

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
August 17, 2016

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 2pm Wednesday, August 17, 2016. Chairman VeHaun presided with the following members present: Ashley, Belcher, Bryson, Collins, Creighton, Frost, Kelly, Pelly, Root and Wisler.

Others present were: Thomas E. Hartye, PE, General Manager; William Clarke, General Counsel; Forrest Westall with McGill Associates; Dave Collins, CDM; Jade Dundas, City of Asheville Water Resources; Joseph Martin with Woodfin Sanitary Water & Sewer District; Scott Powell, Ed Bradford, Hunter Carson, Matthew Walter, Pam Thomas, Peter Weed, Mike Stamey, Ken Stines and Pam Nolan, 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 July 20, 2016 Board Meeting:

Mr. Vahaun asked if there were any changes to the Minutes of the July 20, 2016 Board Meeting. Ms. Wisler 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 Joseph Martin from Woodfin Sanitary Water & Sewer District, Dave Collins with CDM and Jade Dundas from City of Asheville Water Resources. There was no discussion or public comment.

6. Report of General Manager:

Mr. Hartye stated that attached to the General Managers Report is the FY 17 Budget/Rate Synopsis. This is a Board level synopsis with bulleted items and graphs for your use to answer questions you may be asked about rates and budget items. The main bullet point of the \$47,009,663.00 budget is that 64 % is construction related between CIP and Debt Service associated with CIP. Mr. Hartye stated that this condenses a lot of material down to a page or two.

Mr. Hartye reported that Martha Weaver of Deanwood Circle called expressing appreciation for Mike Rice coming out promptly the previous night. He was very prompt and answered all of the questions she had.

Mr. Hartye reported that Jade Dundas of the City of Asheville was present to speak to the Board regarding the City's rates and billing cycle. The City typically raises rates starting July 1 but they are on a two month billing cycle. They have had some customer requests along the lines of making adjustments to the billing so that it reflects the rate change and usage starting after July 1 for the May and June usage. As a result of that the City is going to have a grace period on billing from September 1 to November 1 to adjust it to the FY 16 rate just for that 60 day period to make up for the lag in billing time. The District has been asked if it is willing to follow suit to do the same. Staff has looked at this, the impact is minimal and it would probably be in the District's best interest to follow suit. MSD typically leaves the billing end of things to the policy of our member agencies. Not all agencies have the exact same policies. For this case we think it would be best to follow suit with the City of Asheville. Mr. Hartye stated that he wanted to get a head nod from the Board or see if the Board would rather take this on in a different way. Mr. Vahaun asked if there were any comments from the Board. Mr. Pelly asked if the rate increase that started July 1 would have applied to the service of the previous two months but now, wait two months and have it apply to the service July 1. Mr. Hartye stated that as he understood it The City of Asheville hasn't resolved the issue permanently yet. Mr. Dundas spoke to me in regard to the City of Asheville looking at two things. Either change the ordinance to reflect what they are currently doing or adjust the rates two months later. That's what some of our other entities do, but a lot of the other entities bill monthly so it's only a one month lag before they start that new rate where this will be a two month lag, so you have a couple of options. The other option is to bill monthly which Mr. Dundas stated they are looking at once again. Mr. Dundas stated that the City is considering a change from a bi-monthly bill to a monthly bill. That was studied several years ago prior to having automated meter reading and at that point in time it was not cost effective. Automated meter reading has been in place for quite a few years now so they will look at that again and make a decision as to how to apply the rate adjustments next year but also whether or not they will go to a monthly bill in the process. Mr. Dundas stated that throughout that process MSD would be involved as well. He also stated that the City will be taking this rate adjustment to their Finance Committee next week for approval. Mr. VeHaun asked if there were any further questions or comments. There were none.

Mr. Hartye reported the next regular Board Meeting will be held on September 21st at 2 pm. The next Right of Way Committee meeting will be held on August 24th at 9am. The employee picnic will be held on September 15th behind the maintenance building.

Mr. VeHaun shared an e-mail he received this morning. Leigh Reed of 19 Red Maple Drive and Board Member of the Little Flat Creek Homeowner's Association stated that for the past several months he has had the opportunity to work with Kevin Johnson regarding a sewer issue in their development. He would like to commend Kevin for his cooperative attitude, job skills and very efficient and quick response to the various issues they

encountered. Mr. Reed stated that in his pre-retirement work there were many encounters with government agencies and employees, and most were painful and unpleasant and that working with Kevin was enjoyable.

7. Consolidated Motion Agenda:

a. Consideration of Bids – Point Repair Contract 1:

Mr. Hartye reported that these point repairs are for non-emergency problems on lines and manholes which do not require a full-scale rehabilitation project. The contract was informally advertised and three bids were received on July 21, 2016 as follows: NHM Constructors, LLC in the amount of \$327,678.00; Terry Brothers Construction Co. in the amount of \$222,050.00; and Patton Construction Group in the amount of \$164,710.00. The FY 16-17 Construction Budget for this project is \$200,000.00. Patton Construction Group is the apparent low bidder. They have completed both rehabilitation projects and sewer line extensions under MSD inspection and their work quality has been excellent on those projects. Staff recommends award of this contract to Patton Construction Group in the amount of \$164,710.00, subject to review and approval by District Counsel.

b. Consideration of Bids – Arco Road and New Haw Creek Road @ Trinity Chapel Road Sewer Rehabilitation Projects:

Mr. Hartye reported that these two projects are located in Haw Creek east of Asheville and consist of replacing approximately 2,855 LF of 8-inch through 24-inch DIP. The larger diameter pipe is for the interceptor along Haw Creek. A single contract for both projects was advertised and five bids were received on July 28, 2016 as follows: Huntley Construction Co. in the amount of \$889,707.00; Davis Grading, Inc. in the amount of \$801,842.00; Buckeye Construction Co. in the amount of \$796,541.00; Thomas Construction Co. in the amount of \$783,565.50; and Terry Brothers Construction Co. in the amount of \$599,609.00. The FY 16-17 Construction Budgets for these two projects total \$801,000.00. Terry Brothers Construction Co. is the apparent low bidder. They have completed numerous MSD sewer rehabilitation projects and their work quality continues to be excellent. Staff recommends award of this contract to Terry Brothers Construction Co. in the amount of \$599,609.00, subject to review and approval by District Counsel.

c. Consideration of Developer Constructed Sewer Systems: Biltmore Lake Block 1; Bojangles @ Smokey Park; 200 Technology Drive; Audubon Phase 2; Evolve Mountain View; Hawthorne Turtle Creek Reems Creek Master Plan Interceptor Phase II:

Mr. Hartye reported that the Biltmore Lake Block 1, Phase 1 project is located off Reeves Cove in Buncombe County. This project included extending approximately 3,361 linear feet of 8-inch public gravity sewer to serve the 108 unit residential development.

Mr. Hartye reported that the Bojangles' & Arby's project is located off Smokey Park Highway in the City of Asheville. This project included extending approximately 256 linear feet of 8-inch public gravity sewer to serve the commercial development.

Mr. Hartye reported that the 200 Technology Drive project is located off Schenck Parkway in Buncombe County. This project included extending approximately 812 linear feet of 8-inch public gravity sewer to serve the commercial development.

Mr. Hartye reported that the Audubon Phase 2 project is located off Rockwood Road in Buncombe County. This project included extending approximately 1,653 linear feet of 8-inch public gravity sewer to serve the 86 unit apartment complex.

Mr. Hartye reported the Evolve Mountain View project is located off of Hendersonville Road in the City of Asheville. This project included extending approximately 1,337 linear feet of 8-inch public gravity sewer to serve the 148 unit apartment complex.

Mr. Hartye reported the Hawthorne Turtle Creek Extension project is located off of Hendersonville Road in the City of Asheville. This project included extending approximately 400 linear feet of 8-inch public gravity sewer to serve the 250 unit apartment complex.

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

Mr. Hartye reported the final item is acceptance and cost reimbursement for Reems Creek Master Plan Interceptor Phase II. This project is located in Buncombe County along Reems Creek, beginning at Pleasant Grove Road and extending to the new Maple Trace residential development. The reason the District participated in this project financially is that it is a Collection System Master Plan Interceptor. MSD designed, permitted and obtained rights of way for the extension and the Developer installed approximately 734 linear feet of 16-inch gravity sewer. The Developer only needed 8-inch line for its development, but MSD required the larger line because it will be serving the whole basin. Therefore, MSD pays the differential cost between the 8-inch and 16-inch sewer. Construction of this extension was funded by the developer, Windsor Built Homes, Inc., for \$249,268.00. The on-site system within the development will be submitted for ownership upon completion. Staff originally came to the Board for authority to participate in this project. Once construction began, a significant amount

of rock was encountered which also increased cost per the MSD design. Windsor paid its contractor a total of \$114,268.00 for rock removal and is asking MSD to participate in some of this additional cost. MSD staff reviewed the rock quantities and the additional quantities required for the installation over and above what they would have had to remove for their own development. This additional rock quantity amounts to about 127 cubic yards at \$98.00 per cubic yard so the additional construction cost for rock is \$12,446.00. The Board initially approved a reimbursement amount of \$22,900.00. Staff recommends acceptance of this developer constructed sewer system and authorization of the General Manager to disperse \$35,346.00 to Windsor Build Homes Inc. for cost reimbursement for this project. Mr. VeHaun asked if there were any questions or comments. Mr. Bradford also pointed out that the line had been installed deeper and under the creek as well so both sides of Reems Creek will be served with no aerial crossings. There were no further questions or comments.

d. Consideration of Engineering Design Contract: Plant High Rate Primary Treatment Project:

Mr. Hartye reported that the District is in the process of finishing design for the beginning of the Headworks Projects which is part of the 20 year Facility Plan Update. The first project is to construct screening, grit and surge facilities. The design is complete, has been approved through permitting and will be going out for bid in the next month or so. Then this will be brought back to the Board for construction approval, which will last 1½ -2 years. This will involve constructing screens and the existing digester tanks will be repurposed for storm surge tanks. Phase II design will begin so that when Phase I is finished we can continue on with Phase II which is the High Rate Primary Treatment. The hope is to place it inside the existing microscreen building which has a process in it that is defunct at this point. This is a new technology. Several technologies were pilot tested and the top two are basically mixing and settling tanks in which you add a coagulant, a polymer and a ballast, either sand (ActiFlow) or magnetite (CoMag). Those ballasts help pull the solids out very quickly so that in a small space you can accomplish a lot of settling. Typically down east if you drive by Durham's plant off of I-40 they have major settling tanks that are huge. Those don't have that ballast and they rely only on gravity and are much bigger tanks. Due to the location of our facility we don't have a lot of space to put up these huge tanks. The next phase will be looking at long term options for the RBCs which we have been replacing over the last several years. In accordance with the statutes, we advertised a Request for Qualifications for an engineer to design these facilities and received responses from Black & Veatch, CDM Smith, and HDR. After careful review and consideration of each firm's capabilities, experience and staffing, the selection committee (consisting of staff and our Engineer of Record) selected CDM Smith as the most qualified engineering consultant to complete the design. CDM Smith has designed and

installed many high rate clarification systems across the United States, and are the only one of the three who have done many successful ones. They have the expertise necessary to design and permit the first wastewater high rate primary treatment system in North Carolina. CDM Smith has worked successfully on many projects with the District and has extensive knowledge of the MSD treatment facility. CDM most recently completed the successful Incinerator System Emissions Upgrades Project. After receiving an initial proposal for CDM Smith's engineering design fee, District staff negotiated a reduced fee in the amount of \$998,900.00. Additional documentation is attached including the Scope of Services. The FY 16-17 design budget for this project is \$960,000.00. Sufficient funds are available in the CIP Contingency Fund for the overage. Staff recommends the District enter into an engineering design contract with CDM Smith in the amount of \$998,900.00 subject to final review and approval by District Counsel. Mr. Hartye stated that Dave Collins with CDM Smith was present to answer any questions. There were none.

e. Consideration of Reimbursement Resolutions for Bond Projects:

Mr. Powell reported that at this time every year MSD adopts a reimbursement resolution is submitted to be in compliance with IRS regulations concerning tax-exempt financing of all expenditures made with non-MSD bond funds, to be reimbursed by MSD bond funds. Every year MSD takes money out of reserves to meet its CIP needs and sometime in the future MSD issues debt and that debt replenishes our unscripted funds so that we may continue on with the CIP process. This year the projects that would meet the qualifications of the reimbursement resolution are in the amount of \$11 million. The next projected debt issuance is in FY 19 in the amount of \$28 million. These projects would be reimbursed out of that \$28 million debt. A reimbursement resolution was one done last year in the amount of \$11 million and MSD does one every year so it can capture that and put all the money that we used in new monies back into our reserves to use for future CIP Projects. Mr. Powell stated that at this time he would entertain any questions regarding this matter. There were none.

f. Fourth Quarter Budget to Actual Review-FY2016

Mr. Powell reported the Domestic Revenue is above budgeted expectations. Staff believes Domestic User Fee variance will end up around 101% when June accounts receivable data is received from Member Agencies typically through the audit process in the first part of September. Industrial Revenue is trending better than budgeted due to increased revenue from one new industrial user, New Belgium. Facility and Tap Fees are above budgeted expectations due to the District receiving \$3.1 million from eight different developments as of the end of the year. MSD typically budgets impact fees very conservatively due to the soft nature and depending upon development in the region. Interest

and miscellaneous income are below budgeted expectations. As I have stated last year and the last few years, this is due to short-term interest rates still experiencing pressures due to Federal Reserve monetary policy. It looks like that will continue for at least the next 6 months. O&M expenditures are at 94.87% of budget. This amount may vary slightly from audited numbers due to final accruals. The reason the number is typically lower than what we have budgeted really depends on cost difference of utilities that happen at the plant. This year that amount should be about \$500,000.00. Bond principal and interest are better than budgeted expectations due to the interest rate swap associated with Series 2008A revenue refunding bonds. The capital project expenditures are at approximately 98.65% of budget. CIP projects are continuing to receive favorable pricing. There were no questions pertaining to this item.

g. Cash Commitment/Investment Report Month ended June, 2016:

Mr. Powell reported that Page 60 presents the makeup of the District's Investment Portfolio and there has not been a significant change from the prior month. Page 61 presents the MSD investment managers report for the month of June. The weighted average maturity of the investment portfolio is 232 days. The yield to maturity is .68% or 68 basis points and exceeds our bench mark of 6 month T-Bill and North Carolina Capital Management Trust cash portfolio. Page 64 presents the MSD Variable Debt Service report for the month of July. The 2008A Series bonds are performing better than budgeted expectations. As of the end of July the issues have saved the District rate payers approximately \$4.6 million in debt service since April, 2008. There were no questions pertaining to this item.

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

8. Old Business:

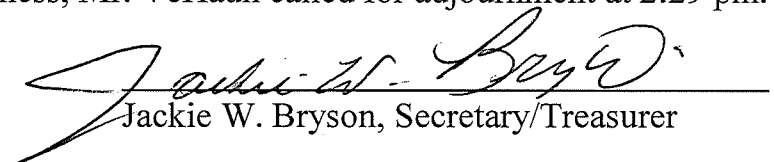
None

9. New Business:

None

10. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:29 pm.


Jackie W. Bryson, Secretary/Treasurer

MSD

Regular Board Meeting

Metropolitan Sewerage District
of Buncombe County, NC

AGENDA FOR 8/17/16

✓	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 July 20, 2016 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		2:35	
	a. Consideration of Bids-Point Repair Contract No. 1	Hartye		
	b. Consideration of Bids-Arco Road and New Haw Creek Rd. @ Trinity Chapel Rd. Sewer Rehabilitation Projects	Hartye		
	c. Consideration of Developer Constructed Sewer Systems: Biltmore Lake Block 1; Bojangles @ Smokey Park; 200 Technology Drive; Audubon Phase 2; Evolve Mountain View; Hawthorne Turtle Creek; Reems Creek Master Plan Interceptor Phase II	Hartye		
	d. Consideration of Engineering Design Contract: Plant High Rate Treatment Project	Hartye		
	e. Consideration of Reimbursement Resolutions for Bond Projects.	Powell		
	f. Fourth Quarter Budget to Actual Review-FY2016	Powell		
	g. Cash Commitment/Investment Report Month Ended June 30, 2016.	Powell		
	07. Old Business:	VeHaun	3:00	
	08. New Business:	VeHaun	3:15	
	09. Adjournment: (Next Meeting 9/21/16)	VeHaun	3:25	
	STATUS REPORTS			

BOARD OF THE METROPOLITAN SEWERAGE DISTRICT
JULY 20, 2016

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 2pm Wednesday, July 20, 2016. Chairman VeHaun presided with the following members present: Ashley, Belcher, Bryson, Collins, Creighton, Frost, Kelly, Manheimer, Pelly, Root and Wisler.

Others present were: Thomas E. Hartye, PE, General Manager; William Clarke, General Counsel; Forrest Westall with McGill Associates; Joseph Martin with Woodfin Sanitary Water & Sewer District; Cheryl Rice, Ed Bradford, Hunter Carson, Peter Weed, Mike Stamey, Jim Hemphill and Pam Nolan.

2. Election of Officers:

Mr. VeHaun called on Mr. Clarke to preside over the election of the Chairman. Mr. Clarke called for nominations for Chairman of the MSD Board. Mr. Kelly nominated Mr. VeHaun as Chairman. Mr. Pelly seconded the nomination. Mr. Clarke called for further nominations. With no further nominations Mr. Clarke called for a motion that nominations be closed, and that Mr. VeHaun be elected, by acclamation, as Chairman of the MSD Board for 2016-2017. Mr. Kelly made the motion. Mr. Pelly seconded. Voice vote in favor of the motion was unanimous.

Mr. VeHaun called for nominations for Vice Chairman of the MSD Board. Ms. Bryson nominated Mr. Kelly. Mr. Pelly seconded the nomination. Mr. VeHaun called for further nominations. With no further nominations, Mr. VeHaun called for a motion that nominations be closed and that, by acclamation, Mr. Kelly be elected as Vice Chairman of the MSD Board for 2016-2017. Ms. Wisler made the motion. Mr. Pelly seconded the motion. Voice vote in favor of the motion was unanimous.

Mr. VeHaun appointed Ms. Bryson as Secretary/Treasurer of the MSD Board for 2016-2017. Mr. Kelly moved to approve the appointment of Ms. Bryson. Mr. Pelly seconded the motion. Voice vote in favor of the appointment was unanimous.

3. Inquiry as to Conflict of Interest:

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

4. Approval of Minutes of the June 15, 2016 Board Meeting:

Mr. Vahaun asked if there were any changes to the Minutes of the June 15, 2016 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.

5. Discussion and Adjustment of Agenda:

None

6. Informal Discussion and Public Comment:

None

7. Report of General Manager:

Mr. Hartye reported that the Government Finance Officers Association has recognized MSD with a Certificate of Achievement for the Fiscal Year 2015 Comprehensive Annual Financial Report (CAFR) and expressed many thanks to Scott Powell, Cheryl Rice and Teresa Gilbert.

Mr. Hartye reported that Drew Mosely of Lanvale Avenue wrote in to express his gratitude to Eric Bryant for his follow through and commitment in solving his problem. Mr. Stevens of Weston Road called to express his appreciation to Wayne Rice, Travis Courtney, and Lloyd Anders for their courtesy and a repair job well done.

Mr. Hartye reported the Personnel Committee met at 1:15 on July 20th. The next regular Board Meeting will be held on August 17th at 2pm. The next Right of Way Committee meeting will be held on August 24th at 9am.

8. Report of Committees:

Personnel Committee:

Mr. VeHaun called for a motion to insert the Personnel Committee report to the agenda. Mr. Kelly moved. Mr. Creighton seconded. Voice vote in favor of the motion was unanimous. Ms. Bryson reported that the Personnel Committee met on this day at 1:15 pm to consider the evaluation of the General Manager. Mr. Hartye reviewed short-term goals, milestones and objectives. The Committee recommends the Board approve an increase of 3.0% effective July 1, 2016. Mr. VeHaun called for a motion to approve the recommendation of the Personnel Committee. Mr. Root moved. Mr. Belcher seconded the motion. Roll call vote was as follows: 12 Ayes; 0 Nays.

9. Consolidated Motion Agenda:

a. Consideration of Bids – Dellwood Avenue Sanitary Sewer Replacement:

Mr. Hartye reported that the Dellwood Avenue project is located in the Grovemont area in Swannanoa and consists of replacing a problematic 6-inch clay line with 392 linear feet of 8-inch ductile iron pipe. The

contract was informally advertised and five bids were received on June 30, 2016 as follows: Huntley Construction Co. in the amount of \$145,298.24; Buckeye Bridge, LLC in the amount of \$134,752.80; Thomas Construction Co. in the amount of \$111,831.93; Davis Grading Inc. in the amount of \$95,803.00; and Terry Brothers Construction Co. Inc. in the amount of \$63,692.00. Terry Brothers Construction Co. Inc. is the apparent low bidder. They have completed numerous MSD sewer rehabilitation projects and their work quality has been excellent. Staff recommends award of this contract to Terry Brothers Construction Company Inc. in the amount of \$63,692.00, subject to review and approval by District Counsel.

b. Consideration of Developer Constructed Sewer Systems: The Crossings at Beaverdam; 26 Carl Alwin Place; Waters Road:

Mr. Hartye reported that the Crossings at Beaverdam project is located in the Town of Woodfin. This project included relocating approximately 119 linear feet of 8-inch public gravity sewer to serve a 170 unit assisted living facility.

Mr. Hartye reported the 26 Carl Alwin Place project is located off of Long Shoals Road in Buncombe County. This project included relocating approximately 250 linear feet of 8-inch public gravity sewer to serve the three unit commercial building.

Mr. Hartye reported the final project is Waters Road and is located off of Waters Road in the City of Asheville. This project included extending approximately 654 linear feet of 8-inch public gravity sewer to serve the twenty unit residential development.

