



COMMISSION MEETING MINUTES
March 28, 2017

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Name	Title	Present for Item Nos.
Elofson, Frederick N.	Commission Chair	1-22
Lynch, Maurice P.	Commission Vice-Chair	1-22
Bredemeyer, Arthur C.	Commissioner	1-22
Glenn, Michael E.	Commissioner	1-22
Lakdawala, Vishnu K.	Commissioner	1-22
Levenston, Jr., Willie	Commissioner	1-22
Rodriguez, Stephen C.	Commissioner	1-22
Templeman, Ann	Commissioner	1-22

1. **AWARDS AND RECOGNITION**

Action: No action required.

Brief: Mr. Henifin announced the following awards and introductions.

a. New Employee Introduction

Mr. Henifin introduced Ms. Leila Rice, Director of Communications. Leila comes to HRSD from Elizabeth River Crossings, where she served as Public Affairs Manager and was responsible for internal and external communications, media relations and community outreach for the Elizabeth River Tunnels Project. Her experience also includes serving as Community and Media Relations Manager for Norfolk-based non-profit agency, ForKids, Inc., and more than 20 years of media experience, including traffic reporting for several Hampton Roads radio and television stations as well as multi-market broadcast management, affiliate relations and product marketing with Westwood One's Metro Networks. She has also served as a morning radio show co-host and News and Public Affairs Director at WAFX-FM and is an accomplished voiceover and on-camera talent.

Leila holds a Bachelor's degree in Communication Arts from James Madison University. She is a member of the Public Relations Society of America and the American Marketing Association and also serves on the Hampton Roads Chamber of Commerce Regional Communications Committee.

b. Promotion Announcement

Mr. Henifin introduced Ms. Kerri Williams, who was recently promoted to Laboratory Manager. Kerri was hired in 2001 as an Industrial Waste Assistant in the Pretreatment Pollution and Prevention (P3) Division of Water Quality. She



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was quickly promoted to Industrial Waste Technician and soon after made a lateral transition to the Central Environmental Laboratory (CEL) as a Laboratory Technician in 2003. She was then promoted to Laboratory Specialist in 2005 and then Laboratory Chemist in 2006. Before working with HRSD Kerri worked for a private environmental laboratory in Richmond, Virginia.

Kerri received an athletic scholarship to Francis Marion University in South Carolina where she earned her Bachelor of Science degree in Chemistry. In 2015, she received the Water Environment Federation (WEF) Laboratory Analyst Excellence award presented by the Virginia Water Environment Association/American Water Works Association (VWEA/AWWA) lab practices committee.

Kerri has served as a leader throughout the CEL and is currently working as a supervising chemist in the metals section, overseeing low level analyses. She led the development and implementation of the Knowledge Development Program, which facilitates employee development through exposure to inter- and intra-divisional Water Quality Department activities. Her professional activities include participating in the Lab Practices Committee of VWEA, serving as an instructor for the Wastewater Laboratory for the Apprenticeship Program and leading technical EPA studies for method development. She has made technical presentations for VWEA events for operators and laboratory professionals. Kerri is a steward of the environment by participating in Earth Action days, Clean the Bay Day and also gardens oysters as a partnership with the Chesapeake Bay Foundation. In her personal time, Kerri is a bee keeper, volunteers for a local women's adult soccer league and coaches youth soccer. She was recently inducted into the Francis Marion University Athletic Hall of Fame for her record-setting accomplishments on the soccer field while a student there.

c. Certification Announcement

Mr. Henifin introduced Ms. Stephanie Atienza, who recently received her professional designation as a Certified Professional Public Buyer (CPPB) based on her years of work experience, training in public procurement and many hours of study. This national certification, administered by the Universal Public Procurement Certification Council, measures specific areas of public procurement knowledge and sound decision making. The CPPB certification also demonstrates a national standard of competency in the public procurement profession.



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Stephanie was hired in August 2012 as a Procurement Coordinator and was promoted to Procurement Specialist in July 2016, the position she holds today. Over the course of her HRSD career, Stephanie has successfully administered HRSD's purchasing card program, led many technical procurement projects and supported a variety of procurement and HRSD initiatives including the Enterprise Resource Planning (ERP) Team.

Before her career began with HRSD, Stephanie held positions with Tidewater Community College as an Apprenticeship Program Coordinator; Virginia Space Grant Consortium as a Program Assistant working on the NASA Global Climate Change Education Program; Armada Hoffler Construction Company as a Project Management Assistant; and IDF Construction as an Office/Production Manager.

She earned her Associates degree in Business Administration from Tidewater Community College in 2007 and a Bachelor's degree in Accounting from Liberty University in 2013. She is a member of the Virginia Association of Governmental Purchasing; NIGP: The Institute for Public Procurement; and the National Association of Purchasing Card Professionals where she earned her Certified Purchasing Card Professional designation in 2015.

Stephanie is excited to give back to the community she has called home her entire life by contributing to a cleaner bay and a sustainable water future.

d. Awards

- (1) **HRSD Environmental Improvement Fund Awards** - The winners of the HRSD Environmental Improvement Fund Awards were presented March 11 during the 66th Annual Tidewater Science and Engineering Fair. The following recipients were selected by a team of HRSD scientists led by Water Quality Director Jim Pletl:

1st Place – Tyson Denton; Spratley Gifted Center, Hampton *"The Effect of Nanosilver on Pond Life"*

2nd Place – Dylan Smith; Gildersleeve Middle School, Newport News *"The Effect of Ultrasound Frequencies on Bacterial Growth"*

Senior Division (High School)

1st Place – Eunice Namkoong; Governor's School for Science and Technology, Newport News *"Water Vortex Powered Permeable Membrane Filtration System and the Extraction of Microplastics in the Ocean"*



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2nd Place – Kaylie Manglicmot; Menchville High School, Newport News “What is the Effect of a Magnetic Field on the Growth of E. coli?” (1st place winner, Junior Division in 2014 event)

The prizes are: *Junior Division*: First Place – \$400 cash and a trophy; Second Place – \$300 cash and a trophy.

Senior Division: First Place – \$700 cash and a trophy; Second Place – \$500 cash and a trophy.

HRSD also presents a \$75 cash honorarium to the teacher that mentored and supported each winner.

- (2) **2016 Engineering Excellence Award** – HRSD was pleased to receive the 2016 Engineering Excellence Award presented by the Engineers Club of Hampton Roads for the South Trunk Sewer Section G project in downtown Norfolk. The project team included the consulting firm of AECOM and the construction firm of Tidewater Utilities Construction, Inc.

Attachment: None

Public Comment: None



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2. **CONSENT AGENDA**

Action: Approve the items listed in the Consent Agenda.

