on your property. State Administrative Code says you can't do that unless you have an engineer design a private line. Mr. Bialik stated that he is looking for guidance on how to deal with some rules that do not coincide and what process could be followed to change a rule, or if there are some exceptions that could be made. He stated that this was brought to his attention because on Sand Hill Road his children go to a small private school, a small church building. They had to go through changing the zoning and do a crazy amount of things to expand the school. They built a second structure on the property, so they have a 2400 square foot building and another 2400 square foot building. There was an existing 4-inch line to the property and according to plumbing code, they should be able to tie those structures in. Each building has four bathrooms. Because they are separate structures, he is now being forced to either put in a whole separate tap or re-engineer and re-design a 6-inch line to the property when everything is existing. He further stated that if he now built another 2400 square foot building that connects the two with 18 bathrooms in it he could go with what he has. He asked how this can be looked at and come up with a practical exception list. Mr. Bradford stated that this is a State of North Carolina issue. If this had been a 6-inch line to serve the property it could have been permitted through the State as a private system but it is a 4-inch line and the State does not allow this. MSD cannot make an exception in this matter because the State controls it. Ms. Manheimer asked about the exception that was granted for ADU. Mr. Bradford stated the State is looking back at that now and it will possibly change. Ms. Manheimer asked if that was a State exception or handled by MSD. Mr. Bradford stated that MSD contacted the State and they did allow that. He further stated that it is his understanding that the State is now looking at the issue and he believes the other municipalities Mr. Bialik mentioned will be addressed because they are out of compliance. Mr. Clarke stated one of the reasons for this was having separate owners of a property with someone on one property connecting to a 4-inch line that crossed the back of someone else's property. He stated that MSD has had a number of situations where people have a service line crossing their neighbor's back yard with both connected to a 4-inch sewer line, and MSD can't go on those properties.

Mr. Clarke reiterated this was a State issue. Mr. Bradford pointed out the property Mr. Bialik was speaking about on a map. He stated that there was originally a 4-inch line connected to MSD sewer. When Mr. Bialik came in for an allocation, he was given the two options MSD is allowed to give, either run a new 4-inch line or upsize the existing line to 6-inches and then connect the two buildings together and have a 6-inch private system. It was later determined Mr. Bialik connected these as a 4-inch system. Hydraulically it is fine but this is a code issue, a 4-inch would handle it just fine, it is really a regulatory issue and is the State's call. From what Staff is hearing, the State is going to be looking at these ADU's now. They haven't had those discussions yet but it may be forthcoming. Mr. Bialik stated that he is asking for MSD's help in this process because he doesn't have the same clout. Ms. Manheimer stated that one way to more effectively lobby the State on a change like this would be to go to the League of Municipalities and that she was wondering if they could go through Paul D'Angelo with the City of Asheville, Affordable Housing and Community Development. Mr. Hartye stated that Mr. Bradford and Mr. Johnson have spoken with local representatives of the State and explained all of this to them. Mr. Martin stated that this is run into at the Woodfin District a lot and a kind of practical thing happened this year, if someone has a little bit more land, maybe half an acre or more, with a house and add trailer for a child or something like that, then they piggy back their water line to the trailer. If everyone moves or the parent dies and they split the property into two separate units, then the new trailer occupant has a disagreement with the other property owner and they cut his water line in half. He says this happens frequently with water and sewer and if there is not some way of addressing that issue it makes it difficult. If you don't address the situation before the property is divided into several lots you will still have the same issue. Mr. Bradford stated that if they are on the same service line now, they cannot subdivide further. Mr. Martin stated that the things listed in the exceptions do not lend themselves to dividing such as apartment buildings and mobile home parks.

6. Report of General Manager:

Mr. Hartye reported that attached is a revised timeline and email from Billy Clarke to the Attorney for the Environmental Management Commission (EMC). The EMC, who must approve the consolidation, has a Water Quality Committee which must review this information first and give their findings to the full Commission presiding over the matter and authorizing the process to go forward to a public hearing. There is a 30-day waiting period required after the WQC makes their recommendation and the EMC can take up the matter. The EMC does not meet in December, February or April. In order for MSD to have a good shot at a transfer on July 1st, we need to adjust our timeline up a month so that the MSD Board may review the information at the October 16 regular Board Meeting. This will necessitate moving up the joint Planning/Finance Committee to review the matter to October 16th, just prior to the regular Board meeting.

Mr. Hartye reported that at the Right of Way Committee Meeting there was discussion regarding a situation at Reed Creek and Mr. Stines is going to give a brief presentation on the rest of the story. Mr. Stines reported that this issue was

on WLOS and in the Asheville Citizen Times, regarding discolored water in Reed Creek. Reed Creek runs along Broadway by UNCA, crosses over Broadway, onto Catawba Street and runs from Catawba Street up to around Starnes Avenue and then into a culvert. He presented various slides. On Monday, August 19, 2019, the French Broad River Keeper called into MSD to report gray water in Reed Creek. He went out and started doing some investigating. He uses a fluorometer which is a quick test that detects detergent which he stated is a good indicator of a sewage leak. It is a quick test and you do not have to wait for e-coli or fecal reports to come back, which are 24-hour tests. During the River Keeper's investigations, he detected some high detergent levels. On Tuesday, August 20, 2019, he called and said he felt like he had found a sewer leak. MSD Supervisors went out and didn't see anything to cause huge concerns but proceeded to put some things together and setting up traffic control plans to do some work on Wednesday. The River Keeper had dyed some manholes which showed up in the creek and he told us it was a sewer leak. Later the next day he called back stating he had made a mistake, that he had dyed the storm drain instead of sewer lines so this was a false alarm. Later that Wednesday around 2:00 pm he called in and said he thought he had found another sewer leak. MSD Supervisors again went out and didn't find any issues. Mr. Stines stated that around 3:30 pm he received a call from John Boyle with the Asheville Citizen Times inquiring about the massive sewer leak on Reed Creek and what was MSD doing to make repairs. Mr. Stines stated that he told Mr. Boyle he was caught off guard and had no idea what he was talking about and told him he would make a few phone calls and get back with him. Mr. Stines then called the Supervisor who stated that they were looking but had not found anything. Mr. Stines then called the River Keeper and asked what was going on. The River Keeper told him that he went into the culvert below Starnes Avenue, which is probably a 60-inch culvert and very old. He stated he walked about 800 feet into the culvert and saw gray water coming into the side of the culvert. He then came out of the culvert and called MSD and the Citizen Times to report that he had found a massive sewer leak and that MSD was there making repairs. Mr. Stines presented a slide showing Staff performing a storm water entry in Weaverville last year. A storm drain is a confined space and staff cannot just enter one. There is a lot of coordination to be worked through. There has to be a team that enters the culvert, a team on site preparing for recovery and the fire department must be present. He stated when the River Keeper sent him pictures on Wednesday evening, he asked the MSD Safety Officer to go to the Asheville Fire Department to start the process in case they had to enter the culvert the next morning. Staff then began trying to find where this possible leak could be coming from. He presented a slide of a City of Asheville storm drain system showing where questionable flow from the culvert comes in, all of this is underground. He pointed out the side of Patton Avenue that flows down to Reed Creek and the other side flows toward Nasty Branch. He presented a slide of the storm drains underground together with MSD sewer lines running on top of those storm drains. It is important to note that most of the sewer lines in this area are 100–120 years old and it is clay pipe which formerly ran straight into the river and the pipes are not watertight. When you have a blockage in the pipe it pressurizes and can squeeze out through the joints and find its way to a storm drain and eventually end up in the creek. Once the culvert goes underground it leaves a task ahead of Staff to try to figure out where it is coming

from. Staff then began dye testing by placing the smaller tablets in the sewer line, which will turn the sewer either red, green or blue. The larger bottle is a die block. The smaller tablets are \$14.00 for a small bottle and the large blocks are \$100.00 each. Staff used 5 of the large blocks and a tremendous amount of the small tablets, performing dye testing from August 21 thru September 6 to try to locate the leak. During the time Staff was performing dye testing some of MSD crews ran across a leak on Lawyer's Alley, it was coming from a restaurant with large trash cans in the back which were being washed out. This was all being washed down the street, into the culvert and into the storm drain, which then goes into Reed Creek. Any kind of run off from anything, from washing out cans to a large storm event, goes right into Reed Creek. Mr. Stines contacted NCDWQ who came out and started doing their samples. NCDEQ notified the City of Asheville Storm Water Department. On Thursday, August 22, 2019, NCDWQ and Keith Roland, who is an industrial hygiene consultant with the North Carolina Department of Health and Human Services, held a conference call with the Buncombe County Environmental Health Director, Buncombe County Preparedness Coordinator and several folks from the Western North Carolina regional office of DWQ in regards to this sewage leak, trying to determine what type of action items needed to be taken. This is all from stained water and high e-coli testing. They decided they didn't have enough information to make any official advisory for Reed Creek. The Buncombe County Health Department decided to issue a general statement for precautions when entering natural bodies of water. Another conference call was scheduled for Friday, August 23, 2019. Staff continued to dye test and tv the lines all night on Thursday night, there was a tremendous amount of rain on Thursday and Friday, which results in run off contamination and runs up your numbers for e coli. Staff didn't dye test on Friday but resumed on Saturday and Sunday. In total, Staff put in over 200-man hours on this issue from August 21–September 6. On the evening of September 11, 2019, Mr. Stines received an e-mail at home from Lee Morgan, Project Manager over the City of Asheville storm water. Mr. Morgan had received a call earlier in the week regarding the same discoloration in Reed Creek, so they had started going into the culverts, looking and making pictures and traced the discoloration back to a leak at the old BB&T building where contractors were washing out paint buckets, plaster buckets and construction debris, which is all going into the storm drain, which goes directly to Reed Creek. He presented more slides showing the discharge point the City found, and of storm culverts and grates that you see throughout downtown, pointing out a sign that says "Dump no waste, it drains to the waterways". The point to take away today is that sewer can certainly affect the quality of water but there are a lot more things other than sewer and that he felt confident sewer was not the case this time. He presented a slide that was posted at the Botanical Gardens at UNCA by the River Keeper. Mr. Stines stated that from that picture, he has had several phone calls from a lady whose daughter got sick, she stated that the daughter was in Reed Creek and had been to the emergency room and contracted e coli. She wanted to send MSD her medical bills. She was told there was no possible way MSD would cover those, that no sewer leak was found to begin with and there is no telling where she could have contracted anything from that creek. He presented photographs taken as of this date showing the creek a lot clearer. He stated that he received another e-mail last night from the City stating that a notice of violation is being issued to MHG Tower LLC, the contractor doing the renovation of the old BB&T Building.

Mr. Hartye stated that there are a lot of sources of pollution throughout the City and MSD has worked with the River Keeper for the last several years. He stated that the other point is that when you get readings it doesn't tell you the source, and in this case, it was a different source. Some other things going on, such as the storm coming, cause everything to go off, in all the rivers and streams the e coli levels go up and the solids levels go up. There are two reasons, the wash off from city streets going into the storm system. The other reason, the main one, is the benthic layer on the bottom of the streams is disturbed. Most of these streams are running maybe in the mid hundreds for e-coli on a normal day and can go up to 5,000-7,000 quickly during a rain event.

Mr. Hartye reported that attached is a copy of a card sent by Anita Zubere and Lisa Bartoli regarding the patience and professionalism of Darin Prosser and Nick Harvey.

Mr. Hartye reported that Sheila Miller of Edgewood Road called to express her appreciation for the great job done by Grady Brooks in getting their stopped-up sewer back operating so that her daughter could shower and go to school.

Mr. Hartye reported that the Employee Picnic will be held September 19th along the river behind the Plant Maintenance Facility. The Right of Way Committee Meeting scheduled for Wednesday, September 25, 2019, has been cancelled. The next meeting is scheduled for October 23, 2019 at 9 am. MSD's United Way gold tournament will be held on October 3rd at 9 am at Broadmoor. The joint Planning and Finance Committee will be held on October 16th at 12:30 pm. The next regular Board Meeting will be held October 16th at 2 pm.

7. Report of Committees:

a. Right of Way Committee - August 28, 2019

Mr. Kelly reported that the Right of Way Committee met on August 28, 2019 and made routine recommendations which are included in this Board package.

8. Consolidated Motion Agenda:

a. Consideration of Engineering Design Contract: Carrier Bridge Pump Station Replacement Project:

Mr. Hartye reported that this is the largest pump station in the District. It serves a large portion of West Asheville, all of Southern and Western Buncombe County, all of South Asheville, and areas of Northern Henderson County (Cane Creek). It was constructed in 1966 and upgraded multiple times over the past 53 years. Its current capacity is about 22.6 mgd and will be upgraded to 40 mgd to get through the 50-year planning horizon. The new pump station will be constructed adjacent to the existing station on property currently owned by Duke Energy. Staff has been in contact with Duke Energy since March, 2019 and they have internally approved the sale. The process is underway with the survey and appraisal being completed. In accordance with

NCGS 143-64.31 the District advertised a Request for Qualifications for the design phase and received responses from CDM Smith and HDR. After careful review and consideration of each firm's capabilities, experience and staffing, the selection committee chose HDR as the most qualified engineering consultant to complete the design. HDR has designed numerous pump stations across the Eastern United States and has the expertise necessary to design this station. HDR most recently completed the Plant Headworks Project this past Spring and it is operating well. Staff therefore recommends the District contract with HDR for the engineering design of the new pump station. After receiving an initial proposal for HDR's Engineering Design Fee, Staff negotiated a reduced fee in the amount of \$1,853,885.00. Staff will also administer the geotechnical work in order to reduce these costs. The preliminary construction cost estimate for this project is roughly \$17 million. A Capital Project Ordinance for this project is included in this agenda item. This is needed because it will be a multi-year project. The FY20 and FY21 Design Budget for this project is \$2,040,000.00. Staff recommends award of the Engineering Design Contract to HDR in the amount of \$1,853,885.00 and the approval of the attached Capital Project Ordinance, subject to review and approval by District Counsel.

b. Consideration of Compensation Budgets-Bent Tree Road GSR; Chestnut Lodge Road GSR; 332 Wilson Avenue:

Mr. Hartye reported that the Right-of-Way Committee recommends approval of these Compensation Budgets.

c. Informational Item-Land Purchase for Proposed Carrier Bridge Pump Station Site:

Mr. Hartye reported that this is an information item that Ms. Banks went over with the Right-of-Way Committee, letting them know that we are in the process of trying to buy 1.25 acres of land belonging to Duke Energy, adjacent to the existing pump station. Of other note, HDR came forward with several ideas on how to get across the river with the new station. They are going to have two large 36-inch diameter pipes going across the river. There are several ways of going underground construction or open pit construction across the river or they came up with an idea for a potential pedestrian bridge supporting this. This could be a win win because a pedestrian bridge was identified in the Wilma Dykeman Master Greenway Plan that was never included in the project because of cost. That idea is being explored. Staff thinks this was a pretty creative idea that came forward from HDR.

d. Consideration of Town of Weaverville/MSD Greenway Agreement:

Mr. Hartye reported that this agreement was prepared by Billy Clarke and Weaverville's attorney, Jennifer Jackson. MSD currently has greenway agreements in place for the Town of Fletcher, the Town of Black Mountain and the City of Asheville and this agreement is based on those. Staff and Right-of-

Way Committee recommends approval of this draft agreement to present to the Town of Weaverville for final review and approval.

e. Cash Commitment Investment Report – Month ended July, 2019:

Mr. Powell reported that Page 41 presents the makeup of the District's Investment Portfolio. There has been an approximate \$6 million decrease from the previous month. This is a direct result of the District making its July 1 debt service payment. Page 42 presents the MSD investment managers report for the month of July. The weighted average maturity of the investment portfolio is 134 days. The yield to maturity is 2.22%. Page 43 presents the analysis of the District's Cash Receipts. Monthly Domestic Sewer Revenue is considered reasonable based on historical trends. Monthly and YTD Industrial Sewer Revenue as well as Facility and Tap Fees are considered reasonable based on historical trends. Page 44 presents the analysis of the District's Expenditures. Monthly and YTD Expenditures are considered reasonable based on historical trends. Page 45 presents the MSD Variable Debt Service report. The 2008A Series is performing at budgeted expectations. As of the end of August, both issues have saved the District rate payers approximately \$6 million in debt service since April 2008.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Mr. Watts moved, Ms. Wisler seconded the motion. Roll call vote was as follows: 10 ayes; 0 Nays.

9. Old Business:

None.

10. New Business:

None.

11. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:46 pm.

Jackie W. Bryson, Secretary/Treasurer



MEMORANDUM

TO: MSD Board
FROM: Thomas E. Hartye, P.E., General Manager
DATE: October 10, 2019
SUBJECT: Report from the General Manager

- Buncombe County Strategic Plan

Attached is a letter from Avril Pinder, Buncombe County Manager inviting MSD Board Members to participate in the public engagement sessions for the new Strategic Plan.

- Kudos

Attached is a copy of a card sent in the mail from Melissa Wright of Seventh Street in Black Mountain expressing her appreciation for a job well done. Thanks to R.L. Haynes, Randy Norton, Mike Rice, Tommie Brooks, Grayson Hensley, Steve Meeks, and James Norton.

- Criticism

Received constructive criticism of our notice to residents regarding the preventative maintenance of the sewer lines. The maps on our website were not changed quick enough to keep pace with the field crew notices, which lead to some confusion. We will ensure the website goes first in the future.

- Cane Creek WSD

The Joint Planning/Finance Committee will meet at 12:30 pm on October 16th. Staff has prepared information and analysis for submittal to the Environmental Management Commission (EMC) for Committee review. The intent is to send out our information later that day in an effort to ensure a timely consolidation due to the lengthy process for the regulators and the public input.

- Board/Committee Meetings/Events

The next Right of Way Committee meeting will be held on October 27th, 2018. The next Regular Board Meeting will be held on November 20th at 2 pm.



Buncombe County Government

Avril M. Pinder, CPA, ICMA-CM
County Manager

Dear Pam Nolan,

Buncombe County is in the midst of a strategic planning process, and we need your help. **We are holding a series of public engagement sessions, and we would like participation from members of Metropolitan Sewerage District Board.** The schedule is listed on page 2.

Please share this letter with your membership, and strongly encourage people to participate. In particular, the expertise of your members might be particularly helpful during the sessions on Environmental stewardship.

Why a Strategic Plan

Buncombe County Commissioners are leading us in preparing a new strategic plan that will set the direction of our organization for 2020-2025. This five-year strategic plan will define priorities, guide County operations, and drive future policy and budget decisions. It will draw a vision for our community's future and establish a course of action for moving forward.

Our Planning Process

Beginning in July, the Board of Commissioners and County leaders began our work in workshops facilitated by Rebecca Ryan who has 20 years of industry experience and specializes in helping organizations plan for the future. Her approach included working with Commissioners to identify emerging trends that will impact our residents over the next 10-20 years (e.g., growth outpacing infrastructure, changing demographics). In September, the teams reviewed the results of the July session and moved forward by establishing focus areas, foundations and draft goals.

The Plan

Our strategic plan will be built around four areas of focus, each of which will later include goals, objectives, tactics and measures.

- **Environmental stewardship:** High quality air, water, farmland and renewable energy for future generations
- **Educated and capable community:** A community where all people thrive and demonstrate resilience throughout their lives
- **Vibrant economy:** A robust and sustainable regional economy that builds on our homegrown talent and provides economic mobility for residents
- **Resident well-being:** Our residents are safe, healthy and engaged in their community



Additionally, the plan identifies foundational components that are necessary for County operations.

- **Infrastructure:** Best-in-class performance to support the strategic focus areas through information technology, facilities, risk management, evaluation and administration
- **Resources:** The funding, talent, and partnerships that enable high quality delivery of services

Public Engagement

Public input is critical to creating a plan that reflects our community, and we invite you to join us. We will hold a series of conversations with the public to gather input about the best ways we can move into action. These sessions will be structured around the four focus areas of the plan and include representatives from the County's more than 35 boards and commissions. We will review strategic goals and discuss what success can look like and how we can get there.

Date	Time	Focus Area
Saturday, Oct 19	9:00 am – 11:00 am	Environmental stewardship
Tuesday, Oct 22	2:00 pm – 4:00 pm	Educated and capable community
Wednesday, Oct 23	5:00 pm – 7:00 pm	Vibrant economy
Thursday, Oct 24	5:00 pm – 7:00 pm	Resident well-being
Friday, Oct 25	8:00 am – 10:00 am	Environmental stewardship
Saturday, Oct 26	9:00 am – 11:00 am	Educated and capable community
Tuesday, Oct 29	9:00 am – 11:00 am	Resident well-being
Friday, Nov 1	9:00 am – 11:00 am	Vibrant economy

All sessions will be held at 200 College Street, Ground Floor Conference Room. These sessions are open to the public, and all are welcome. Please contact Angelyn.Johnson@BuncombeCounty.org to RSVP.

Next Steps

Through the end of 2019, Commissioners will continue to work with staff to further define the strategic plan. This process will include the public engagement sessions as well as work by County departments. We anticipate that Buncombe County's Five-Year Strategic Plan will be adopted at a regular meeting of the Board of Commissioners in January 2020. The plan will take effect July 1, 2020.

It is my hope that the end result will be an ambitious plan that meets the dynamic needs of our community and that all members of the public can see themselves in. This is our community, and I look forward to working with all of you as we align with Board's strategy and commit ourselves to improving the quality of life in Buncombe County.