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

c. Cash Commitment/Investment Report Month ended May, 2016:

Mr. Hartye reported that Page 21 presents the makeup of the District's total cash and investments as of May 31, 2016 in the amount of \$49,322,924.00. Budgeted commitments out of that amount include Construction and Operation and Maintenance Funds of approximately \$7 Million, Bond Restricted Funds of about \$6.8 Million, District Reserve Funds of about \$2 Million and District Insurance Funds of about \$2.9 Million, leaving funds designated for capital outlay about \$30 Million which will be for projects going forward. The next two pages show the Investment Portfolio and the Investment Manager's Report, which are substantially the same as the end of April, 2016. The Analysis of Cash Receipts shows the Domestic Revenue, Industrial Revenue and Facility and Tap Fees. The top graph shows Monthly Cash Receipt Analysis. One month is basically 8.5% so you can compare these

numbers and see that the Domestic and Industrial Revenue are pretty average. The Facility and Tap Fees are about double for the month due to the number of collected facility fees for development. The bottom graph shows the Year to Date Cash Receipt Analysis. The 11 month average would be about 91.7% . Domestic and industrial sewer revenue are very close at 92% with industrial revenue being slightly over. Facility and tap fees again are well above the average due to collected facility fees from new development. The following page shows Monthly and Yearly expenditure analysis. The top graph is very similar and you are looking at about 8.5% for the average month for O&M. The debt service is low due to timing the payments in larger chunks with typically one payment made at the end of the year. Capital projects are a little bit lower. The YTD Expenditure Analysis shows a comparison with 11 of 12 months at basically 92%. The O&M and Capital Projects are pretty close to that figure. The debt service is low for the same reason as mentioned in the above graph. The last page shows the Variable Debt Service Report. The Series 2008A Synthetic Fixed Rate Bonds Performance History basically shows that the District is continuing to save money compared to the fixed rate of 4.85% in 2008. To date savings have amounted to approximately \$4.5 million dollars compared to the prior rate.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Ms. Wisler moved. Mr. Root seconded the motion. Roll call vote was as follows: 12 Ayes; 0 Nays.

10. Old Business:

None

11. New Business:

None

12. Adjournment:

With no further business, Mr. VeHaun called for adjournment at 2:13 pm.

Jackie W. Bryson, Secretary/Treasurer



MEMORANDUM

TO: MSD Board
FROM: Thomas E. Hartye, P.E., General Manager
DATE: August 10, 2016
SUBJECT: Report from the General Manager

- **Fiscal Year 2017 Budget Recap**

Attached is a copy of the MSD Budget and Rate Synopsis for the Board to use for easy reference to the salient points of the recently passed FY 2017 Budget.

- **Kudos**

- Received a call from Martha Weaver of Deanwood Circle expressing appreciation for Mike Rice coming out so promptly the previous night. He was very prompt and answered all of the questions she had.

- **Board/Committee Meetings/Events**

The next Regular Board Meeting will be held on September 21st at 2 pm. The next Right of Way Committee meeting will be held at 9 am on August 24th.



MSD FY17 BUDGET/RATE SYNOPSIS

➤ Total Budget \$47,009,663

1. CIP (Rehab Construction)	\$22,042,087	} 64% Construction related
2. Debt Service	\$ 7,956,840	
3. O&M	\$16,038,288	
4. Capital Equipment	\$ 972,448	

See graphs other side

➤ The 2.5% rate adjustment is necessary to fund sewer system rehabilitation/replacement projects as well as necessary treatment plant improvements of \$211.5 million over the next 10 years.

➤ The District's sewer system consists of approximately 5 million feet of 6" to 66" pipe and over 28,000 manholes, much of which was constructed in the 1920's, 30's, and 40's and is in dire need of replacement or rehabilitation. It will be necessary to replace 50,000 feet of sewer each year as required by the NCDENR collection system permit. The District will be constructing \$22 million of treatment plant improvements over the next 3 years to enhance effluent water quality.

➤ O&M budget includes

1. Salary and Benefits increase of 4.8%
2. A 0.68% increase to Materials and Supplies (including fuel).
3. Medical Plan funding increase of 10%.
4. A one-time Self-insurance plan funding of \$475,000 out of unrestricted reserves.
5. GASB 45 (OPEB) funding of \$270,000.

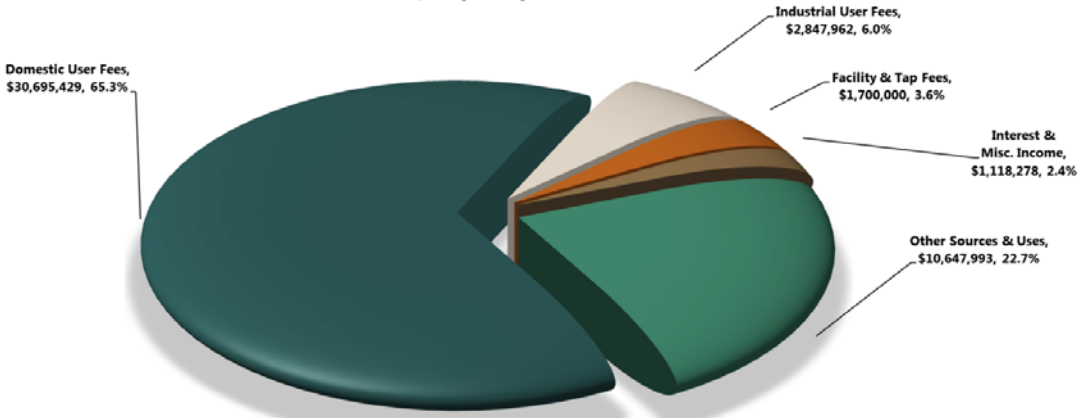
➤ Average residential monthly bill will go up .73 cents from \$29.15 to \$29.88.

➤ Residential Facilities Fee - No increase at \$2,500.

➤ Average bill for industrial user to go up 4.1% based upon the 20 year "parity" plan approved by the District Board.

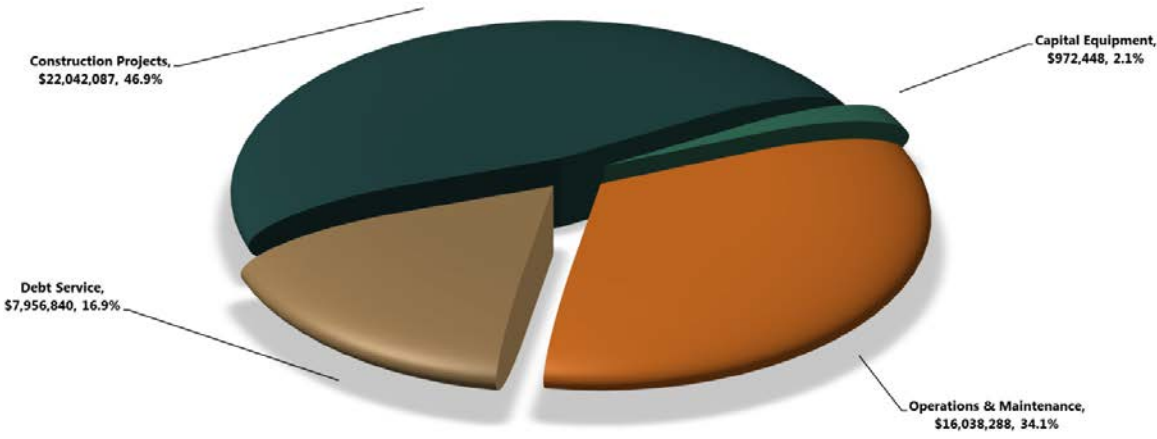
FY17 Budget Revenues

\$47,009,663



FY17 Budget Expenditures

\$47,009,663



Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: August 17, 2016

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

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Shaun Armistead, P.E. - Project Manager

SUBJECT: Consideration of Bids: MSD Point Repair Contract No. 1, MSD Project No. 2016028

BACKGROUND: This project is comprised of various point repairs located throughout the District's regional service area.

These point repairs are for non-emergency problems on lines or manholes, which do not require a full-scale rehabilitation project. In-house staff also completes repairs of this nature; however, due to the increasing number of repairs a project was created to address this.

This is the first contract of this nature for MSD. It will be in-force through June 30, 2017.

The contract was informally advertised, and three bids were received on July 21, 2016 in the following amounts:

<u>Contractor</u>	<u>Bid Amount</u>
1) NHM Constructors, LLC	\$327,678.00
2) Terry Brothers Construction Co.	\$222,050.00
3) Patton Construction Group	\$164,710.00

The apparent low bidder is Patton Construction Group. Patton has completed both rehabilitation projects and sewer line extensions under MSD inspection, and their work quality has been excellent on those projects.

Please refer to the attached documentation for further details.

FISCAL IMPACT: The FY16-17 Construction Budget for this project is \$200,000.00.

STAFF RECOMMENDATION: Staff recommends award of this contract to Patton Construction Group in the amount of \$164,710.00, subject to review and approval by District Counsel.

**METROPOLITAN SEWERAGE DISTRICT OF
BUNCOMBE COUNTY, NORTH CAROLINA**

**POINT REPAIR CONTRACT NO. 1
SEWER REHABILITATION
PROJECT NO. 2016028**

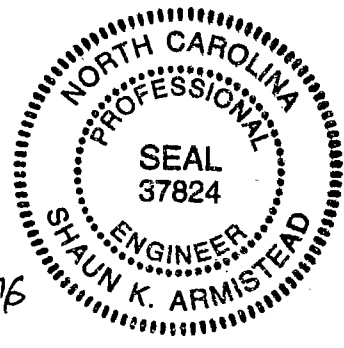
**BID TABULATION
July 21, 2016**

BIDDER	MBE Form	Bid Forms (Proposal)	Total Bid Amount
NHM Constructors, LLC Asheville, NC	2	Yes	\$327,678.00
Terry Brothers Construction Company Leicester, NC	1	Yes	\$222,050.00
Patton Construction Group Asheville, NC	2	Yes	\$164,710.00

APPARENT LOW BIDDER

Shaun K. Armistead
 Shaun Armistead, P.E.
 Project Engineer
 Metropolitan Sewerage District of
 Buncombe County, North Carolina

7/22/2016



This is to certify that the bids tabulated herein were publicly opened and read aloud at 2:00 p.m. on the 21st day of July, 2016, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina. This was an informal bid and no bid bonds were required.

Interoffice Memorandum

TO: Ed Bradford, Engineering Director
FROM: Shaun Armistead, Project Manager
DATE: July 22, 2016
RE: Point Repair Contract No. 1, MSD Project No. 2016028

Point Repair Contract No. 1 will cover point repairs performed throughout the District by an outside contractor for Fiscal Year 2016-17. Point repairs include repairs to manholes, installation of new manholes on existing lines, and various pipeline repairs. The contract includes specific work locations, and also allows for additional repairs as may be required through the end of the current fiscal year.

Work covered under this contract has been generated through work orders from the System Services Division, and will require no easements to be obtained prior to the work being performed. This contract will help to reduce the backlog of these types of repairs.

Three bids were received on Thursday, July 21, 2016, as follows:

<u>Contractor</u>	<u>Bid</u>
1) NHM Constructors, LLC	\$327,678.00
2) Terry Brothers Construction Co.	\$222,050.00
3) Patton Construction Group	\$164,710.00

The construction budget for this project is \$200,000.00.

Patton Construction is the apparent low bidder for this contract with a bid amount of \$164,710.00. District Staff are familiar with Patton Construction Group through their work on developer projects supervised by the District's Construction Administration Division.

Staff recommends award of this contract to Patton Construction Group, contingent upon review and approval by District Counsel.

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

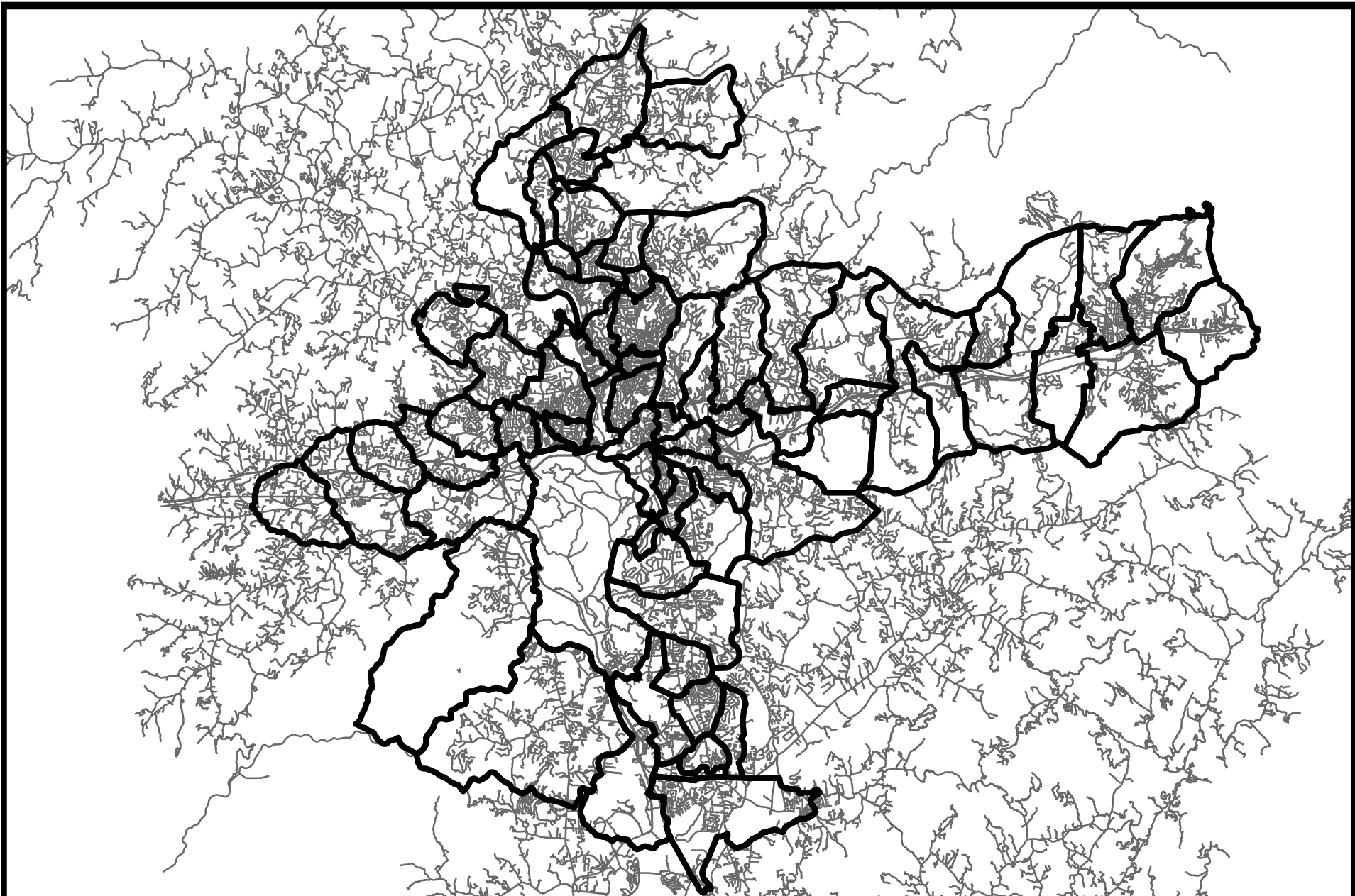
BUDGET DATA SHEET - FY 2016 - 2017

PROJECT: Point Repair Contract No. 1	LOCATION: various
TYPE: General Sewer Rehab	PIPE RATING: N/A
PROJECT NO.: 2016028	TOTAL LF: 0
PROJECT BUDGET: \$200,000.00	PROJECT ORIGIN: Work Orders

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/15	EST. COST JAN - JUNE 2016	BUDGET FY 16-17
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	\$200,000.00			\$200,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING				
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$200,000.00	\$0.00	\$0.00	\$200,000.00

ENGINEER: MSD	SA	ESTIMATED BUDGETS - FY '18 -'26		
R.O.W. ACQUISITION: N/A	# PLATS: [0]	FY 17-18	\$0.00	
CONTRACTOR:		FY 18-19	\$0.00	
CONSTRUCTION ADM: MSD		FY 19-20	\$0.00	
INSPECTION: MSD		FY 20-21	\$0.00	
		FY 21-22	\$0.00	
		FY 22-23	\$0.00	
PROJECT DESCRIPTION: This construction contract will cover point repairs performed by an outside contractor for Fiscal Year 2016-17. Point repairs covered under this contract are generated through work orders from the System Services Division.		FY 23-24	\$0.00	
		FY 24-25	\$0.00	
		FY 25-26	\$0.00	

SPECIAL PROJECT NOTES:



**Point Repair Contract No. 1
Project No. 2016028**

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: August 17, 2016

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

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Hunter Carson, P.E. - Project Manager

SUBJECT: Consideration of Bids: Arco Road and New Haw Creek Road @ Trinity Chapel Road Sanitary Sewer Rehabilitation Projects, MSD Project Nos. 2012082 & 2012081, respectively

BACKGROUND: These two projects are located in the Haw Creek area of east Asheville.

They consist of replacing problematic six-inch and eight-inch clay lines which are structurally deficient and have triggered numerous maintenance calls over the years. The new lines are comprised of 2,855 LF of 8-inch DIP through 24-inch DIP. The larger diameter pipe is for segments of the main interceptor along Haw Creek.

A single contract for both projects was advertised, and five bids were received on July 28, 2016 in the following amounts:

<u>Contractor</u>	<u>Total Bid Amount</u>
1) Huntley Construction Co.	\$889,707.00
2) Davis Grading, Inc.	\$801,842.00
3) Buckeye Construction Co.	\$796,541.00
4) Thomas Construction Co.	\$783,565.50
5) Terry Brothers Const. Co.	\$599,609.00

The apparent low bidder is Terry Brothers Construction Co. They have completed numerous MSD sewer rehabilitation projects, and their work quality continues to be excellent.

Please refer to the attached documentation for further details.

FISCAL IMPACT: The combined FY16-17 Construction Budgets for these two projects total \$801,000.00.

STAFF RECOMMENDATION: Staff recommends award of this contract to Terry Brothers Construction Co. in the amount of \$599,609.00, subject to review and approval by District Counsel.

METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, N.C.

SEWER REHABILITATION PROJECTS

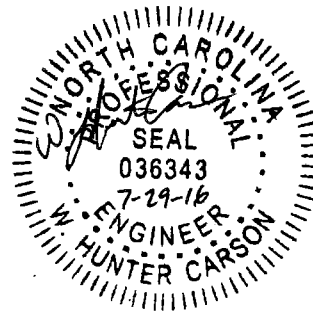
ARCO ROAD, PROJECT NO. 2012082

NEW HAW CREEK @ TRINITY CHAPEL ROAD, PROJECT NO. 2012081

BID TABULATION

BIDDER	Bid Bond	MBE Form	Bid Forms (Proposal)	Arco Road	New Haw Creek Road	Combined Total Bid Amount
Huntley Construction Company Asheville, NC	5%	1	Yes	\$638,743.00	\$250,964.00	\$889,707.00
Davis Grading, Inc. Shelby, NC	5%	2	Yes	\$578,837.00	\$223,005.00	\$801,842.00
Buckeye Bridge, LLC Canton, NC	5%	1	Yes	\$568,116.00	\$228,425.00	\$796,541.00
Thomas Construction Company Johnson City, TN	5%	1	Yes	\$536,481.00	\$247,084.50	\$783,565.50
Terry Brothers Const. Co. Leicester, NC	5%	1	Yes	\$418,245.00	\$181,364.00	\$599,609.00

APPARENT LOW BIDDER



W. Hunter Carson, 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 28th day of July, 2016, 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 bidders bonds in the amount of 5% of the bid.

Interoffice Memorandum

TO: Tom Hartye, General Manager

FROM: Ed Bradford, Director of Engineering
Hunter Carson, Project Manager

DATE: August 2, 2016

RE: Arco Road and New Haw Creek Road @ Trinity Chapel Road Sanitary Sewer Rehabilitation projects MSD Project Nos. 2012082 and 2012081

The Arco Road and New Haw Creek Road @ Trinity Chapel Road Sewer Rehabilitation projects are located in the Haw Creek neighborhood of East Asheville. Both projects are within 0.9 mile east of I-240. The Arco Road project includes sewer replacement under the majority of Arco Road, while the New Haw Creek Road @ Trinity Chapel Road project includes sewer replacement along New Haw Creek Road between Trinity Chapel Road and Beverly Road.

Approximately 1,901 LF of 8-inch DIP and 115 LF of 24-inch DIP sewer line will be installed to replace existing 6-inch VCP and 21-inch DIP on Arco Road. Approximately 784 LF of 8-inch DIP and 55 LF of 24-inch DIP will be installed to replace existing 8-inch VCP and 21-inch DIP on the New Haw Creek Road @ Trinity Chapel Road project.

Root intrusion, pipe fractures and offset joints have resulted in more than 34 customer service requests (combined) over the past decade, and multiple point repairs. Both projects rank highly in the CIP Pipe Rating System, each with a score of 71. The high pipe ratings are attributed primarily to the number of SSOs and flooded structures which have resulted from the poor pipe condition, and the high number of CSRs.

Given the close proximity of the two referenced projects, a combined bidding process was utilized in order to reduce overall project costs. Mobilization fees were reduced and economies of scale were achieved by increasing the overall bid quantities.