Moved: Maurice Lynch **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

Brief:

- a. Approval of minutes from previous meeting.
- b. Contract Awards
 - 1. [Banking Services and Related Financial Services](#) \$9,379,960
 - 2. [James River Treatment Plant Outfall Diffuser Dredging, Inspection and Repair](#) \$315,912
 - 3. [Sewerage System Improvements Division C, Phase II Replacement Contract Award](#) \$978,330
- c. Change Orders
 - 1. [Bill Printing, eBilling, Online Payments, Merchant Card Processing and Lockbox Services](#) \$1,506,000
- d. Sole Source
 - 1. [Aqua-Screen™ Replacement Belt Screen Parts and Repairs](#)
 - 2. [Boerger® Primary Pump and Parts](#)
 - 3. [ChemScan® Process Analyzer Preventative Maintenance Service Contract and Related Parts](#)
 - 4. [Flygt Mixers and Parts](#)
 - 5. [Fusible Polyvinylchloride \(FPVC\) Pipe](#)
 - 6. [HERE License Software Support Contract](#)
 - 7. [Meridian License Maintenance and Support Contract](#)
 - 8. [Ovivo Influent Screen Parts](#)



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9. [RecoverE ESep™ System](#)
10. [Rheinhutte Recirculation Pumps and Related Parts](#)
11. [SymProTreasury Management Software Maintenance and Support Contract](#)

Item(s) Removed for Discussion: None

Attachment #1: [Consent Agenda](#)

Public Comment: None



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3. **SUSTAINABLE WATER INITIATIVE FOR TOMORROW (SWIFT) ADVISORY PANEL BRIEFING**

Action: No action required.

Brief: The Commission approved a contract with National Water Research Institute (NWRI), acting as an independent advisory panel, at the June 28, 2016 meeting to review the SWIFT program in general and specifically, the methodology and results of the SWIFT pilot. NWRI panels are comprised of water and wastewater industry professionals, academics, government representatives and independent consultants who are experts in their fields. None of the members are associated with the project, ensuring the panel's independence and integrity. The SWIFT panel is comprised of seven members from across the country.

The panel is completing its report and will provide a final report in the coming weeks. The panel chair, Glen T. Daigger, Ph.D., P.E., BCEE, NAE, Professor of Civil and Environmental Engineering at the University of Michigan (Ann Arbor, MI) summarized the panel's work and findings at the March meeting. The [panel member bios](#) are attached.

Discussion Summary: The Commission discussed the preliminary panel findings in detail. Of particular note was the assessment that the panel does not foresee any fatal flaws with the project. They also discussed the opportunities to support SWIFT and the potential challenges of the project. Dr. Daigger stated there are approximately a dozen or more utilities throughout the country that are successfully recharging the groundwater supply.

Attachment #2: [Panel Member Bios and PowerPoint Presentation](#)

Public Comment: None



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4. **INTERIM FINANCING (LINE OF CREDIT) AGREEMENT EXTENSION AND INTEREST ACCRUAL PROVISION MODIFICATION RESOLUTION**

Action: Adopt a resolution authorizing the General Manager or Chief Financial Officer to deliver one or more amendments extending the termination date of the credit agreement with Bank of America, N.A.; and granting the authority to execute and deliver such other documents and agreements relating to such transaction as may be necessary or appropriate.

Moved: Stephen Rodriguez **Ayes:** 8
Seconded: Maurice Lynch **Nays:** 0

Agreement Description: On October 27, 2015, the Commission approved a resolution to establish a \$90 million Line of Credit (LOC) with Bank of America to fund the Capital Improvement Program. As part of the Plan of Finance, the LOC was satisfied with proceeds from the February 2016 Fixed Rate bond sale and the amount available to withdraw was reduced to \$1 million to keep this credit facility open. By leaving the line of credit open, staff can avoid bond counsel and financial advisory fees and the time to procure a new line of credit.

When the LOC was used last year, Bank of America realized that the interest accrual provisions outlined in the agreement that sets an interest rate for each draw could not easily be accommodated in their computer system. This [amendment](#) will modify the interest accrual method to set the rate on the first business day of each month for the entire month on all amounts drawn. In addition, the unutilized fee will be based on the daily outstanding principal amount rather than the average. In both cases, the financial impact is neutral.

The attached [resolution](#) authorizes the General Manager or the Chief Financial Officer to extend the termination date to June 30, 2020. Future draws will be presented to the Commission for approval. The resolution was prepared by HRSD legal counsel and reviewed by staff.

Attachment #3: [Amendment and Resolution](#)

Public Comment: None



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5. **AQUIFER REPLENISHMENT SYSTEM CONCEPT FEASIBILITY EVALUATION (SWIFT)
WELL DRILLING, INSTALLATION, DEVELOPMENT AND TESTING
ADDITIONAL APPROPRIATION AND CONTRACT AWARD**

Actions:

- a. **Appropriate additional funding in the amount of \$3,360,000.**
- b. **Award a contract to A.C. Schultes of Maryland, Inc. in the amount of \$5,187,370.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Michael Glenn **Nays:** 0

CIP Project: GN015700

Budget	\$7,540,000
Previous Expenditures and Encumbrances	(\$5,064,015)
Available Balance	\$2,475,985
Proposed Contract to A.C. Schultes of Maryland, Inc.	(\$5,187,370)
Proposed Contingency	(\$648,615)
Project Shortage/Requested Additional Funding	(\$3,360,000)
Revised Total Project Authorized Funding	\$10,900,000

Type of Procurement: Competitive Bid

Bidder	Bid Amount
A.C. Schultes of Maryland, Inc.	\$5,187,370

Engineer Estimate: \$5,872,881

Project Description: This study will evaluate the feasibility of reusing highly treated wastewater for aquifer replenishment to protect groundwater supplies as well as accomplish wastewater treatment objectives and enhance the region's total groundwater supply.

Funding Description: The project is currently arranged in a six-phase framework, where the conclusion of each phase is a juncture where HRSD can decide if and how to proceed to the next phase. This approach provides a screening process where key potential barriers are identified and addressed or mitigated. The existing appropriations did not account for additional analytical testing services to support the advanced water



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treatment pilot systems; funding for the VIMS Microplastics Study; funding for the National Water Research Institute (NWRI) independent review panel; funding for fences in support of the extensometer construction; funding for additional groundwater modeling; and a comprehensive test well program that includes: well construction, development, treatment, and testing at the other sites where SWIFT is proposed and at the Nansemond Treatment Plant to monitor aquifer response associated with the operation of the SWIFT Demonstration Facility.

The comprehensive well drilling and testing work is \$5,187,370, which exceeds the \$2,564,057 contingency was previously appropriated for the work. A more extensive soil and groundwater sampling and testing program was recommended by the NWRI independent review panel to better understand the aquifer and potential aquifer response to the recharge of purified water. In addition, this appropriation request contains a contingency of \$648,615 for additional analytical services and unforeseen conditions.