Sincerely,



Avril Pinder
County Manager

Thank You



Tender Thoughts

17913587



0 68981 54027 4

5345572

\$2.25 TTY82476-00F

AMERICAN GREETINGS, CLEVELAND, OHIO 44114
©AGC, LLC MADE IN U.S.A.

106 Seventh St
WO 225198
RL & Randy's crew

R L Haynes
Randy Norton
Mike Rice
Tommy Books
Grayson Hensley
Steve Weeks
James Norton

...more than I can say.

I just want to take
a moment to tell you
how much I
appreciate all the
effort + kindness you
put into keeping my
property looking nice
& neat. You are a
very kind man! And
thank you to the
guys that helped you!
Great pairing also.

Thank you so much
Melissa Wright

(1027th St)

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Billy Clarke, Esq. - District Counsel

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Hunter Carson, P.E. - Ass't. Director of Engineering
Darin Prosser, P.E. - Project Manager

SUBJECT: Consideration of Bids: South French Broad Interceptor Lining - Phase IV, MSD Project No. 2011033, and Town Branch Interceptor Lining, MSD Project No. 2019069

BACKGROUND: The South French Broad Interceptor Project is located within the Biltmore Estate, along the main 36-inch interceptor. This major line serves the District's southern service area including South Asheville, all of Southern Buncombe County, and the Cane Creek Water & Sewer District in northern Henderson County.

This is the fourth and final phase of this planned four-year rehabilitation project. It is comprised of lining the interceptor with Cured-in-Place-Pipe (CIPP). The existing concrete line is generally in good structural condition, but has suffered some degradation of the inner surface due to hydrogen sulfide. The CIPP process will provide an integral structural liner which is inert and impervious to the hydrogen sulfide present within the line.

It is important to note that this interceptor is planned to remain in-service. Capacity needs will be addressed by adding a parallel "relief" line - which is within the ten-year CIP planning window. As the existing line will remain in service, it is important to protect and maintain its long-term viability.

The Town Branch Interceptor is also a major line which serves a large area of Asheville's southern downtown area. In September 2018 a blockage on a section of this 21-inch clay line caused a major SSO to occur. This blockage is believed to have been caused by root intrusion into the clay joints. Lining this section will prevent this from reoccurring in the future.

Both of these lines are major interceptors serving large areas. For the project through the Biltmore Estate, timeliness is highly critical. MSD staff have worked closely with Biltmore Estate staff in order to schedule this work during a short time window when the estate is less busy, during Biltmore's slower winter season.

The sections to be lined under this contract total 4,776 LF, for both projects.

The contract was advertised and five bids were received on September 26, 2019 in the following amounts:

<u>Contractor</u>	<u>Bid Amount</u>
1) Granite Inliner, LLC	\$1,152,440.00
2) Insituform Technologies, LLC	\$1,125,518.70
3) SAK Construction, LLC	\$1,120,500.00
4) Am-Liner East, Inc.	\$1,061,336.00
5) IPR Southeast, LLC	\$ 922,306.00

The apparent low bidder is IPR Southeast, LLC, with a bid amount of \$922,306.00. IPR has performed previous work for the District on two contracts (Pipe Rating Contract 6 - 2011/2012 and Lining Contract 8 - 2017). Due to significant problems with both timeliness and quality on these contracts, combined with current references stating similar problems, staff recommends that the District reject IPR's bid and award the contract to the second-low bidder, Am-Liner East, Inc.

Am-Liner has performed previous work for the District on two lining projects, and another small project as recently as 2018. Their performance was excellent on those projects. Staff also checked newer references for projects of a similar scope, for large-diameter pipe, with positive results.

Please refer to the attached documentation for further details, including the various reference checks.

FISCAL IMPACT: The combined FY19-20 Construction Budgets for these two projects total \$1,081,000.00.

STAFF RECOMMENDATION: Staff recommends that the District reject IPR Southeast, LLC's bid and award this contract to Am-Liner East, Inc. in the amount of \$1,061,336.00, subject to review and approval by District Counsel.

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, N.C.

SEWER REHABILITATION PROJECTS

**SOUTH FRENCH BROAD INTERCEPTOR LINING (FY 19-20), PROJECT NO. 2011033
TOWN BRANCH INTERCEPTOR LINING, PROJECT NO. 2019069**

BID TABULATION

September 26, 2019

BIDDER	Bid Bond	MBE Form	Bid Forms (Proposal)	South French Broad	Town Branch Interceptor	Combined Total Bid Amount
Granite Inliner, LLC Gastonia, NC	5%	1	Yes	\$942,290.00	\$210,150.00	\$1,152,440.00
Insituform Technologies, LLC Chesterfield, MO	5%	1	Yes	\$962,216.50	\$163,302.20	\$1,125,518.70
SAK Construction, LLC O'Fallon, MO	5%	1	Yes	\$923,784.00	\$196,716.00	\$1,120,500.00
Am-Liner East, Inc. Berryville, VA	5%	1	Yes	\$866,707.00	\$194,629.00	\$1,061,336.00
IPR Southeast, LLC Stone Mountain, GA	5%	1	Yes	\$777,580.00	\$144,726.00	\$922,306.00

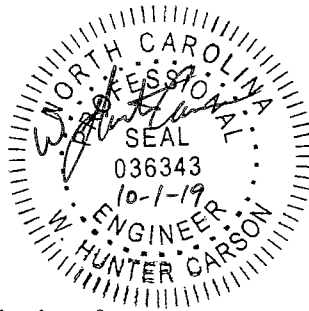
APPARENT LOW BIDDER

South French Broad Interceptor Lining

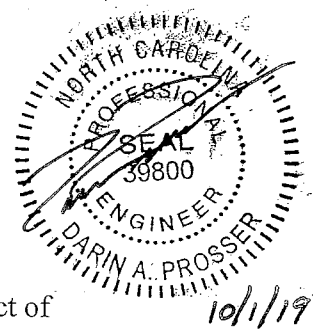
Town Branch Interceptor Lining



W. Hunter Carson, P.E.
Project Engineer
Metropolitan Sewerage District of
Buncombe County, North Carolina



Darin Prosser, P.E.
Project Engineer
Metropolitan Sewerage District of
Buncombe County, North Carolina



This is to certify that the bids tabulated herein were publicly opened and read aloud at 2:00 p.m. on the 26th day of September, 2019, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina, and that said bids were accompanied by acceptable bidder's bonds in the amount of 5% of the bid.

Interoffice Memorandum

TO: Tom Hartye, General Manager

FROM: Ed Bradford, Director of Engineering
Hunter Carson, Asst. Director of Engineering
Darin Prosser, Project Manager

DATE: October 4, 2019

RE: South French Broad Interceptor Lining Ph. 4 Sewer Rehabilitation
Town Branch Interceptor Lining Sewer Rehabilitation
MSD Project Nos. 2011033 and 2019069, respectively

South French Broad Interceptor

The South French Broad Interceptor Lining project is located on the Biltmore Estate in Asheville. The District's 36-inch sewer interceptor runs through the Estate, adjacent to the French Broad River for approximately 22,000 linear feet. This interceptor conveys an average daily flow of 5.5 MGD of wastewater from South Asheville and north Henderson County to MSD's Carrier Bridge Pump Station.

The interceptor, installed in 1966, is believed to be a major source of inflow & infiltration (I&I) into MSD's collection system. Leaking pipe joints, and the development of sinkholes over the line provide evidence of joint failure. The reinforced concrete pipe (RCP) also shows signs of hydrogen sulfide (H₂S) degradation with exposed aggregate being visible in portions of the pipe above normal operating water levels. Exposed reinforcing steel is also visible in locations with elevated levels of H₂S. Continuous exposure to H₂S will attack and thin the concrete pipe wall, compromise the pipe's structural integrity, and ultimately lead to failure.

Cured-in-Place-Pipe (CIPP) lining is the preferred rehab method for combatting I&I and chemical corrosion. The end-product is a new, corrosion-resistant, seamless pipe that is structurally capable of functioning in the absence of its surrounding host pipe. A CIPP liner system seals the entire pipe segment, eliminating I&I from joints and pipe holes/fractures, and has a 50-year life expectancy. Longevity and preservation of this line are critical since the 36-inch interceptor will remain in service indefinitely.

The South French Broad Interceptor Lining project began in Fiscal Year 16-17 and is being phased over four years. Over the last three years, approximately 17,937 linear feet of 36-inch interceptor has been successfully lined. This year is the fourth and final year, consisting of approximately 3,976 linear feet of lining. In addition to rehabilitation of the interceptor pipe, all manholes are being rehabilitated using a non-cementitious, corrosion-resistant liner system. Twelve (12) manholes will be lined in this final phase.

Town Branch Interceptor

The Town Branch Interceptor Lining project is located within the south slope area of Asheville. A 21-inch sewer interceptor runs from the McDowell St. and Southside Ave. intersection south to Choctaw St. The interceptor conveys an average daily flow of 2.5 MGD of wastewater from portions of the downtown Asheville area to the French Broad Interceptor.

The interceptor is believed to be a major source of inflow & infiltration (I&I) into MSD's collection system. Last year (September 2018) there was a major pipe failure due to a blockage in the line which also caused a major SSO. This blockage may have been caused by roots that grew into the pipe through the joints or cracks in the line. Due to this major failure, lining these pipes with CIPP is essential to help prevent future SSOs along this 800 LF section. CIPP lining is the preferred rehab method for combatting I&I and root intrusion through joints and cracks.

On September 26th, 2019, five (5) sealed bids were received at 2:00 pm, as follows:

<u>Contractor</u>	<u>Bid Amount</u>
1) Granite Inliner, LLC	\$1,152,440.00
2) Insituform Technologies, LLC	\$1,125,518.70
3) SAK Construction, LLC	\$1,120,500.00
4) Am-Liner East, Inc.	\$1,061,336.00
5) IPR Southeast, LLC	\$ 922,306.00

The apparent low bidder is IPR Southeast, LLC with a bid amount of \$922,306.00. IPR Southeast, LLC has completed two projects for the District - Pipe Rating Contract 6 in 2013, and Lining Contract No. 8 in 2018. Neither quality nor performance on these projects met District expectations, and furthermore, contract times were exceeded significantly. Details of both projects can be found in the attached *MSD Construction Administration Notes*.

District staff contacted project references provided by IPR Southeast and discovered that similar problems have been experienced by other municipalities. Product quality, staff performance and/or management, and project time of completion were topics of discussion with most references contacted. Details of those discussions, as well as additional notes on Pipe Rating Contract 6 & Lining Contract No. 8 can be found in the attached *Reference Check for IPR Southeast, LLC* document.

Due to the criticality of the South French Broad Interceptor in MSD's collection system, and the time-sensitive nature of the project (work period restricted to January 1 – April 1, 2020), staff recommends award to the lowest *responsible* bidder: Am-Liner East.

The apparent second low bidder, and lowest responsible bidder is Am-Liner East, Inc with a bid amount of \$1,061,336.00. The combined FY19-20 construction budgets for this contract total \$1,081,000.00.

Am-Liner East has performed well with two smaller lining projects for the District in the past. Since this combined project is time-critical, references were checked to confirm timelines of project completion, quality of work, experience and reputation of project management, and compliance with budget. Two references were contacted and both provided positive feedback, specifically regarding completion time. Details can be found in the attached *Reference Check for Am-Liner East*.

Staff recommends award of this contract to Am-Liner, East, Inc. contingent upon review and approval by District Counsel.

MSD Construction Administration Notes

October 1, 2019

Pipe Rating Contract VI – Project 2010089

- **Contract Time Exceeded** - Original Project Time Frame was 12/5/11 to 7/2/12 (210 days). Work was not completed until January of 2013. Contractor Certificate of Completion dated 1/11/13
- **Mis-sized Liner Bags Created Difficulty** - Numerous liner bags were oversized which led to punch-list repairs and corrections having to be made.
- **Faulty Grout Work for Manhole Repair** - Grout work in MH inverts in several locations damaged the liner connection.
- **Faulty Sewer By-Pass** - Sewer discharged into ditch line.

Lining Contract No. 8 – Project 2015218

- **Contract Time Exceeded** - Original Project Time Frame was 2/20/17 – 7/20/17 (150 days). Work was not completed until December of 2017. Contractor Certificate of Completion dated 2/1/18
- **Difficulty Reinstating Service Connections** - Work with robotic cutter was noted as being inefficient and slow. This was a particular concern on 10/25/17 where 20+ hours were needed to install liner and reconnect service in Oakley.
- **Mis-sized Liner Bags Created Difficulty** - Numerous liner bags were oversized which led to punch-list repairs and corrections having to be made.
- **Poor Communications** - Contractor showed up on jobsites without proper equipment, which created unneeded delays. MSD not always notified of crew activity. Method of Liner installation changed midstream without prior notice to MSD. MSD observed slow response time to instructions given.
- **Property Owner Concerns** - Job-site housekeeping was lacking in neighborhoods. On 12/27/17, MSD notified of damaged property by resident on Old Haywood Road. Contractor worked late into the evenings in residential areas.
- **Safety Concerns** - MSD observed IPR'S Safety Manager on-site providing corrective instruction for safety matters. On 10/24/17, one employee badly burned.

South French Broad Interceptor – Lining (FY19-20)
MSD Project No. 2011033
Town Branch Interceptor Lining
MSD Project No. 2019069

Reference Check for IPR Southeast, LLC
October 2019

REFERENCE CONTACT #1

Metropolitan Sewerage District of Buncombe County, NC

Lining Contract No. 6 (\$779,000) & No. 8 (\$778,000) Sewer Rehab

10,988LF of 6", 8", & 10" CIPP (Completed 2013); 10,148LF of 8" & 12" CIPP (Completed 2017)

Lining Contract No. 6 was designed and construction administered by the Metropolitan Sewerage District (MSD). The project was completed by ITG, a subsidiary of parent-company, IPR. Over the course of the project, there were several issues with liner bags being oversized which created ridges and bulges in the liner. Sections of the liner had to be removed by grinding and were relined with a patch. ITG did not take appropriate care while handling the liner bags which resulted in holes, scrapes, and tears in the liner. ITG had to reline these sections with a second, thinner liner. There were defects in the liner due to resin not being applied or not being applied at the correct quantity. Several liner samples failed thickness tests.

Lining Contract No. 8 was also designed and construction administered by MSD. The staff at MSD was not satisfied with IPR's performance, nor the finished product. IPR's project manager for Contract No. 8 was the same individual who oversaw Lining Contract No. 6. Again, there were several issues with the liner bags being oversized that caused wrinkles, bulges, and other defects in the liner. This resulted in cutting and grinding the liner down. IPR performed several lengthy CIPP "shots" (i.e. lining through multiple manholes) and had issues with liner bags being cut too short or wasting liner that was too long. On runs that were too short, IPR installed a second liner to line the remaining pipe. Midway through the project IPR changed liner installation methods from a steam-cured process to water-cured without notifying MSD. The service reconnections made by remote cutter were inefficient and unsatisfactory. IPR's robotic cutter did not allow for a direct view of the service locations, resulting in a lengthy reinstatement period and inaccurate cuts (holes were made larger than necessary).

Throughout the project, IPR's communication both internally and with MSD was poor. There were several occasions when IPR did not show up on the job site when expected, and other times when they were present without notification. Crews were known to show up unprepared and without proper equipment. IPR's Safety Manager documented several violations to their own company safety policies during Contract No. 8. On one occasion, an IPR staff member was badly burned. IPR did not complete this project in a timely manner and did not make the necessary repairs/restorations without being pressured by MSD.

REFERENCE CONTACT #2

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$4.48M)

>90,000LF of 8" CIPP (Ongoing)

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$3.4M)

>70,000LF of 8" and 10" CIPP (Completed 2019)

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$1M)

15,000LF of 8" CIPP (Completed 2019)

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$1M)

10,000LF of 8" CIPP (Completed 2018)

All of the projects listed above were designed and managed by Reference Contact #2, an engineering consultant in North Carolina. The project manager was contacted and stated that in his experience, IPR's "work can be questionable". He indicated that they struggle to finish work, citing specifics of grouting at manhole connections, use of hydro-tight to prevent leaks, and brushing/cleaning up for service reconnections by way of robotic cutter. He also stated that their work included large punch lists.

The project manager spoke in detail about multiple projects where contract time was, or is, being exceeded by large amounts. One current project is now 30 days past the anticipated completion date and IPR still has CIPP liners to be installed. On another project, IPR was issued a change order to extend contract time by 21 days, but still exceeded the time limit. On that project they are currently being charged liquidated damages. Additionally, there is one 20,000 LF project under contract at present that was supposed to already be underway, but IPR cannot get a crew on-site until November 2019.

The project manager also highlighted the oversight that is required for an IPR project. In his opinion their crews lack appropriate oversight from within their organization. As such, inspection and oversight from the project owner/engineer must be strong, staying on top of their every move. This is to ensure items are completed properly. He noted that their crews did not follow project specifications and did not automatically do things "right." In one instance a municipality was overseeing IPR's work on a project, but turned the construction administration/inspection over to the subject engineering consultant due to project timeframe being exceeded and the problems encountered in dealing with IPR. Furthermore, the project manager specifically stated that "you have to fight with IPR to get projects completed properly."

Another issue briefly touched on was a high turnover rate for IPR employees in project/field leadership roles. One particular leadership employee that Frazier is interacting with now has been with IPR and in the CIPP business less than one year.

REFERENCE CONTACT #3

Municipality in North Carolina

Sanitary Sewer Rehabilitation Project (\$4M)

Project scope not defined (Ongoing)

This project was designed and is currently being managed by Reference Contact #3, an engineering consultant in North Carolina. The project manager was contacted and stated that IPR is working under an annual renewable contract and that they are in their first renewal period. He indicated that the Owner probably will not renew again due to problems experienced with IPR. He stated that IPR was very behind in their work, that they cannot seem to finish what they started. Furthermore, in his opinion, they do not appear to have the resources to do the job or the support from their corporate office that is needed.

He also shared that their current work has a large punch-list of items that require attention. Included on this list is oversized CIPP liner bags being used in pipes and multiple issues with sewer service lateral reconnections. Oversized liner bags are being ground down to remove wrinkles and other obstructions in the pipeline. Lateral reconnections have not been properly cared for and were left only partially open and unclean when utilizing a robotic cutter. This required IPR's crew to mobilize to the site again and polish/finish the reconnection hole as appropriate. Additionally, he indicated that they "punched holes in the liner looking for the services."

In closing, the project manager specifically stated that "If time is critical, you will have a hard time."

REFERENCE CONTACT #4

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$1.2M)

11,500 LF of 8", 10", 18" and 30" CIPP (Completed 2017 & 2018)

This project was designed by an engineering consultant in North Carolina, and construction administration was performed primarily by the municipality. Project managers from both the consultant and municipality were contacted regarding the project. Both gentlemen were satisfied with the end product (of the two phase project); however, there were issues with IPR not completing the projects on time, noting coordination problems between internal [IPR] teams and subcontractors. On multiple occasions, IPR crews abandoned the project for days at a time to work on larger projects in a nearby city.

REFERENCE CONTACT #5

Municipality in Tennessee

Sanitary Sewer Rehabilitation Project (<\$1M)

Approx. 5,000LF of CIPP (Completed 2019)

The municipality's project manager stated that IPR's work quality was acceptable and that ultimately they will be invited back for future projects. However, IPR was late finishing the work, primarily due to rain delays but also due to project management. The same IPR employee took on roles of both project manager and on-site superintendent. The employee was competent and performed well, but on multiple occasions was pulled off the job site to attend projects in other cities or states. The IPR staff who remained

on site were somewhat inexperienced and were left to proceed with “no great direction”. This required a greater level of inspection by the Owner’s staff than anticipated. According to the Owner’s project manager, the IPR PM/Superintendent was absent for most, if not all of the manhole rehab work. The burden of installation inspection and quality control was left entirely to the Owner’s inspector. He also mentioned that IPR did not account for the high groundwater table in the area. He said that on several occasions, IPR had to switch from a steam-cured installation to water-cured to keep the liner pressurized against the host pipe. While IPR seemed very comfortable with steam-cured applications, their water-curing procedures presented “a lot of questions” among field staff.

REFERENCE CONTACT #6

Municipality in South Carolina

Sanitary Sewer Rehabilitation Project (\$1.9M)

>28,000 LF of 8”, 10”, 12” and 15” CIPP (Multiple projects, completed 2019)

The Owner’s project manager stated that IPR “had troubles here and there”, but overall they did a “pretty good job” and they would use IPR for future projects. The Owner had no complaints about the quality of installed liner and the projects were all completed on time. The biggest issues were communication, specifically lack of notification prior to certain work, and staff turnover. Over the course of two years while working with IPR, there were six (6) project managers involved. With the level of turnover experienced, some project details “got muddy” according to the Owner.

South French Broad Interceptor Lining
Town Branch Interceptor Line

MSD Project No. 2011033 & 2019069

Reference Check for Am-Liner East, Inc., October 2019

Arlington County, VA

Sanitary Sewer Relining 48" & 54" (June 2018)

3,000 LF of 48" and 3,000 LF of 54" CIPP

Hisham Wahdan, Construction Manager for Arlington County, said that Am-Liner has been working with them for 10 years. Am-Liner has an on-going contract for 8" to 10" CIPP and has won several larger diameter CIPP projects. Hisham stated that Am-Liner's supervisors/crew leaders have been great to work with, communication is good, and they are very quick to finish projects. Hisham did suggest having Am-Liner use water insertion/curing process because the liner turned out perfect. The previous steam processed liners did have some wrinkles in the liner. Overall, he gave Am-liner a very positive reference.