On July 28, 2016, five sealed bids were received at 2:00 pm, as follows:

<u>Contractor</u>	<u>Arco Road</u>	<u>New Haw Creek Rd @ Trinity Chapel Rd</u>	<u>Combined Bid Amount</u>
1) Huntley Construction Co.	\$638,743.00	\$250,964.00	\$889,707.00
2) Davis Grading, Inc.	\$578,837.00	\$223,005.00	\$801,842.00
3) Buckeye Construction Co.	\$568,116.00	\$228,425.00	\$796,541.00
4) Thomas Construction Co.	\$536,481.00	\$247,084.50	\$783,565.50
5) Terry Brothers Const. Co.	\$418,245.00	\$181,364.00	\$599,609.00

The apparent low bidder is Terry Brothers Construction Co., Inc. with a combined bid amount of \$599,609.00. The FY16-17 combined construction budget for this project is \$801,000.00 (\$577k for Arco Road and \$224k for New Haw Creek Road @ Trinity Chapel Road). Terry Brothers Construction Co. has an extensive history completing District rehabilitation and replacement projects with excellent workmanship and quality. Terry Bros. completed four of the District's seven CIP projects in FY15-16.

Staff recommends award of this contract to Terry Brothers Construction Co., Inc. contingent upon review and approval by District Counsel.

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

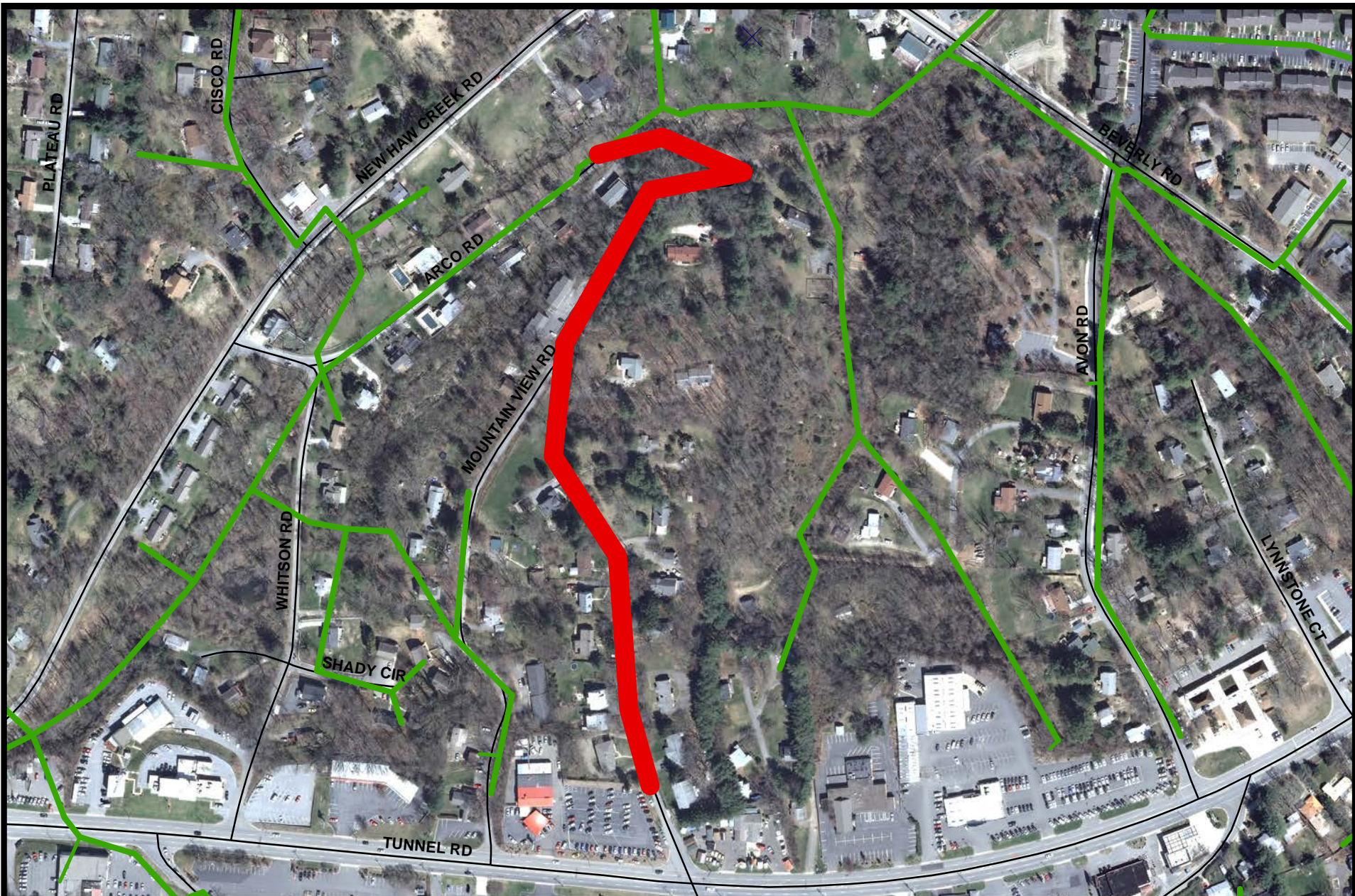
BUDGET DATA SHEET - FY 2016 - 2017

PROJECT:	Arco Road	LOCATION:	E. Asheville
TYPE:	General Sewer Rehab.	PIPE RATING:	71
PROJECT NO.	2012082	TOTAL LF:	2,022
PROJECT BUDGET:	\$592,000.00	PROJECT ORIGIN:	SSO's; Work Orders; Line Condition

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/15	EST. COST JAN - JUNE 2016	BUDGET FY 16-17
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$8,500.00	\$6,475.00	\$2,025.00	
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES				
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$577,000.00			\$577,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$2,000.00			\$2,000.00
55450 - SURVEY - ASBUILT	\$4,500.00			\$4,500.00
TOTAL AMOUNT	\$592,000.00	\$6,475.00	\$2,025.00	\$583,500.00

ENGINEER:	MSD	HC	ESTIMATED BUDGETS - FY '18 -'26	
R.O.W. ACQUISITION:	N/A	# PLATS: [0]	FY 17-18	\$0.00
CONTRACTOR:			FY 18-19	\$0.00
CONSTRUCTION ADM:	MSD		FY 19-20	\$0.00
INSPECTION:	MSD		FY 20-21	\$0.00
			FY 21-22	\$0.00
			FY 22-23	\$0.00
PROJECT DESCRIPTION: This project is located in the Haw Creek neighborhood of E. Asheville along Arco Rd., adjacent to New Haw Creek Rd. It consists of replacing approx. 1,871 LF of 6-inch vitrified clay pipe and 151 LF of 21-inch reinforced concrete pipe with 8-inch ductile iron pipe and 24-inch ductile iron pipe. The existing line is in very poor condition with offset joints, roots, and fractures.			FY 23-24	\$0.00
			FY 24-25	\$0.00
			FY 25-26	\$0.00

SPECIAL PROJECT NOTES:



Arco Road Project No. 2012082

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 2016 - 2017

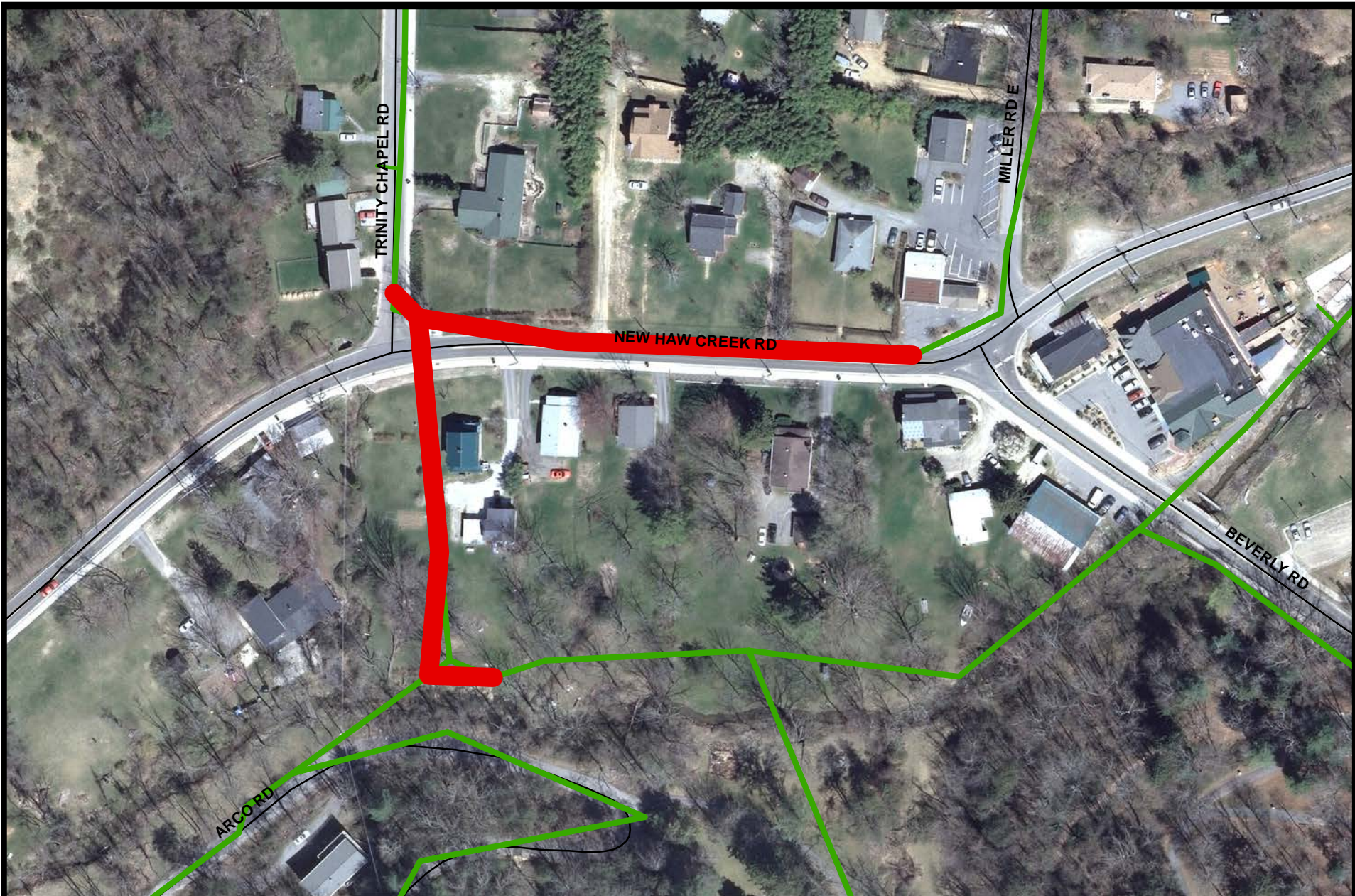
PROJECT:	New Haw Creek Rd. @ Trinity Chapel Rd.	LOCATION:	E. Asheville
TYPE:	General Sewer Rehab.	PIPE RATING:	71
PROJECT NO.	2012081	TOTAL LF:	838
PROJECT BUDGET:	\$252,076.00	PROJECT ORIGIN:	SSO's; Work orders; Line condition

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/15	EST. COST JAN - JUNE 2016	BUDGET FY 16-17
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$4,500.00	\$2,400.00	\$2,100.00	
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS	\$1,350.00	\$1,350.00		
55370 - LEGAL FEES	\$1,037.00	\$1,037.25		
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION	\$9,889.00	\$4,389.00	\$5,500.00	
55400 - APPRAISAL	\$2,500.00		\$2,500.00	
55410 - CONDEMNATION	\$5,000.00		\$5,000.00	
55420 - CONSTRUCTION	\$224,000.00			\$224,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$2,000.00			\$2,000.00
55450 - SURVEY - ASBUILT	\$1,800.00			\$1,800.00
TOTAL AMOUNT	\$252,076.00	\$9,176.25	\$15,100.00	\$227,800.00

ENGINEER:	MSD	HC	ESTIMATED BUDGETS - FY '18 -'26	
R.O.W. ACQUISITION:	MSD	# PLATS: [2]	FY 17-18	\$0.00
CONTRACTOR:			FY 18-19	\$0.00
CONSTRUCTION ADM:	MSD		FY 19-20	\$0.00
INSPECTION:	MSD		FY 20-21	\$0.00
			FY 21-22	\$0.00
			FY 22-23	\$0.00
			FY 23-24	\$0.00
			FY 24-25	\$0.00
			FY 25-26	\$0.00

PROJECT DESCRIPTION: This project is located in the Haw Creek neighborhood of East Asheville along New Haw Creek Rd. It consists of replacing approx. 838 LF of existing 6-inch and 8-inch vitrified clay pipe and 21-inch reinforced concrete pipe with new 8-inch ductile iron pipe and 24-inch ductile iron pipe. This line segment has had multiple point repairs, backups, and overflows.

SPECIAL PROJECT NOTES:



TRINITY CHAPEL RD

MILLER RD E

NEW HAW CREEK RD

BEVERLY RD

ARCO RD



New Haw Creek Road at Trinity Chapel Road Project No. 2012081

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: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the Biltmore Lake Block I, Phase 1 Sewer Extension, MSD Project No. 2014028

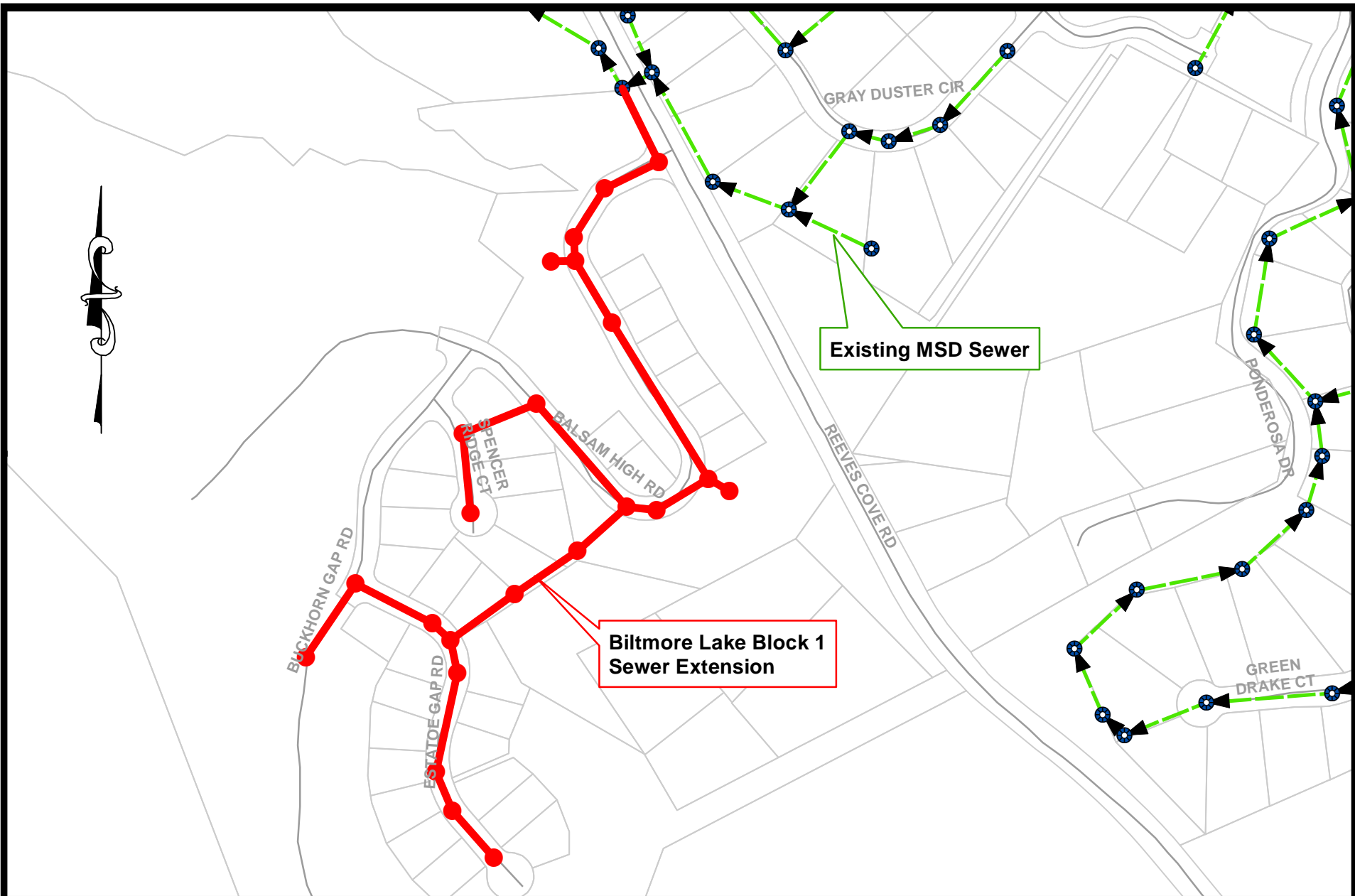
BACKGROUND: This project is located inside the District boundary off Reeves Cove in Buncombe County. The developer of the project is Lee Thomason of Biltmore Lake, LLC.

The project included extending approximately 3,361 linear feet of 8-inch public gravity sewer to serve the 108 unit Residential Development.

A wastewater allocation was issued in the amount of 32,400 GPD for the project. The estimated cost of the sewer construction is \$238,154.00.

All MSD requirements have been met.

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



MSD
Engineering Division

Biltmore Lake Block 1 Sewer Extension- MSD Project # 2014028
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the Bojangles' & Arby's - Smokey Park Highway Sewer Extension, MSD Project No. 2014124

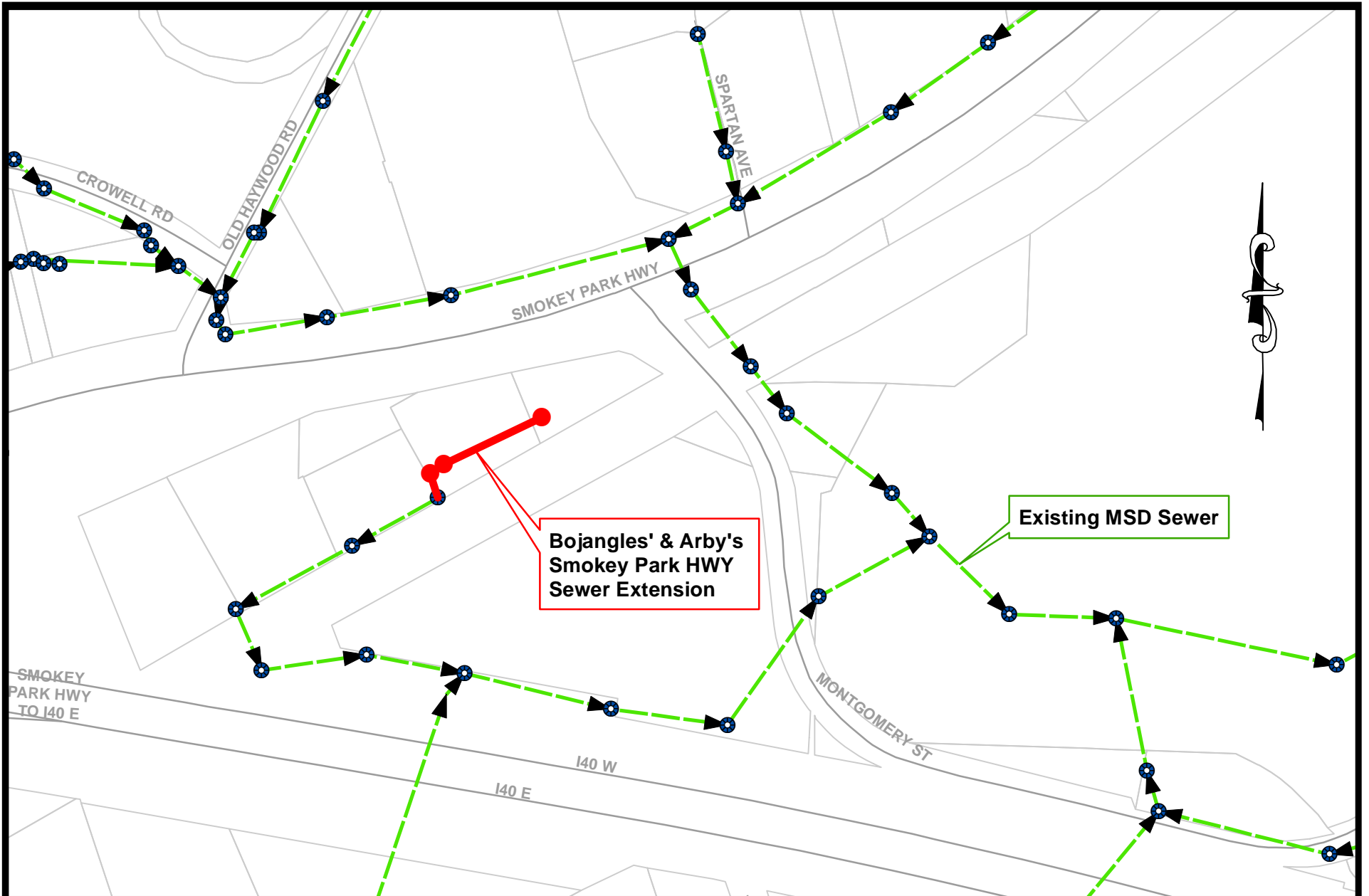
BACKGROUND: This project is located inside the District boundary off Smokey Park Highway in the City of Asheville. The developer of the project is Mitchell Lerner of BJSP, LP.

The project included extending approximately 256 linear feet of 8-inch public gravity sewer to serve the Commercial Development.

A wastewater allocation was issued in the amount of 4,800 GPD for the project. The estimated cost of the sewer construction is \$60,000.00.

All MSD requirements have been met.