Contract Description: This contract is an agreement for well drilling, installation, development and testing eight-inch diameter test wells at five wastewater treatment plants (WWTP), including the Virginia Initiative, Boat Harbor, Army-Base, Williamsburg, and James River WWTP's. This contract also includes drilling, installing and developing three 6-inch diameter monitoring wells at the Nansemond WWTP that screen the Upper, Middle and Lower Potomac Aquifers (UPA, MPA, LPA). The Contractor will be required to collect 12 core samples at intervals selected by CH2M Hill while drilling the pilot boring for the monitor well screening at the LPA. The Contractor will also be required to conditioning clays in the LPA and treating clay minerals in the UPA, MPA and LPA at a test well at Nansemond WWTP using aluminum chloride.

Schedule: Project Completion June 2018

Discussion Summary: Other firms who initially showed interest in the project decided not to submit a bid for a number of reasons, including the specialty nature of the work.

Attachment: None

Public Comment: None



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6. **SUSTAINABLE WATER PHASE 3 – DEMONSTRATION FACILITY
APPROVAL OF GUARANTEED MAXIMUM PRICE (GMP)**

Actions:

- a. **Approve a partial Guaranteed Maximum Price of \$21,631,900 to the Comprehensive Agreement with Crowder Construction Company.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Maurice Lynch **Nays:** 0

Actions:

- b. **Approve additional option to install a solar power generation array.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

Actions:

- c. **Approve additional option to pursue Envision Certification.**

Moved: Maurice Lynch
Seconded: The motion died for lack of second

CIP Project: GN016200

Description: This project is being procured through the Design-Build process. On November 22, 2016 the Commission approved a Comprehensive Agreement with Crowder Construction Company (Crowder) with a Construction Cost Limit (CCL) of \$25,650,000. To meet this project’s aggressive timeline, Crowder developed a project schedule that included two Guaranteed Maximum Price (GMP) packages. Commission approved the first partial Guaranteed Maximum Price (GMP) package on January 24, 2017 for \$2,722,500. This approval allowed for the major treatment equipment units that are subject to long lead times (approximately 30 weeks) to be released for procurement in January. The project team’s current request is for approval of the second GMP which includes the remainder of the project scope. GMP 2 for the balance of the project is \$21,631,900. The sum of GMP 1 and GMP 2 is \$24,354,400. The combined total project GMP is less than the Commission approved CCL. The capital project budget has approximately \$1,690,000 of owner contingency.

The Design-Build team has proposed two additional options related to sustainability.



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One option would increase the sustainability of the project by installing a nominal 60kW solar array on the roof of the Demonstration Facility. The second option would be to acknowledge the sustainability efforts of the project and pursue an independently verified Envision certification. Crowder estimated that the cost for installing the solar array is \$100,000 and the cost for pursuing an Envision certification without modifying the current scope of the project is \$95,800. These options would be in addition to the cost of GMP 2. With solar panels, we may be able to obtain Platinum Envision level certification.

Analysis of Cost: The GMP costs were prepared by Crowder and reviewed with HRSD during a series of meetings. The scope changes developed during the design process and the impact to project costs were carefully considered. HRSD has negotiated the GMP with the Design-Build team to reflect the complete facility at the 75 percent design phase. CH2M Hill Engineers, who are providing Owner's Advisor services for this project, developed an independent estimate of the project based on the 75 percent design documents. The total of GMP 1 plus GMP 2 is within three percent of CH2M's independent estimate. Staff recommends the Comprehensive Agreement be amended to include GMP 2, thus reflecting the total GMP of \$24,354,400 for the project.

Discussion Summary: The Commission asked staff a number of questions about the solar power generation and Envision Certification options. After a lengthy discussion, the general consensus was the cost of obtaining the certification would outweigh the benefits and would provide little return on the investment.

Attachment #4: [PowerPoint Presentation](#)

Public Comment: None



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**7. EFFINGHAM STREET INTERCEPTOR FORCE MAIN EMERGENCY REPLACEMENT
ADDITIONAL APPROPRIATION AND CONTRACT CHANGE ORDER**

Actions:

- a. **Appropriate additional funding in the amount of \$18,774.**
- b. **Approve a change order to the contract with Tidewater Utility Construction, Inc. in the amount \$32,250.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Stephen Rodriguez **Nays:** 0

CIP Project: VP017500

Budget	\$3,133,275
Previous Expenditures and Encumbrances	(\$3,119,799)
Available Balance	\$13,476
Proposed Change Order No. 5 to Tidewater Utility	(\$32,250)
Proposed Contingency	(\$0)
Project Shortage/Requested Additional Funding	(\$18,774)
Revised Total Project Authorized Funding	\$3,152,049

Contract Status	Amount	Cumulative % of Contract
Original Contract with Tidewater Utility	\$1,385,589	
Total Value of Previous Change Orders	\$733,781	53%
Requested Change Order	\$32,250	
Total Value of All Change Orders	\$766,031	55%
Revised Contract Value	\$2,151,620	

Time (Additional Calendar Days)		0
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Project Description: This project will replace approximately 1,400 linear feet of 24-inch force main on Effingham Street from Firehouse Lane to County Street in Portsmouth.

Funding Description: This action includes Change Order No. 5, which closes out the contract with Tidewater Utility. Previous change orders addressed numerous unforeseen conditions including the removal of cobblestones under the pavement and relocation of a water main in conflict with the proposed force main.



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Analysis of Cost: The Engineer prepared an independent estimate of costs and recommends approval of these changes.

Change Order Description: This change order includes three point repairs required on an adjacent gravity line and provides a reconciliation of unbilled items on the unit price contract.

Schedule: Project Completion March 2017

Attachment: None

Public Comment: None



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8. **ELBOW ROAD PRESSURE REDUCING STATION
INITIAL APPROPRIATION**

Action: Appropriate total project funding in the amount of \$8,984,000.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Michael Glenn **Nays:** 0

CIP Project: CE011821

Project Description: This project is to construct a Pressure Reducing Station (PRS) on Elbow Road in Chesapeake. The PRS will be located on Section A of the Elbow Road Interceptor Force Main (IFM). HRSD owns a small piece of property at the proposed location, which is roughly 1/2 mile north east of Bethel Baptist Church. Additional property will likely be needed to accommodate the PRS. This project must be substantially complete by June 2021.

The project is needed to provide reliable capacity and maintain HRSD pressure policy requirements when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the ultimate Regional Wet Weather Management Plan (RWWMP).

Funding Description: The total cost for this project is estimated to be \$8,984,000 and is based upon a recent cost estimate for the construction of a new pressure reducing station. Kimley-Horn and Associates, Inc. (KHA) will prepare a Preliminary Engineering Report (PER) for this project at a cost of \$187,900. KHA was awarded a contract in September 2016 to perform the Program Definition Phase to develop a coordinated plan of required interceptor system improvements in support of the Chesapeake-Elizabeth Treatment Plant closure. They will continue with preliminary engineering on the individual capital improvement projects identified in the program definition report. Future phases of work will be negotiated after the PER is completed.