Bucks County Water & Sewer Authority, PA

2017 Rehab of Gravity Sewer Lines 8" to 18" (September 2017)

11,044 LF of 21" to 30" CIPP

John Butler, Chief Operations Officer for Bucks County, said that AM-Liner has been working with them for 10-12 years on various projects and contract work. Am-Liner's last project with them was a difficult job lining 24" to 30" sewer lines that ran through an animal farm. This project went really well and Am-Liner went far and above with site restoration and communication and assistances with farm owners for relocations of animals. The liner bags were sized appropriately and the project was completed in time. John mentioned that Am-Liner's communication was excellent, from possible issues before project started, when they would be on site, and during the project. John said that he hopes to be able to renew their contract with Am-Liner this upcoming year.

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

BUDGET DATA SHEET - FY 2019 - 2020

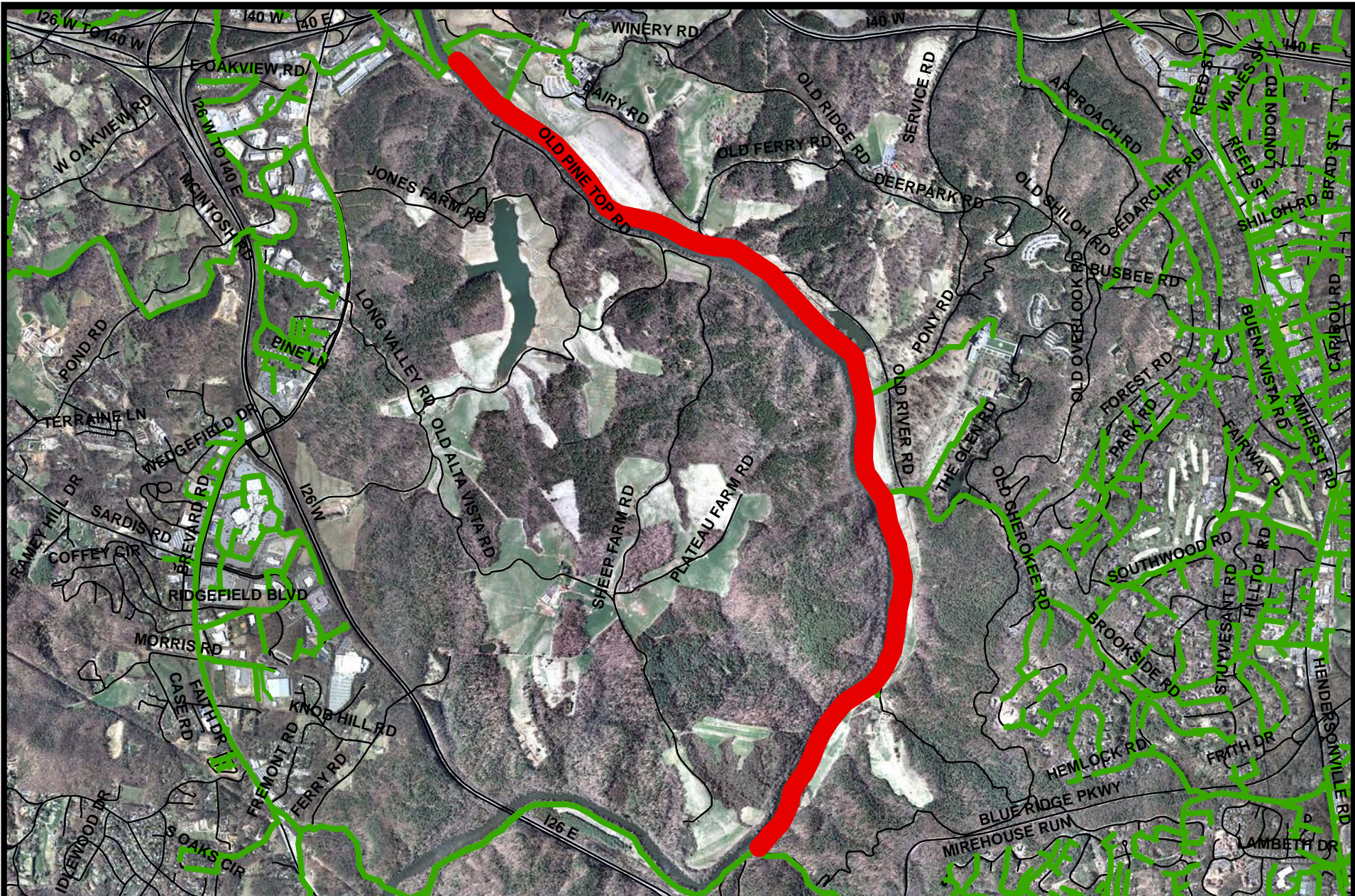
PROJECT: South French Broad Int. - Lining	LOCATION: Biltmore Estate
TYPE: Interceptor	PIPE RATING: 8
PROJECT NO.: 2011033	TOTAL LF: 21,913
PROJECT BUDGET: \$4,892,686.00	PROJECT ORIGIN: Line Condition, Inflow & Infiltration

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/18	EST. COST JAN - JUNE 2019	BUDGET FY 19-20
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES	\$630.00	\$630.00		
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$4,884,450.00	\$2,877,006.00	\$1,176,444.00	\$831,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$7,606.00	\$4,450.00	\$1,156.00	\$2,000.00
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$4,892,686.00	\$2,882,086.00	\$1,177,600.00	\$833,000.00

5111 3,976

ENGINEER: MSD	HC	ESTIMATED BUDGETS - FY 21 - 29	
R.O.W. ACQUISITION: N/A	# PLATS: [0]	FY 20-21	\$0.00
CONTRACTOR:		FY 21-22	\$0.00
CONSTRUCTION ADM: MSD		FY 22-23	\$0.00
INSPECTION: MSD		FY 23-24	\$0.00
		FY 24-25	\$0.00
		FY 25-26	\$0.00
PROJECT DESCRIPTION: This project is located within the Biltmore Estate along the French Broad River. The southern terminus of the project is located where the Dingle Creek Int. flows into the South French Broad Int. The project consists of CIPP lining approx. 22,000 LF of existing 36-inch Reinforced Concrete Pipe. The line is a major source of inflow and infiltration. Construction has been phased over four years.		FY 26-27	\$0.00
		FY 27-28	\$0.00
		FY 28-29	\$0.00
			\$0.00

SPECIAL PROJECT NOTES: 6,195LF in FY 16-17; 6,631LF in FY 17-18; 5,111LF in FY 18-19; 3,976LF in FY 19-20. Pricing includes manhole rehab.



**South French Broad Interceptor Lining
Project No. 2011033**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

**Metropolitan Sewerage District of Buncombe County, North Carolina
CAPITAL IMPROVEMENT PROGRAM**

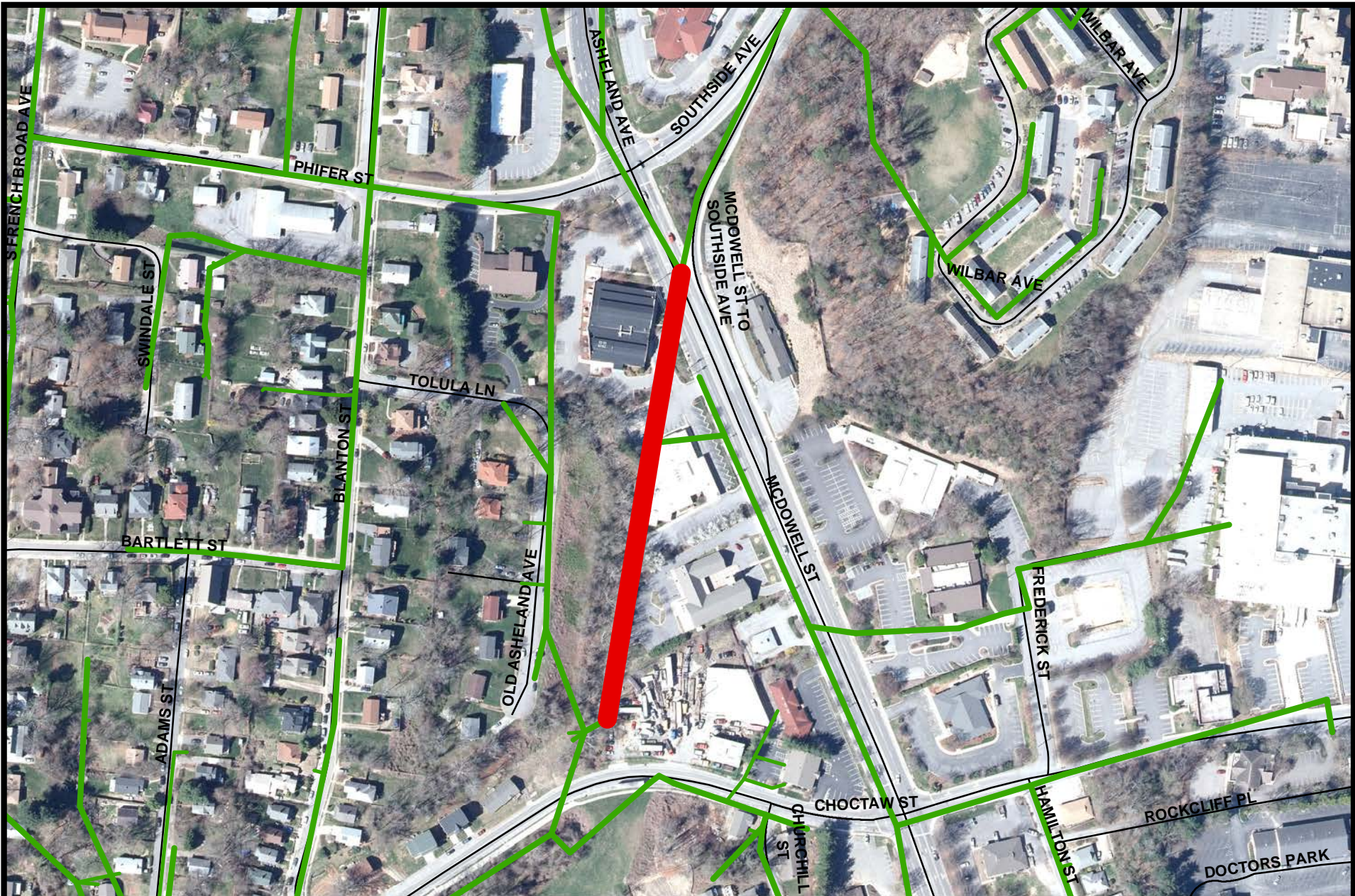
BUDGET DATA SHEET - FY 2019 - 2020

PROJECT: Town Branch Interceptor Lining	LOCATION: Asheville
TYPE: Interceptor	PIPE RATING: 81
PROJECT NO.: 2019069	TOTAL LF: 800
PROJECT BUDGET: \$251,000.00	PROJECT ORIGIN: CDM Preliminary Engineering Report

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/18	EST. COST JAN - JUNE 2019	BUDGET FY 19-20
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES				
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$250,000.00			\$250,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$1,000.00			\$1,000.00
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$251,000.00	\$0.00	\$0.00	\$251,000.00

ENGINEER: MSD	DP	ESTIMATED BUDGETS - FY 21 - 29	
R.O.W. ACQUISITION: N/A	# PLATS: [0]	FY 20-21	\$0.00
CONTRACTOR:		FY 21-22	\$0.00
CONSTRUCTION ADM.: TBD		FY 22-23	\$0.00
INSPECTION: TBD		FY 23-24	\$0.00
		FY 24-25	\$0.00
PROJECT DESCRIPTION: This CIPP lining project is located in the South Slope area of Asheville. The project begins at Choctaw St, runs north along Town Branch, and ends at the intersection of McDowell St and Southside Ave. The existing pipes are in poor condition contributing to I/I that surcharges the line during heavy rains and has created SSOs.		FY 25-26	\$0.00
		FY 26-27	\$0.00
		FY 27-28	\$0.00
		FY 28-29	\$0.00

SPECIAL PROJECT NOTES:



**Town Branch Interceptor Lining
Project No. 2019069**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Ed Bradford, P.E. - Engineering Director

PREPARED BY: Kevin Johnson, P.E. - Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Cypress Knoll Gardens Sewer Extension, MSD Project No. 2018121

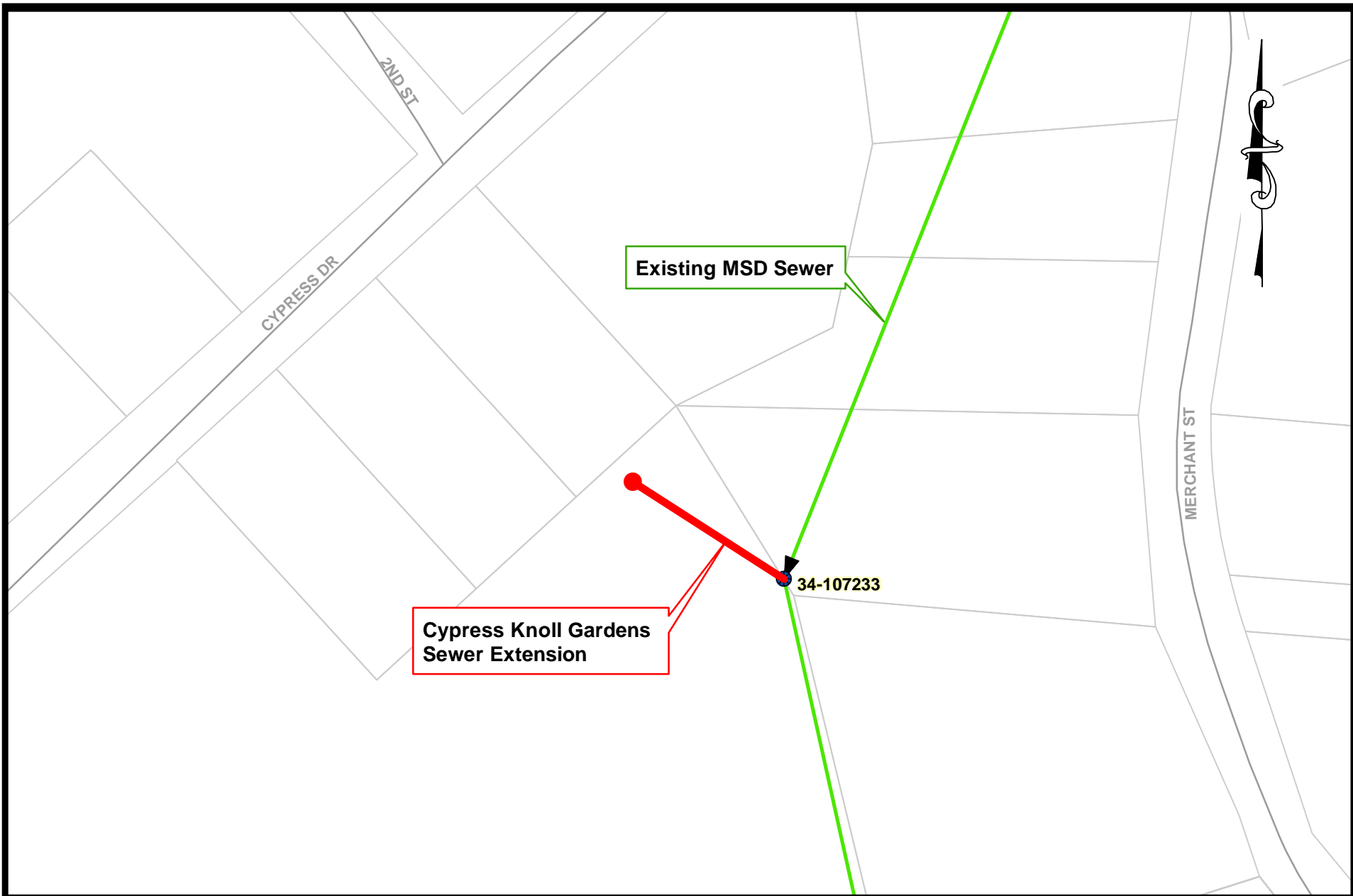
BACKGROUND: This project is located inside the District boundary along Cypress Drive in the City of Asheville. The developer of the project is David King.

The project included extending approximately 80 linear feet of 8-inch public gravity sewer to serve the single family residential development.

A wastewater allocation was issued in the amount of 900 GPD for three (3) residential units for this phase of the project. The estimated cost of the sewer construction is \$14,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

Cypress Knoll Gardens Sewer Extension
MSD Project # 2018121
Metropolitan Sewerage District of Buncombe County

9/25/19

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Ed Bradford, P.E. - Engineering Director

PREPARED BY: Kevin Johnson, P.E. - Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the New Salem Heights Sewer Extension, MSD Project No. 2016192

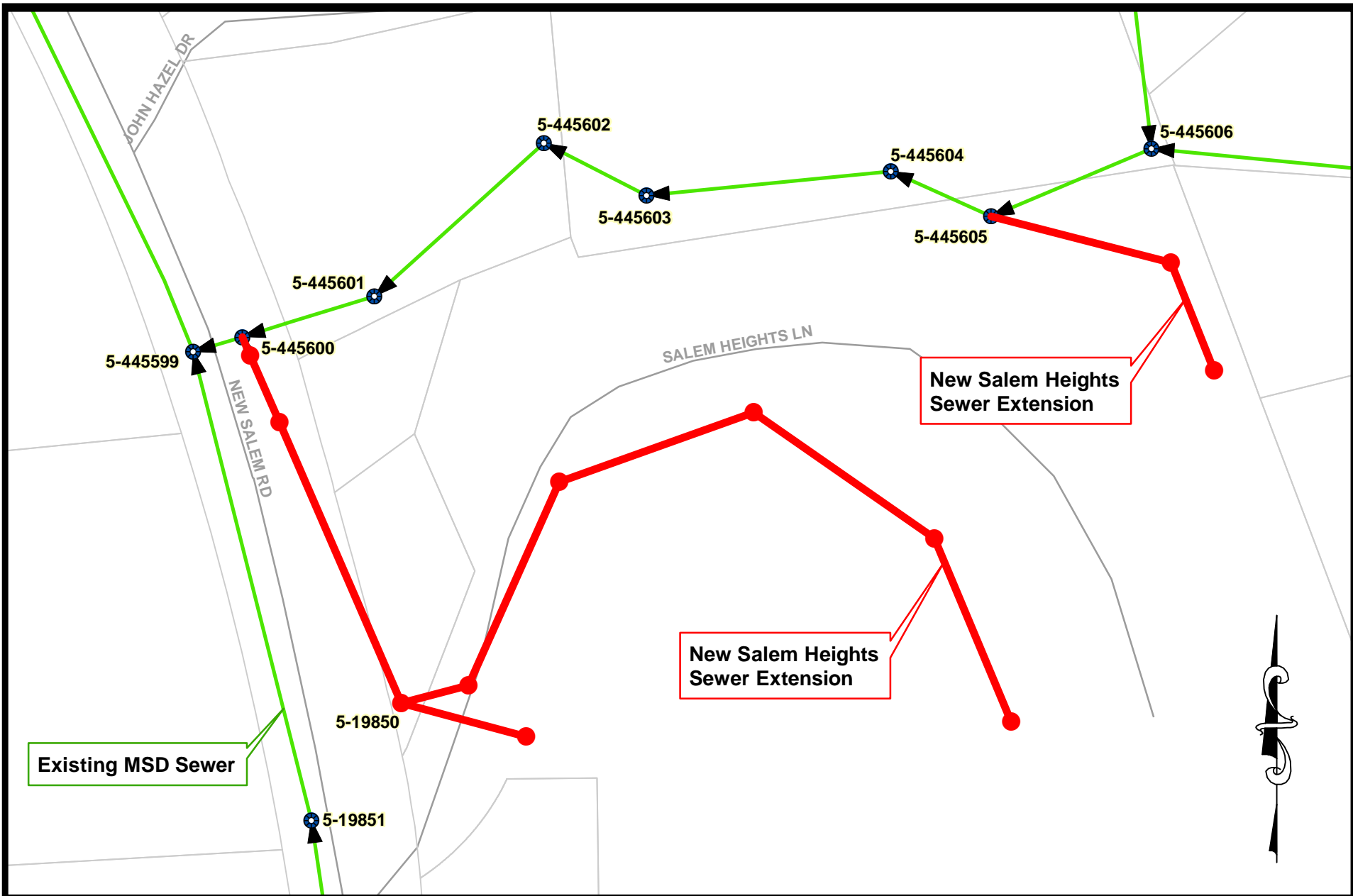
BACKGROUND: This project is located inside the District boundary along New Salem Road in Buncombe County. The developer of the project is Dan Fiore.

The project included extending approximately 805 linear feet of 8-inch public gravity sewer to serve the single family residential development.