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



MSD
Engineering Division

**Bojangles' & Arby's Smokey Park HWY Sewer Extension -
MSD Project # 2014124**
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the 200 Technology Drive Sewer Extension, MSD Project No. 2015213

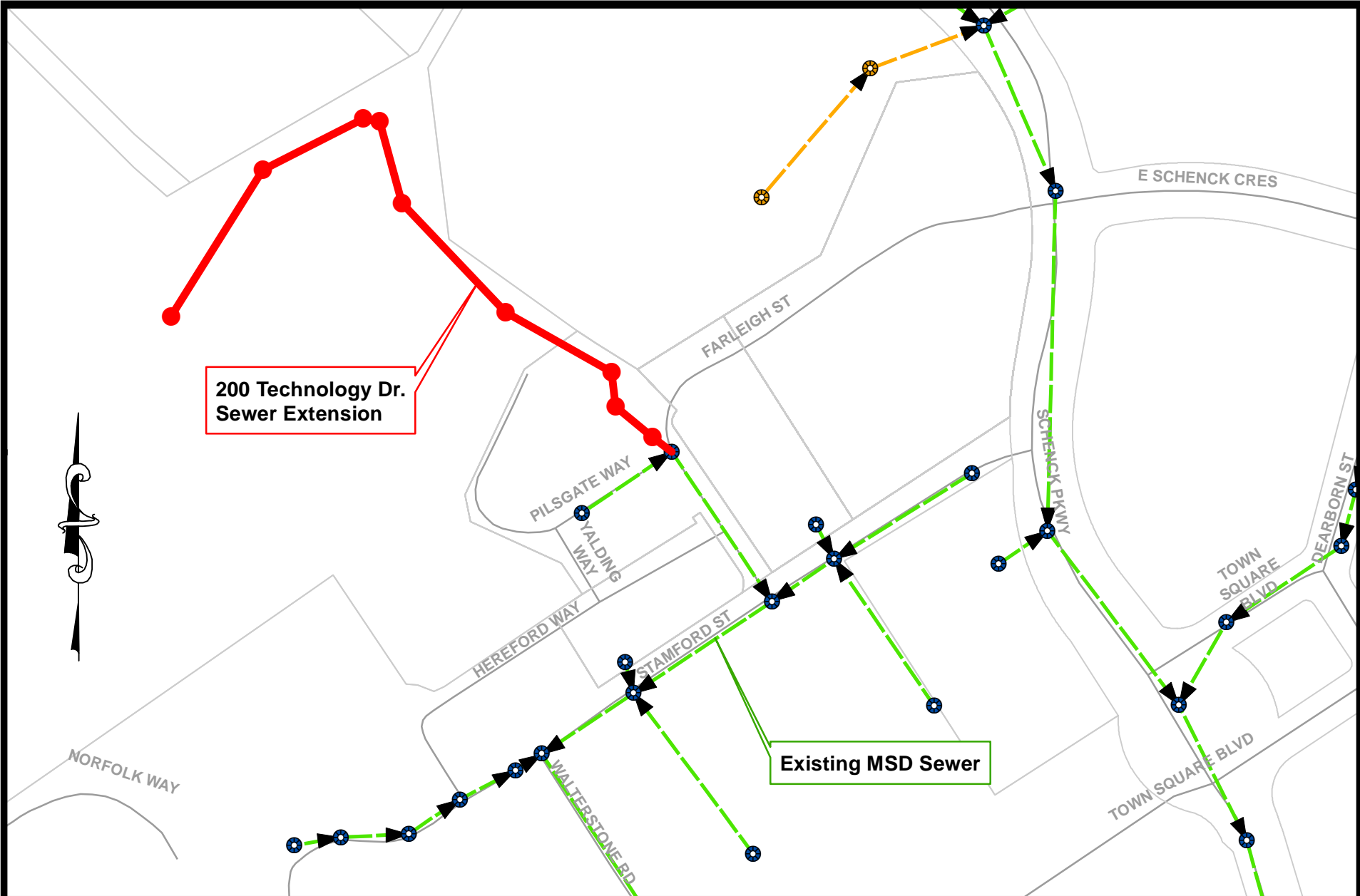
BACKGROUND: This project is located inside the District boundary off Schenck Parkway in Buncombe County. The developer of the project is Lee Thomason of Biltmore Farms, Inc.

The project included extending approximately 812 linear feet of 8-inch public gravity sewer to serve the Commercial Development.

A wastewater allocation was issued in the amount of 4,500 GPD for the project. The estimated cost of the sewer construction is \$83,000.00.

All MSD requirements have been met.

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



200 Technology Dr.
Sewer Extension

Existing MSD Sewer



MSD
Engineering Division

200 Technology Drive Sewer Extension - MSD Project # 2015213
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the Audubon Phase 2 Sewer Extension, MSD Project No. 2014027

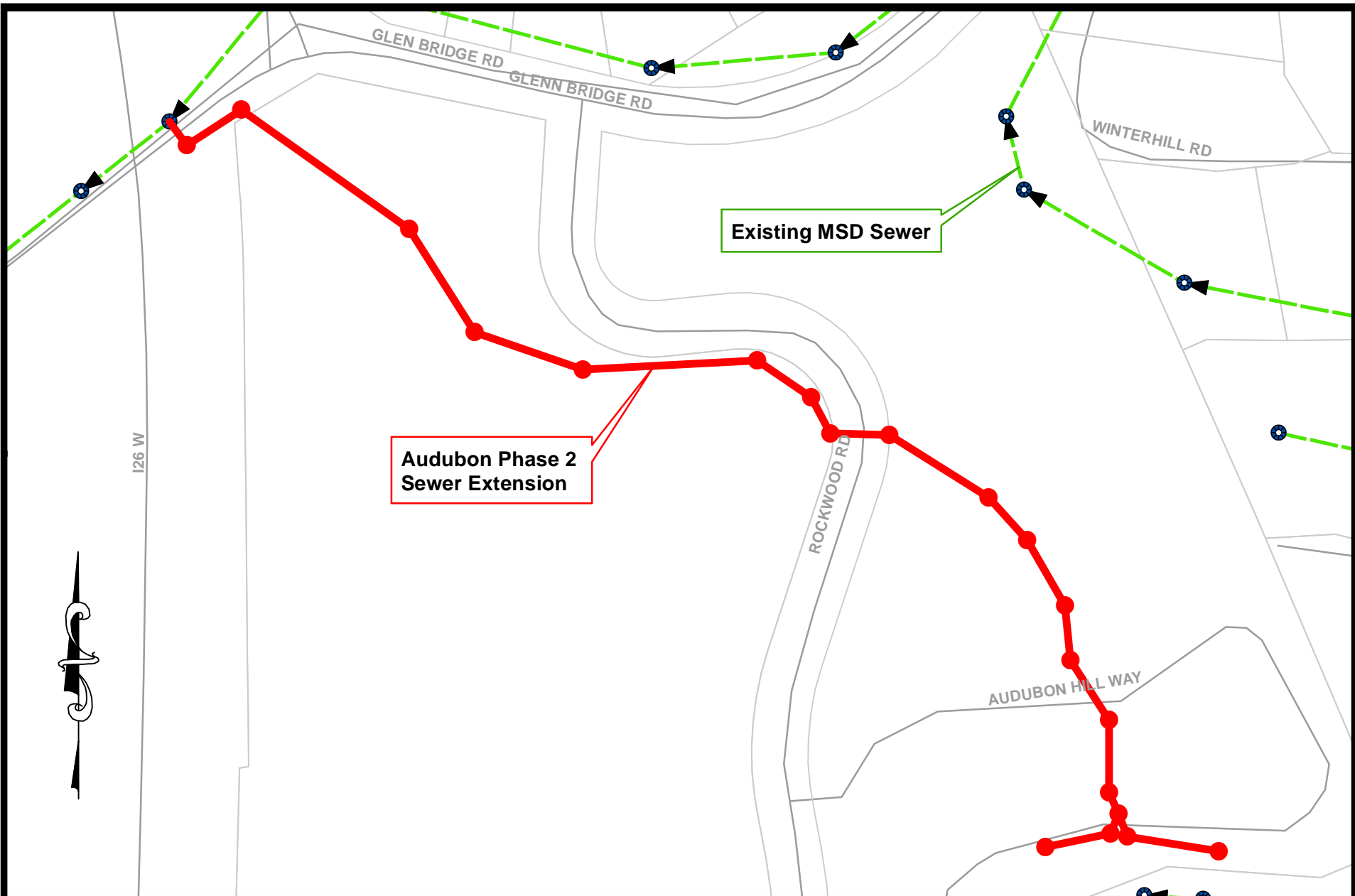
BACKGROUND: This project is located inside the District boundary off Rockwood Road in Buncombe County. The developer of the project is Chip Kassinger of Rockwood Road Apartments, LLC.

The project included extending approximately 1,653 linear feet of 8-inch public gravity sewer to serve the eighty-six (86) unit apartment complex.

A wastewater allocation was issued in the amount of 12,600 GPD for the project. The estimated cost of the sewer construction is \$158,000.00.

All MSD requirements have been met.

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



MSD
Engineering Division

Audubon Phase 2 Sewer Extension- MSD Project # 2014027
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the Evolve Mountain View Sewer Extension, MSD Project No. 2013105

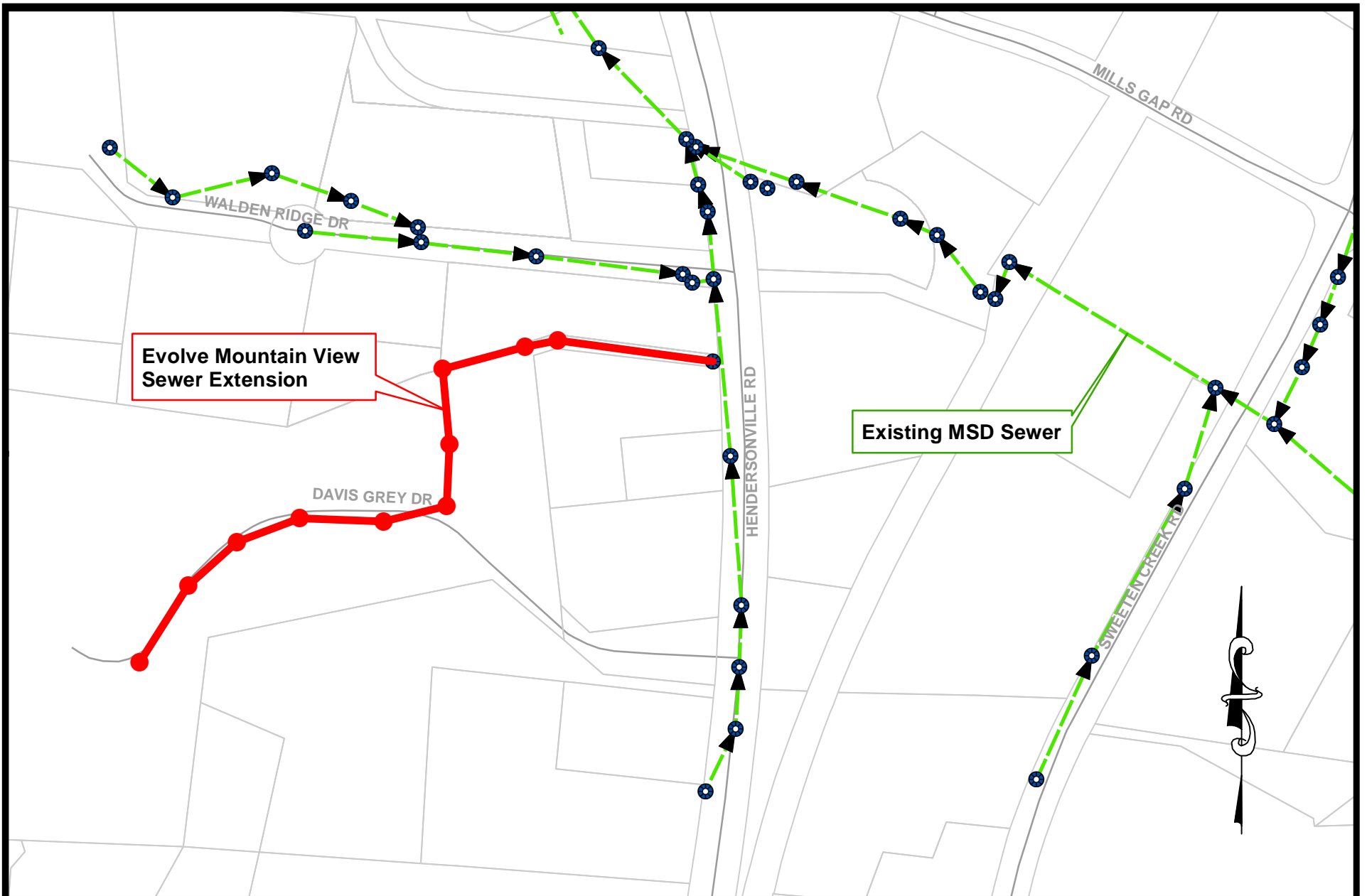
BACKGROUND: This project is located inside the District boundary off Hendersonville Road in the City of Asheville. The developer of the project is Stephen Austin of Asheville Housing, LLC.

The project included extending approximately 1,337 linear feet of 8-inch public gravity sewer to serve the 148 Unit Apartment Complex.

A wastewater allocation was issued in the amount of 31,600 GPD for the project. The estimated cost of the sewer construction is \$130,150.00.

All MSD requirements have been met.

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



MSD
Engineering Division

Evolve Mountain View Sewer Extension - MSD Project # 2013105
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

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

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

SUBJECT: Acceptance of Developer Constructed Sewer System for the Hawthorne Turtle Creek Sewer Extension, MSD Project No. 2014130

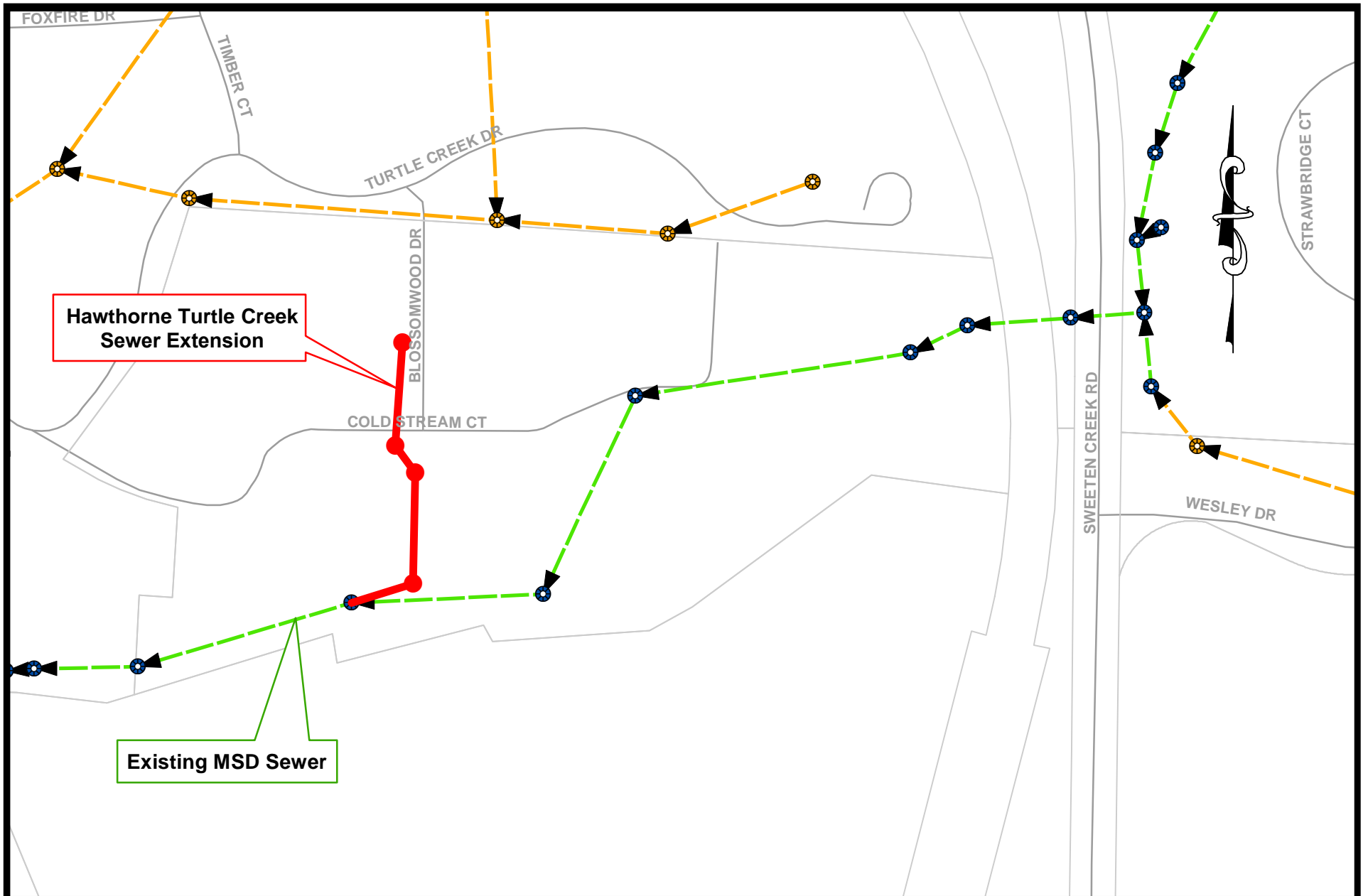
BACKGROUND: This project is located inside the District boundary off Hendersonville Road in the City of Asheville. The developer of the project is Ed Harrington of Hawthorne-Midway Turtle Creek, LLC.

The project included extending approximately 400 linear feet of 8-inch public gravity sewer to serve the 250 Unit Apartment Complex.

A wastewater allocation was issued in the amount of 75,000 GPD for the project. The estimated cost of the sewer construction is \$64,000.00.

All MSD requirements have been met.

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



**Hawthorne Turtle Creek
Sewer Extension**

Existing MSD Sewer



MSD
Engineering Division

Hawthorne Turtle Creek Sewer Extension - MSD Project # 2014130
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

Board Action Item

BOARD MEETING DATE: August 17, 2016

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

PREPARED BY: Owen Herbert, P.E., Project Manager
Kevin Johnson, P.E., Planning & Development Manager

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

SUBJECT: Acceptance of Developer Constructed Sewer System and Cost Reimbursement for the Reems Creek Master Plan Interceptor Phase II Sewer Extension, MSD Project No. 2015025

BACKGROUND: This project is located inside the District boundary along Reems Creek, beginning at Pleasant Grove Road in Buncombe County and extending to the new Maple Trace residential development.

This is a Collection System Master Plan Interceptor which will serve additional areas upstream; therefore, MSD designed, permitted, and obtained rights-of-way for the extension. The project included installation of approximately 734 linear feet of 16-inch gravity sewer.

Construction of this system was funded by the developer, Windsor Built Homes, Inc. (Windsor). The on-site sewer system within the development will be submitted for ownership at a later date, after it is complete. The construction cost of the extension was \$249,268.00.

MSD required a larger line than Windsor needed for their development; therefore, they are eligible for cost reimbursement for their increased costs. Reimbursement in the amount of \$22,900.00 was first approved for the additional pipe size at the July 15, 2015 MSD Board Meeting.

During construction, a significant amount of rock excavation was required to install the sewer line as designed (which is both larger and deeper than Windsor needed, since it serves upstream areas). Windsor requested that MSD consider providing additional reimbursement due their increased costs per the MSD design.

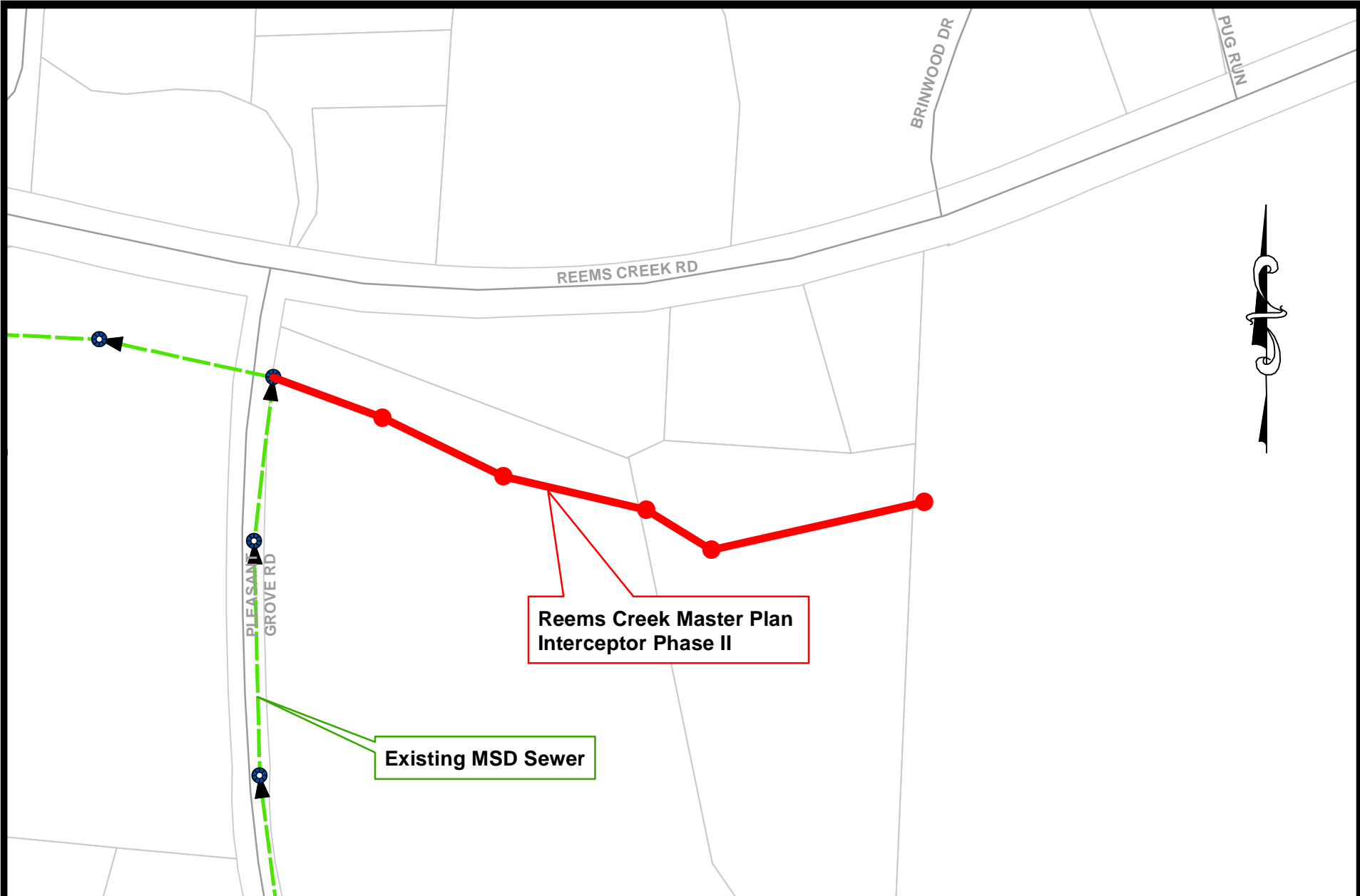
Windsor paid its contractor a total of \$114,268.00 for the rock removal. MSD staff reviewed their rock quantities, and calculated the additional quantities required for the installation *over and above* what Windsor would have had to remove for their own development.