Schedule:

PER	April 2017
Design	October 2017
Bid	January 2019
Construction	April 2019
Project Completion	October 2020

Attachment: None

Public Comment: None



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9. **LYNNHAVEN PARKWAY FORCE MAIN PHASE II INITIAL APPROPRIATION**

Action: Appropriate total project funding in the amount of \$20,265,000.

Moved: Michael Glenn **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

CIP Project: CE011824

Project Description: This project is to upgrade the existing 36-inch pre-stressed concrete cylinder pipe to a 42-inch pipe from Lynnhaven Parkway to Holland Road in Virginia Beach. The existing alignment to be replaced is roughly 4,000 linear feet, but the length of a new alignment to move the pipeline out of backyard easements is approximately 8,000 linear feet. This project must be substantially complete by June 2021.

The project is needed to provide reliable capacity and maintain HRSD pressure policy requirements when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the ultimate Regional Wet Weather Management Plan (RWWMP). The decision to move the pipeline out of its existing easement and into the public right-of-way would support better constructability due to space constraints and nearby stormwater ponds. Moving the pipeline into the public right-of-way would also make it more accessible for HRSD's Interceptor staff.

Funding Description: The total cost for this project is estimated to be \$20,265,000 and is based upon a recent cost estimate for the construction of a new 42-inch force main. Kimley-Horn and Associates, Inc. (KHA) will prepare a Preliminary Engineering Report (PER) for this project at a cost of \$172,400. KHA was awarded a contract in September 2016 to perform the Program Definition Phase to develop a coordinated plan of required interceptor system improvements in support of the Chesapeake-Elizabeth Treatment Plant closure. They will continue with preliminary engineering on the individual capital improvement projects identified in the program definition report. Future phases of work will be negotiated after the PER is completed.

Schedule:	PER	April 2017
	Design	September 2017
	Bid	March 2019
	Construction	June 2019
	Project Completion	January 2021

Attachment: None
Public Comment: None



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10. **PROVIDENCE ROAD OFF-LINE STORAGE FACILITY
INITIAL APPROPRIATION AND TASK ORDER**

Actions:

- a. **Appropriate total project funding in the amount of \$25,608,184.**
- b. **Approve a task order with Kimley-Horn and Associates, Inc. in the amount of \$287,600.**

<u>Moved:</u>	Michael Glenn	<u>Ayes:</u>	8
<u>Seconded:</u>	Maurice Lynch	<u>Nays:</u>	0

CIP Project: CE011826

Project Description: This project is to construct a 5.2 million gallon storage tank in the vicinity of the existing Providence Road Pressure Reducing Station (PRS) in Virginia Beach to be utilized during wet weather. This project must be substantially complete by June 2021.

The project is needed to provide reliable capacity and maintain HRSD pressure policy requirements when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the ultimate Regional Wet Weather Management Plan (RWWMP).

Funding Description: The total cost for this project is estimated to be \$25,608,184 and is based upon a recent cost estimate for the construction of an off-line storage tank. Kimley-Horn and Associates, Inc. (KHA) will prepare a Preliminary Engineering Report (PER) for this project at a cost of \$287,600. KHA was awarded a contract in September 2016 to perform the Program Definition Phase to develop a coordinated plan of required interceptor system improvements in support of the Chesapeake-Elizabeth Treatment Plant closure. They will continue with preliminary engineering on the individual capital improvement projects identified in the program definition report. Future phases of work will be negotiated after the PER is completed.

Task Order Description: This task order will provide a Preliminary Engineering Report (PER) with a Tank Configuration Alternatives Analysis Technical Memorandum.

Analysis of Cost: The cost for this PER and associated studies was negotiated and a fee of \$287,600 was considered to be reasonable. This cost is approximately two percent of the construction cost, which is a typical value percentage for a preliminary engineering effort. The fee includes evaluation of a partially buried tank with athletic



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fields on the surface, a detailed triple-bottom line analysis, evaluation of alternate project delivery methods, and a significant amount of coordination with the City of Virginia Beach.

<u>Schedule:</u>	PER	June 2017
	Design	January 2018
	Bid	March 2019
	Construction	June 2019
	Project Completion	September 2020

Discussion Summary: Staff explained the existing tanks at the Chesapeake-Elizabeth Treatment Plant are not a viable option for storage of wet weather flows due to the location within the service area.

Attachment: None

Public Comment: None



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11. **PROVIDENCE ROAD PRESSURE REDUCING STATION
UPGRADES AND INTERCONNECT FORCE MAIN
INITIAL APPROPRIATION AND TASK ORDER**

Actions:

- a. **Appropriate total project funding in the amount of \$5,445,000.**
- b. **Approve a task order with Kimley-Horn and Associates, Inc. in the amount of \$208,300.**

<u>Moved:</u>	Vishnu Lakdawala	<u>Ayes:</u>	8
<u>Seconded:</u>	Michael Glenn	<u>Nays:</u>	0

CIP Project: CE011822

Project Description: This project is to upgrade the existing Providence Road Pressure Reducing Station (PRS) in Virginia Beach to meet the new capacity with the post-2021 valving. This project must be substantially complete by June 2021.

The project is needed to provide reliable capacity and maintain HRSD pressure policy requirements when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the ultimate Regional Wet Weather Management Plan (RWWMP).

Funding Description: The total cost for this project is estimated to be \$5,445,000 and is based upon a recent cost estimate for upgrades to the existing pressure reducing station. Kimley-Horn and Associates, Inc. (KHA) will prepare a Preliminary Engineering Report (PER) for this project at a cost of \$208,300. KHA was awarded a contract in September 2016 to perform the Program Definition Phase to develop a coordinated plan of required interceptor system improvements in support of the Chesapeake-Elizabeth Treatment Plant closure. They will continue with preliminary engineering on the individual capital improvement projects identified in the program definition report. Future phases of work will be negotiated after the PER is completed.

Task Order Description: This task order will provide a Preliminary Engineering Report (PER) with conceptual station design, Pump Selection Technical Memorandum, and Hydraulic Institute Standards Compliance Cost/Benefit Analysis.

Analysis of Cost: The cost for this PER and associated studies was negotiated and a fee of \$208,300 was considered to be reasonable. This cost is six percent of the construction cost. Additional efforts beyond a typical PER involve the additional



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technical memos, new architectural guidelines, coordination with the Regional Wet Weather Management Plan, and programmatic expenses to facilitate a well-coordinated effort with the 16 other Interceptor CIP projects related to the closure of the Chesapeake-Elizabeth Treatment Plant.

<u>Schedule:</u>	PER	April 2017
	Design	September 2017
	Bid	August 2018
	Construction	November 2018
	Project Completion	June 2020

Discussion Summary: KHA will be actively involved in all projects identified in support of interceptor improvements for the Chesapeake-Elizabeth closure plan. There may be a potential for economics of scale or a design-build project. All projects will be individually tracked and presented for commission approval. Virginia Revolving Loan Fund (VRLF) funding may be available on some projects.