A wastewater allocation was issued in the amount of 7,500 GPD for twenty-five (25) residential units included in this project. The estimated cost of the sewer construction is \$87,690.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

**New Salem Heights Sewer Extension
MSD Project # 2016192**

Metropolitan Sewerage District of Buncombe County

9/24/19

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Ed Bradford, P.E. - Engineering Director

PREPARED BY: Kevin Johnson, P.E. - Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Ricky Robinson Sewer Extension, MSD Project No. 2017088

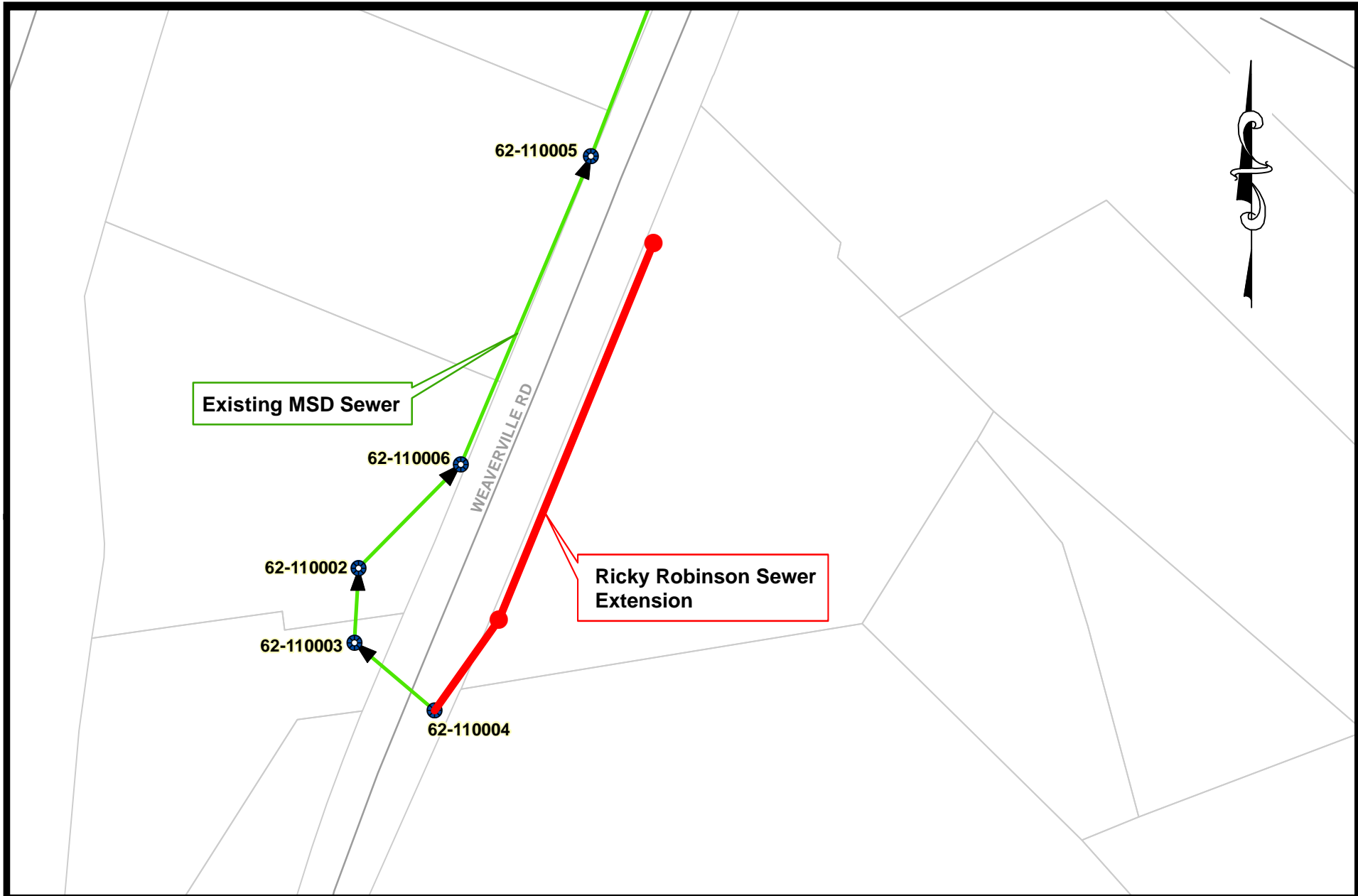
BACKGROUND: This project is located inside the District boundary along Weaverville Road in the Town of Woodfin. The developer of the project is Ricky Robinson.

The project included extending approximately 385 linear feet of 8-inch public gravity sewer to serve the commercial development.

A wastewater allocation was issued in the amount of 6,439 GPD for this project. The estimated cost of the sewer construction is \$45,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

Ricky Robinson Sewer Extension MSD Project # 2017088

Metropolitan Sewerage District of Buncombe County

10/01/19

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Ed Bradford, P.E. - Engineering Director

PREPARED BY: Kevin Johnson, P.E. - Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Rosscraggon Road Subdivision Sewer Relocation, MSD Project No. 2018048

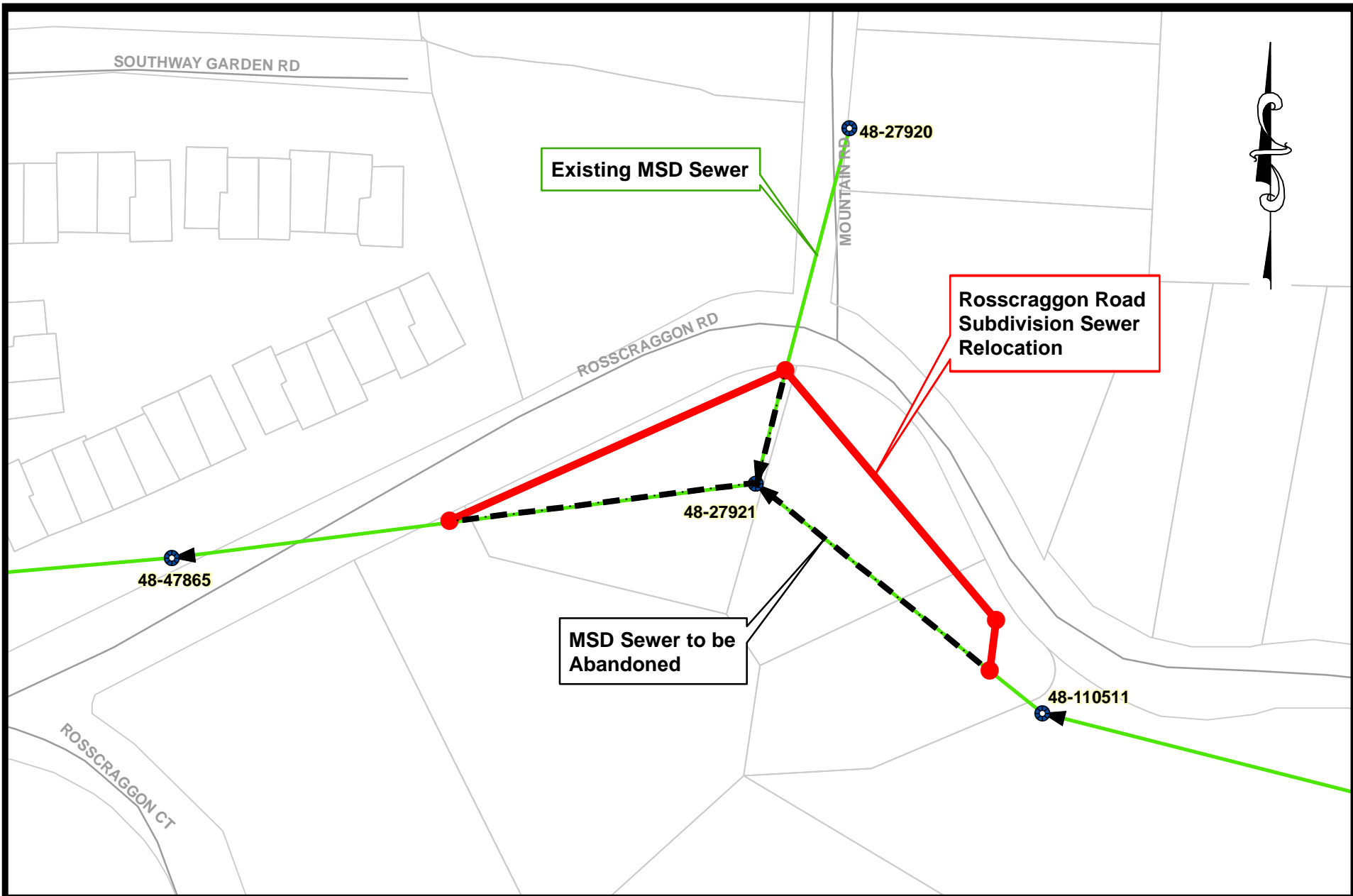
BACKGROUND: This project is located inside the District boundary off Rosscraggon Road in Buncombe County. The developer of the project is White & Thrailkill Properties, Asheville Mountain Escape Rentals, Steven Zimovan, and Jessica Brooks.

The project included relocating approximately 360 linear feet of 8-inch public gravity sewer along with abandoning approximately 320 linear feet of public gravity sewer to accommodate this residential development.

A wastewater allocation was issued in the amount of 1,200 GPD for this four (4) unit residential development. The estimated cost of the sewer construction is \$65,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

**Rosscraggon Road Subdivision Sewer
Relocation MSD Project # 2018048**
Metropolitan Sewerage District of Buncombe County

10/01/19

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: October 16, 2019

SUBMITTED BY: Tom Hartye, P.E. - General Manager

REVIEWED BY: Ed Bradford, P.E. - Engineering Director

PREPARED BY: Kevin Johnson, P.E. - Planning and Development Manager

SUBJECT: Acceptance of Developer Constructed Sewer System for the Wheeler Road Sewer Extension, MSD Project No. 2017019

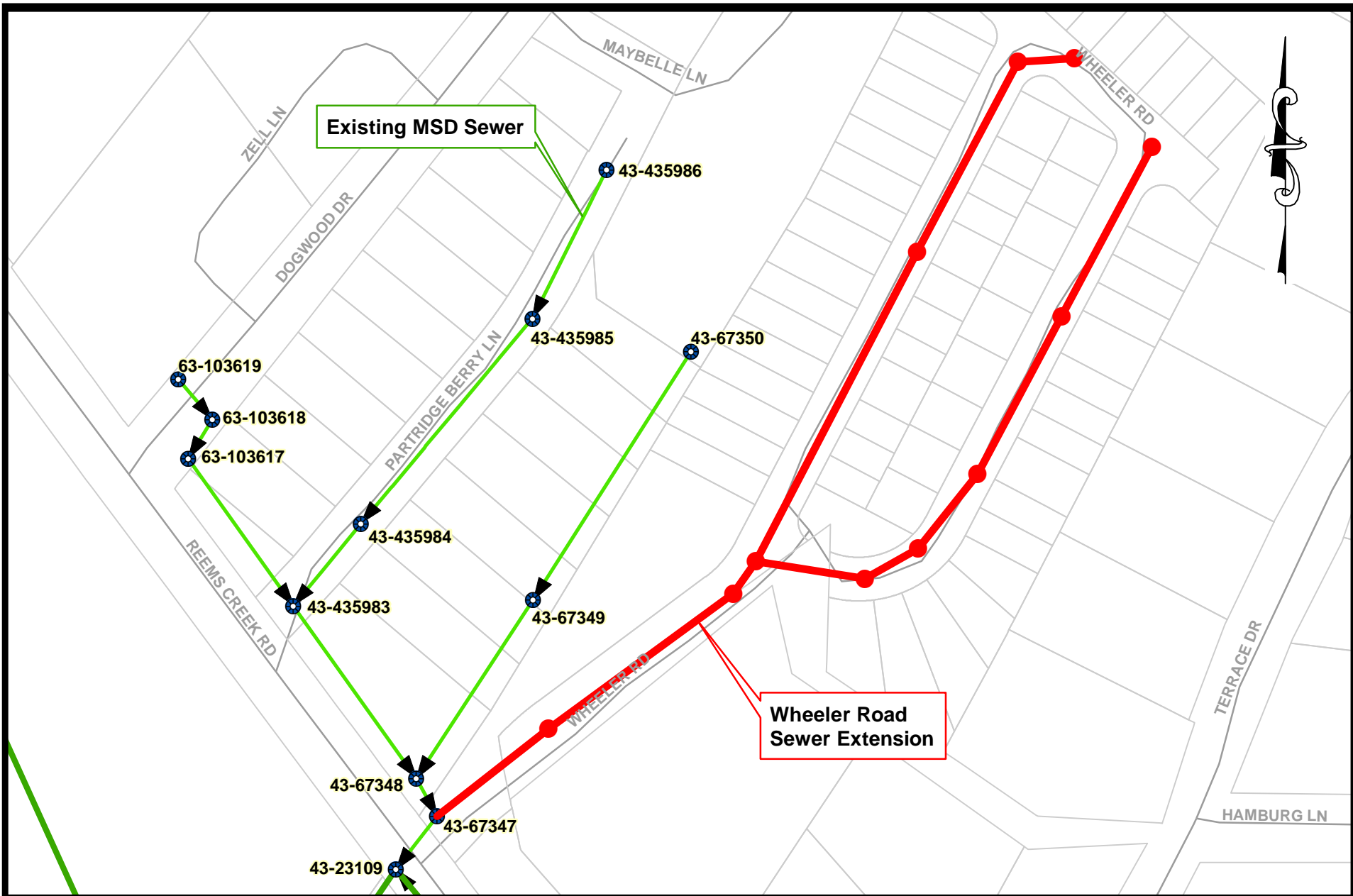
BACKGROUND: This project is located inside the District boundary off Reems Creek Road in Buncombe County. The developer of the project is Chris Eller of Farmbound Holdings, LLC.

The project included extending approximately 1,530 linear feet of 8-inch public gravity sewer to serve the single family residential development.

A wastewater allocation was issued in the amount of 21,600 GPD for seventy-two (72) residential units included in this project. The estimated cost of the sewer construction is \$200,000.00.

All MSD requirements have been met.

STAFF RECOMMENDATION: Staff recommends acceptance of this developer constructed sewer system.



MSD
Engineering Division

**Wheeler Road Sewer Extension
MSD Project # 2017019**

Metropolitan Sewerage District of Buncombe County

9/25/19

Metropolitan Sewerage District of Buncombe County

BOARD INFORMATIONAL ITEM

Meeting Date: October 16, 2019
Submitted By: Thomas E. Hartye, PE., General Manager
Prepared By: W. Scott Powell, CLGFO, Director of Finance
 Cheryl Rice, Accounting Manager
Subject: Cash Commitment/Investment Report-Month Ended August 31, 2019

Background

Each month, staff presents to the Board an investment report for all monies in bank accounts and specific investment instruments. The total investments as of August 31, 2019 were \$71,611,755. The detailed listing of accounts is available upon request. The average rate of return for all investments is 2.279%. These investments comply with North Carolina General Statutes, Board written investment policies, and the District's Bond Order.

The attached investment report represents cash and cash equivalents as of August 31, 2019 do not reflect contractual commitments or encumbrances against said funds. Shown below are the total investments as of August 31, 2019 reduced by contractual commitments, bond funds, and District reserve funds. The balance available for future capital outlay is \$14,005,860.

Total Cash & Investments as of 08/31/19		71,611,755
<i>Less:</i>		
Budgeted Commitments (Required to pay remaining FY20 budgeted expenditures from unrestricted cash)		
Construction Funds	(27,136,085)	
Operations & Maintenance Fund	<u>(14,889,194)</u>	
		(42,025,279)
Bond Restricted Funds		
Bond Service (Funds held by trustee):		
Funds in Principal & Interest Accounts	(51,989)	
FY19 Principal & Interest Due	<u>(9,636,592)</u>	
		(9,688,581)
District Reserve Funds		
Fleet Replacement	(798,198)	
Pump Replacement	(188,186)	
WWTP Replacement	(305,687)	
Maintenance Reserve	<u>(994,599)</u>	
		(2,286,670)
District Insurance Funds		
General Liability	(35,027)	
Worker's Compensation	(245,340)	
Post-Retirement Benefit	(1,927,881)	
Self-Funded Employee Medical	<u>(1,397,117)</u>	
		(3,605,365)
Designated for Capital Outlay		<u>14,005,860</u>

Meeting Date: October 16, 2019

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2019

Page 2

Staff Recommendation

None - Information Only.

Action Taken

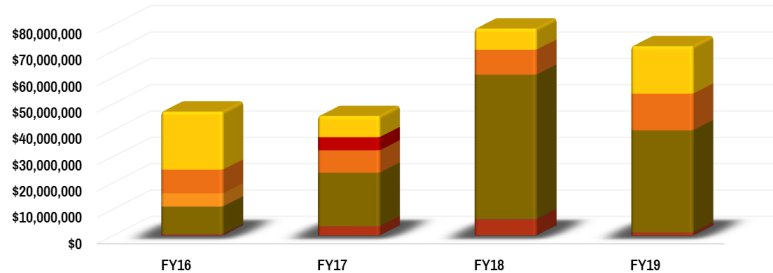
Motion by:	to	<input type="checkbox"/> Approve	<input type="checkbox"/> Disapprove
Second by:		<input type="checkbox"/> Table	<input type="checkbox"/> Send to Committee
Other:			
Follow-up required:			
Person responsible:		Deadline:	

Metropolitan Sewerage District of Buncombe County
Investment Portfolio

	Operating Checking Accounts	Gov't Advantage Money Market	NCCMT (Money Market)	Certificate of Deposit	Commercial Paper	Municipal Bonds	Cash Reserve	Gov't Agencies & Treasuries	Total
Held with Bond Trustee	\$ -	\$ -	\$ 51,989	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,989
Held by MSD	6,517,447	46,683	36,328,012	-	14,897,667	-	-	13,769,957	71,559,766
	\$ 6,517,447	\$ 46,683	\$ 36,380,001	\$ -	\$ 14,897,667	\$ -	\$ -	\$ 13,769,957	\$ 71,611,755

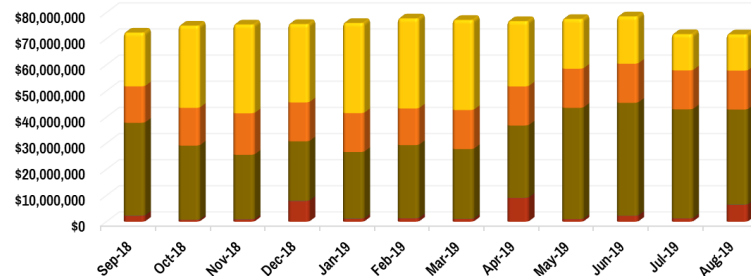
Investment Policy Asset Allocation	Maximum Percent	Actual Percent	
U.S. Government Treasuries, Agencies and Instrumentalities	100%	19.23%	No significant changes in the investment portfolio as to makeup or total amount.
Bankers' Acceptances	20%	0.00%	
Certificates of Deposit	100%	0.00%	The District 's YTM of 2.22% is exceeding the YTM benchmark of the NCCMT Government Portfolio.
Commercial Paper	20%	20.00%	
Municipal Bonds	100%	0.00%	
North Carolina Capital Management Trust	100%	51.60%	
Checking Accounts:	100%		All funds invested in CD's, operating checking accounts, Gov't Advantage money market are fully collateralized with the State Treasurer.
Operating Checking Accounts		9.10%	
Gov't Advantage Money Market		0.07%	

MSD of Buncombe County
Investment Portfolio - As of August 31, 2019



■ Operating Checking Accts ■ Gov't Advantage Money Market ■ NCCMT (Money Market)
■ Certificate of Deposit ■ Commercial Paper ■ Municipal Bonds
■ Cash Reserve ■ Gov't Agencies & Treasuries

MSD of Buncombe County
Investment Portfolio - 12 Month Trend



■ Operating Checking Accts ■ Gov't Advantage Money Market ■ NCCMT (Money Market)
■ Certificate of Deposit ■ Commercial Paper ■ Municipal Bonds
■ Cash Reserve ■ Gov't Agencies & Treasuries

Meeting Date: October 16, 2019

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2019

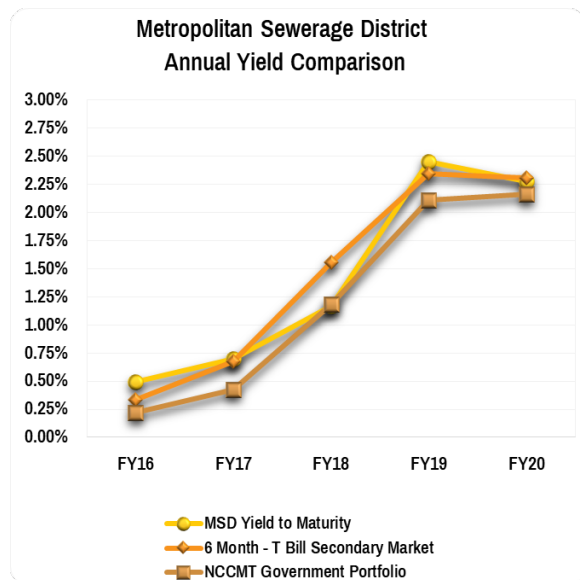
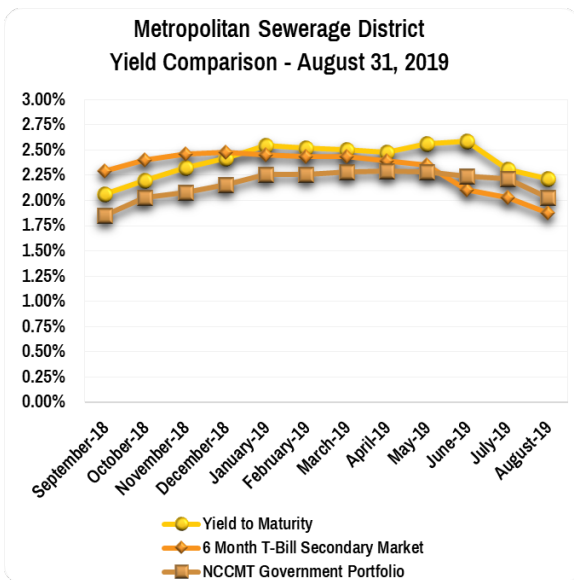
Page 4