This additional rock quantity amounts to approximately 127 Cubic Yards (CY). Windsor paid \$98.00 per CY for rock removal; therefore, the additional construction cost for this rock is \$12,446.00. MSD staff recommends additional reimbursement for this amount.

All other MSD requirements have been met.

FISCAL IMPACT: The Board initially approved a reimbursement amount of \$22,900.00. Staff recommends an additional amount of \$12,446.00, giving a total reimbursement of \$35,346.00

STAFF RECOMMENDATION: Acceptance of this developer constructed sewer system and authorization of the General Manager to disperse \$35,346.00 to Windsor Built Homes, Inc. for cost reimbursement for this project.



MSD
Engineering Division

Reems Creek Master Plan Interceptor Phase II- MSD Project # 2015025
Metropolitan Sewerage District of Buncombe County

8/04/2016

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

BOARD MEETING DATE: 8/17/16

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

REVIEWED BY: Tom Hartye, P.E. - General Manager
Billy Clarke - District Counsel
Forrest Westall, P.E. - Engineer of Record

PREPARED BY: Ed Bradford, P.E. - Director of Engineering
Hunter Carson, P.E. - Project Engineer

SUBJECT: Consideration of Engineering Design Contract - Plant High Rate Primary Treatment Project, MSD Project Number 2015054

BACKGROUND: The District's 2015 Facility Plan Update provides recommendations for phased improvements at the treatment plant over a 20 year planning horizon. Major objectives of the Facility Plan Update were to recommend methods of extending the life and efficiency of the existing RBCs, and to define a long-term approach for transitioning away from the aging biological treatment technology.

After extensive research of various options, the plan recommended near, mid, and long-term improvements. The near-term Headworks Improvements are designed and are almost ready for construction. This mid-term improvement project involves installation of a new chemically-enhanced primary clarification process. These improvements have been incorporated into the District's Ten-Year CIP.

Chemically-Enhanced Primary Treatment (CEPT) was recommended in order to reduce organic and solids loading on the RBCs. Early reduction of these constituents will improve treatment efficiency by reducing BOD and TSS, as well as promoting the growth of nitrifying bacteria on the RBCs. This will allow for better nitrification and reduction of influent ammonia.

The District is looking to begin the design process for the CEPT project, which has an estimated cost of approximately \$10 million. Construction is expected to begin by Spring 2018.

In accordance with NCGS 143-64.31 the District advertised a Request for Qualifications for the design phase and received responses from Black & Veatch, CDM Smith, and HDR. After careful review and consideration of each firm's capabilities, experience, and staffing, the selection committee selected CDM Smith as the most qualified engineering consultant to complete the design.

CDM Smith has designed and installed many high rate clarification systems across the United States, and as a result has the expertise necessary to design and permit the first wastewater high rate primary treatment system in North Carolina. CDM Smith has worked effectively on many projects with the District and has extensive knowledge of the MSD treatment facility. They most recently completed the successful Incinerator System Emissions Upgrades Project.

Staff therefore recommends that the District contract with CDM Smith for this design work.

After receiving an initial proposal for CDM Smith's engineering design fee, District staff negotiated a reduced fee in the amount of \$998,900.00. As stated above, the preliminary construction cost estimate for this project is \$10,000,000.00.

Please refer to the attached documentation, including the CDM Smith Scope of Services, for further details.

FISCAL IMPACT: The FY16-17 design budget for this project is \$960,000.00. Sufficient funds are available in the CIP Contingency Fund for the overage.

STAFF RECOMMENDATION: Staff recommends the District enter into an engineering design contract with CDM Smith in the amount of \$998,900.00, subject to final review and approval by District Counsel.

EXHIBIT A
TO AGREEMENT BETWEEN
OWNER AND ENGINEER
SCOPE OF SERVICES

This is an exhibit attached to and made a part of the Agreement dated, _____ 2016, between MSD of Buncombe County (OWNER) and CDM Smith Inc. (ENGINEER) for professional services. ENGINEER will provide project management, preliminary design, final design, permitting, and bid phase services for the Plant **High Rate Primary Treatment Project**.

PROJECT DESCRIPTION AND OBJECTIVES

The OWNER owns and operates a 40 mgd water reclamation facility located along the French Broad River. Major processes at the plant include: Screening, Grit and Grease Removal, Biological Treatment via seven-stage Rotating Biological Contactors (RBC), Intermediate Clarification, Cloth Media Filtration, Disinfection, Gravity Thickening, Belt Filter Press Dewatering, and Sewage Sludge Incineration (SSI).

The OWNER completed a Facilities Plan in April 2015 which included recommendations for a new high rate primary clarification system (HRC) to be implemented downstream of a new fine screening and grit removal facility (currently under design by others). The new HRC system will remove influent BOD₅ and Total Suspended Solids (TSS) to reduce the loading to the existing RBC system to improve treatability and enhance the ability for nitrification. The proposed HRC system will consist of two (2) 40-mgd trains for a combined total capacity of 80-mgd (to be confirmed by NCDEQ) and will generally include coagulation tanks, flocculation tank and clarifier for each train along with appropriate ballast recovery systems, and polymer and coagulant storage and feed systems. The proposed location of the HRC system will be within or in the same general location of the existing Primary Microscreen building.

Basic Services to be provided by the ENGINEER under this Agreement shall be limited to the following:

- Task 100 – Project Management and Meetings
- Task 200 – Preliminary Design
- Task 300 – Final Design
- Task 400 – Permitting
- Task 500 – Bid Phase Services

The following tasks may be added at a future date by amendment for additional services:

- Task 600 – Construction Phase Services (Future Task)

- Task 700 – Startup, Operations & Maintenance Manual, and Training (Future Task)

The detailed scope of services for the basic services included under this Agreement for Tasks 100 through 500 are as follows:

Task 100 Project Management and Meetings

The project management task includes those activities involved with the detailed planning and subsequent monitoring and control of the project. In addition to the ENGINEER's normal in-house staff management and job tracking procedures, the following subtasks will be considered project management services:

101 Project Kick-Off /Coordination Meeting

A project kick-off meeting will be held with the OWNER to discuss project schedule, administrative procedures, respective responsibilities, communications, OWNER contacts, OWNER expectations, progress reporting, data collection, and other project matters as appropriate.

102 Deliverable Review Meetings

The ENGINEER shall meet with the OWNER at key milestones and after submittal of the major deliverables on the project as described under Tasks 200 and 300. The following milestone meetings are anticipated:

- Alternatives Analysis Results and Technology Selection Workshop
- Preliminary Design Report Review Meeting
- 60% Design Review Meeting
- 90% Design Review Meeting
- 100% Design Review Meeting

The meetings will serve as a venue to discuss key project issues and to receive OWNER comments before proceeding to the next project milestone. The ENGINEER will issue meeting minutes after each milestone meeting.

103 Project Management

The ENGINEER shall track the overall project scope, schedule and budget during execution of the scope of work. This will include management of the design team, preparation of monthly project invoices and progress reports and coordination with the OWNER on the execution of the work over the anticipated 9 month schedule up to the bid phase under Task 500.

Task 200 Preliminary Design

The ENGINEER will prepare a Preliminary Design Report summarizing the recommendations for implementation of the new HRC system. Improvements may include, but are not limited to, HRC system tanks and equipment, coagulation and polymer storage and feed systems, sludge pumping systems, ballast recovery systems, associated building mechanical, structural, architectural,

electrical and instrumentation system improvements. The following subtasks will be considered part of this task:

201 Data Collection

ENGINEER will compile necessary information to support the preliminary design efforts including existing record drawings of the Primary Microscreen building, design drawings for the proposed fine screening and grit removal facility, available survey data and CAD files, and other data as may be appropriate. It is assumed that the OWNER will provide necessary additional survey data of the areas necessary to develop the project design. The ENGINEER will identify the extents of survey required and coordinate with the OWNER's surveyor as required. Survey will be provided to the ENGINEER in AutoCAD format and can be relied upon for use in preparing the design documents.

202 Primary Microscreen Building Evaluation

The ENGINEER proposes to potentially re-purpose the existing Primary Microscreen Building at the plant to house the new HRC system(s) through modifications and expansions of the existing building. To facilitate a decision on feasibility of re-purposing this building, the ENGINEER will conduct a detailed site visit and review of the building by appropriate functional discipline engineering staff including structural, electrical, architectural and building mechanical (HVAC/plumbing) for code compliance and structural compatibility with new functions. A technical memorandum will be prepared summarizing the findings of this evaluation and key decisions required during preliminary design to support re-purposing of the building. This task will occur simultaneously with the evaluation of alternate HRC technologies described in the next task.

Upon completion of the building evaluation, it may be necessary to complete supplemental in place testing of the concrete structure by core sample, in place strength testing or petrographic analysis. Should this be necessary, the OWNER will coordinate with a local consultant to perform the testing based on direction from the ENGINEER.

Expansion of the existing Primary Microscreen Building to the north may be necessary to accommodate the new HRC system. If additional geotechnical borings are required as part of the analysis and design, the OWNER will coordinate with a local consultant to perform the borings and analysis based on direction from the ENGINEER.

203 Alternatives Screening and Evaluations

ENGINEER will review viable HRC technologies with the OWNER at the kickoff meeting to select final alternatives to be analyzed during preliminary design. The ENGINEER assumes a maximum of three (3) alternatives will be considered including ActiFlo, Co-Mag, and up to one other technology. Plan and section layouts for these alternatives, based on data provided from the manufacturers, will be prepared to facilitate preparation of capital cost of construction opinions for each option. Operation and maintenance costs for each alternative will also be developed to include power costs, chemical costs, and major maintenance events for use in 20-year net present worth comparison. Other non-cost criteria will also be

considered including constructability, performance and effluent quality based on pilot results, compatibility with future improvements, operation and maintenance considerations, etc. The alternative screening process will include preparing sufficient information for the vendors to provide firm pricing that will be held for the duration of final design pending major revisions in scope of supply.

The above criteria will be utilized to facilitate a technology selection with input from the OWNER. A written summary of the alternatives analysis will be included in the preliminary design report.

204 Alternative Hydraulics Evaluation

ENGINEER will analyze the open channel hydraulic conditions for each technology alternative based on information provided by vendors and proposed layout of each technology. The ENGINEER will utilize upstream and downstream water surface elevation information provided by the OWNER for existing and other proposed facilities and the previously completed Facilities Plan Report by others including coordination with other consultants related to confirming upstream water elevations. ENGINEER will assist with providing recommendations related to adjustments to the influent pumping system to achieve the necessary water surface elevations in the system to accommodate the proposed HRC system. ENGINEER will also recommend necessary provisions to allow future biological enhancement to the high-rate primary clarification system.

205 Downstream System Impacts Analysis

ENGINEER will visit the site to define conditions of operation of the existing solids handling system including secondary clarifier sludge pumps, gravity thickeners, and dewatering equipment to understand potential impacts of coagulants used in the HRC system to these systems. This task will include analyzing existing sludge pump capabilities to route waste sludge to a point upstream of the HRC system for blending with the HRC sludge to generate a single sludge stream to the existing gravity thickeners. The ENGINEER will evaluate downstream capacity of belt filter system and capability to operating existing gravity thickeners in parallel to maintain balanced sludge blanket levels.

206 Preliminary Design Report Preparation

The ENGINEER shall prepare a Preliminary Design Report that summarizes the equipment selected including 30% design drawings for the selected technology to fit within the existing primary Microscreen building. This will include process mechanical plan and section drawings, process and instrumentation diagrams for main HRC and chemical systems, electrical one line diagram(s), electrical room layout, preliminary structural plan and section drawings including potential temporary supports necessary to facilitate construction within the existing building and preliminary architectural elevations for the revised building configuration.

The Preliminary Design Report will include a 30 percent opinion of probable construction cost and schedule for implementation of the improvements. The cost of implementation to re-purpose the Microscreen building will be compared to previous Facilities plan estimates

with updated vendor quotes to verify the approach for final design. Should the decision be reached not to re-purpose the Microscreen building the scope for final design may require adjustments. The ENGINEER shall review scheduling constraints with respect to time and project completion.

The ENGINEER shall provide the OWNER with five hardcopies of the draft Preliminary Design Report and one electronic copy as a PDF. After the OWNER reviews the draft Preliminary Design Report, the OWNER and ENGINEER shall meet (Task 102) to make final decisions on the recommendations. The ENGINEER will provide five hardcopies and one electronic copy as a PDF of the final Preliminary Design Report for the record.

The Preliminary Design Report shall serve as the basis for the final design improvements to be prepared under Task 300.

207 Preliminary Design Report Technical Review

During the course of the evaluation and recommendations process, the ENGINEER shall conduct one technical review meeting to ensure that the recommendations are technically sound and complete. This review meeting shall be attended by a Technical Review Committee (TRC) of senior engineers experienced in HRC.

Task 300 Final Design

Following the OWNER'S review and approval of the final Preliminary Design Report, the ENGINEER shall proceed with the final design of the improvements. This Agreement scope of services includes preparation of Contract Documents for the HRC improvements under one construction contract. Final design services provided by the ENGINEER are described as follows:

301 60 Percent Drawings and Specifications

The ENGINEER shall provide 60 percent drawings, technical specifications, and 3D model/Building Information Model (BIM) detailing the improvements recommended under Task 200. The drawings and model will show the proposed HRC system, chemical storage and feed systems, ballast recovery systems, sludge collection and conveyance systems, secondary clarifier waste sludge conveyance system and associated ancillary support equipment and relevant features impacting construction in adequate detail to define the extent of the work. Drawings shall include civil/site work requirements including erosion control, structural requirements, architectural requirements, mechanical requirements, instrumentation (including plant SCADA), electrical requirements, HVAC and plumbing requirements.

The ENGINEER shall provide a 60 percent opinion of probable construction cost and schedule for implementation of the improvements. The ENGINEER shall review scheduling constraints with respect to time and project completion.

Assuming a NTP date no later than September 1, 2016, the ENGINEER shall provide a complete, final construction budget to the OWNER no later than March 31, 2017 for inclusion in the OWNER'S FY17-18 Capital Improvement Program Budget.

The ENGINEER shall conduct one technical and constructability review workshop to ensure that the 60 percent design is technically sound and cost-effective. These reviews shall be attended by a Technical Review Committee (TRC) of senior engineers. The ENGINEER will meet with the OWNER (Task 102) to review the 60 percent design documents and receive comments to be incorporated into the subsequent design deliverables.

The anticipated list of Drawings to be prepared are included at the end of Exhibit A.

302 90 Percent Drawings and Specifications

The ENGINEER shall provide 90 percent drawings, technical specifications, and 3D model/Building Information Model (BIM) incorporating the comments provided to the 60 percent deliverable and developing the documents to a draft complete state. Drawings shall include civil/site work requirements including erosion control, structural requirements, architectural requirements, mechanical requirements, instrumentation (including plant SCADA), electrical requirements, HVAC and plumbing requirements. The documents will include necessary drawings, technical specifications and bidding documents for a complete and final review by the OWNER. It is assumed that the ENGINEER will utilize ENGINEER's standard Division 0 Contractual Documents for bidding purposes based on standard EJCDC documents. These will be provided to the OWNER for review and comment.

The ENGINEER shall provide a 90 percent opinion of probable construction cost and schedule for implementation of the improvements. The ENGINEER shall review scheduling constraints with respect to time and project completion. The ENGINEER will meet with the OWNER (Task 102) to review the 90 percent design documents and receive comments to be incorporated into the subsequent design deliverables.

303 100 Percent Drawings and Specifications

The ENGINEER shall provide 100 percent drawings, technical specifications, and 3D model/Building Information Model (BIM) incorporating the comments provided to the 90 percent deliverable and developing the documents to a complete state. Drawings shall include civil/site work requirements including erosion control, structural requirements, architectural requirements, mechanical requirements, instrumentation (including plant SCADA), electrical requirements, HVAC and plumbing requirements. The documents will include necessary drawings, technical specifications and bidding documents for a complete and final review by the OWNER. The ENGINEER will meet with the OWNER (Task 102) to review the 100 percent design documents and receive comments to be incorporated into the final documents for Bidding.

304 Final Bidding Documents

The ENGINEER shall provide final documents suitable for bidding by the OWNER by incorporating the comments provided to the 100 percent deliverable.

Final Bidding Documents shall include both reproducible copies of the Plans and Specifications, as well as a complete PDF of the signed and sealed final versions.

Task 400 Permitting

The ENGINEER will assist the OWNER in obtaining the required regulatory approvals/ permits for the HRC System Improvements.

401 Regulatory Review, Meetings, and Coordination

Following the completion of the Preliminary Engineering Report (Task 200), the ENGINEER will finalize the list of permits and approvals required for the construction phase of the work. This will include a strategy and schedule for resolving any obstacles that will prevent timely permit acquisition to ensure the overall project can proceed unimpeded including advanced meetings with NCDEQ to review the HRC technology.

Once permit applications are submitted, the ENGINEER will support the OWNER by attending meetings or participating in conference calls with regulators as necessary, including two regulatory/city agency meetings either onsite or at the regulatory offices to resolve any issues necessary to permit the project.

402 Prepare and Submit Permit Applications

As the design documents approach the 90-percent completion stage, the ENGINEER will begin preparing formal permit application forms and securing appropriate permitting fees from the OWNER with the goal of submitting the 90-percent documents to the necessary permitting agencies for review and approval. Should any major revisions be identified during the review meeting with the OWNER, the ENGINEER will coordinate these changes with the appropriate agencies to ensure the permitting process is not delayed. Applications for the required permits and approvals shall be prepared for submittal to the respective agencies. Where acceptable, the ENGINEER will make applications directly to the permitting agencies of behalf of the OWNER. It is assumed that the OWNER will pay all permitting fees. Due to the anticipated limited disturbed area with reuse of the primary Microscreen building, a sediment and erosion control permit is not anticipated to be required for this project. The following permits are assumed to be required for the project:

- NCDEQ Authorization to Construction
- Buncombe County Building Department

Task 500 Bidding and Award

Following receipt of authorization from OWNER, ENGINEER shall perform the following services related to Bidding and Award. One bidding phase for one construction contract is included as part of this scope of services. It is assumed that the OWNER will coordinate all bidding activities, distribute addenda and correspond with the prospective bidders.

- 501 Prepare for and conduct one pre-bid workshop with prospective bidders including a site tour and preparation of minutes of the meeting and response to questions received at the meeting.
- 502 Preparation of addenda as appropriate to interpret, clarify, or further define the Contract Documents. Addenda will be issued by OWNER.

- 503 Consult with and advise OWNER to determine the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the Contract Documents.
- 504 Attend the bid opening and certify the bid tabulation prepared by the OWNER. Assist OWNER in contract award process.
- 505 ENGINEER will prepare copies of the bid documents with appropriate agreement sections and bid documents from the low bid Contractor for execution by the OWNER and Contractor. It is assumed that conforming of the documents for construction purposes will be done during a future construction phase.

ASSUMPTIONS

The scope above and proposed fee for providing services is based on the following assumptions:

- Field survey of the existing plant site is not included in the scope, the OWNER will coordinate and pay for additional field survey, with input from the ENGINEER for necessary site survey of the plant property for use by the ENGINEER.
- Geotechnical investigations are not included in this scope of work, should additional geotechnical subsurface investigations be necessary these will be paid for by the OWNER.
- Subsurface vacuum excavations for buried utility designations are not included in this scope of work. Should these be required, the ENGINEER will coordinate with OWNER staff
- It is assumed that the existing plant has sufficient standby generator capacity for powering critical loads associated with the HRC system. New/improved standby generation equipment and/or associated air permitting is not included in the scope of services.
- Only the permits identified above will be necessary, should additional permits be required a scope modification will be required. OWNER will pay all permit fees.
- The scope of these improvements are based on the intention to re-purpose the existing primary Microscreen building to house the new HRC systems. If this is not feasible or cost effective based on preliminary design investigations, the OWNER and ENGINEER will revisit the revised final design scope to rectify any modifications necessary to the design fee.
- The scope assumes that a single technology will be selected for final design (i.e. ActiFlo, Co-Mag, etc.) and that this technology will be sole sourced resulting in one set of design documents specific to the selected technology.
- It is assumed that minor modifications will be required at the existing gravity thickeners to allow for simultaneous sludge removal from both thickener tanks.
- It is assumed that no odor control improvements will be included in this phase of the work for the gravity thickener system or for the HRC system.
- It is assumed that no fire protection system will be required for this project

- No architectural or structural modifications/improvements to the existing exterior primary Microscreen building are anticipated or included in the scope of work beyond the extension of the building to the north. It is assumed that the existing roof of the Microscreen building will remain in place and that improvements and new equipment will be completed using the existing roll-up door and/or wall modifications for the building expansion to the north.
- Architectural and Structural drawings will not be included in the Preliminary Design Report, these will be provided beginning with the 60-percent design deliverable.
- Structural design assumes that the demolition of the existing interior Microscreen basins can be demolished in one phase of work and that adequate temporary supports can be provided to allow the new features to be constructed inside the existing building.