Attachment: None

Public Comment: None



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12. VIRGINIA BEACH BOULEVARD FORCE MAIN PHASE VI
INITIAL APPROPRIATION

Action: Appropriate total project funding in the amount of \$15,913,000.

Moved: Vishnu Lakdawala **Ayes:** 8
Seconded: Willie Levenston **Nays:** 0

CIP Project: CE011823

Project Description: This project is to upgrade approximately 7,500 linear feet of the existing 24-inch reinforced concrete flat bottom pipe to a 42-inch pipe from North Lynnhaven Road to North Great Neck Road in Virginia Beach. This project must be substantially complete by June 2021.

The project is needed to provide reliable capacity and maintain HRSD pressure policy requirements when flow is diverted in support of the Chesapeake-Elizabeth Treatment Plant closure and for the ultimate Regional Wet Weather Management Plan (RWWMP).

Funding Description: The total cost for this project is estimated to be \$15,913,000 and is based upon a recent cost estimate for the construction of a 42-inch force main. Kimley-Horn and Associates, Inc. (KHA) will prepare a Preliminary Engineering Report (PER) for this project at a cost of \$191,200. KHA was awarded a contract in September 2016 to perform the Program Definition Phase to develop a coordinated plan of required interceptor system improvements in support of the Chesapeake-Elizabeth Treatment Plant closure. They will continue with preliminary engineering on the individual capital improvement projects identified in the program definition report. Future phases of work will be negotiated after the PER is completed.

Schedule:

PER	April 2017
Design	September 2017
Bid	May 2019
Construction	August 2019
Project Completion	April 2021

Attachment: None

Public Comment: None



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13. **JAMES RIVER TREATMENT PLANT CENTRATE EQUALIZATION IMPROVEMENTS
ADDITIONAL APPROPRIATION**

Action: Appropriate additional funding in the amount of \$200,295.

Moved: Michael Glenn **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

CIP Project: JR012900

Budget	\$2,036,670
Previous Expenditures and Encumbrances	(\$1,916,871)
Available Balance	\$119,799
Estimated Change Order Costs	(\$196,094)
Estimated Costs for Additional Construction Inspection	(\$24,000)
Proposed Contingency	(\$100,000)
Project Shortage/Requested Additional Funding	(\$200,295)
Revised Total Project Authorized Funding	\$2,236,965

Project Description:

This project will convert Pre-aeration Tanks #2 and #3 to centrate equalization tanks. The conversion requires modifying an existing wet well, installing centrate pumps and piping, and constructing a pipe from the #3 and #4 grit tank effluent to the #2 and #3 preaeration effluent. This project will ensure the reliability of Integrated Fixed Film Activated Solids (IFAS) Tank #1 to meet hydraulic capacity and nutrient removal requirements. The use of IFAS Tank #1 as a centrate equalization tank to enhance nutrient removal has resulted in the formation of struvite on metal surfaces in the tank, particularly on the IFAS tank air grid and cylinder screens. Plugging of the IFAS air grid and screens could result in the inability to use IFAS Tank #1 during peak hydraulic flows, the loss of 1/9 of the plant's total nutrient capacity, and costly replacement for the air grid and screens.

Funding Description:

The original CIP project estimate did not anticipate the need for the following items:

- Replacement of the 12-inch cast iron Gravity Thickener Supernatant line that was discovered to be in poor condition.



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- Adding an additional 48 cubic meters to the purchase order of plastic media associated with this project in support of the “James River Treatment Plant Stress Testing” effort.
- Adding epoxy coatings to structures discovered to have corrosion issues while the plant bypass system was in service.
- Additional funding for construction inspection due to the project changes and the project extending beyond the original contract time.

The amount for this work is estimated to be \$220,094 and exceeds the available balance for this CIP project by \$100,295.

This request also includes \$100,000 in contingency to accommodate any additional unforeseen conditions that could occur during project completion and start-up of the facility.

Schedule: Project Completion June 2017

Attachment: None

Public Comment: None



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14. **WEST POINT TREATMENT PLANT TERTIARY FILTER
INITIAL APPROPRIATION**

Action: Appropriate total project funding in the amount of \$641,780.

Moved:	Maurice Lynch	Ayes:	8
Seconded:	Michael Glenn	Nays:	0

CIP Project: MP012400

Project Description: This project will add a tertiary filter and pump station at the West Point Treatment Plant (WPTP) between the secondary clarifiers and the chlorine contact tank. The filter has already been purchased and resides at the WPTP where it is currently in storage. It was previously part of a side stream process at the York River Treatment Plant where it provided reclaimed water to the Yorktown Refinery. The installation of the filter will reduce solids in the plant effluent and improve disinfection reliability.

Funding Description: The funding will be used to provide engineering services and a construction contract to install the tertiary filter along with associated pumps, electrical, instrumentation, and piping. The total cost for this project is estimated to be \$641,780 which is in accordance with the FY-2018 CIP document.

Schedule:	Design	April 2017
	Bid	June 2017
	Construction	August 2017
	Project Completion	January 2018

Discussion Summary: Staff discussed the potential savings of \$1 million by repurposing the existing filter instead of purchasing a new filter.

Attachment: None

Public Comment: None



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15. **TELECOMMUNICATIONS MASTER MARKETING AGREEMENT AND DEED OF SITE LEASE AGREEMENT AMENDMENT**

Actions:

- a. **Approve the amended terms and conditions of the Telecommunications Master Marketing Agreement and Deed of Site Lease Agreement between HRSD and Milestone Communications.**
- b. **Authorize the General Manager to execute same, substantially as presented, together with such changes, modifications and deletions as the General Manager may deem necessary.**

Moved: Willie Levenston **Ayes:** 8
Seconded: Vishnu Lakdawala **Nays:** 0

Brief: The Commission approved a [Telecommunications Master Marketing Agreement](#) with Milestone Communications in June 2013. This agreement modified an agreement between Milestone Communication and [Isle of Wight Schools](#). Isle of Wight Schools had selected Milestone and entered that agreement pursuant to a competitive bid process.

HRSD required telecommunication services to construct 12 communications towers to support the HRSD SCADA system (see attached examples of [Memorandum of Lease](#) and [Deed of Site Lease](#) Agreements). The concept was for Milestone to permit and construct the towers at their cost. HRSD was obligated to lease space on each tower until such time as a private communications service provider co-located on a HRSD tower. HRSD's goals were to have an experienced firm handle the siting, permitting and construction of the towers, avoid the capital expense associated with the towers, and attract private telecommunications carriers to co-locate on the towers to offset HRSD lease costs. The original agreement with Milestone exceeded those goals.

The original agreement was modified in June 2016 with the following terms:

- At the time a carrier co-locates, HRSD will no longer make lease payments for the tower but will no longer receive 40 percent of the gross revenues received from the first private carrier to co-locate on a HRSD tower.
- At the time a second carrier co-locates, HRSD will receive payment of \$7,500 per year, subject to annual inflationary escalation.
- At the time a third and all subsequent carriers co-locate, HRSD will receive payment of \$5,000 per year per carrier, subject to annual inflationary escalation.
- All site fees and co-location fees have been deleted from the agreement.