**Metropolitan Sewerage District
INVESTMENT MANAGERS' REPORT
At August 31, 2019**

Summary of Asset Transactions			
	Original Cost	Market	Interest Receivable
Beginning Balance	\$ 67,556,144	\$ 67,569,895	\$ 108,288
Capital Contributed (Withdrawn)	(5,448,456)	(5,448,456)	-
Realized Income	76,402	76,402	(22,672)
Unrealized/Accrued Income	-	24,881	24,906
Ending Balance	<u>\$ 62,184,090</u>	<u>\$ 62,222,722</u>	<u>\$ 110,522</u>

Value and Income by Maturity			
	Original Cost	Income	
Cash Equivalents <91 Days	\$ 48,414,134	\$ 80,594	
Securities/CD's 91 to 365 Days	3,999,510	\$ 6,658	
Securities/CD's > 1 Year	9,770,447	\$ 16,265	
	<u>\$ 62,184,090</u>	<u>\$ 103,517</u>	

Month End Portfolio Information	
Weighted Average Maturity	135
Yield to Maturity	2.22%
6 Month T-Bill Secondary Market	1.88%
NCCMT Government Portfolio	2.03%

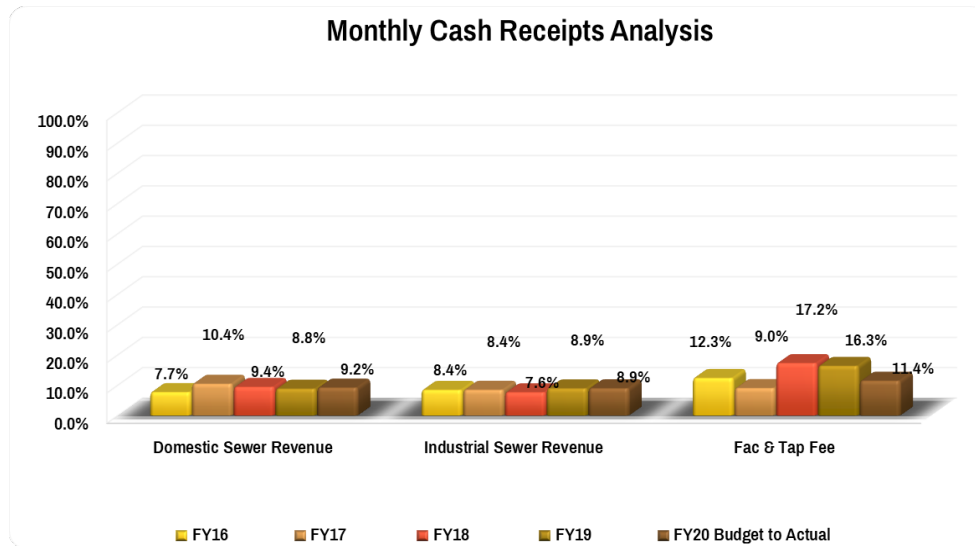


Meeting Date: October 16, 2019

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2019

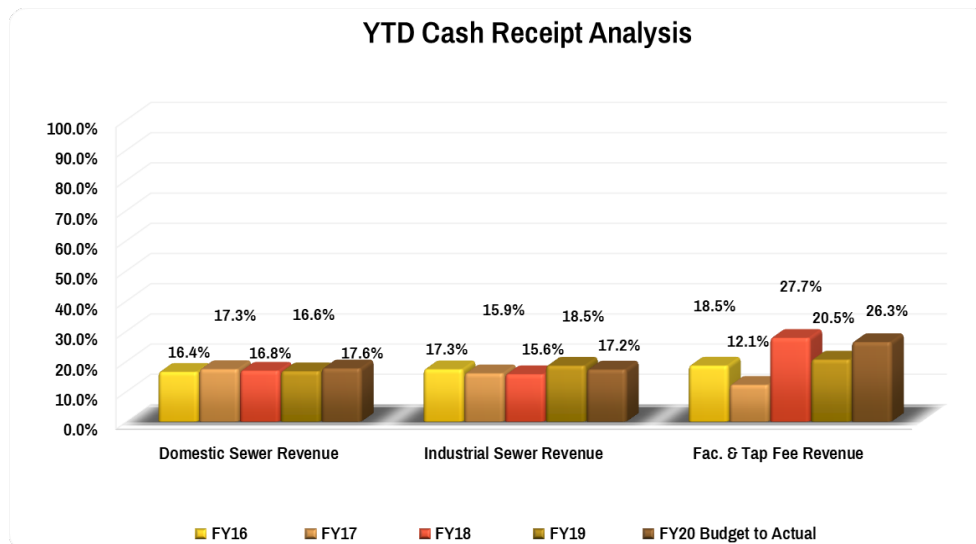
Page 5

Metropolitan Sewerage District
ANALYSIS OF CASH RECEIPTS
As of August 31, 2019



Monthly Cash Receipts Analysis:

- Monthly domestic sewer revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods.
- Monthly industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.



YTD Actual Revenue Analysis:

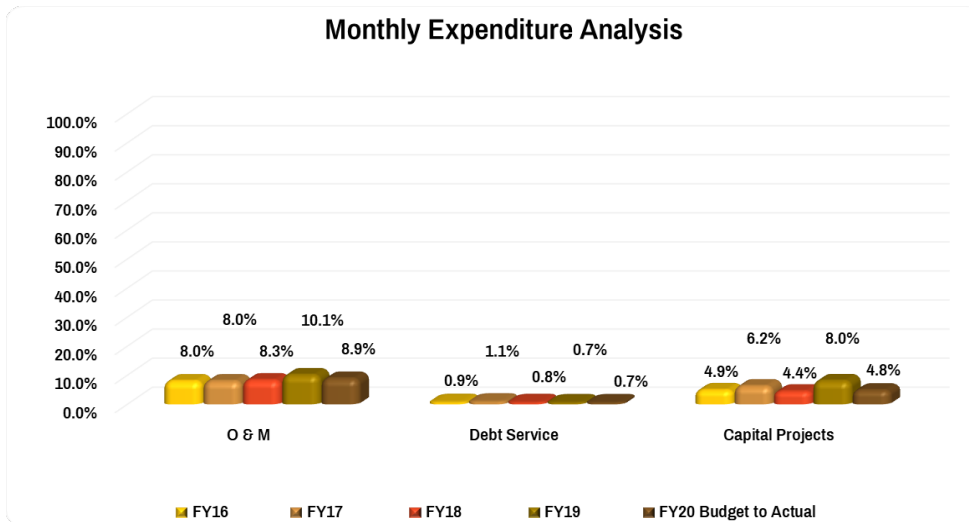
- YTD domestic sewer revenue is considered reasonable based on historical trends.
- YTD industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.

Meeting Date: October 16, 2019

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2019

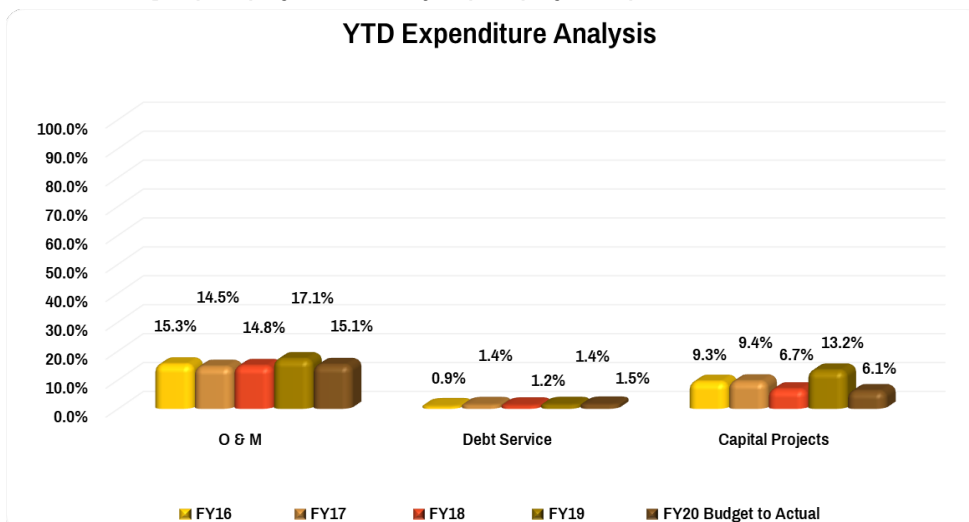
Page 6

Metropolitan Sewerage District
ANALYSIS OF EXPENDITURES
As of August 31, 2019



Monthly Expenditure Analysis:

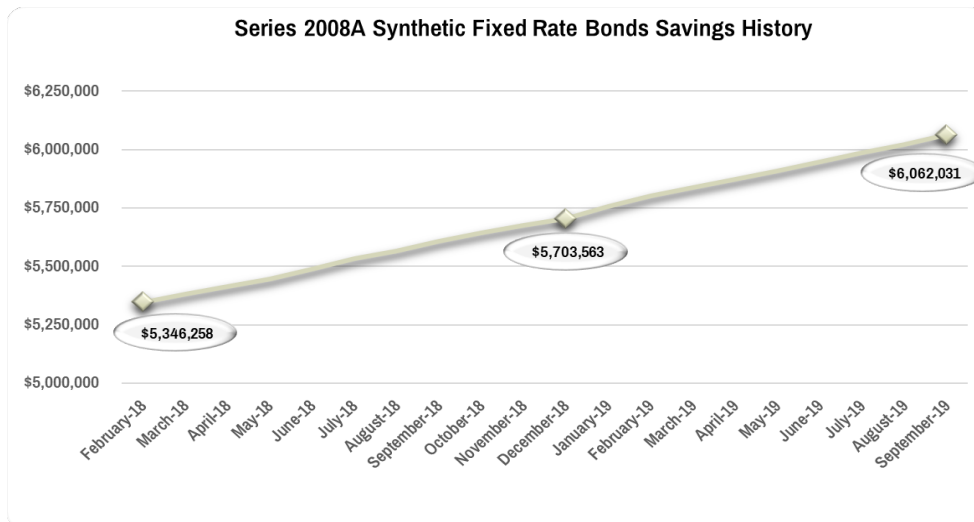
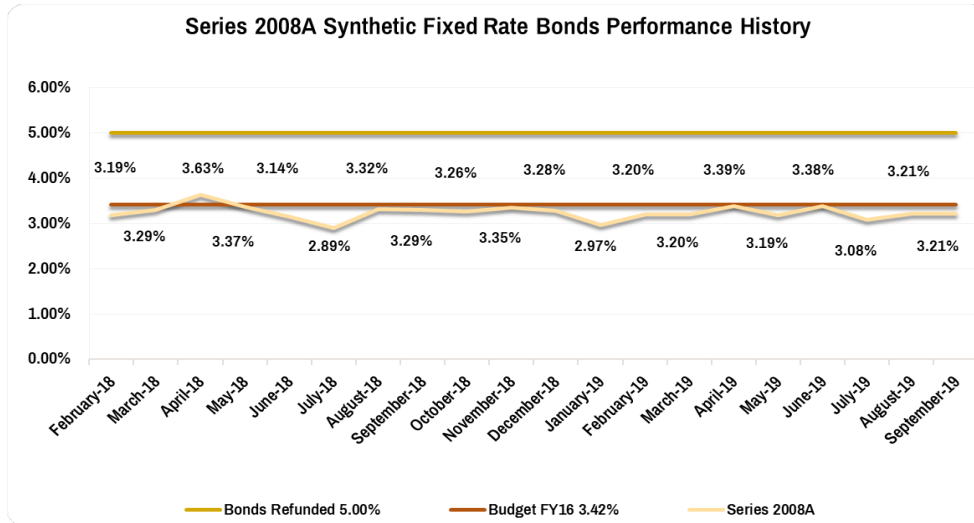
- * Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year.
- * Due to the nature of the variable rate bond market, monthly expenditures can vary year to year. Based on current variable interest rates, monthly debt service expenditures are considered reasonable.
- * Due to nature and timing of capital projects, monthly expenditures can vary from year to year. Based on the current outstanding capital projects, monthly capital project expenditures are considered reasonable.



YTD Expenditure Analysis:

- * YTD O&M expenditures are considered reasonable based on historical trends.
- * Due to the nature of the variable rate bond market, YTD expenditures can vary year to year. Based on current variable interest rates, YTD debt service expenditures are considered reasonable.
- * Due to nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD capital project expenditures are considered reasonable.

**Metropolitan Sewerage District
 VARIABLE DEBT SERVICE REPORT
 As of September 30, 2019**



Series 2008A:

- S** Savings to date on the Series 2008A Synthetic Fixed Rate Bonds is \$6,062,031 as compared to 4/1/2008 fixed rate of 4.85%.
- S** Assuming the rate on the Series 2008A Bonds continues at the current all-in rate of 3.9475%, MSD will achieve cash savings of \$4,670,000 over the life of the bonds.
- S** MSD would pay \$3,540,871 to terminate the existing Bank of America Swap Agreement.

Metropolitan Sewerage District of Buncombe County

Board Action Item

COMMITTEE MEETING DATE: October 16, 2019

SUBMITTED BY: Thomas Hartye, General Manager

SUBJECT: Expansion of MSD to include Cane Creek WSD

BACKGROUND:

The recent passage of House Bill 758 (SL 2019-127) amended MSD's enabling legislation to allow for Henderson County to consolidate with MSD under a revised process whereby, once requested, MSD will prepare information to be brought to the Environmental Management Commission (EMC). After the required public hearing/input, if the consolidation is approved by the EMC, Henderson County shall appoint two representatives from the Cane Creek Water and Sewer District (CCWSD) territory to the MSD Board.

At the August 5th meeting of the Henderson County Commissioners, the attached resolution was passed requesting inclusion into the District.

Also attached is a Process Summary and a proposed timeline for all the items (stipulated in the amended legislation) to be accomplished. The hope is to accomplish this entire process by July 1, 2020 so as to dovetail with the change in fiscal year.

DISCUSSION:

In the early 1970's MSD and Henderson County partnered to run an interceptor extension from the MSD collection system into northern Henderson County to what is now the Cane Creek Water and Sewer District. Attached is an exhibit showing that extension. In 1981 the Cane Creek Water and Sewer District was formed by the Henderson County Commissioners. MSD entered into an agreement with CCWSD in 1988 (which was amended in 1989) for the treatment of 1.35 MGD of wastewater.

MSD does not own or operate the collection system in the Cane Creek District. MSD charges the CCWSD customers treatment service charges based upon their usage but not the flat rate meter fee which is theoretically for local collection system maintenance. CCWSD has operations personnel and contractors to work on the system and charges an additional fee to their customers for maintenance of the local collection system. CCWSD remits collections made on MSD's behalf on a monthly basis.

MSD staff performed some "due diligence" analyses back in 2010, 2013 and 2017 as a part of the previous efforts at consolidation. Those analyses basically showed that in

considering all operations, assets, and liabilities that the impact to MSD would be minimal and have no rate implications.

MSD staff has just completed performing an updated analysis of the impact of expanding MSD to include CCWSD.

FINDINGS:

Over the past several weeks MSD personnel met with Henderson County representatives, evaluated information received from Henderson County and performed field inspections of the pump stations, new projects, and critical areas of the CCWSD system.

The CCWSD service area is approximately 49 square miles. CCWSD owns and operates approximately 84 miles of sewer mains and 9 pump stations. The current average daily flow from CCWSD is approximately 0.9 million gallons per day. CCWSD has 3686 Residential customers, 225 Commercial customers, and 6 Industrial customers. Water service for the area is provided by both the City of Asheville and the City of Hendersonville. The current Capital Asset Value is approximately \$25 million. CCWSD is carrying a private placement loan for the construction of the Mud Creek Interceptor for approximately \$2.7 million, and has a balance of approximately \$2.4 million which is slated to complete planned CIP projects.

MSD's Treatment Plant is rated at 40 MGD and is currently averaging 25.9 MGD (which includes flow from CCWSD). There is plenty of treatment capacity for the planned build out of the CCWSD area.

Master planning by Henderson County for the CCWSD area estimates a future need of 3.0 million gallons a day. MSD master planning has already included this figure in all recent studies for collection and treatment. The 50-year Interceptor Study recently completed by MSD includes improvements to serve the southern portion of Buncombe County along with the CCWSD. These projects include the South French Broad Interceptor, the Carrier Bridge Pump Station replacement/upgrade and its associated wet weather equalization tank.

The CCWSD collection system is generally in good condition. MSD staff have inspected the 9 pump stations and noted any needed improvements to bring them up to MSD standards. Attached is a spreadsheet showing the needed improvements which have been included in the recommended Capital Improvement Plan (CIP) discussed below.

The Capital Improvement Plan developed for the CCWSD area includes projects in both Buncombe and Henderson Counties. The engineering consultant for Henderson County, WGLA & Assoc. developed a plan of desired capital improvements, some of which were intended to be funded by Henderson County and some of which were to be extensions in partnership with others in the future. MSD staff developed a 10-year CIP for the CCWSD area (attached) which includes some of those projects along with a proportionate share of existing projects that MSD is slated to complete with monies being currently collected from

the CCWSD area customers. The projected 10-year CIP for CCWSD area is estimated to be \$15,127,213.

As far as operations, MSD will retain one employee who will remain in a Henderson County office which MSD will rent so that there will be close coordination for new customers and developments along with collections for well customers. There will be operational cost reductions for staff by approximately \$345,000 and for indirect cost allocations by \$105,000.

Attached are three 10-year Financial Projections, one representing MSD’s current Business Plan, a revised MSD Business Plan including CCWSD, and a “what-if” projection of CCWSD revenues versus expenses for operations and capital improvements as identified.

The financial impact of including CCWSD within MSD is de minimis. There are no rate implications by including the operations and Capital Improvement Plans as developed by MSD staff and represented herein.

All current operational and financial MSD Policies were followed in preparing this analysis.

Between now and July 1, 2020 MSD will seek to resolve the following items:

- MSD and CCWSD will develop a Consolidation Agreement stipulating some of the details that have been assumed above and below in this report.
- MSD is in conversations with the City of Hendersonville with regard to billing for the area in which they provide water service. Hopefully the City will partner with the MSD as our other member agencies have with regard to billing. If not, MSD will likely contract with Henderson County for the first year.
- MSD will make arrangements for the payment of CCWSD debt along with ensuring all assets and cash balances are properly transferred at July 1, 2020.
- MSD will assume some operational contracts, at least at the outset, until other arrangements can be made using our existing operation.
- MSD will ensure that CCWSD’s State Collection System Permit is properly transferred.
- MSD will monitor the close-out of the Fletcher Academy/Hospital treatment facility and ensure that disposal irregularities do not occur.
- MSD will seek to have CCWSD completely close-out the Mud Creek Interceptor Extension and to have payment received from Fletcher Academy.

COMMITTEE ACTION TAKEN	
Motion by:	To: <input type="checkbox"/> Approve <input type="checkbox"/> Disapprove
Second by:	<input type="checkbox"/> Table <input type="checkbox"/> Send back to Staff
	<input type="checkbox"/> Other
BOARD ACTION TAKEN	
Motion by:	To: <input type="checkbox"/> Approve <input type="checkbox"/> Disapprove
Second by:	<input type="checkbox"/> Table <input type="checkbox"/> Send back to Staff

Henderson County
North Carolina

Before the Board of Commissioners

RESOLUTION

BOARD OF COMMISSIONERS ENACTMENT 2019- 68

WHEREAS, the Cane Creek Water and Sewer District (the "District") was created by the County of Henderson (the "County") to provide potable water and sanitary sewer to the residents of the District; and,

WHEREAS, the District is located within the County;

WHEREAS, the District has installed and operates a sewerage system to the District and its residents and businesses; and,

WHEREAS, the District contracts with the Metropolitan Sewerage District of Buncombe County ("MSD") for the bulk service treatment of all the sewage collected in the District; and,

WHEREAS, MSD has installed a sewerage system which operates within the County; and,

WHEREAS, MSD serves customers within the County as of the date hereof; and,

WHEREAS, it would benefit the customers of the District for the District to be included within MSD.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of Henderson County, in that capacity and *ex officio* as the Board of Directors of the District, hereby requests the inclusion of the District into MSD.

Moved and adopted, this the 5th day of August, 2019.



Grady Hawkins
GRADY HAWKINS, Chairman
Henderson County Board of Commissioners

Attest:

Teresa L. Wilson
TERESA WILSON, Clerk to the Board of Commissioners

MSD-CCWSD Merger Process Summary

As defined by NCGS 162A-68.5 (SL2019--127)

- 1) The Henderson County Commissioners file a resolution with the District Board requesting inclusion of CCWSD into the District.

- 2) The District Board shall send to the Environmental Management Commission (EMC) and Henderson County all of the following:
 - a) Maps of the District showing the following:
 - 1) The present and proposed new boundaries of the District.
 - 2) The existing sewer system.
 - 3) Any proposed extensions of the system.