SCHEDULE

The proposed schedule for implementing the improvements is as follows:

- Preliminary Design, including final selection of HRC technology and final decision by the team on re-purposing the Primary Microscreen building, will be completed within approximately 14 weeks of notice to proceed including notification of NCDEQ of intended scope of final design.
- 60% design documents will be delivered for OWNER Review 12 weeks following approval of the Preliminary Design Report.
- 90% design documents will be delivered for OWNER Review within 12 weeks following the 60% design review meeting.
- 100% design documents will be delivered for OWNER Review within 6 weeks following the 90% review meeting.
- Final “Bid Ready” documents will be delivered for bidding purposes within 3 weeks following the 100% design review meeting
- Bid Phase services, including contract execution and conforming of the documents, is estimated to require approximately 3 months to complete following bid advertisement.
- Permitting services will be completed concurrently with final design such that necessary permits have been received prior to bid advertisement.

PAYMENT AND COMPENSATION

For the services described above, OWNER agrees to pay ENGINEER a lump sum fee of \$998,900.00. The estimated schedule of values associated with each task is shown in Table 1 below; however these values do not represent upper limits for each task. Partial payments are to be made on a monthly basis according to the percentage of work completed during that month with the balance due upon completion of the work.

Table 1 - Proposed Services Fees	Estimated Budget
Task 100 - Project Management and Meetings	\$72,373.00
Task 200 - Preliminary Design	\$195,191.00
Task 300 - Final Design	\$677,257.00
Task 400 - Permitting	\$22,445.00
Task 500 - Bidding Assistance	\$31,634.00
Subtotal	\$998,900.00

PRELIMINARY DESIGN DRAWING LIST

Series	Number	Title
General	G-0	Cover
General	G-1	Index of Sheets
General	G-2	Symbols, Abbreviations, General Notes
General	G-3	Hydraulic Profile
General	G-4	Process Flow Diagram
General	G-5	Building Code Sheet
Civil	C-1	Existing Site Plan, Horizontal Control, Soil Borings
Civil	C-2	Temporary Facilities
Civil	C-3	Proposed Site Plan Improvements
Civil	C-4	Proposed Yard Piping Improvements (@ HRC)
Civil	C-5	Proposed Yard Piping Improvements (Return Sludge to Splitter Box)
Civil	C-6	Paving, Grading and Erosion Control
Civil	C-7	Piping Profiles
Civil	CD-1	Miscellaneous Details
Civil	CD-2	Miscellaneous Details
Civil	CD-3	Miscellaneous Details
Architectural	A-1	Abbreviations, Symbols and General Notes
Architectural	A-2	Building Code Key Determinations and Life Safety Plans
Architectural	A-3	High Rate Clarifier Building Addition Floor Plan
Architectural	A-4	High Rate Clarifier Building Addition Roof Plan
Architectural	A-5	High Rate Clarifier Building Addition Exterior Elevations
Architectural	A-6	High Rate Clarifier Building Addition Building Sections
Architectural	A-7	High Rate Clarifier Building Addition Wall Sections
Architectural	AD-1	Architectural Schedules, Types and Details
Architectural	AD-2	Architectural Details
Structural	S-1	Standard Structural Notes and Abbreviations
Structural	S-2	Microscreen Building Demolition Lower Level Plan - Phase 1
Structural	S-3	Microscreen Building Demolition Ground Floor Plan - Phase 1
Structural	S-4	Microscreen Building Demolition Sections and Details – Phase 1
Structural	S-5	High Rate Clarifier Lower Level Plan - Phase 2
Structural	S-6	High Rate Clarifier Ground Floor Plan - Phase 2
Structural	S-7	High Rate Clarifier Upper Level Plan – Phase 2
Structural	S-8	High Rate Clarifier Sections - Phase 2
Structural	S-9	High Rate Clarifier Sections and Details - Phase 2
Structural	S-10	Chemical Storage and Electrical Building Extension Foundation and Ground Level Slab Plans
Structural	S-11	Chemical Storage and Electrical Building Extension Roof Plan and Details
Structural	S-12	Chemical Storage and Electrical Building Extension Sections and Details
Structural	S-13	Miscellaneous Pads
Structural	SD-1	Standard Structural Details (Concrete)
Structural	SD-2	Standard Structural Details (Concrete)
Structural	SD-3	Standard Structural Details (Beam Schedule)

Structural	SD-4	Standard Structural Details (Masonry)
Structural	SD-5	Standard Structural Details (Metals)
Structural	SD-6	Standard Structural Details (Stairs & Misc)
Structural	SD-7	Special Inspections
Structural	SD-8	Special Inspections
Mechanical	M-1	General Notes, Abbreviations, Etc.
Mechanical	M-2	HRC Top Plan
Mechanical	M-3	HRC Bottom Plan
Mechanical	M-4	HRC Sections
Mechanical	M-5	HRC Sections
Mechanical	M-6	HRC Details
Mechanical	M-7	Chemical Storage and Pumping Plan
Mechanical	M-8	Chemical Storage and Pumping Plan
Mechanical	M-9	Chemical Feed Systems Schedules and Details
Mechanical	M-10	Splitter Box Modification Details
Mechanical	M-11	Sludge Pumping Improvement Plan and Details
Mechanical	M-12	Thickener Modifications
Mechanical	MD-1	Miscellaneous Details
Mechanical	MD-2	Miscellaneous Details
Mechanical	MD-3	Miscellaneous Details
HVAC	H-1	General Notes, Abbreviations, Etc.
HVAC	H-2	Microscreen Building Demolition Plan
HVAC	H-3	High Rate Clarifier Lower Level Floor Plan
HVAC	H-4	High Rate Clarifier Upper Level Floor Plan
HVAC	H-5	High Rate Clarifier Roof Plan
HVAC	H-6	High Rate Clarifier Sections
HVAC	HD-1	Schedules
HVAC	HD-2	Details
HVAC	HD-3	Details
Plumbing	P-1	General Notes, Abbreviations, Etc.
Plumbing	P-2	High Rate Clarifier lower Level Floor Plan
Plumbing	P-3	High Rate Clarifier Upper Level Floor Plan
Plumbing	P-4	Riser Diagrams
Plumbing	PD-1	Details
Electrical	E-1	Electrical Symbols, Abbreviations and General Notes I
Electrical	E-2	Electrical Symbols, Abbreviations and General Notes II
Electrical	E-3	NFPA 820 and NEC Hazardous Classification Plan and Notes
Electrical	E-4	Electrical Site Plan
Electrical	E-5	Overall 480 Volt One Line Power Diagram Modifications
Electrical	E-6	480 Volt One Line Power Diagram
Electrical	E-7	480 Volt One Line Power Diagram
Electrical	E-8	Electrical Equipment Front Views and Elevations
Electrical	E-9	Control and Instrumentation Diagrams
Electrical	E-10	Elementary Control Diagrams
Electrical	E-11	High Rate Clarifier Lower Level Power, Control and Grounding Plan

Electrical	E-12	High Rate Clarifier Lower Level Lighting Plan
Electrical	E-13	High Rate Clarifier Upper and Extension Level Power, Control and Grounding Plan
Electrical	E-14	High Rate Clarifier Upper Level and Extension Lighting Plan
Electrical	E-15	High Rate Clarifier Extension Roof Power, Control and Grounding Plan
Electrical	E-16	Miscellaneous Structures Electrical Plan
Electrical	E-17	Existing Electrical Room Modifications Plan
Electrical	E-18	Lighting Fixture Schedules and Details
Electrical	E-19	Panelboard Schedules
Electrical	E-20	Electrical Details I
Electrical	E-21	Electrical Details II
Instrumentation	I-1	Instrumentation Symbols
Instrumentation	I-2	Instrumentation Legend
Instrumentation	I-3	System Architecture
Instrumentation	I-4	HRC Mixing and Maturation Tanks P&ID
Instrumentation	I-5	HRC Sludge Pumps and Hydrocyclone P&ID
Instrumentation	I-6	Polymer System P&ID
Instrumentation	I-7	Coagulant P&ID
Instrumentation	I-8	Automated Ballast Feed System P&ID
Instrumentation	I-9	Electrical Systems P&ID
Instrumentation	I-10	Control Panel Details
Instrumentation	I-11	Instrumentation Details
Instrumentation	I-12	Instrumentation Details

Task	Description	LABOR CATEGORY																	Total Hours	Labor Cost	Outside Professionals	Other Direct Costs	TOTAL TASK BUDGET
		Officer Technical Review	Senior Project Manager	Senior Technical Specialist	Lead Design Engineer	Senior Professional	Electrical Engineer	Structural Engineer	Instrumentation Engineer	Architect	HVAC/Plumbing	Designer Drafter	Professional II	Professional I	Cost Estimator	O&M Specialist	Site Inspector	Administrative					
	Rate Schedule (\$/hr)	250	205	240	240	155	140	140	145	145	145	120	135	110	135	155	155	95					
	Total Project	177	263	184	269	349	757	1127	530	457	539	550	405	315	240	25	0	97	6284	\$946,825	\$0	\$52,075	\$998,900
100	--Project Management and Meetings	57	138	24	42	15	8	8	8	8	0	8	0	0	0	0	0	25	341	\$68,600	\$0	\$3,773	\$72,373
	--Project Initiation and Kickoff Workshop	10	18	8	6														42	\$9,550			\$9,550
	--Alternatives Analysis Results Mtg and Technology Selection	8	8	8	6														30	\$7,000			\$7,000
	--Preliminary Design Report Mtg	8	8	8	6														30	\$7,000			\$7,000
	--60% Design Review Meeting	8	8		8		8	8	8	8		8							64	\$11,080			\$11,080
	--90% Design Review Meeting	8	8		8														24	\$5,560			\$5,560
	--100% Design Review Meeting				8														16	\$3,560			\$3,560
	--Project Management	15	80			15											25		135	\$24,850			\$24,850
200	-- Preliminary Design (30%)	20	30	86	73	115	77	202	65	112	47	77	165	85	30	0	0	15	1199	\$185,015	\$0	\$10,176	\$195,191
	-- Data Collection and Review		5		5	10	10	20	10	10	10			15					95	\$13,975			\$13,975
	-- Primary Microscreen Building Evaluation and Site Visit						20	50	8	20	10								108	\$15,310			\$15,310
	-- Baseline Existing MicroScreen BIM Model							30		30									60	\$8,550			\$8,550
	-- Final Alternatives Screening and Analysis		10	60	40								40	35					185	\$35,575			\$35,575
	-- Coordination with Headworks Project - HGL/Influent Pumping/Splitter Box Design with HDR		5	8	8	10							20						51	\$9,115			\$9,115
	-- Alternative Hydraulics Evaluations					30							45						75	\$10,725			\$10,725
	-- Downstream System Investigations and Impact Analysis (Sludge Pumping, Thickening, Dewatering)	4	4	8	8	25						15	15	10					89	\$14,460			\$14,460
	-- Prepare Draft PDR and Review of Report	16	4	6	8	40	45	100	45	50	25	20	40	50	30			10	489	\$70,380			\$70,380
	-- Prepare Final Design Report		2	4	4		2	2	2	2	2	2	10	10				5	47	\$6,925			\$6,925
300	--Final Design	100	45	70	140	165	645	890	430	315	470	455	220	185	210	25	0	40	4405	\$641,950	\$0	\$35,307	\$677,257
	-- Prepare 60% Design and Cost Estimate	50	15	35	75	70	225	400	215	170	245	225	100	85	130	10		20	2070	\$302,525			\$302,525
	-- Prepare 90% Design and Cost Estimate	30	15	25	50	60	200	240	115	65	100	150	70	70	50	10		10	1260	\$184,475			\$184,475
	-- Prepare 100% Design and Cost Estimate	15	10	5	10	25	175	150	50	40	75	60	40	20	30	5		5	715	\$102,800			\$102,800
	-- Prepare and Deliver Final Bidding Documents	5	5	5	5	10	45	100	50	40	50	20	10	10				5	360	\$52,150			\$52,150
400	-- Permitting	0	23	0	10	46	2	2	2	2	2	0	10	30	0	0	0	10	139	\$21,275	\$0	\$1,170	\$22,445
	-- Authorization to Construct from NCDEQ (including efforts during preliminary design)		15		10	40							10	20				5	100	\$15,700			\$15,700
	-- City/County Building Department Approval		8			6	2	2	2	2	2			10				5	39	\$5,575			\$5,575
500	-- Bidding Assistance	0	27	4	4	8	25	25	25	20	20	10	10	15	0	0	0	7	200	\$29,985	\$0	\$1,649	\$31,634
	-- Respond to Questions and Assist with Addenda		12	4	4	8	25	25	25	20	20	10	10	15				5	183	\$26,720			\$26,720
	-- Attend Pre-Bid, Bid Opening and Prepare Recommendation		15															2	17	\$3,265			\$3,265

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

BUDGET DATA SHEET - FY 2016 - 2017

PROJECT: Plant High Rate Primary Treatment	LOCATION: MSD-Treatment Plant
TYPE: Treatment Plant	PIPE RATING: N/A
PROJECT NO.: 2015054	TOTAL LF: 0
PROJECT BUDGET: \$10,962,000.00	PROJECT ORIGIN: Facilities Plan Update - HDR

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/15	EST. COST JAN - JUNE 2016	EST. BUDGET FY 16-17
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN	\$960,000.00			\$960,000.00
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES				
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$9,608,000.00			
55430 - CONST. CONTRACT ADM.	\$384,000.00			
55440 - TESTING	\$10,000.00			
55450 - SURVEY - ASBUILT				
TOTAL AMOUNT	\$10,962,000.00	\$0.00	\$0.00	\$960,000.00

ENGINEER: TBD	HC	ESTIMATED BUDGETS - FY '18 -'26	
R.O.W. ACQUISITION: N/A	# PLATS: [0]	FY 17-18	\$5,006,000.00
CONTRACTOR:		FY 18-19	\$4,996,000.00
CONSTRUCTION ADM.: TBD		FY 19-20	\$0.00
INSPECTION: TBD		FY 20-21	\$0.00
		FY 21-22	\$0.00
		FY 22-23	\$0.00
PROJECT DESCRIPTION: This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. High rate primary treatment will improve water quality ahead of the RBC's thereby extending their useful life and improving treatment efficiency.		FY 23-24	\$0.00
		FY 24-25	\$0.00
		FY 25-26	\$0.00

SPECIAL PROJECT NOTES:



RIVERSIDE DR



**Plant High Rate Primary Treatment
Project No. 2015054**

NOT TO SCALE



METROPOLITAN SEWERAGE DISTRICT
of
BUNCOMBE COUNTY, NORTH CAROLINA

Budget Map

Metropolitan Sewerage District of Buncombe County

BOARD ACTION ITEM

Meeting Date: August 17, 2016
Submitted By: Thomas E. Hartye, PE., General Manager
Prepared By: W. Scott Powell, CLGFO, Director of Finance
Subject: Reimbursement Resolution for Bond Projects

Background

To be in compliance with IRS regulations concerning tax-exempt financing, all expenditures made with non-MSD bonds funds and to be reimbursed from MSD bond funds must be properly identified and authorized. The proposed reimbursement resolution identifies a major project intended to be solely or substantially financed by bonds anticipated to be issued in FY 2019. Board approval is required to obtain the tax-exemption of interest paid on MSD bonds by authorizing reimbursement from bond proceeds of the expenditures for this project.

This resolution does not take the place of an annual budget or capital projects ordinance as mandated by North Carolina General Statutes required authorizing any expenditures irrespective of source of the funds. The project has been or will be included in the District's annual budget process.

In addition to this current reimbursement resolution, additional resolutions may be submitted for other projects when their anticipated costs may be more accurately projected.

Discussion

\$28 million of bonds are planned to be issued in FY 2019, and this reimbursement resolution is intended to preserve for the District the ability to issue the bonds as tax-exempt bonds and to reimburse itself from their proceeds for the temporary cash outlay made for the projects identified in the reimbursement resolutions.

Engineering Staff have identified several upcoming projects detailed on the attached exhibit, which could be reimbursed from the upcoming revenue bonds. Estimated reimbursable expenditures for these projects total \$11,512,000.

Fiscal Impact

Allows for reimbursement of project expenses with bond proceeds. This reimbursement resolution does not obligate the District to use bond proceeds for these projects, nor does it create an obligation for expenditure of the funds for the identified projects. Authorization for these project expenditures is provided by the annual budget ordinance or capital projects ordinance.

Meeting Date: August 17, 2016
Subject: Reimbursement Resolution for Bond Projects
Page 2

Staff Recommendation

Approval.

Action Taken			
Motion by:	to	Approve	Disapprove
Second by:		Table	Send to Committee
Other:			
Follow-up required:			
Person responsible:		Deadline:	

Metropolitan Sewerage District of Buncombe County
Attachment to Reimbursement Resolution
August 17, 2016

Project	Project #	Estimated Expenditures on and after June 17, 2016
Horizon Hill Road	2008084	\$ 224,000
Dellwood Avenue	2009131	92,000
South French Broad Interceptor - Grouting	2011033	588,000
Sand Hill Rd. @ Russell/Davenport	2011093	533,000
Sweeten Creek @ Busbee View	2011095	276,000
Freno Drive PSR (lower)	2012010	639,000
New Haw Creek Rd. @ Trrinity Chapel Rd.	2012081	228,000
Arco Road	2012082	584,000
Stratford Rd. @ Oxford Court	2012133	401,000
Plant Headworks Improvement	2015004	5,457,000
Plant High Rate Primary Treatment	2015054	960,000
Venable Pump Station Elimination	2015172	153,000
Lining Contract No. 8	2015218	1,377,000
		\$ 11,512,000

Note: Amounts rounded to nearest thousand

REIMBURSEMENT RESOLUTION

RESOLUTION OF THE DISTRICT BOARD OF THE METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY, NORTH CAROLINA DECLARING ITS INTENTION TO REIMBURSE ITSELF FROM THE PROCEEDS OF ONE OR MORE TAX-EXEMPT FINANCINGS FOR CERTAIN EXPENDITURES MADE AND/OR TO BE MADE IN CONNECTION WITH THE ACQUISITION, CONSTRUCTION AND/OR EQUIPPING OF CERTAIN CAPITAL IMPROVEMENTS

WHEREAS, the Metropolitan Sewerage District of Buncombe County, North Carolina (the "Issuer") is a body politic and corporate organized and existing under the laws of the State of North Carolina; and

WHEREAS, the Issuer has paid, beginning June 17, 2016, and will pay, on and after the date hereof, certain expenditures (the "Expenditures") in connection with the acquisition, design and construction of the projects on the attached Exhibit (the "Projects"); and

WHEREAS, the District Board of the Issuer (the "Board") has determined that those monies previously advanced no more than 60 days prior to the date hereof and to be advanced on and after the date hereof to pay the Expenditures are available only for a temporary period and it is necessary to reimburse the Issuer for the Expenditures from the proceeds of one or more issues of tax-exempt bonds (the "Bonds");

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD AS FOLLOWS:

Section 1. The Board hereby declares the Issuer's intent to reimburse the Issuer with the proceeds of the Bonds for the Expenditures with respect to the Project made on and after June 17, 2016 which date is no more than 60 days prior to the date hereof. The Issuer reasonably expects on the date hereof that it will reimburse the Expenditures with the proceeds of the Bonds.

Section 2. Each Expenditure was and will be either (a) of a type properly chargeable to capital account under general federal income tax principles (determined in each case as of the date of the Expenditure), (b) a cost of issuance with respect to the Bonds, (c) a nonrecurring item that is not customarily payable from current revenues, or (d) a grant to a party that is not related to or an agent of the Issuer so long as such grant does not impose any obligation or condition (directly or indirectly) to repay any amount to or for the benefit of the Issuer.

Section 3. The maximum principal amount of the Bonds expected to be issued for the Projects is \$11,512,000.

Section 4. The Issuer will make a reimbursement allocation, which is a written allocation by the Issuer that evidences the Issuer's use of proceeds of the Bonds to reimburse an Expenditure, no later than 18 months after the later of the date on which the Expenditure is paid or the Projects are placed in service or abandoned, but in no event more than three years after the date on which the Expenditure is paid. The Issuer recognizes that exceptions are available for certain "preliminary expenditures," costs of issuance, certain de minimis amounts, expenditures by "small issuers" (based on the year of issuance and not the year of expenditure) and expenditures for construction projects of at least five years.

Section 5. This resolution shall take effect immediately upon its passage.

PASSED AND ADOPTED this 17th day of August, 2016

M. Jerry VeHaun
Chairman of the Board

Attested to:

Jackie W. Bryson, Secretary/Treasurer

Metropolitan Sewerage District of Buncombe County

BOARD INFORMATIONAL ITEM

Meeting Date: August 17, 2016
Submitted By: Thomas E. Hartye, PE., General Manager
Prepared By: W. Scott Powell, CLGFO, Director of Finance
Subject: Fourth Quarter Budget to Actual Review – FY2016

Background

At the end of each quarter, actual revenue and expenditure amounts are compared with the budget to evaluate performance. This information is based on cash revenues and invoices received prior to June 30, 2016 and may not include some accruals of revenue and expenditures.