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We have discovered the inflationary escalation clause was inadvertently deleted from the original agreement when the June 2016 amendment was drafted. This proposed amendment adds the inflationary clause back for HRSD's rent to match the inflationary adjustments to Milestone's payments to HRSD as included in the June 2016 amendment.

This [agreement](#), as revised, meets HRSD's objectives. Milestone handled all the complex permitting issues, the towers were all constructed on schedule avoiding impact to our SCADA project and HRSD avoided \$5.1 million in capital costs.

Attachment #5: [Agreements](#)

Public Comment: None

16. **UNFINISHED BUSINESS** – None

17. **NEW BUSINESS**

Mr. Henifin reviewed the program and order of events for the SWIFT Groundbreaking event scheduled for Friday, March 31 at the Nansemond Treatment Plant in Suffolk.

18. **COMMISSIONER COMMENTS** – None

19. **PUBLIC COMMENTS NOT RELATED TO AGENDA** – None

20. **INFORMATIONAL ITEMS**

Action: No action required.

Brief: The items listed below were presented for information.

- a. [Management Reports](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)

Attachment #6: [Informational Items](#)

Public Comment: None



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21. **FISCAL YEAR 2017-2018 ANNUAL BUDGET
WORK SESSION**

Brief: Staff presented the highlights and drivers of the draft Fiscal Year 2017-2018 budget including estimated revenues, significant expense increases and decreases, staffing requirements, results of the second phase of the compensation study and a review of benefit changes. A draft budget was provided during the workshop for Commissioners' review before the April 12 meeting of the Finance Committee.

Action: No action required.

Attachment #7: [PowerPoint Presentation](#)

Public Comment: None

22. **ANNOUNCEMENTS**

The Chair made the following announcements:

- The Finance Committee will meet on March 30 to review the draft FY 2018-2027 Capital Improvement Program Budget.
- The groundbreaking for the SWIFT Research Center will be held on March 31, 2017.
- The Finance Committee will meet on April 12 to review the draft FY 2017-2018 Budget.
- The annual Pretreatment and Pollution Prevention awards ceremony will be held on April 18.

Next Commission Meeting Date: April 25, 2017 at the HRSD North Shore Operations Center, 2389 G. Avenue, Newport News, VA 23602

Meeting Adjourned: 12:16 p.m.

SUBMITTED:

APPROVED:

Jennifer L. Cascio
Secretary

Frederick N. Elofson, CPA
Chair

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ATTACHMENT #1

AGENDA ITEM 2. – Consent Agenda

CONSENT AGENDA ITEM 2.b.1. – March 28, 2017

Subject: Banking Services and Related Financial Services
Contract Award (>\$200,000)

Recommended Actions: Award contracts for the following Banking services:

- a. Award a contract for general banking to Bank of America in the estimated amount of \$127,260 for three years with seven annual renewal options and an estimated cumulative value in the amount of \$1,272,600.
- b. Award a contract for retail lockbox services to Kubra Data Transfer LTD in the estimated amount of \$235,392 for three years with seven annual renewal options and an estimated cumulative value in the amount of \$2,353,920.
- c. Award a contract for bill printing, eBilling and online payments to Ancor Information Management LLC DBA Utilitec in the estimated amount of \$567,324 for three years with seven annual renewal options and an estimated cumulative value in the amount of \$5,673,240.
- d. Award a contract for institutional custody to U.S. Bank National Association as Assignee for Electronic Systems Master in the estimated amount of \$8,020 for three years with seven annual renewal options and an estimated cumulative value in the amount of \$80,200.

Type of Procurement: Competitive Negotiation

Proposers for Service Group 1: General Banking	Technical Points	Recommended Selection Ranking
Bank of America	93.5	1
Wells Fargo Bank NA	80.4	2

Proposers for Service Group 2: Retail Lockbox Services	Technical Points	Recommended Selection Ranking
Kubra Data Transfer LTD	89.4	1
Wells Fargo Bank NA	87	2

Proposers for Service Group 3: Bill Printing, eBilling and Online Payments	Technical Points	Recommended Selection Ranking
Ancor Information Management LLC DBA Utilitec	91.8	1
Kubra Data Transfer LTD	89	2

Proposers for Service Group 5: Institutional Custody	Technical Points	Recommended Selection Ranking
U.S. Bank National Association as Assignee for Electronic Systems Master	86.5	1
Wells Fargo Bank NA	84	2

Contract Description: These multiple contracts are for banking and financial related services for HRSD. These services were broken into six Service Groups (SG); SG 1: General Banking, SG 2: Retail Lockbox Services, SG 3: Bill Printing, eBilling and Online Payment Services, SG 4: Walk-In Payments, SG 5: Institutional Custody and SG 6: Merchant Card Processing. Offerors were given the ability to submit proposals for any or all of the six service groups with HRSD reserving the right to award each service group separately or combine the service groups as best suited the needs of HRSD.

In accordance with HRSD competitive negotiation procedures, the Procurement Division advertised and solicited proposals from potential Offerors. A total of ten proposals were received and only the top two Offerors for each service group were invited to prepare presentations for HRSD.

Independent negotiations and best and final offers were requested with the two top ranked Offerors to negotiate a fair and reasonable cost. All service groups were negotiated except for the SG 4: Walk-In-Payments and SG 6: Merchant Card Processing. None of the proposals received for SG 4: Walk-In-Payments were advantageous to HRSD and once an Offeror was chosen for SG 3: Bill Printing, eBilling and Online Payments, final evaluations for Merchant Card Processing were not needed as all fees were included within the solution for SG 3: Bill Printing, eBilling and Online Payments.

CONSENT AGENDA ITEM 2.b.2. – March 28, 2017

Subject: James River Treatment Plant Outfall Diffuser Dredging, Inspection and Repair
Contract Award (>\$200,000)

Recommended Action: Award a contract to Marine Contracting Corporation in the estimated amount of \$315,912.

Type of Procurement: Competitive Bid

Bidder	Bid Amount
Marine Contracting Corporation	\$315,912

HRSD Estimate: \$339,580

Contract Description: This contract is to provide clam shell dredging operations around the 36-inch outfall pipeline and diffuser at the James River Treatment Plant. The contractor will excavate both manually and by remote operated vehicle, and dispose of an estimated 3,000 cubic yards of material. In addition, contractor will perform an interior and exterior inspection of both the 36-inch and 60-inch outfall pipelines and diffusers and make minor repairs as necessary.

CONSENT AGENDA ITEM 2.b.3. – March 28, 2017

Subject: Sewerage System Improvements Division C, Phase II Replacement
Contract Award (>\$200,000)

Recommended Action: Award a contract to T.A. Sheets General Contractors, Inc. in the amount of \$978,330.