 - b) A description of any proposed extension of services to Henderson County, which shall address all of the following:
 - 1) Extension of sewerage service to CCWSD on substantially the same basis and manner as currently exists within the rest of the District.
 - 2) A proposed time schedule for extension of service.
 - 3) The estimated cost of extending service, including the method of financing the extension of service, outstanding existing indebtedness of the District, the valuation of assessable property within the District and within the requesting county.

 - c) An analysis of the inclusion of CCWSD into the District.

- 3) The EMC shall review the documents submitted. They shall, in conjunction with Henderson County, schedule a public hearing in Henderson County. The Chairman of the Henderson County Commissioners shall give at least 30 days notice. The notice shall be posted on the Henderson County Courthouse door, in the Henderson County newspaper for four weeks, and the Buncombe County newspaper.

- 4) After the hearing, if the EMC determines that the addition of CCWSD into the District will not "...adversely affect customer service and preserve and promote the public health and welfare of the district..." the EMC shall adopt a resolution expanding and defining the boundaries of the District to include CCWSD. An effective date shall be specified in the resolution.

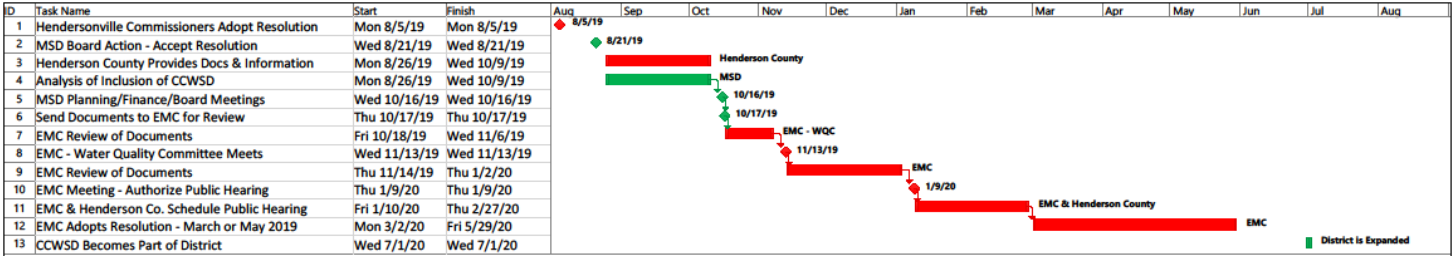
5) Any court action opposing the EMC resolution or inclusion of CCWSD must be commenced within 30 days after the effective date of the EMC resolution. Any actions taken after the 30 day period will not be valid.

6) CCWSD shall be subject to all debts of the District.

7) Upon inclusion of CCWSD into the District, the District Board shall be expanded by two members. The members shall be qualified voters residing in CCWSD and appointed by the Henderson County Commissioners. The term of office for these two new members may vary by no more than 6 months from what is specified in GS 162A-67.

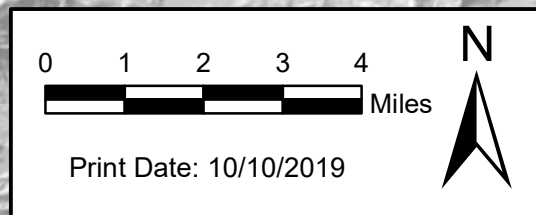
MSD-CCWSD Merger Timeline

Proposed Conclusion by June 30, 2020





METROPOLITAN SEWERAGE DISTRICT AND CANE CREEK WATER AND SEWER DISTRICT BOUNDARIES AND INTERCEPTORS



Legend

- Buncombe County
- Henderson County
- Metropolitan Sewerage District Service Area
- CCWSD Boundary
- MSD System Large Interceptors
- MSD Owned Interceptor Into CCWSD

MSD INTERCEPTOR

***Buncombe
County***

MSD 24" EXTENSION
INTO CCWSD EARLY 1970'S

***Henderson
County***

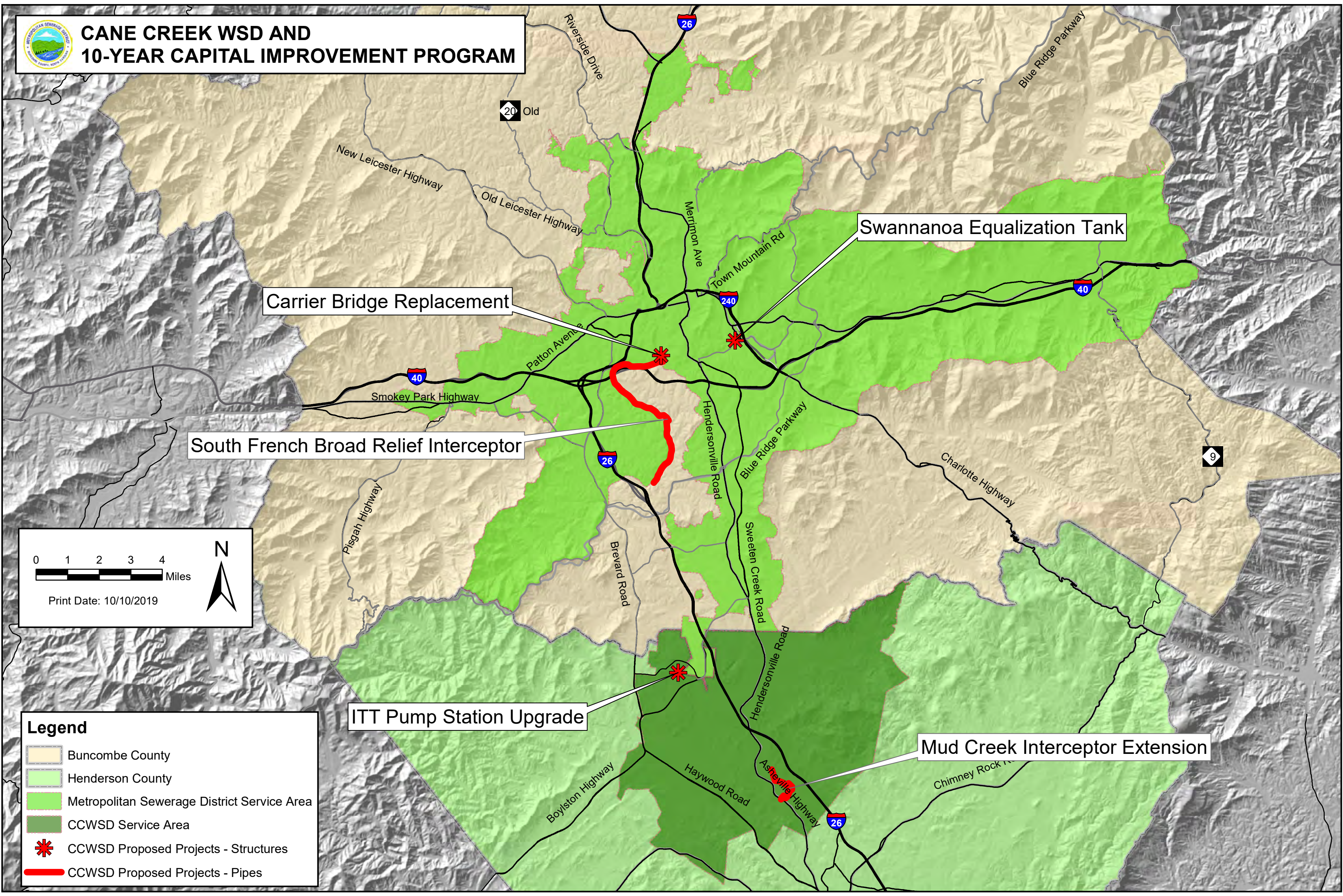
Cane Creek Water & Sewer District Pump Station Inspection
 Latest Inspection Date: Thursday, October 10, 2019.
 Inspectors: Hunter Carson, Ken Stines
 Spreadsheet last updated October 11, 2019

Criteria **meets** MSD standards
 Criteria **does not meet** MSD standards
 To be removed from system

Pump Station Flow Data and MSD Criteria	Cane Creek Water & Sewer District Pump Station I.D.										
	470 Broadpointe Dr.	Mud Creek No. 1 180 W Swift Creek Rd	Mud Creek No. 2 180 W Swift Creek Rd	Naples	Rockwell 641 Rockwell Dr	Mountain Home 99 Industrial Park Dr	New Bern 25 New Bern Dr	Fanning Bridge Road 72 Fanning Bridge Rd	Mill Pond 3791 Haywood Rd	School House Road 21 School House Rd	
Firm Capacity (mgd)	0.936	1.287	0.648	0.518	1.584	0.288	0.202	0.986	0.279	0.138	
Design Average Daily Flow (mgd)	0.3744	0.5128	0.2592	0.2072	0.6336	0.1152	0.0808	0.3944	0.1116	0.0352	
Approx. Avg. Current Daily Flow (mgd)	0.195	0.215	0.215	0.052	0.204	0.0319	0.0306	0.137	0.0256	0.00921	
Obligated, Not Yet Trib. Flow (mgd)	0.046	0.12	0.12	0	0	0	0	0	0.01	0	
Available Capacity (mgd)	0.1334	0.1778	-0.0758	0.1552	0.4296	0.0833	0.0502	0.2574	0.076	0.04599	
Site Requirements											
Paved Entrance	No (gravel)	No (gravel)	No (gravel)	No (gravel)	No (gravel)	Yes	No (gravel)	No (gravel)	Yes	No (gravel)	
Accessible by flusher truck	Yes (see below)	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	
RPZ Backflow Preventer	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	
10' wide access gate	Yes	Yes	Yes	Yes	No-12'	Yes	No-14'	Yes	Yes	Yes	
Sign on Gate	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
6' chain link fence	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Emergency Generator	Yes (permanent)	Yes (permanent)	Yes (permanent)	Yes (Yes (permanent)	Yes (permanent)	Yes (permanent)	No - Godwin DBS	No - Godwin DBS	Yes (permanent)	
Influent Manhole	Yes (see below)	Yes (see below)	No	No	Yes (see below)	No	No	Yes	Yes	Yes	
Area Light	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Tard Hydrant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Wetwell and Valve Vault Requirements											
Wetwell float switches	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Level indicator	Yes (Multitrode Level Probe)	Yes (Millitronics Hydromanager)	Yes (Millitronics Hydromanager)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	Yes (Multitrode Level Probe)	
Aluminum Access Hatches	Yes	Yes (see below)	Yes (see below)	Yes	Yes	Yes (see below)	Yes	Yes	Yes	Yes	
Force Main bypass	No	No	No	No	No	No	No	No	No	Yes (see below)	
Force Main Pressure Gauge	Yes	No	No	No	No	Yes	No	No	No	Yes	
Valve Vault Drain	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
Electrical Equipment Rack Requirements											
Service Entrance Disconnect/Voltage	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	Yes/480V	
GFI Outlet	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Automatic Transfer Switch	Yes	Yes	Yes	No	Yes	Yes	Yes	No - N/A	No - N/A	Yes	
Pump Control Panel Audible and Visual Alarm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Concrete pad	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	
Scada Equipment	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	
Estimated Cost of Improvements	\$988,000	\$15,000	\$350,000	\$0	\$50,000	\$15,000	\$35,000	\$15,000	\$0	\$15,000	
Notes: *Pump station to be eliminated per CCWSO. All SCADA is GuardDog web-based software manufactured by Omnisite.	Force main partially corroded inside wetwell. Pump station overall in poor condition. Access via flusher truck will be difficult. Existing gravel entry road has tight bend below PS. Suggest enlarging turning area below PS, regrading access drive (approx. 50') as well as area within PS fence, and paving the site. Greg Wiggins mentioned that ITT pump station would require future expansion due to other PS elimination projects. Wet well is very deep, approx. 30-40'. Improvement costs include PS replacement.	Valve vault access is via manhole lids and will prove difficult for future valve replacement. Pump station overall is in good condition. Mud Creek #1 has a 24" incoming line with head manhole. Mud Creek #2 has an 8" incoming line, but no head manhole. MC #1 is approx. 30' deep and pumps into MC #2 (approx. 20' deep) which has a separate 10' diam. EQ wetwell. MC #2 pumps all flow out via 2 mile force main. 24" incoming line into MC#1 is close to bottom of wetwell, offering very little storage volume. Existing gen set is not capable of running both stations. One main electrical feed powers control panels to both stations. No apparent method for isolating power to individual stations. Additions to wetwell top slabs will make pump replacement difficult. Improvement costs include pump and control panel upgrades at MCR2, and new gen set, and electrical upgrades.	This station was not evaluated in 2019. Pump station overall is in fair condition (2015 assessment); access could be difficult with multiple vehicles. To be eliminated in prior to July 2020 per Greg Wiggins.	Pump station has two wetwells, second for wet weather EQ. Pump station overall is in good condition. Wetwell has two incoming lines, 10" and 18". Both lines have influent manholes within PS property, but not a common influent MH. 18" line enters at bottom of wetwell, greatly reducing storage volume. Suggest tying existing 10" incoming line into 18" line to create one head manhole. Improvement costs include pipe/MH work to create single head MH, and GFI outlet installation.	Pump station overall is in fair condition. Force main discharge inside of wetwell is badly corroded. Valve vault access via manhole lid. Improvement costs include piping replacement.	Portable generator hookup (located approx. 100 yds. from PS is non-functional per CCWSO). Access road to pump station is very narrow and not accessible by flusher truck. Pump station overall is in poor condition. Needs general housekeeping and upgrade (i.e. concrete pad, new pump discharge piping, removal of overhead crane, new ARV in valve vault). Improvement costs include all of the above and easement/construction to widen access road. Adjoining property is 86.5 acres (Fletcher Lime Stone Co.) and taxed at \$88,400.	This station placed on line in fall 2016. It has two 10' diam. wetwells, one for EQ. Godwin DBS pump is natural gas powered and has been installed in lieu of emergency generator. There is an electrical hookup for portable generator. Godwin DBS capable of conveying peak hour flow (i.e. capacity equals that of submersible). Improvement costs include storage building purchase and installation.	This station placed on line in July 2017. Godwin DBS pump is natural gas powered. Godwin DBS capable of conveying peak hour flow (i.e. capacity equals that of submersible). No improvement necessary at this time.	This station placed on line in Oct 2015. Permanent generator is natural gas powered. There is currently a bypass tie-in at the PS; however, it is a 4" camlock connection inside a water meter box. Connection will be difficult. There is a second bypass tie-in on the force main, but it is approx. 3/4 mile downstream of PS. Suggest modifying existing bypass tie-in at PS. Improvement costs include storage building purchase and installation, and bypass modifications.		



CANE CREEK WSD AND 10-YEAR CAPITAL IMPROVEMENT PROGRAM



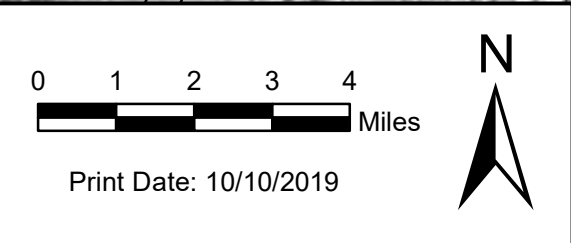
Carrier Bridge Replacement

Swannanoa Equalization Tank

South French Broad Relief Interceptor

ITT Pump Station Upgrade

Mud Creek Interceptor Extension



Legend

- Buncombe County
- Henderson County
- Metropolitan Sewerage District Service Area
- CCWSD Service Area
- CCWSD Proposed Projects - Structures
- CCWSD Proposed Projects - Pipes

CANE CREEK WATER AND SEWER DISTRICT

HENDERSON COUNTY, NORTH CAROLINA

TEN YEAR CAPITAL IMPROVEMENT PROGRAM

				FY2021 - FY2030									
PROJECT NAME	TOTAL ESTIMATED COST	PROJECT FOOTAGE	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
INTERCEPTORS													
Mud Creek Interceptor Phase II (Fletcher Academy)	\$3,977,670		\$2,741,580	\$300,000									
Mud Creek Interceptor/Extension Phase III (Mtn. Home)	\$4,289,000	9,200						\$334,000	\$1,977,500	\$1,977,500			
South French Broad Relief Interceptor - Costs Apportioned	\$2,343,768			\$234,377	\$234,377	\$234,377	\$234,377	\$234,377	\$234,377	\$234,377	\$234,377	\$234,377	\$234,377
Swannanoa Equalization Tank - Costs Apportioned	\$1,539,375			\$153,938	\$153,938	\$153,938	\$153,938	\$153,938	\$153,938	\$153,938	\$153,938	\$153,938	\$153,938
SUBTOTAL (Without Mud Crk. Ph II)	\$12,149,813			\$688,315	\$388,315	\$388,315	\$388,315	\$722,315	\$2,365,815	\$2,365,815	\$388,315	\$388,315	\$388,315
<i>Inflation per ENR Const. Cost Index</i>	2.90%		1.0000	1.0290	1.0588	1.0895	1.1211	1.1537	1.1871	1.2215	1.2570	1.2934	1.3309
SUBTOTAL with inflation				\$708,276	\$411,164	\$423,088	\$435,357	\$833,304	\$2,808,491	\$2,889,937	\$488,098	\$502,253	\$516,818
GENERAL SEWER REHABILITATION													
General Sewer Rehabilitation Projects (Future)	\$1,800,000				\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Emergency Line Replacements & Repairs	\$500,000			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Line Cleaning & CCTV	\$200,000			\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
SUBTOTAL	\$2,500,000			\$70,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000
<i>Inflation per ENR Const. Cost Index</i>	2.90%		1.0000	1.0290	1.0588	1.0895	1.1211	1.1537	1.1871	1.2215	1.2570	1.2934	1.3309
SUBTOTAL with inflation				\$72,030	\$285,887	\$294,178	\$302,709	\$311,488	\$320,521	\$329,816	\$339,380	\$349,222	\$359,350
TREATMENT PLANT, PUMP STATIONS & GENERAL CAPITAL IMPROVEMENTS													
Carrier Bridge Replacement - Costs Apportioned	\$1,500,000			\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
ITT Pump Station Upgrade	\$988,000	N/A				\$110,000	\$600,000	\$278,000					
Pump Station Upgrades & Equipment	\$200,000			\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Vehicles	\$250,000				\$50,000		\$50,000		\$50,000		\$50,000		\$50,000
SUBTOTAL	\$2,938,000			\$20,000	\$70,000	\$130,000	\$670,000	\$298,000	\$70,000	\$20,000	\$70,000	\$20,000	\$70,000
<i>Inflation per ENR Const. Cost Index</i>	2.90%		1.0000	1.0290	1.0588	1.0895	1.1211	1.1537	1.1871	1.2215	1.2570	1.2934	1.3309
SUBTOTAL with inflation				\$20,580	\$74,119	\$141,641	\$751,167	\$343,790	\$83,098	\$24,431	\$87,988	\$25,868	\$93,165
BUDGET SUMMARY													
Sub-Totals with Inflation				\$800,886	\$771,170	\$858,907	\$1,489,233	\$1,488,582	\$3,212,110	\$3,244,184	\$915,466	\$877,344	\$969,333
<i>Line Extensions/Reimbursements/Developer Projects</i>	\$500,000			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Fiscal Year Totals				\$850,886	\$821,170	\$908,907	\$1,539,233	\$1,538,582	\$3,262,110	\$3,294,184	\$965,466	\$927,344	\$1,019,333
				\$15,127,213									

NOTES:

- 1) Boylston Creek P.S. & Phase 1 Interceptor (\$3,013,000; 12,300LF) and Howard Gap Interceptor (\$5,819,000; 14,300LF) are extensions and will be constructed as potential partnerships become available.
- 2) Mud Creek Ph 2: Full completion expected by June 1, 2020. Original construction contract amount \$3,056,970; \$2,426,067.52 balance as of 8/20/19. WGLA Balance \$72,238.52 as of 8/20/19. \$3,041,580= \$2,741,580 for FY20 + \$300,000 for FY21 is Outstanding Balance Total on expense sheet. See Mud Creek expense sheet for further information and details.
- 3) Project Costs and Prioritization are based on the 2019 CCWSD Basinwide Plan Update 1 (WGLA, September 2019).
- 4) Costs for the SFB Relief Interceptor, Swannanoa EQ Tank, and Carrier Bridge PS are apportioned based on flows from CCWSD at a ratio of 3mgd/40mgd, or 0.075, times the total project cost. This cost is then spread over ten years.