Discussion

There are several explanatory notes at the bottom of the attached Budget to Actual schedule. Other considerations are as follows:

- ◀ Domestic revenues are at budgeted expectations. Staff believes Domestic User Fee variance will end up around 101% when June accounts receivable data is received from its Member Agencies in September. Industrial Revenue trending slightly better than budgeted expectations due to increased revenue from one new industrial user. Staff monitors consumption trends as they have a direct effect on the District's current and future revenue projections.
- ◀ Facility and Tap Fees are budgeted conservatively. The unusually large variance as of the end of the year is due to receiving unanticipated revenue of \$3.1 million from eight developments.
- ◀ Interest and miscellaneous income are below budgeted expectations. Short-term interest rates are still experiencing pressures due to Federal Reserve monetary policy.
- ◀ Rental income reflects slightly better than expected earnings.
- ◀ Actual and encumbered O&M expenditures are considered reasonable, but may vary slightly once accruals and adjustments are made in connection to the final audit.
- ◀ Bond principal and interest are better than budgeted expectations due to the interest rate swap associated with Series 2008A revenue refunding bonds.
- ◀ Capital project expenditures are at approximately 98.65% of budget. The District continues to receive favorable pricing on projects.

Meeting Date: August 17, 2016

Subject: Fourth Quarter Budget to Actual Review – FY2016

Page -2-

Staff Recommendation

None - Information Only.

Action Taken

Motion by: _____ to Approve Disapprove
Second by: _____ Table Send to Committee
Other: _____
Follow-up required: _____
Person responsible: _____ Deadline: _____

Metropolitan Sewerage District Budget to Actual Revenue and Expenditure Report For the twelve months ended June 30, 2016

UNAUDITED--NON-GAAP

	Budget	Actual to Date	% Budget to Actual
REVENUES			
Domestic User Fees ¹	\$ 28,962,278	\$ 29,790,620	102.86%
Industrial User Fees	3,155,799	3,344,330	105.97%
Facility Fees ²	1,500,000	5,798,181	386.55%
Tap Fees ³	105,000	526,415	501.35%
Billing and Collection	734,708	754,317	102.67%
Interest and Misc. Income	485,094	420,705	86.73%
Employee Contribution to Health Ins.	413,000	416,349	100.81%
City of Asheville (Enka Bonds)	37,000	37,146	100.39%
Proceeds from Revenue Bonds	-	-	-
Rental Income	69,950	78,925	112.83%
Use of Available Funds ⁴	12,021,748	4,054,988	33.73%
Total Revenues ⁵	\$ 47,484,577	\$ 45,221,975	95.24%
EXPENDITURES			
Operations and Maintenance ⁶	\$ 15,890,011	\$ 15,074,895	94.87%
Bond Principal and Interest	9,109,708	8,986,919	98.65%
Capital Equipment (Other than O&M) ⁶	635,000	564,415	88.88%
Capital Projects ⁶	20,849,858	20,595,746	98.78%
Contingency	1,000,000	-	0.00%
Total Expenditures	\$ 47,484,577	\$ 45,221,975	95.24%

Notes:

¹ Revenues are accounted for on the cash basis method

² Increase due to unanticipated revenue from eight developments at \$3,110,000

³ Increase in number of Taps requiring Pavement Disturbance

⁴ Pay-as-go funds to be used for CIP

⁵ Budget-to-Actual Ratio does not include use of available funds

⁶ Includes encumbered amounts as well as actual insurance expenditures

Metropolitan Sewerage District of Buncombe County

BOARD INFORMATIONAL ITEM

Meeting Date: August 17, 2016

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 June 30, 2016

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 June 30, 2016 were \$50,211,231. The detailed listing of accounts is available upon request. The average rate of return for all investments is 0.491%. 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 June 30, 2016 do not reflect contractual commitments or encumbrances against said funds. Shown below are the total investments as of June 30, 2016 reduced by contractual commitments, bond funds, and District reserve funds. The balance available for future capital outlay is (\$7,654,257).

Total Cash & Investments as of 06/30/2016		50,211,231
Less:		
FY17 O & M Expenditures approved June 15, 2016	(16,106,490)	
FY17 Construction Expenditures approved June 15, 2016	(22,042,087)	
		(38,148,577)
Bond Restricted Funds		
Bond Service (Funds held by trustee):		
Funds in Principal & Interest Accounts	(6,589,803)	
FY17 Principal & Interest Due	(7,956,840)	
		(14,546,643)
District Reserve Funds		
Fleet Replacement	(573,921)	
WWTP Replacement	(567,421)	
Maintenance Reserve	(956,441)	
		(2,097,783)
District Insurance Funds		
General Liability	(555,944)	
Worker's Compensation	(284,561)	
Post-Retirement Benefit	(1,451,320)	
Self-Funded Employee Medical	(780,660)	
		(3,072,485)
Designated for Capital Outlay		(7,654,257)

Staff Recommendation

None. Information Only.

Action Taken

Motion by:

to

Approve

Disapprove

Second by:

Table

Send to Committee

Other:

Follow-up Required:

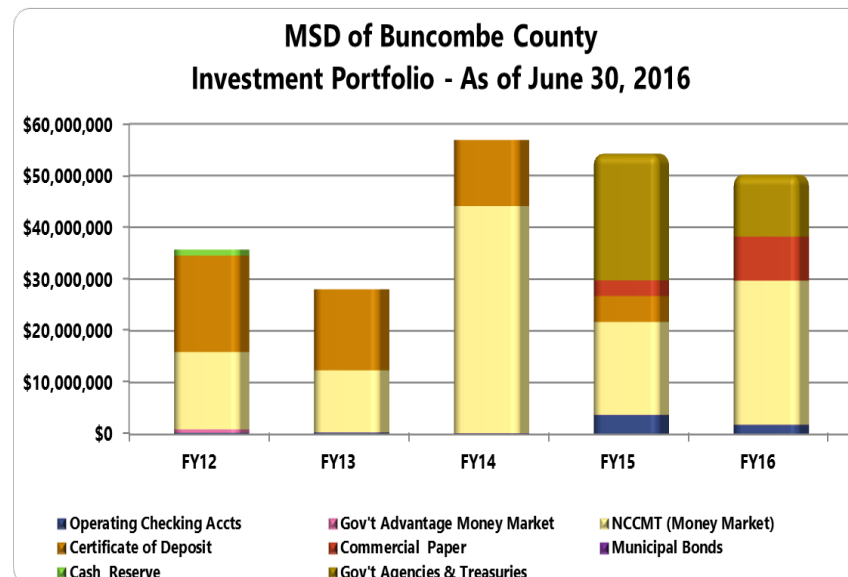
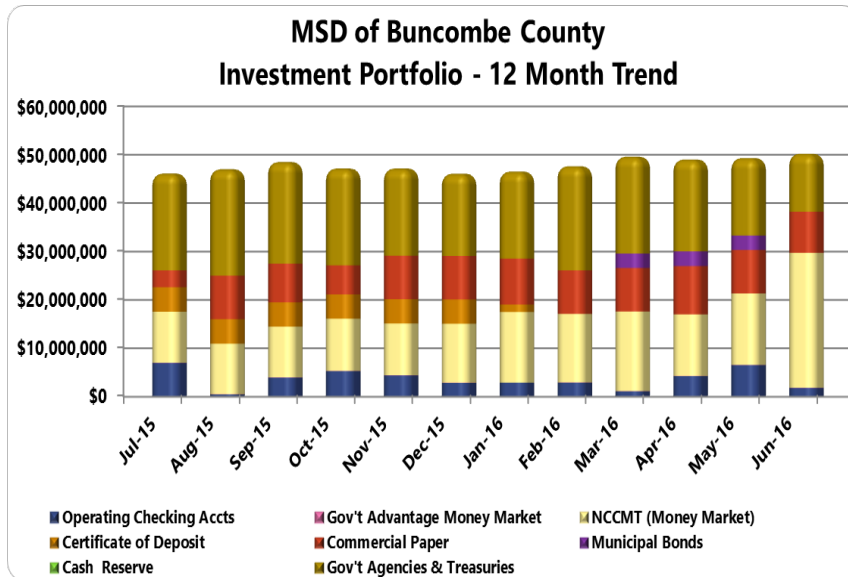
Person Required:

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	\$ -	\$ -	\$ 6,589,803	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,589,803
Held by MSD	1,839,860	46,669	21,242,057	-	8,492,649	-	-	12,000,193	43,621,428
	\$ 1,839,860	\$ 46,669	\$ 27,831,860	\$ -	\$ 8,492,649	\$ -	\$ -	\$ 12,000,193	\$ 50,211,231

Investment Policy Asset Allocation	Maximum Percent	Actual Percent	
U.S. Government Treasuries, Agencies and Instrumentalities	100%	23.90%	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 .68% is exceeding the YTM benchmarks of the 6 month T-Bill and NCCMT Cash Portfolio.
Commercial Paper	20%	16.91%	
Municipal Bonds	100%	0.00%	6 month T-Bill and NCCMT Cash Portfolio.
North Carolina Capital Management Trust	100%	55.43%	
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		3.66%	
Gov't Advantage Money Market		0.10%	

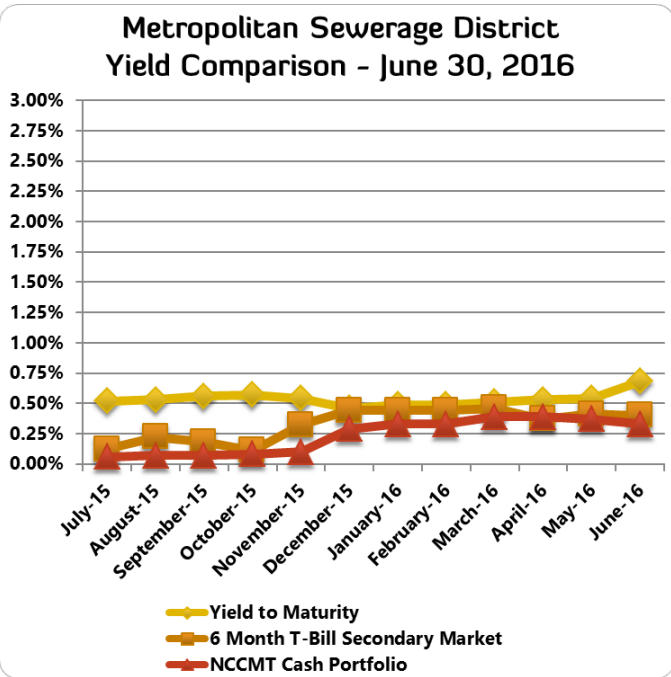
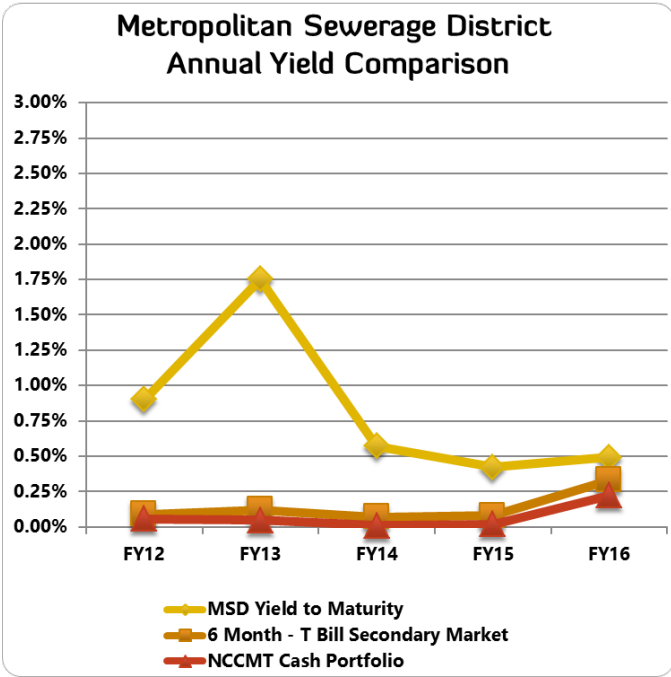


**METROPOLITAN SEWERAGE DISTRICT
 INVESTMENT MANAGERS' REPORT
 At June 30, 2016**

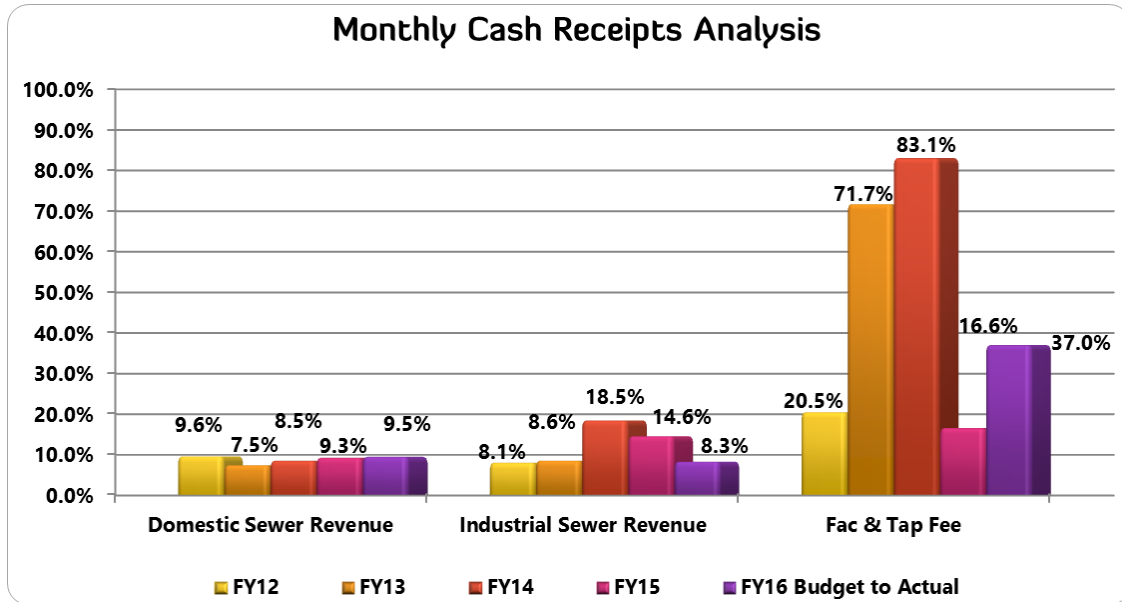
	Original		Interest
	Cost	Market	
Beginning Balance	\$ 41,152,001	\$ 41,160,966	\$ 23,247
Capital Contributed (Withdrawn)	(1,080,556)	(1,080,556)	
Realized Income	13,852	13,852	(8,852)
Unrealized/Accrued Income		(1,116)	4,154
Ending Balance	<u>\$ 40,085,297</u>	<u>\$ 40,093,146</u>	<u>\$ 18,549</u>

	Original Cost	Income
Cash Equivalents <91 Days	\$ 28,085,757	\$ 5,632
Securities/CD's 91 to 365 Days	4,500,040	902
Securities/CD's > 1 Year	7,499,500	1,504
	<u>\$ 40,085,297</u>	<u>\$ 8,038</u>

Month End Portfolio Information	
Weighted Average Maturity	232
Yield to Maturity	0.68%
6 Month T-Bill Secondary Market	0.40%
NCCMT Cash Portfolio	0.33%

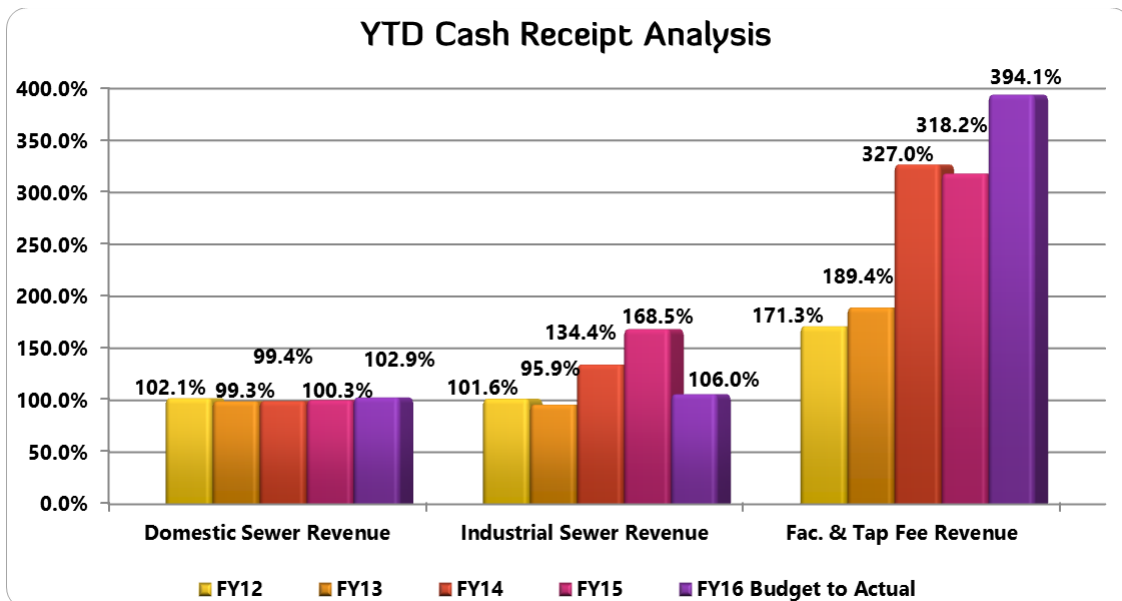


**METROPOLITAN SEWERAGE DISTRICT
 ANALYSIS OF CASH RECEIPTS
 As of June 30, 2016**



Monthly Cash Receipts Analysis:

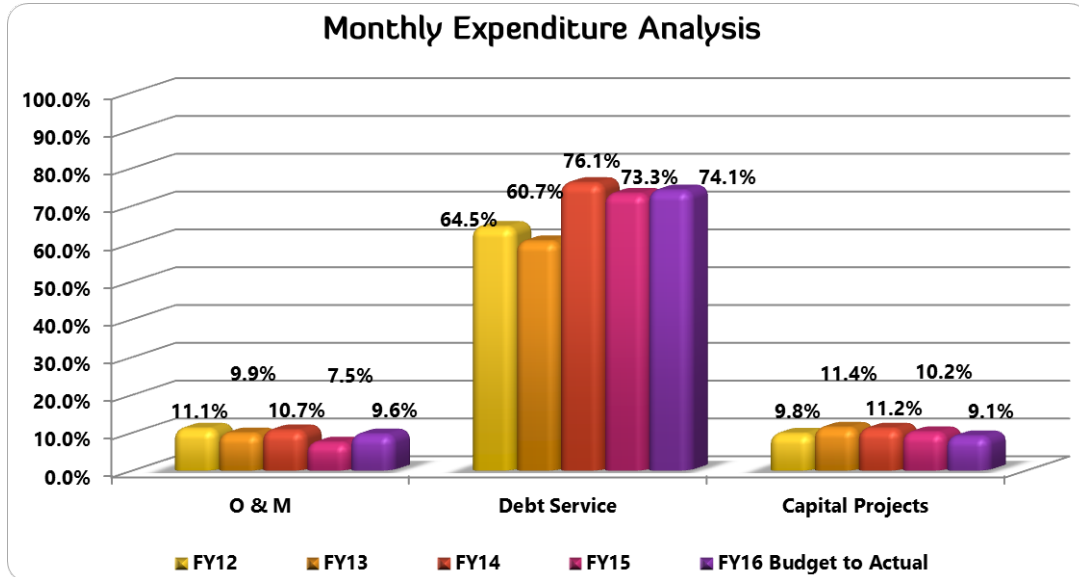
- Monthly domestic sewer revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods.
- Monthly industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap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



YTD Actual Revenue Analysis:

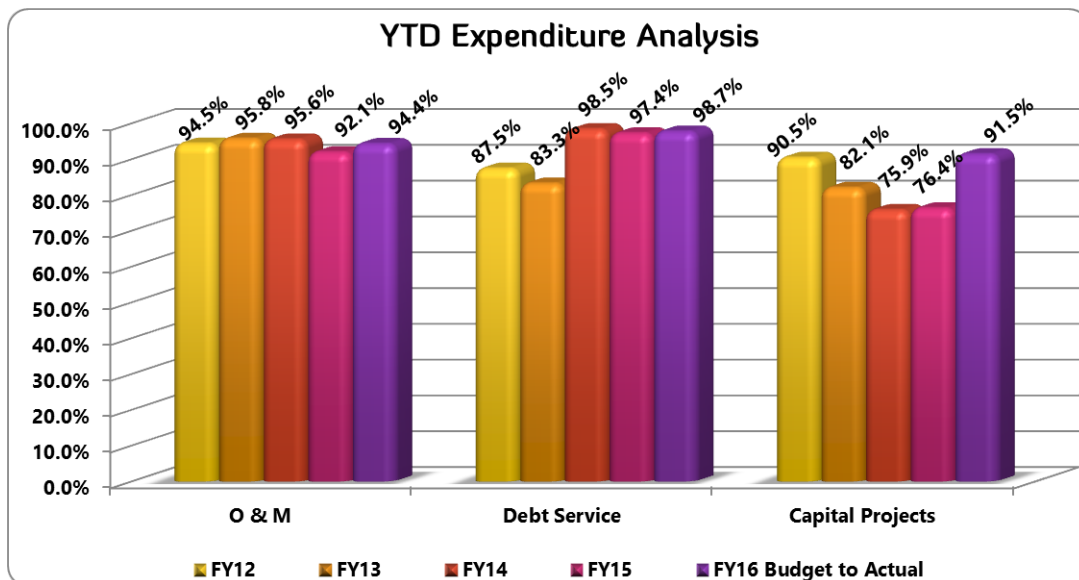
- YTD domestic sewer revenue is considered reasonable based on historical trends.
- YTD industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.