CIP Project: VP011600

Budget	\$2,031,000
Previous Expenditures and Encumbrances	(\$519,482)
Available Balance	\$1,511,518

Type of Procurement: Competitive Bid

Bidder	Bid Amount
T.A. Sheets General Contractors, Inc.	\$978,330
Tidewater Utility Construction, Inc.	\$1,182,563
MEB General Contractors, Inc.	\$1,314,569
Gaston Brothers Utilities, LLC	\$1,344,065
Basic Construction Company, LLC	\$1,437,256
VICO – Big, Joint Venture	\$1,604,109

Engineer Estimate: \$1,313,121

Project Description: This project is to study, design and construct a replacement force main for approximately 1,680 linear feet of 30-inch reinforced concrete force main. The replacement alignment is anticipated to be along Elm Avenue in Portsmouth and roughly the same length as the original pipe.

Contract Description: This construction contract will replace the force main installed in 1946 and will enter into a cost-sharing agreement with the City of Portsmouth to abandon approximately 1,000 linear feet of 6-inch water line within the right of way along Elm Avenue between South Street and County Street that was constructed in the early 1900s.

The project was advertised on February 12, 2017 and seven bids were received on March 14, 2017. The bid submitted by Shaw Construction was determined to be non-responsive. The design engineer, Whitman Requardt and Associates, LLP, evaluated the bids and recommends award to the lowest responsive and responsible bidder, T.A. Sheets General Contractors, Inc., in the amount of \$978,330.

Schedule:	PER	November 2014
	Design	March 2015
	Bid	March 2017
	Construction	June 2017
	Project Completion	January 2018

CONSENT AGENDA ITEM 2.c.1. – March 28, 2017

Subject: Bill Printing, eBilling, Online Payments, Merchant Card Processing and Lockbox Services
Contract Change Order (>25% or \$50,000)

Recommended Action: Approve a change order for contract extension for Bill Printing, eBilling, Online Payments and Merchant Card Processing with Kubra Data Transfer, Ltd. through October 5, 2017 in the estimated amount of \$1,400,000 and for Lockbox and Commercial Electronic Office Services with Wells Fargo Financial through October 5, 2017 in the estimated amount of \$106,000.

Contract Status: Bill Printing, eBilling, Online Payments and Merchant Card Processing	Amount	Cumulative % of Contract
Original Contract with Kubra Data Transfer, Ltd.	\$1,856,662	
Total Value of Previous Change Orders	\$1,418,567	76%
Requested Change Order No. 6	\$1,400,000	
Total Value of All Change Orders	\$2,818,567	152%
Revised Contract Value	\$4,675,229	

Contract Status: Lockbox and Commercial Electronic Office Services	Amount	Cumulative % of Contract
Original Contract with Wells Fargo Financial	\$997,000	
Total Value of Previous Change Orders	\$179,000	18%
Requested Change Order No. 4	\$106,000	
Total Value of All Change Orders	\$285,000	29%
Revised Contract Value	\$1,282,000	

Change Order Description: These change orders are to extend the services an additional six months to allow for the implementation of two new contracts with different vendors that were selected during the competitive negotiation process of the Banking Services and Related Financial Services Request for Proposal.

CONSENT AGENDA ITEM 2.d.1. – March 28, 2017

Subject: Aqua-Screen™ Replacement Belt Screen Parts and Repairs
Sole Source (>\$10,000)

Recommended Action: Approve Andritz Separation, Inc. to perform repairs and provide Aqua-Screen™ replacement parts for use at the Atlantic Treatment Plant.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Services include repairs, improvements and replacement parts to the currently installed Aqua-Screen™ in-channel perforated panel traveling belt screen. There are three Aqua-Screen™ belt screens used in the solids/liquid separation processes at Atlantic Treatment Plant.

CONSENT AGENDA ITEM 2.d.2. – March 28, 2017

Subject: Boerger® Pump and Parts
Sole Source (>\$10,000)

Recommended Action: Approve Boerger® Rotary Lobe Pump PL300 and replacement parts for use at the York River Treatment Plant.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Product includes a Boerger® Rotary Lobe Pump PL300 and various replacement parts. There are two Boerger® Rotary Lobe Pumps used in the primary sludge thickening process for the York River Treatment Plant. This replacement pump and parts allows for the reuse of the existing piping.

CONSENT AGENDA ITEM 2.d.3. – March 28, 2017

Subject: ChemScan[®] Process Analyzer Preventative Maintenance Service Contract
and Related Parts
Sole Source (>\$10,000)

Recommended Action: Approve Applied Spectrometry Associates, Inc. as a provider of preventative maintenance services, repairs and related parts for the ChemScan[®] Process Analyzers at HRSD facilities.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Service agreement includes annual preventative maintenance, technical support, related repair parts, labor and upgrades. The instruments are critical to the denitrification process to control the methanol feed.

CONSENT AGENDA ITEM 2.d.4. – March 28, 2017

Subject: Flygt Mixers and Parts
Sole Source (>\$10,000)

Recommended Action: Approve the purchase of Flygt mixers and parts for use at HRSD.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product has unique characteristics essential to the needs of the program
- Product is covered by a patent or copyright
- Product is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Product includes four Flygt heavy duty direct drive mixers and associated parts. The purchase of these mixers and parts will allow for the extension of the anoxic zone to aid in the de-nitrification process. These mixers will complement the existing Flygt mixers.

CONSENT AGENDA ITEM 2.d.5. – March 28, 2017

Subject: Fusible Polyvinylchloride (FPVC) Pipe
Sole Source (>\$10,000)

Recommended Action: Approve FPVC (Fusible Polyvinylchloride) pipe by Underground Solutions, Inc. for use on the Ferguson Park Interceptor Force Main Bridge Span Relocation.

CIP Project: BH013700

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: As part of the Ferguson Park Interceptor Force Main Bridge Span Relocation project, an existing 10-inch ductile iron pipeline will be slip-lined with an 8-inch fusible PVC pipeline. The project team has determined that FPVC is the only feasible pipeline material that can be utilized for this specific effort. The characteristics leading to this decision are the material's limited potential for expansion and contraction due to temperature swings, its ability to be easily connected with ductile iron fittings and a thinner pipe wall that allows for additional flow capacity when compared to other options.

CONSENT AGENDA ITEM 2.d.6. – March 28, 2017

Subject: HERE License Software Support Contract
Sole Source (>\$10,000)

Recommended Action: Approve American Digital Cartography, Inc. as the provider of HERE Software for use at HRSD.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Service includes annual license subscription including quarterly updates. Software is used to serve the geographic information system (NAVTEQ) base map in HRSD's web maps. Current processes have been specifically designed and developed for use with the NAVTEQ base map product and would have to be redesigned if another product was used.

CONSENT AGENDA ITEM 2.d.7. – March 28, 2017

Subject: Meridian License Maintenance and Support Contract
Sole Source (>\$10,000)

Recommended Action: Approve Bluecielo ECM Solutions, Inc. as the provider of Meridian license maintenance and support for use at HRSD.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Service includes annual maintenance and support of licenses to access to the Meridian system which is used as a library to organize and maintain engineering computer-aided design drawings. The licenses allow access by both HRSD and outside consultants.