Sources: WGLA Engineering 2019 Basinwide Plan (September 2019, Short and Intermediate Term); Mud Creek Ph. 2 Expense Sheet from Marcus Jones

Business Plan - Current FY20	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.50%	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%	Sewer Rate Increase
	\$29.15	\$29.88	\$30.62	\$31.36	\$32.17	\$32.97	\$33.80	\$34.64	\$35.51	\$36.49	\$37.49	\$38.52	\$39.58	\$40.67	Average Monthly Bill
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Assumptions
July 1- Available for Construction	44,585,099	41,819,146	46,455,838	69,792,374	65,459,390	49,825,911	36,601,452	22,955,916	49,354,762	26,666,485	51,773,588	34,892,240	11,280,151	32,504,757	Minimum of 365 Days Cash on Hands
REVENUE:															Consumption and Account Growth
Domestic Users	29,581,170	30,842,462	31,935,658	32,531,584	33,623,113	34,732,618	35,860,421	37,006,848	38,233,303	39,557,512	41,241,300	42,674,046	44,194,128	45,740,039	0.75% Increase
Industrial Users (No growth)	3,344,074	3,909,925	4,159,767	3,745,625	3,464,402	3,544,137	3,625,866	3,709,637	3,795,503	3,892,317	3,716,793	3,819,005	3,924,028	4,031,939	
Billing and Collections (User Fee)	754,317	768,833	795,574	811,883	832,994	861,327	887,167	913,782	941,195	969,431	998,514	1,028,470	1,059,324	1,091,104	
Tap Fees	526,415	571,126	604,047	500,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	
Facility Fees	5,798,181	6,405,971	4,752,960	4,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
Interest & Non-operating Revenues	207,246	306,110	885,718	1,500,000	1,296,960	972,308	670,020	813,495	950,266	980,501	1,083,323	692,586	656,774	617,036	
City of Asheville (annex.-Enka)	37,146	35,834	34,522	35,000	35,000	35,000	35,000	35,000	35,000	0	0	0	0	0	
Rental Income	78,925	71,399	81,826	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	
Transfer from Reserves (to / from)	430,058	(214,395)	298,619	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous	170,897	138,469	171,097	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	
Total Revenues	40,928,429	42,835,734	43,719,788	43,835,733	41,639,110	42,532,031	43,465,115	44,865,404	46,341,908	47,786,402	49,426,571	50,600,748	52,220,895	53,866,759	
State and Federal (EPA) Grants															
Revenue Bonds/Stimulus			28,003,632					40,000,000		50,000,000			50,000,000		
Total Funds Available	85,513,528	84,654,881	118,179,258	113,628,107	107,098,500	92,357,942	80,066,567	107,821,320	95,696,670	124,452,887	101,200,160	85,492,988	113,501,046	86,371,516	

EXPENSES:															
Operations & Maintenance	14,804,769	14,874,149	15,538,788	16,163,063	16,793,404	17,793,395	18,828,983	19,475,331	20,161,257	20,875,778	21,620,299	22,396,257	23,205,244	23,948,859	
Replacement Funds (WRF & Fleet)	625,000	625,000	660,000	730,000	750,000	830,000	830,000	860,000	865,000	865,000	865,000	865,000	865,000	865,000	
Debt Service	9,003,519	7,918,557	9,423,689	9,448,115	9,834,367	9,837,382	9,823,943	8,899,361	11,394,314	11,366,407	14,737,511	14,731,468	14,730,209	18,269,556	
CIP (including Bond Projects)	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,295,713	27,627,726	29,231,865	36,609,614	39,572,114	29,085,110	36,220,112	42,195,835	34,657,129	
Total Expenses	43,694,382	38,199,043	48,386,884	48,168,717	57,272,589	55,756,490	57,110,652	58,466,557	69,030,185	72,679,299	66,307,920	74,212,837	80,996,288	77,740,544	
Pay-as-you-go (Current Revenue only)	17,120,141	20,043,028	18,757,311	18,224,555	15,011,339	14,901,254	14,812,190	16,490,711	14,786,337	15,544,217	13,068,762	13,473,023	14,285,441	11,648,344	
Debt Coverage (User Fees only)	2.1	2.6	2.3	2.2	2.2	2.2	2.2	2.5	2.0	2.1	1.7	1.7	1.8	1.5	
Debt Coverage with Total Revenue	2.9	3.5	3.0	2.9	2.5	2.5	2.5	2.8	2.3	2.4	1.9	1.9	2.0	1.6	

Active Plan CIP	10-Year Capital Improvement Program														
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	
Interceptor/Wet Weather Rehabilitation	618,050	760,970	1,726,500	1,366,293	5,514,370	3,753,278	746,748	2,113,722	18,902,492	23,191,399	12,939,537	9,387,533	50,907	1,606,294	
General Sewer Rehabilitation	9,104,792	8,859,631	13,213,448	10,377,703	8,085,700	10,618,946	12,918,178	12,632,866	7,770,707	9,847,432	9,444,616	10,797,557	15,611,101	13,530,041	
Private Sewer Rehabilitation	2,000	646,000	51,200	0	6,500	84,275	294,834	20,700	2,179,841	0	0	0	0	0	
Treatment Plant / Pump Stations	7,181,959	1,868,250	5,291,691	7,112,321	11,756,250	9,874,284	10,628,646	11,348,726	4,561,936	3,193,324	3,285,930	12,542,771	22,962,227	15,867,633	
Engineering Force Account	2,254,293	2,546,486	2,481,568	2,705,222	2,795,998	2,864,930	2,939,320	3,015,851	3,094,638	3,239,959	3,315,027	3,392,251	3,471,600	3,553,161	
Reimbursements	100,000	100,000	0	266,000	736,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	
Contingency	0	0	0	0	1,000,000										
Capital Improvement Program Totals	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,295,713	27,627,726	29,231,865	36,609,614	39,572,114	29,085,110	36,220,112	42,195,835	34,657,129	

Bond Issues figured at:
4.0% yield FY23
4.5% yield FY25
5.0% yield FY28

3% inflation in O & M, Replacement Funds and Engineering Force Account

ENR 10-year Construction Index @ 2.90%

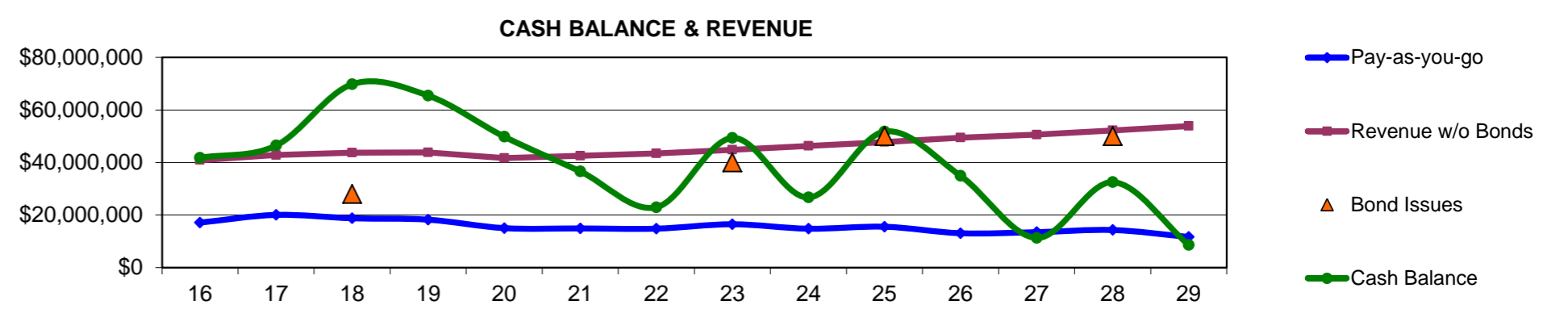
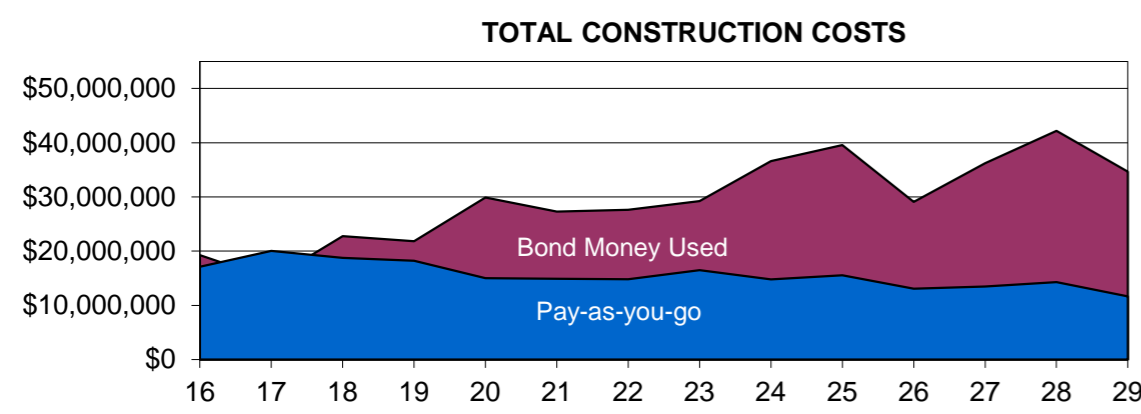
General Sewer Rehab to cover approx. 45,000 lineal ft / year

Target Debt Coverage 1.5

No growth in Industries - Rate Parity for Flow in 2020

District 10yr CIP \$332.4 Million

District total 10yr Budget \$669.2 Million



Business Plan MSD with Cane Creek FY20	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.50%	2.50%	2.75%	2.75%	2.75%	2.75%	2.75%	Sewer Rate Increase
	\$29.15	\$29.88	\$30.62	\$31.36	\$32.17	\$32.97	\$33.80	\$34.64	\$35.51	\$36.49	\$37.49	\$38.52	\$39.58	\$40.67	Average Monthly Bill
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Assumptions
July 1- Available for Construction	44,585,099	41,819,146	46,455,838	69,792,374	65,459,390	52,643,825	39,164,766	25,376,552	51,557,766	28,030,191	53,207,426	33,760,288	7,491,990	28,363,638	Minimum of 365 Days Cash on Hands
REVENUE:															
Domestic Users	29,581,170	30,842,462	31,935,658	32,531,584	33,981,781	35,103,010	36,242,920	37,401,850	38,641,216	39,979,787	41,678,442	43,126,578	44,662,592	46,224,995	Consumption and Account Growth 0.75% Increase
Industrial Users (No growth)	3,344,074	3,909,925	4,159,767	3,745,625	3,464,402	3,911,772	4,002,691	4,095,884	4,191,406	4,299,107	4,134,770	4,248,476	4,365,309	4,485,355	
Billing and Collections (User Fee)	754,317	768,833	795,574	811,883	832,994	861,327	887,167	913,782	941,195	969,431	998,514	1,028,470	1,059,324	1,091,104	
Tap Fees	526,415	571,126	604,047	500,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000	
Facility Fees	5,798,181	6,405,971	4,752,960	4,500,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
Interest & Non-operating Revenues	207,246	306,110	885,718	1,500,000	1,296,960	1,032,847	726,090	865,511	994,849	1,015,470	1,087,096	618,784	537,834	488,234	
City of Asheville (annex.-Enka)	37,146	35,834	34,522	35,000	35,000	35,000	35,000	35,000	35,000	0	0	0	0	0	
Rental Income	78,925	71,399	81,826	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	71,641	
Transfer from Reserves (to / from)	430,058	(214,395)	298,619	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous	170,897	138,469	171,097	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	
Total Revenues	40,928,429	42,835,734	43,719,788	43,835,733	41,997,778	43,330,597	44,280,509	45,698,668	47,190,307	48,650,436	50,285,463	51,408,949	53,011,700	54,676,329	
State and Federal (EPA) Grants															
Revenue Bonds/Stimulus			28,003,632					40,000,000		50,000,000			50,000,000		
Total Funds Available	85,513,528	84,654,881	118,179,258	113,628,107	107,457,168	95,974,422	83,445,275	111,075,220	98,748,073	126,680,627	103,492,889	85,169,237	110,503,691	83,039,966	
EXPENSES:															
Operations & Maintenance	14,804,769	14,874,149	15,538,788	16,163,063	16,793,404	18,193,395	19,240,983	19,899,691	20,598,348	21,325,982	22,084,009	22,873,878	23,697,194	24,455,567	
Replacement Funds (WRF & Fleet)	625,000	625,000	660,000	730,000	750,000	830,000	830,000	860,000	865,000	865,000	865,000	865,000	865,000	865,000	
Debt Service	9,003,519	7,918,557	9,423,689	9,448,115	9,834,367	10,177,977	10,087,160	9,155,305	11,644,002	11,609,839	14,974,687	14,962,388	14,954,873	18,487,964	
CIP (including Bond Projects)	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,608,284	27,910,581	29,602,457	37,610,532	39,672,381	31,808,905	38,975,981	42,622,986	35,046,158	
Total Expenses	43,694,382	38,199,043	48,386,884	48,168,717	57,272,589	56,809,656	58,068,724	59,517,453	70,717,882	73,473,202	69,732,601	77,677,247	82,140,053	78,854,689	
Pay-as-you-go (Current Revenue only)	17,120,141	20,043,028	18,757,311	18,224,555	15,370,007	14,959,225	14,952,367	16,643,671	14,947,957	15,714,615	13,226,768	13,572,683	14,359,633	11,732,798	
Debt Coverage (User Fees only)	2.1	2.6	2.3	2.2	2.2	2.1	2.2	2.5	2.0	2.1	1.7	1.7	1.8	1.5	
Debt Coverage with Total Revenue	2.9	3.5	3.0	2.9	2.5	2.5	2.5	2.8	2.3	2.3	1.9	1.9	2.0	1.6	

Bond Issues figured at:
4.0% yield FY23
4.5% yield FY25
5.0% yield FY28

3% inflation in O & M,
Replacement Funds and
Engineering Force Account

ENR 10-year Construction Index
@ 2.90%

General Sewer Rehab to cover
approx. 45,000 lineal ft / year

Target Debt Coverage 1.5

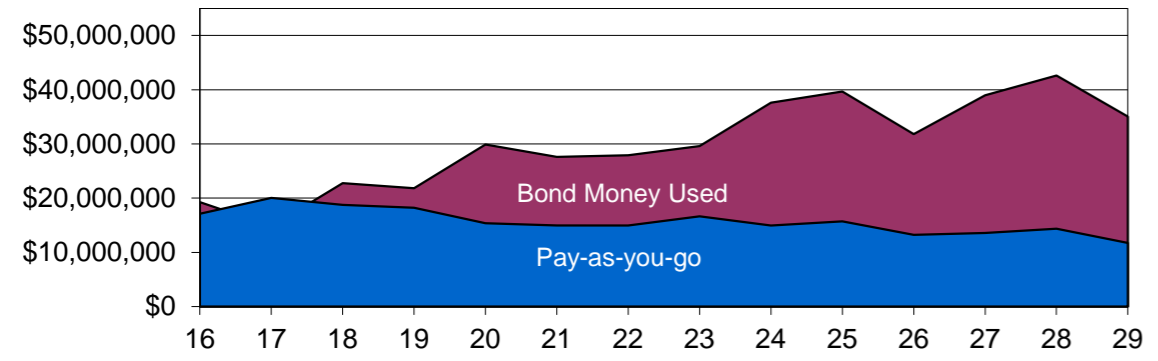
No growth in Industries -
Rate Parity for Flow in 2020

District 10yr CIP
\$340.8 Million
District total 10yr Budget
\$684.3 Million

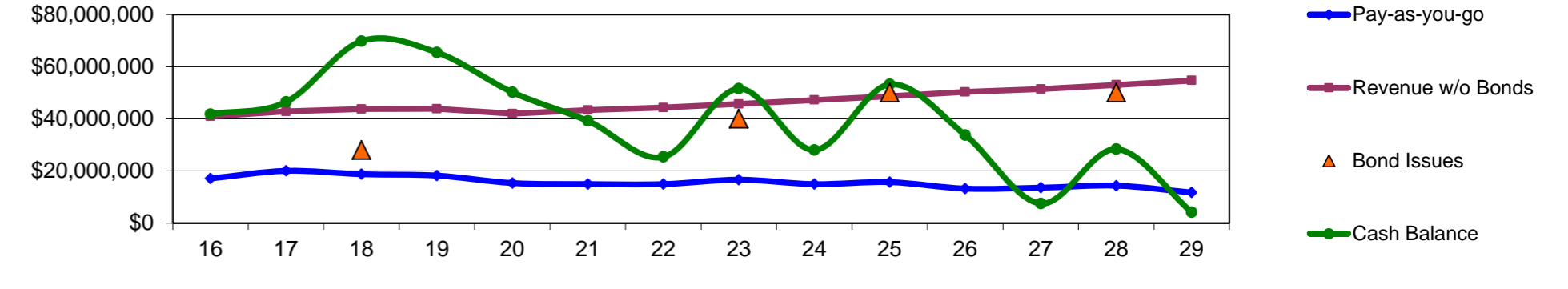
October 7, 2019

Active Plan CIP	10-Year Capital Improvement Program													
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Interceptor/Wet Weather Rehabilitation	618,050	760,970	1,726,500	1,366,293	5,514,370	3,753,278	746,748	2,113,722	18,902,492	23,191,399	12,939,537	9,387,533	50,907	1,606,294
General Sewer Rehabilitation	9,104,792	8,859,631	13,213,448	10,377,703	8,085,700	10,931,517	13,201,033	13,003,458	8,771,625	9,947,699	12,168,411	13,553,426	16,038,252	13,919,070
Private Sewer Rehabilitation	2,000	646,000	51,200	0	6,500	84,275	294,834	20,700	2,179,841	0	0	0	0	0
Treatment Plant / Pump Stations	7,181,959	1,868,250	5,291,691	7,112,321	11,756,250	9,874,284	10,628,646	11,348,726	4,561,936	3,193,324	3,285,930	12,542,771	22,962,227	15,867,633
Engineering Force Account	2,254,293	2,546,486	2,481,568	2,705,222	2,795,998	2,864,930	2,939,320	3,015,851	3,094,638	3,239,959	3,315,027	3,392,251	3,471,600	3,553,161
Reimbursements	100,000	100,000	0	266,000	736,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Contingency	0	0	0	0	1,000,000									
Capital Improvement Program Totals	19,261,094	14,781,337	22,764,407	21,827,539	29,894,818	27,608,284	27,910,581	29,602,457	37,610,532	39,672,381	31,808,905	38,975,981	42,622,986	35,046,158

TOTAL CONSTRUCTION COSTS

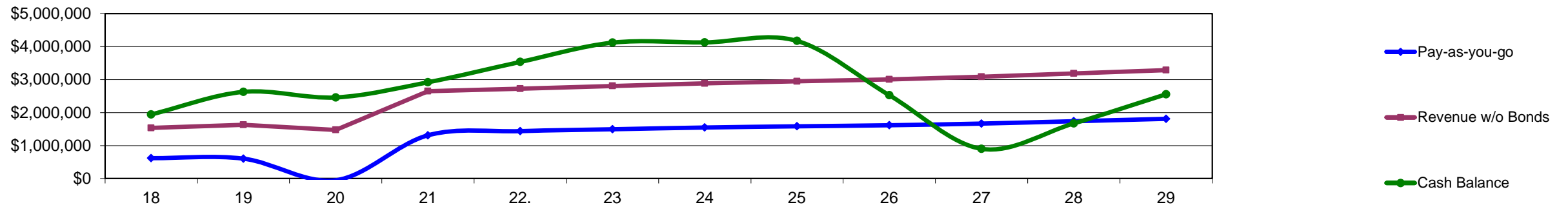


CASH BALANCE & REVENUE



FY20 Business Plan Cane Creek WSD - Only	2.50%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.75%	2.75%	2.75%	2.75%	Sewer Rate Increase
	\$38.97	\$39.52	\$40.12	\$32.97	\$33.80	\$34.64	\$35.51	\$36.49	\$37.49	\$38.52	\$39.58	\$40.67	Average Monthly Bill	
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Assumptions	
July 1- Available for Construction	1,976,978	1,944,086	2,628,442	2,459,246	2,919,907	3,535,807	4,121,199	4,128,913	4,173,956	2,527,432	899,860	1,671,947	365 Days cash on hand	
REVENUES:														
Domestic Users														No Consumption and Account Growth
Cane Creek Domestic User Fees	1,513,162	1,602,025	1,456,893											
Domestic Users - Cane Creek				1,500,000	1,537,500	1,575,938	1,615,336	1,655,719	1,701,252	1,748,036	1,796,107	1,845,500		
Industrial Users - Cane Creek				696,000	713,400	731,235	749,516	768,254	789,381	811,089	833,394	856,312		
Facility Fees - Cane Creek				50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000		
Interest & Non-operating Revenues	19,928	26,752	10,000	43,340	57,495	72,761	83,747	78,038	59,822	59,548	78,035	97,293		
Cane Creek Meter Revenue				358,668	367,635	376,826	386,246	395,902	406,790	417,976	429,471	441,281		
Miscellaneous			6,000											
Total Revenues	1,533,090	1,628,777	1,472,893	2,648,008	2,726,029	2,806,759	2,884,845	2,947,914	3,007,244	3,086,649	3,187,007	3,290,386	\$2.4 million cash toward CIP	
Grants/Donation		202,985	1,020,000										3% inflation in O & M	
Installment Loan		765,191	1,997,809											
Total Funds Available	3,510,068	4,541,039	7,119,144	5,107,255	5,645,936	6,342,566	7,006,045	7,076,827	7,181,200	5,614,081	4,086,867	4,962,332	Target Debt Coverage 1.5	
EXPENDITURES:														
Cane Creek O & M	795,709	886,581	1,139,393	995,867	1,025,743	1,056,515	1,088,211	1,120,857	1,154,483	1,189,117	1,224,791	1,261,534	Cane Creek CIP - 10 YR \$17,242,691	
Cane Creek Debt Service	119,193	139,618	385,696	340,595	263,217	255,944	249,688	243,432	237,176	230,920	224,664	218,408		
CIP (including Bond Projects)	651,080	886,398	3,134,809	850,886	821,170	908,907	1,539,233	1,538,582	3,262,110	3,294,184	965,466	927,344	MSD pays off existing debt of \$2.7 million	
Total Expenses	1,565,982	1,912,597	4,659,898	2,187,348	2,110,130	2,221,366	2,877,132	2,902,871	4,653,769	4,714,221	2,414,921	2,407,286		
Pay-as-you-go (Current Revenue only)	618,188	602,578	(52,196)	1,311,547	1,437,070	1,494,300	1,546,947	1,583,625	1,615,586	1,666,612	1,737,552	1,810,444	1 employee coming over through merger.	
Debt Coverage (User Fees only)	6.0	5.1	0.8	4.6	6.1	6.4	6.7	7.0	7.3	7.7	8.2	8.6		
Debt Coverage with Total Revenue	6.2	5.3	0.9	4.9	6.5	6.8	7.2	7.5	7.8	8.2	8.7	9.3		
October 3, 2019	10-Year Capital Improvement Program													
Active Plan CIP	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029		
Cane Creek CIP	651,080	886,398	3,134,809	850,886	821,170	908,907	1,539,233	1,538,582	3,262,110	3,294,184	965,466	927,344		
Capital Improvement Program Totals	651,080	886,398	3,134,809	850,886	821,170	908,907	1,539,233	1,538,582	3,262,110	3,294,184	965,466	927,344		