**METROPOLITAN SEWERAGE DISTRICT
 ANALYSIS OF EXPENDITURES
 As of June 30, 2016**



Monthly Expenditure Analysis:

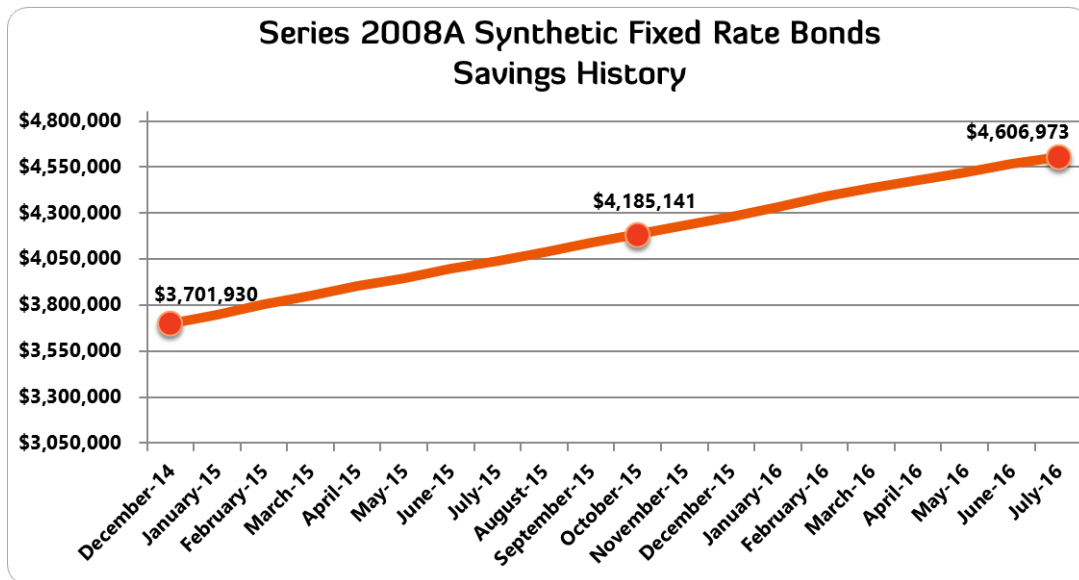
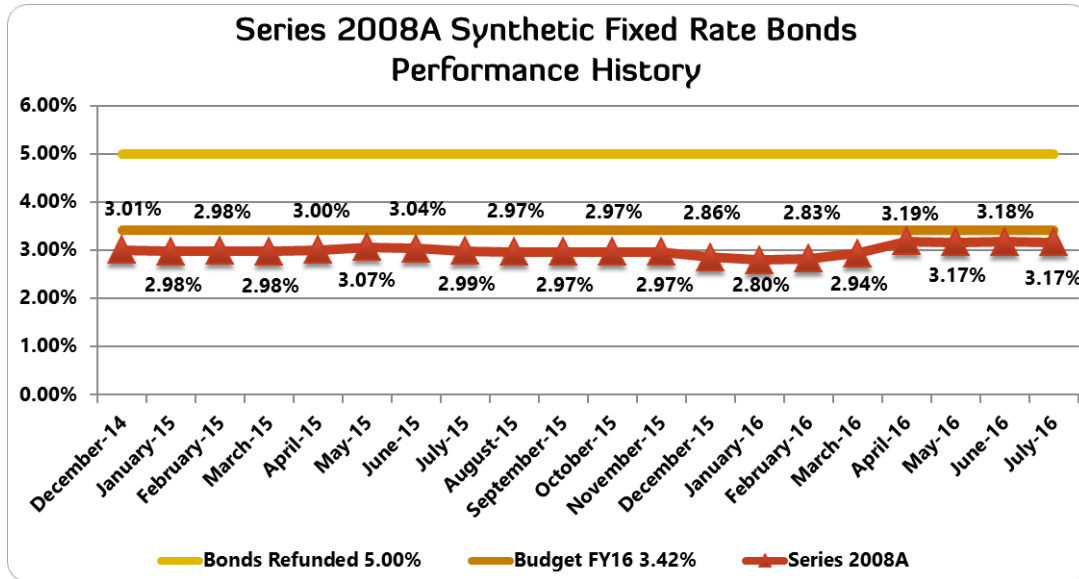
- Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year.
- Due to the nature of the variable rate bond market, monthly expenditures can vary year to year. Based on current variable interest rates, monthly debt service expenditures 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 July 31, 2016**



Series 2008A:

- ▲ Savings to date on the Series 2008A Synthetic Fixed Rate Bonds is \$4,606,973 as compared to 4/1/2008 fixed rate of 4.85%.
- ▲ Assuming that 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.
- ▲ MSD would pay \$5,684,165 to terminate the existing Bank of America Swap Agreement.

STATUS REPORTS

**MSD System Services In-House Construction
FY 16-17 PROJECTS**

PROJECT NAME	LOCATION	ZIP CODE	ESTIMATED FOOTAGE	ESTIMATED PROJECT DATES	WO#	CREW	COMPLETION DATE	ACTUAL FOOTAGE	NOTES
Asheville Country Club Phase 1 B	N. Asheville	28804	1739	6/29/16 - 7/21/16	234696	631	7/21/2016	1739	complete
Asheville Country Club 6" Replacement	N. Asheville	28804	325	7/25/16 - 7/27/16	235071	631	7/27/2016	325	complete
Tanglewood Drive at Craggy Ave	W. Asheville	28803	141	7/18/16 - 7/28/16	233397	632	7/28/2016	101	complete
Asheville Country Club Phase 2	N. Asheville	28804	4030	7/28-16 - 9/1/16	225192	631			In Construction
Dejeuil Drive Sewer Rehabilitation	West Asheville	28806	300	8/8/16 - 9/1/16	219451	632			Construction to begin 8/8/16
Weighstill PS Force Main Replacement	Arden	28704	1700	9/2/16 - 10/2/16	235481	631			ready for construction
Lakeshore Drive	Asheville	28804	500	9/2/16 - 10-1/16	TBA	632			design nearing completion
Kenilworth Rd @ Sheridan Road	Asheville	28803	400	FY 16-17	TBA	TBA			design nearing completion
East Grovestone Quarry	Black Mountain	28711	780	FY 16-17	213459	TBA			ready for construction
Spears Avenue Rehabilitation	Asheville	28801	300	FY 16-17	225197	TBA			ready for construction
Celia Place at Bond Street	Asheville	28801	526	FY 16-17	227752	TBA			ready for construction
School Road at Cranford Road	W. Asheville	28806	360	FY 16-17	224943	TBA			ready for construction, MSD Project 2014084
Starnes Avenue at Broadway Street	Asheville	28801	400	FY 16-17	208325	TBA			ready for construction
350 Old Haw Creek Road	Asheville	28805	1333	FY 16-17	47802	TBA			ready for construction
905 Patton Avenue	Asheville	28806	187	FY 16-17	TBA	TBA			ready for Construction
149 Weston Rd	Arden	28704	210	FY 16-17	225004	TBA			ready for construction
110 Beaver Drive	Woodfin	28804	425	FY 16-17	210211	TBA			ready for construction
18 Crestland Road	Asheville	28803	270	FY 16-17	46826	TBA			ready for construction
Meadowbrook Rd Rehabilitation	Black Mountain	28711	1327	FY 16-17	TBA	TBA			In ROW
69 Providence Road	West Asheville	28806	190	FY 16-17	231127	TBA			In Design
722 Center St	Asheville	28803	265	FY 16-17	229911	TBA			In Design
5 Spring Cove Terr	Beaverdam	28804	375	FY 16-17	233212	TBA			In Design
Seventh St	Black Mountain	28711	200	FY 16-17	225198	TBA			In design
School Road at Woodland	W. Asheville	28806	350	FY 16-17	224993	TBA			In design
Upper Chestnut Ridge at lookout Road	Woodfin	28804	800	FY 16-17	210370	TBA			In Design
179 Old Haw Creek Rd	Asheville	28805	760	FY 16-17	220080	TBA			In Design
Biltmore Avenue at Bryson Street	Asheville	28801	200	FY 16-17	225195	TBA			In Design
111 Compton Drive	Asheville	28806	360	FY 16-17	228741	TBA			In Design
332 Wilson Avenue	Swannanoa	28778	235	FY 16-17	210202	TBA			In Design
Old Farm School Road	Asheville	28805	550	FY 16-17	456319	TBA			In Design
155 New Haw Creek Road	Asheville	28805	100	FY 16-17	456318	TBA			In Design
184 West Chestnut	Asheville	28801	320	FY 16-17	201957	TBA			In Design
Upper Chestnut @ Lookout Road	Woodfin	28804	800	FY 16-17	TBA	TBA			In Design
Chestnut Lodge	Black Mountain	28711	500	FY 16-17	TBA	TBA			In Design
Belmont Road	W. Asheville	28806	170	FY 16-17	233437	TBA			In Design
24 Ivey Street	W Asheville	28806	850	FY 16-17	TBA	TBA			In Design
4 Westview Rd	Asheville - Oakley	28803	740	FY 16-17	TBA	TBA			In Design
304 9th Street	Black Mountain	28711	450	FY 16-17	TBA	TBA			In Design
15 New Jersey	Asheville	28806	250	FY 16-17	TBA	TBA			In Design
139 Weaverville Rd	Asheville - Woodfin	28804	400	FY 16-17	TBA	TBA			In Design



CONSTRUCTION TOTALS BY DATE COMPLETED - Monthly

From 7/1/2015 to 6/30/2016

	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 2015	31	7	87	489	32	12	0	91	1116	408	13	1,057	2672
August 2015	27	7	89	427	13	11	6,757	377	307	280	18	1,378	2342
September 2015	33	7	190	747	29	25	10	348	219	479	11	735	1781
October 2015	42	7	226	1,023	18	21	190	202	137	182	5	126	647
November 2015	28	8	145	505	18	14	440	0	442	1504	16	261	2207
December 2015	30	16	90	616	27	7	220	0	368	598	7	100	1066
January 2016	29	8	121	367	29	11	300	4	100	0	0	0	104
February 2016	35	14	185	628	22	14	805	219	625	265	13	503	1612
March 2016	37	23	420	862	28	23	1,251	0	8	646	7	215	869
April 2016	40	9	209	639	34	14	200	0	139	756	11	1,018	1913
May 2016	25	15	119	1,080	26	46	160	0	288	0	0	0	288
June 2016	33	8	155	753	18	36	6,000	0	20	1622	28	2,942	4583
Grand Totals	390	129	2,034	8,135	294	234	16,333	1,241	3769	6740	129	8,335	20084

* Used to calculate Total Rehab Footage



PIPELINE MAINTENANCE TOTALS BY DATE COMPLETED - Monthly

July 01, 2015 to June 30, 2016

	Main Line Wash Footage	Service Line Wash Footage	Rod Line Footage	Cleaned Footage	CCTV Footage	Smoke Footage	SL-RAT Footage
2015							
July	98,340	1,112	3,630	101,970	35,280	18,250	7,999
August	65,325	1,906	7,190	72,515	24,728	0	13,969
September	79,795	1,645	9,498	89,293	32,353	4,579	17,664
October	38,126	2,363	4,810	42,936	31,243	14,600	21,241
November	42,038	1,966	6,174	48,212	29,033	0	17,487
December	48,491	1,945	8,240	56,731	19,205	1,500	15,016
2016							
January	53,754	1,554	7,559	61,313	18,118	3,663	3,800
February	57,342	2,460	9,279	66,621	25,427	1,936	12,807
March	54,004	2,950	11,610	65,614	28,973	8,587	26,752
April	65,853	1,600	11,018	76,871	28,639	201	12,380
May	47,637	2,323	7,532	55,169	29,304	4,775	11,279
June	45,120	1,752	10,941	56,061	29,785	22,902	12,880
Grand Total:	695,825	23,576	97,481	793,307	332,088	80,993	173,274
Avg Per Month:	57,985	1,965	8,123	66,109	27,674	6,749	14,440



CUSTOMER SERVICE REQUESTS

Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
DAY 1ST RESPONDER				
	July, 2015	80	32	38
	August, 2015	110	31	45
	September, 2015	99	29	39
	October, 2015	98	32	52
	November, 2015	92	31	54
	December, 2015	146	34	44
	January, 2016	90	27	47
	February, 2016	144	28	46
	March, 2016	148	34	42
	April, 2016	119	28	44
	May, 2016	120	29	43
	June, 2016	125	30	43
		1,371	31	45
NIGHT 1ST RESPONDER				
	July, 2015	14	19	25
	August, 2015	22	22	28
	September, 2015	23	21	29
	October, 2015	23	37	33
	November, 2015	27	29	33
	December, 2015	22	30	27
	January, 2016	24	23	23
	February, 2016	27	27	22
	March, 2016	24	23	21
	April, 2016	18	23	25
	May, 2016	20	26	26
	June, 2016	20	27	28
		264	26	27
ON-CALL CREW *				
	July, 2015	28	39	46
	August, 2015	24	48	30

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



CUSTOMER SERVICE REQUESTS Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
ON-CALL CREW *				
	September, 2015	30	45	51
	October, 2015	26	49	69
	November, 2015	31	49	40
	December, 2015	72	57	51
	January, 2016	46	43	48
	February, 2016	49	46	43
	March, 2016	46	48	36
	April, 2016	40	42	48
	May, 2016	20	42	44
	June, 2016	30	41	49
		442	47	46
Grand Totals:		2,077	33	43

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

CAPITAL IMPROVEMENT PROGRAM

STATUS REPORT SUMMARY

August 10, 2016

PROJECT	LOCATION OF PROJECT	CONTRACTOR	AWARD DATE	NOTICE TO PROCEED	ESTIMATED COMPLETION DATE	*CONTRACT AMOUNT	*COMPLETION STATUS (WORK)	COMMENTS
ARCO ROAD	East Asheville 28805	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on July 28th. Terry Brothers is the low bidder. Project will be presented at the August Board meeting.
BYPASS PUMP STAGING AREAS	Woodfin 28804 and Asheville 28806	NHM Constructors, LLC	3/16/2016	4/11/2016	9/30/2016	\$307,455.72	65%	Amboy Road site complete. Work underway at the Plant site.
DELLWOOD AVENUE	Swannanoa 28778	Terry Brothers	7/20/2016	7/25/2016	9/23/2016	\$63,692.00	85%	All pipeline has been installed. Restoration work and other miscellaneous clean up items in progress.
HENDERSONVILLE ROAD @ MILLS GAP ROAD	Asheville 28803	Terry Brothers	3/16/2016	4/13/2016	8/31/2016	\$716,988.00	95%	All pipeline is complete. Milling and paving remain to be done.
MTN. VIEW PUMP STATION GENERATOR SITE	Arden 28704	Haynes Electric Construction Company	6/15/2016	7/5/2016	9/19/2016	\$148,800.00	30%	The concrete for control pad and transformer are being poured. Asphalt will be complete soon.
NEW HAW CREEK @ TRINITY CHAPEL ROAD	East Asheville 28805	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on July 28th. Terry Brothers is the low bidder. Project will be presented at the August Board meeting.
POINT REPAIR CONTRACT NO. 1	Various	TBA	TBA	TBA	TBA	TBA	0%	Bids were opened on July 21st. Patton Construction is the low bidder. Project will be presented at the August Board meeting.
SHADOWLAWN DRIVE PHASE 2	Asheville 28806	Davis Grading, Inc.	1/20/2016	3/14/2016	7/25/2016	\$439,065.50	98%	Project is complete and ready for a final inspection.
VENABLE PUMP STATION ELIMINATION	Asheville 28806	Buckeye Bridge, LLC	4/20/2016	5/9/2016	9/15/2016	\$314,639.20	95%	The only work remaining is milling and paving, which is being coordinated with construction for new Ingles store.
WRF - INCINERATOR SYSTEM REHABILITATION AND EMISSIONS UPGRADES	Woodfin 28804	Haren Construction Company	2/18/2015	3/25/2015	9/16/2016	\$5,091,740.23	99%	Final welding inspection and project close out in process.

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

Planning & Development Project Status Report

Active Construction Projects

August 17, 2016

#	Project Name	Project Number	Work Location	Zip Code	Units	LF	Pre-Construction Conference Date	Comments
1	Governor's Western Residence	2014100	Buncombe Co.	28804	Comm.	636	7/22/2015	Final Inspection complete, awaiting close-out docs
2	Greenwood Park Phase 1	2014067	Weaverville	28787	7	283	9/1/2015	Final Inspection complete, awaiting close-out docs
3	Rivermill Lofts Relocation	2014125	Asheville	28803	254	314	8/21/2015	Waiting on final inspection
4	Givens Gerber Park	2014065	Buncombe Co.	28803	260	357	8/7/2015	Waiting on final inspection
5	Sonic- Weaverville	2016121	Weaverville	28787	Comm.	133	8/5/2016	Pre-con held, ready for construction
6	Conestee	2014149	Asheville	28801	7	113	8/7/2015	Testing
7	Audubon Apts. Phase 2	2014027	Buncombe Co.	28704	86	16	5/27/2015	Punchlist Pending
8	Hunt Hill Apartments	2013111	Asheville	28801	180	1,729	3/5/2014	Waiting on final inspection
9	Rosebriar	2007005	Black Mountain	28711	12	309	8/28/2014	Waiting on final inspection
10	Dilworth Apartments	2015001	Asheville	28806	168	950	8/3/2015	Waiting on final inspection
11	Isaac Dickson School Relocation	2013033	Asheville	28801	School	504	1/13/2014	Waiting on final inspection
12	Gibson Road (aka Four Seasons)	2014138	Asheville	28804	3	137	9/11/2015	Final Inspection complete, awaiting close-out docs
13	Roberts Farm Phase 1B	2015056	Black Mountain	28711	250	1,165	7/29/2015	Final Inspection complete, awaiting close-out docs
14	First Baptist Relocation	2015032	Asheville	28801	Comm.	333	7/21/2015	Final Inspection complete, awaiting close-out docs
15	Biltmore Lake Block I, Phase 2	2016042	Buncombe Co.	28803	26	1,297	8/5/2016	Pre-con held, ready for construction
16	Creekside Cottages	2014095	Buncombe Co.	28704	7	504	3/12/2015	Final Inspection complete, awaiting close-out docs
17	Greenwood Fields Phase 1	2015204	Buncombe Co.	28804	158	2,830	6/16/2016	Pre-con held, ready for construction
18	Creekside Village Phase 2	2014088	Weaverville	28787	145	2,051	8/7/2015	Final Inspection complete, awaiting close-out docs
19	Beale Road Subdivision (Habitat)	2015200	Asheville	28704	21	730	4/5/2016	Testing
20	Country Inn & Suites - Westgate	2014089	Asheville	28806	Comm.	204	1/22/2015	Final Inspection complete, awaiting close-out docs
21	Dillingham Woods	2014048	Asheville	28805	27	375	3/4/2015	Waiting on final inspection
22	Shelburne Road	2014126	Asheville	28806	9	418	4/5/2016	Pre-con held, ready for construction
23	Ramble Block "E"	2015030	Buncombe Co.	28803	22	1,357	7/29/2015	Final Inspection complete, awaiting close-out docs
24	Monticello Apartments	2015124	Weaverville	28787	168	1,484	6/14/2016	Pre-con held, ready for construction
25	Asheville Middle School	2013125	Asheville	28801	School	214	9/30/2014	Final Inspection complete, awaiting close-out docs
26	Robinhood Relocation	2013107	Asheville	28804	5	230	7/23/2015	Final Inspection complete, awaiting close-out docs
27	Crest Mountain Phase 3B	2013041	Woodfin	28806	69	1,329	10/15/2013	Waiting on final inspection
28	Hyde Park Phase 2	2013058	Buncombe Co.	28704	14	500	12/3/2013	Testing
29	Serenity Falls Subdivision	2015055	Woodfin	28804	45	2,583	9/18/2015	Testing
30	Amboy Overlook - Phase 1	2014136	Asheville	28806	19	899	10/20/2015	Final Inspection complete, awaiting close-out docs
31	Bowen Estates	2015064	Asheville	28803	4	178	10/13/2015	Waiting on final inspection
32	Craggy Park	2014164	Asheville	28806	45	1,935	10/23/2015	Phase 1 Tested
33	Pinnacle at Arabella Heights	2006277	Buncombe Co.	28704	28	482	11/10/2015	Testing
34	Settings at Black Mountain	2008016	Black Mountain	28711	30	907	11/13/2015	Testing
35	Cottages at Kenilworth	2015107	Asheville	28805	12	454	12/1/2015	Testing
36	A.B. Tech Fernhurst Relocation	2014061	Asheville	28801	Comm.	697	4/8/2014	Waiting on final inspection
37	Springside Road Townhomes	2015006	Asheville	28803	3	120	12/15/2015	Installing
38	Vance Place	2014084	Asheville	28801	8	398	1/29/2016	Waiting on final inspection
39	The District	2015133	Asheville	28803	309	912	2/26/2016	Installing
40	Asheville Exchange	2015170	Asheville	28806	312	582	2/26/2016	Waiting on final inspection
41	Cheshire Pocket Village	2015129	Black Mountain	28711	15	370	2/26/2016	Waiting on final inspection
42	Hall Avenue	2015035	Asheville	28806	8	329	3/4/2016	Waiting on final inspection
43	Maple Trace Subdivision	2014121	Weaverville	28787	31	2,420	1/29/2016	Installing
44	McKinley Avenue (Habitat)	2015180	Asheville	28803	10	237	4/22/2016	Waiting on final inspection
45	Reese & Jan Lasher (High Hopes)	2015152	Woodfin	28806	14	320	4/26/2016	Waiting on final inspection
46	Fairfield Inn & Suites - Tunnel Road	2015203	Asheville	28805	Comm.	350	4/29/2016	Waiting on final inspection
47	500 Fairview Road Subdivision	2016049	Asheville	28803	10	220	5/6/2016	Waiting on final inspection
48	Ball Gap Road	2015186	Buncombe Co.	28704	14	947	5/31/2016	Pre-con held, ready for construction
49	Woodcrest at Biltmore Terrace Ph. 2	2015063	Buncombe Co.	28803	8	210	5/27/2016	Waiting on final inspection
50	Greymont Apartments	2015108	Buncombe Co.	28806	312	3,193	5/17/2016	Installing
51	Mallard Run Phase II	2015090	Buncombe Co.	28704	37	1,217	10/13/2015	Final Inspection complete, awaiting close-out docs
52			TOTAL			3,172	40,462	