CASH BALANCE & REVENUE



STATUS REPORTS

**MSD System Services In-House Construction
FY 19-20**

PROJECT NAME	LOCATION	ZIP CODE	ESTIMATED FOOTAGE	ESTIMATED PROJECT DATES	WO#	CREW	COMPLETION DATE	ACTUAL FOOTAGE	NOTES
Saint Johns Street Force Main Replacement	Arden	28704	1040	6/10/19-7/5/19	238516	631	7/1/2019	1048	Complete
Brown Avenue at Elk Mtn Rd	Woodfin	28804	484	7/6/19 - 7/17/19	252976	631	7/17/2019	500	Complete
324 Brooklyn Road Sewer Rehabilitation	Asheville	28803	100	7/18/19-7/19/19	258462	631	7/19/2019	85	Complete
Tried Street Sewer Rehab	Asheville	28803	100	7/20/19 - 7/28/19	263127	631	7/25/2019	86	Complete
415 Chunns Cove Road at Willow Ridge Sewer Rehabilitation	Asheville	28805	100	8/1/19 - 8/8/19	258463	631	8/2/2019	100	Complete
106 Seventh St Sewer Rehabilitation	Black Mountain	28711	200	8/9/19 - 8/20/19	225198	631	8/13/2019	200	Complete
122 Wendover Road Sewer Rehabilitation	Asheville	28806	113	8/14/19 - 8/16/19	258561	631	8/16/2019	112	Complete
2 Spartan Avenue Sewer Replacement	Asheville	28806	110	8/14/2019	264550	614	8/14/2019	110	Complete
Riverside Drive @ Vine Street	Woodfin	28804	220	8/19/19 - 8/21/19	264742	631	8/21/2019	220	Complete
Barnard Avenue at Lookout Sewer Rehabilitation	Asheville	28804	200	8/22/19 - 8/27/19	236089	631	8/27/2019	205	Complete
Waynensville Avenue at Brownwood	Asheville	28806	798	6/24/19 - 8/31/19	247283	674	8/30/2019	698	Complete
Lower Melody Lane Sewer Rehabilitation	Asheville	28803	694	8/28/19 - 10/1/19	256882	631	9/27/2019	667	Complete
149 State Street Sewer Rehabilitation	Asheville	28806	265	9/1/19 - 9/20/19	237791	674	9/24/2019	233	Complete
15 New Jersey Sewer Rehabilitation	Asheville	28806	250	9/21/19 - 10/7/19	238782	674			Construction 90% complete
Old Haw Creek Road at Dillingham Road Phase I	Asheville	28805	419	10/2/19 - 11/1/19	385247	631			Construction just underway
East Grovestone Quarry Sewer Rehabilitation	Black Mountain	28711	780	10/21/19-12/15/19	213459	674			Ready for construction
28 Mayflower Drive Sewer Replacement	Asheville	28804	272	11/2/19 - 11/15/19	265101	631			Ready for construction
12 Mayflower Drive Sewer Rehabilitation	Asheville	28804	279	11/16/19 - 12/1/19	247347	631			Ready for construction
Sarvena Place	Asheville	28804	160	12/2/19 - 12/15/19	262466	631			Ready for construction
217 Mountain View Road Sewer Rehabilitation Ph. 2	Asheville	28805	483	FY 19-20	260470	TBA			Ready for construction
Starnes Avenue at Broadway Street	Asheville	28801	400	FY 19-20	208325	TBA			Ready for construction
154 Overbrook Road	Montreat	28757	470	FY 19-20	264010	TBA			Ready for construction
72 Dillingham Road	Asheville	28805	234	FY 19-20	39327	TBA			In ROW
332 Wilson Avenue	Swannanoa	28778	235	FY 19-20	210202	TBA			In ROW
111 Compton Drive	Asheville	28806	360	FY 19-20	228741	TBA			In ROW
28 Woodward Avenue Sewer Rehabilitation	Asheville	28804	660	FY 19-20	249386	TBA			In Design
Brucemont Circle Phase 2 Sewer Rehabilitation	Asheville	28806	913	FY 19-20	256883	TBA			In Design
Lakewood Drive at Waverly Road Sewer Rehabilitation	Asheville	28803	1350	FY 19-20	258770	TBA			In Design
Coleman Avenue at Conestee	Asheville	28801	1490	FY 19-20	233875	TBA			In Design
Holiday Dr. at Sweeten Creek Rd. Sewer Rehabilitation	Arden	28704	730	FY 19-20	258461	TBA			Preliminary Engineering
48 Clarendon Road Sewer Rehabilitation	Asheville	28806	500	FY 19-20	258562	TBA			Preliminary Engineering
Antique Lane to Colters Path Sewer Rehabilitation	Asheville	28806	1600	FY 19-20	258821	TBA			Preliminary Engineering
Daniel Road to Starnes Cove Place Sewer Rehabilitation	Asheville	28806	879	FY 19-20	258822	TBA			Preliminary Engineering
Moss Lane at Cedar Lane Sewer Rehabilitation	Arden	28704	911	FY 19-20	258823	TBA			Preliminary Engineering
Sweeten Creek Rd At Carrington Pl Sewer Rehabilitation	Arden	28704	1232	FY 19-20	258825	TBA			Preliminary Engineering



CONSTRUCTION TOTALS BY DATE COMPLETED - Monthly

From 7/1/2019 to 8/31/2019

	Dig Ups	Emergency Dig Ups	Dig Up ML Ftg	Dig Up SL Ftg	Manhole Repairs	Taps Installed	ROW Ftg	IRS Rehab Ftg *	Const Rehab Ftg *	D-R Rehab Ftg *	Manhole Installs	Bursting Rehab Ftg *	Total Rehab Ftg *
July 2019	25	12	163	718	27	24	12,239	0	24	606	10	1,121	1751
August 2019	32	6	138	488	27	28	2,615	0	110	1543	12	0	1653
Grand Totals	57	18	301	1,206	54	52	14,854	0	134	2149	22	1,121	3404

* Used to calculate Total Rehab Footage



PIPELINE MAINTENANCE TOTALS BY DATE COMPLETED - Monthly

July 01, 2019 to August 31, 2019

	Main Line Wash Footage	Service Line Wash Footage	Rod Line Footage	Cleaned Footage	CCTV Footage	Smoke Footage	SL-RAT Footage
2019							
July	89,420	739	8,930	98,350	21,980	325	17,474
August	100,227	1,060	1,520	101,747	20,013	2,700	6,860
Grand Total:	189,647	1,799	10,450	200,097	41,993	3,025	24,334
Avg Per Month:	94,824	900	5,225	100,049	20,996	1,513	12,167



CUSTOMER SERVICE REQUESTS

Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
DAY 1ST RESPONDER				
	July, 2019	108	25	35
	August, 2019	85	23	41
		193	24	38
NIGHT 1ST RESPONDER				
	July, 2019	13	24	15
	August, 2019	18	25	20
		31	24	18
ON-CALL CREW *				
	July, 2019	41	41	37
	August, 2019	29	34	30
		70	38	34
Grand Totals:		294	28	35

* On-Call Crew Hours: 8:00pm-7:30am Monday-Friday, Weekends, and Holidays

CAPITAL IMPROVEMENT PROGRAM

STATUS REPORT SUMMARY

October 9, 2019

PROJECT	LOCATION OF PROJECT	CONTRACTOR	AWARD DATE	NOTICE TO PROCEED	ESTIMATED COMPLETION DATE	*CONTRACT AMOUNT	*COMPLETION STATUS (WORK)	COMMENTS
AVERY CREEK PUMP STATION IMPROVEMENTS	Arden 28704	NHM Constructors	11/21/2018	5/2/2019	10/1/2019	\$532,674.25	100%	Project is complete and in close out.
BEAUCATCHER ROAD @ KENILWORTH ROAD PHASE 1	Asheville 28805	Terry Brothers Construction Company	1/16/2019	6/24/2019	10/22/2019	\$171,908.00	40%	Work is progressing well.
BEAUCATCHER ROAD @ KENILWORTH ROAD PHASE 2	Asheville 28805	Terry Brothers Construction Company	7/17/2019	10/14/2019	1/12/2020	\$334,779.00	0%	Contractor is working on Phase 1.
KENILWORTH ROAD @ SPRINGDALE ROAD	Asheville 28805	Terry Brothers Construction Company	1/16/2019	6/24/2019	10/22/2019	\$252,324.00	98%	Mainline work is complete. Restoration and paving are all that remains.
MULL BUILDING HVAC PHASE 1	Woodfin	Pyatt Heating & Air Conditioning	8/21/2019	11/1/2019	1/31/2020	\$186,338.00	0%	A preconstruction meeting was held on September 25th. Submittals are being reviewed.
MULL BUILDING IT BACKUP GENERATOR	Woodfin	MB Haynes	9/10/2019	10/7/2019	2/4/2020	\$120,700.00	0%	A preconstruction meeting was held on September 25th. Submittals are being reviewed.
OLD HAW CREEK ROAD @ GREENBRIAR ROAD	Asheville 28805	Terry Brothers Construction Company	1/16/2019	4/15/2019	10/30/2019	\$821,552.00	99%	Paving is complete, ready for final inspection.
SOUTH FRENCH BROAD INTERCEPTOR LINING (FY 19-20)	Biltmore	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on September 26th. Project will be presented at the October Board meeting.
TOWN BRANCH INTERCEPTOR LINING	Asheville 28801	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on September 26th. Project will be presented at the October Board meeting.
WEAVERVILLE FORCE MAIN @ PLANT	Woodfin	Terry Brothers Construction Company	7/17/2019	11/4/2019	7/1/2020	\$2,188,114.10	0%	Submittals are being reviewed.
WRF- PLANT HIGH RATE PRIMARY TREATMENT	Woodfin	Shook Construction Company	10/17/2018	1/7/2019	12/31/2020	\$15,071,000.00	20%	Pouring last two slab sections at clarifier.

***Updated to reflect approved Change Orders and Time Extensions**

Planning & Development Project Status Report

Active Construction Projects Sorted by Work Location and Project Number

October 1, 2019

Project Name	Project Number	Work Location	Zip Code	Units	LF	Pre-Construction Conference Date	Comments
First Baptist Relocation	2015032	Asheville	28801	Comm.	333	7/21/2015	Final Inspection complete, awaiting close-out docs
8 Sulphur Springs Road	2015116	Asheville	28806	6	80	11/22/2016	Final Inspection complete, awaiting close-out docs
Towne Place Suites	2016012	Asheville	28801	83	342	9/11/2018	Installing
88 Southside Ave Phase 2	2016015	Asheville	28801	18	400	2/21/2017	Phase 2 not yet started
Hounds Ear (Mears Ave Cottages)	2016123	Asheville	28806	18	402	8/18/2017	Pre-con held, construction not yet started
Lausch Subdivision	2016153	Asheville	28805	4	248	5/16/2017	Final Inspection complete, awaiting close-out docs
Hawthorne at Mills Gap	2016222	Asheville	28803	272	442	10/3/2017	Waiting on final inspection
Ashcroft	2016229	Asheville	28806	40	2,450	2/20/2018	Phase 1 - Final complete, awaiting close-out docs / Phase 2 - on hold
Hotel Milan	2017003	Asheville	28805	112	24	9/20/2019	Pre-con held, construction not yet started
Gerber Road Storage	2017049	Asheville	28803	Comm.	156	2/9/2018	Final Inspection complete, awaiting close-out docs
RADTIP	2017052	Asheville	28801	0	919	2/13/2018	Installing
White Oak Grove	2017053	Asheville	28801	114	1,185	6/28/2019	Installing
Rock Hill Road	2017096	Asheville	28803	15	990	7/24/2018	Waiting on final inspection
McCormick Place	2017150	Asheville	28801	17	210	8/3/2018	Waiting on final inspection
Wanoca Cottages	2017214	Asheville	29903	15	378	3/26/2019	Waiting on final inspection
Hawthorne Apartments @ Haywood	2017225	Asheville	28806	240	1,604	10/19/2018	Waiting on Final Inspection
17 N. Market Street	2017238	Asheville	28801	16	256	5/10/2019	Pre-con held, construction not yet started
Fernwood Avenue	2017251	Asheville	28806	3	368	10/30/2018	Final Inspection complete, awaiting close-out docs
Biltmore Terrace Ph. 3	2018000	Asheville	28803	15	294	7/16/2019	Testing
US 74 Commercial Development	2018010	Asheville	28803	4	265	5/25/2018	Pre-con held, construction not yet started
Alice Place Subdivision	2018066	Asheville	28803	19	480	6/19/2018	Final Inspection complete, awaiting close-out docs
Oakview Park Road	2018072	Asheville	28803	3	230	1/29/2019	Pre-con held, construction not yet started
Old Haywood Subdivision Phase 1	2018073	Asheville	28806	79	1,770	3/19/2019	Pre-con held, construction not yet started
Fern Street	2018081	Asheville	28803	8	60	2/15/2019	Testing
Lee Walker Heights - Renewal	2018126	Asheville	28801	116	1,755	10/1/2019	Pre-con held, construction not yet started
Le An Hurst Road	2018127	Asheville	28803	5	245	3/22/2019	Final Inspection complete, awaiting close-out docs
Tru by Hilton	2018131	Asheville	28805	1	248	1/25/2019	Waiting on final inspection
Hamrick Farms	2018133	Asheville	28715	69	3,483	8/30/2019	Pre-con held, construction not yet started
Grove Park Views	2018239	Asheville	28801	7	150	2/19/2019	Waiting on final inspection
Habitat - Old Haywood Road	2018258	Asheville	28806	38	1,355	8/20/2019	Installing
Joyner Avenue	2018264	Asheville	28801	4	215	6/4/2019	Waiting on final inspection
UNC-A Edgewood Road Parking Lot	2019078	Asheville	28801	Comm.	373	7/19/2019	Installing
100 Airport Road Sewer Relocation	2019125	Asheville	28704	Comm.	548	8/23/2019	Installing
West Keesler Avenue	2007176	Black Mountain	28711	6	410	11/15/2016	Final Inspection complete, awaiting close-out docs
808 Montreat Road	2015126	Black Mountain	28711	4	371	4/18/2017	Final Inspection complete, awaiting close-out docs
Avadim	2017001	Black Mountain	28711	Comm.	2,286	1/11/2019	Installing
Sweet Birch Lane	2017111	Black Mountain	28711	65	780	9/28/2018	Final Inspection complete, awaiting close-out docs
Chapman's Cove	2017227	Black Mountain	28711	10	430	9/21/2018	Final Inspection complete, awaiting close-out docs
White Oak Circle	2018197	Black Mountain	28711	4	330	10/30/2018	Installing
402 Blue Ridge Road	2018206	Black Mountain	28711	6	372	2/5/2019	Pre-con held, construction not yet started
Givens Highland Farms-Cottage Development	2018272	Black Mountain	28711	16	1,355	9/13/2019	Installing
Padgettstown Road - Phase 1	2019003	Black Mountain	28711	6	240	7/19/2019	Ready for testing
Padgettstown Road - Phase 2	2019085	Black Mountain	28711	43	1,308	7/19/2019	Pre-con held, construction not yet started
Hyde Park Phase 2	2013058	Buncombe Co.	28704	14	500	12/3/2013	Waiting on final inspection
Creekside Cottages	2014095	Buncombe Co.	28704	7	504	3/12/2015	Waiting on final inspection
Avondale Subdivision	2015052	Buncombe Co.	28803	4	215	4/7/2017	Final Inspection complete, awaiting close-out docs
Waightstill Mountain Phase 2B	2015155	Buncombe Co.	28704	16	1,784	4/23/2019	Installing
Bee Tree Village	2015158	Buncombe Co.	28778	26	1,118	3/17/2017	Waiting on final inspection
NCDOT I-5504 NC 191/I-26 Interchange	2016132	Buncombe Co.	28806	0	355	10/23/2017	In Construction
Bradley Branch Phase 4A	2016189	Buncombe Co.	28704	27	2,420	5/10/2019	Installing
Villas of Avery Creek	2017068	Buncombe Co.	28704	270	3,170	9/18/2018	Waiting on final inspection
ABCCM	2017083	Buncombe Co.	28806	60	4,069	12/4/2018	Off-site portion has been installed, on-site in progress
240 Old Farm School Road	2017112	Buncombe Co.	28805	4	340	2/9/2018	Final Inspection complete, awaiting close-out docs
Glenn Bridge Meadows	2017151	Buncombe Co.	28704	30	1,692	7/19/2019	Testing
Sweetgrass Apartments	2018015	Buncombe Co.	28704	270	1,090	4/12/2019	Installing
Fields BMW	2018022	Buncombe Co.	28704	3	490	10/9/2018	Final Inspection complete, awaiting close-out docs
The Ramble Block 1	2018050	Buncombe Co.	28803	39	7,316	12/4/2018	Testing
Upper Grassy Branch Road	2018087	Buncombe Co.	28805	6	250	8/31/2018	Waiting on final inspection
Starnes Cove Subdivision	2018106	Buncombe Co.	28806	14	315	9/6/2019	Pre-con held, construction not yet started
412 Ridge Street	2018111	Buncombe Co.	28715	4	275	5/7/2019	Waiting on final inspection
Bee Tree Road	2018115	Buncombe Co.	28778	6	240	12/18/2018	Final Inspection complete, awaiting close-out docs
New Riparian	2018156	Buncombe Co.	28778	5	275	9/28/2018	Final Inspection complete, awaiting close-out docs
Cedar Lane	2018164	Buncombe Co.	28704	9	145	3/22/2019	Pre-con held, construction not yet started
Fountain Park Subdivision	2018167	Buncombe Co.	28806	240	8,023	7/12/2019	Installing
Blake Ct.	2018174	Buncombe Co.	28704	5	307	7/30/2019	Waiting on final inspection
The Preserve at Avery's Creek Phase 2	2018188	Buncombe Co.	28704	141	4,000	6/16/2017	Final Inspection complete, awaiting close-out docs
East Haven Apartments	2018198	Buncombe Co.	28778	95	34	7/30/2019	Ready for testing
Reserve at Gashes Creek	2018208	Buncombe Co.	28803	190	1,940	8/2/2019	Installing
Biltmore Lake Block I-4	2018226	Buncombe Co.	28715	27	1,770	3/12/2019	Waiting on final inspection
Roberts Relocation	2018250	Buncombe Co.	28803	1	340	7/19/2019	Final Inspection complete, awaiting close-out docs
44 Central Ave	2017107	Weaverville	28787	7	275	10/27/2017	Final Inspection complete, awaiting close-out docs
Ambler's Chase	2017249	Weaverville	28787	21	1,235	11/29/2018	Testing
Northridge Commons Townhomes	2018082	Weaverville	28787	53	1,380	4/9/2019	Pre-con held, construction not yet started
Maple Trace Ph. 4	2018214	Weaverville	28787	35	1,265	5/24/2019	Testing
Crest Mountain Phase 3B	2013041	Woodfin	28806	69	1,329	10/15/2013	Punchlist pending, awaiting closeout documents (roadwork remaining)
Reese & Jan Lasher (High Hopes)	2015542	Woodfin	28806	14	320	4/26/2016	Final Inspection complete, awaiting close-out docs
Olivette Development-Phase 1 Gravity	2016065	Woodfin	28804	356	1,155	3/29/2018	Working on punchlist items
Olivette Pump Station/Force Main	2016213	Woodfin	28804	356	1,740	2/27/2018	Working on punchlist items
Apple Lane	2017130	Woodfin	28804	4	60	8/31/2018	Installing
88 North Merrimon Avenue	2017196	Woodfin	28804	Comm.	455	5/11/2018	Waiting on final inspection
Olivette Gravity Phase 2	2018116	Woodfin	28804	94	12,406	11/27/2018	Installing
Skyfin-Terraces at Reynolds Mtn -Phase 3&4	2018187	Woodfin	28804	22	845	8/8/2017	Waiting on final inspection and phasing
Brown Avenue	2018267	Woodfin	28804	3	62	7/2/2019	Waiting for testing
French Broad River Academy for Girls	2019151	Woodfin	28804	Comm.	20	9/13/2019	Pre-con held, construction not yet started
		TOTAL		4,048	95,664		