CONSENT AGENDA ITEM 2.d.8. – March 28, 2017

Subject: Ovivo® Influent Screen Parts
Sole Source (>\$10,000)

Recommended Action: Approve Ovivo® influent screen replacement parts for use at HRSD.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Product includes Ovivo® influent screen replacement parts. These screen parts are needed to remove solids, grit and other debris from the influent wastewater.

CONSENT AGENDA ITEM 2.d.9. – March 28, 2017

Subject: RecoverE ESep™ System
Sole Source (>\$10,000)

Recommended Action: Approve the RecoverE ESep™ System for use at Nansemond Treatment Plant (NTP).

CIP Project: GN013300

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: The RecoverE ESep™ System is a fully automated system designed to remove trap grease or FOG (Fats, Oils and Grease). This system has the capability of dewatering FOG to greater than 90 percent solids. The proposed facility is being constructed at the Nansemond Treatment Plant (NTP) to provide a geographically centered location for indirect haulers. As part of the Preliminary Engineering Report (PER) effort, CH2M evaluated the possibility of designing and constructing an engineered grease dewatering tank system. The PER indicates that the ESep™ System is a better alternative both in terms of cost and processing effectiveness. The project team also advertised a Request For Information (RFI) through the HRSD ERP system and Water Environment & Technology magazine to solicit information on various manufacturers of FOG removal systems. Following evaluation of the responses provided (four manufacturers total) the project team came to the determination that the ESep™ System has unique characteristics that are essential to the goals of the facility. These characteristics include: the high degree of solids production, high temperature generation which eliminates pathogens and odor, high degree of automation and highly marketable end product. The system will be procured either directly by HRSD or from a general contractor through the construction contract for this project. Negotiation for the final cost of the system will occur as details are finalized during design.

CONSENT AGENDA ITEM 2.d.10. – March 28, 2017

Subject: Rheinutte Recirculation Pumps and Related Parts
Sole Source (>\$10,000)

Recommended Action: Approve Rheinutte recirculation pumps and related parts for use at the Nansemond Treatment Plant.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Product includes various Rheinutte recirculation pump replacement parts. The pump is used in the Struvite Recovery Facility (SRF) to remove nutrients. The SRF is designed specifically with the Rheinutte pumps. The replacement parts will allow the pumps to be repaired without costly modifications to existing piping and system.

CONSENT AGENDA ITEM 2.c.11. – March 28, 2017

Subject: SymProTreasury Management Software Maintenance and Support Contract
Sole Source (>\$10,000)

Recommended Action: Approve Emphasys Computer Solutions Inc. DBA SymPro Inc. as the provider of maintenance and support for the SymPro Treasury Management Software for use by the Finance Department.

Sole Source Justification:

- Compatibility with existing equipment or systems is required
- Support of a special program in which the product or service has unique characteristics essential to the needs of the program
- Product or service is covered by a patent or copyright
- Product or service is part of standardization program to minimize training for maintenance and operation, and parts inventory
- Only known source

Details: Service includes annual maintenance and support of the SymPro Treasury Management Software used to track investments and compile monthly general ledger entry. HRSD is required to prepare a Comprehensive Annual Financial Report each fiscal year. This software is used to prepare work papers for review by external auditors during their testing and compile data in the format required by the Governmental Accounting Standards Board and the Auditor of Public Accounts.

The maintenance and support renewal includes: priority service from technical support and client service representatives, free version corrections and enhancements, access to the internet site for support, and unlimited telephone technical support for loading and configuring of software, operational questions, including standard reports and data entry support for all debt and investment types supported within SymPro.

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ATTACHMENT #2

AGENDA ITEM 3. – Sustainable Water Initiative for Tomorrow (SWIFT) Advisory Panel
[Member Bios](#) and [PowerPoint Presentation](#)

NATIONAL WATER RESEARCH INSTITUTE

Hampton Roads Sanitation District's Sustainable Water Initiative for Tomorrow (SWIFT)

Independent Advisory Panel ♦ Panel Member Bios

Glen T. Daigger, Ph.D., P.E., BCEE, NAE (Panel Chair)

*Professor of Civil and Environmental Engineering
University of Michigan (Ann Arbor, MI)*



Dr. Glen Daigger is a Professor of Engineering Practice of Civil and Environmental Engineering at the University of Michigan. As a faculty member in CEE, Daigger contributes to the teaching of practice-oriented courses and provide leadership in the pursuit of national and international research and education initiatives, while also maintaining strong ties with professional practice. Daigger, recognized worldwide as an expert in wastewater treatment technologies, has contributed significantly to the entire water industry, most recently through his work as president of the International Water Association (IWA), where he worked with water leaders around the globe to advance the science and practice of water management to create more livable cities and accelerate the rate at which people gained access to drinking water and sanitation, all while protecting the environment. He will continue serving IWA as immediate past president of the association.

Daigger has also served in senior roles for the Water Environment Federation, the American Academy of Environmental Engineers and Scientists, and the Water Environment Research Foundation. Daigger is a member of the National Academy of Engineering and received the Harrison Prescott Eddy Award from the Water Environment Federation three times. As the author or co-author of more than 100 technical papers, four books, and several technical manuals, Daigger has also contributed to advancing practice within the wastewater profession.

Daigger received his doctorate and master's degrees in environmental engineering from Purdue University, as well as his bachelor's degree in civil engineering from Purdue. In 2012, he was named a Purdue University Distinguished College of Engineering Alumnus. Daigger worked at CH2M and was the firm's first Technical Fellow, an honor which recognized the leadership that he provided for CH2M HILL and for the profession in the development and implementation of new wastewater treatment technology.

His research has focused on the fundamental science and engineering supporting the advancement of technologies and practices which have been transformational for environmental engineering. These have included topics such as wastewater nutrient removal and recovery (biological and chemical), treatment process optimization and control (particularly biological treatment systems), control of activated sludge bulking and foaming, which can be debilitating and lead to excessive treatment costs if not properly addressed, and the highly efficient coupled attached and suspended growth systems.

Diana S. Aga, Ph.D.*Professor of Chemistry**University at Buffalo (Buffalo, NY)*

Diana Aga, a Professor in the Chemistry Department at the University of Buffalo, leads a research team that studies how various contaminants affect the environment. Her lab investigates techniques for removing antibiotics from wastewater; how plants – especially food crops – take up pharmaceuticals and engineered nanomaterials; and how levels of veterinary antibiotics in manure decrease over time through long-term storage or waste-disposal processes like composting and anaerobic digestion. Aga also has extensive experience in analyzing persistent organic pollutants, such as polybrominated flame retardants (PBDEs), and how these compounds accumulate in the human body, Great Lakes fish and the environment.



Aga's insights have been published in news outlets ranging from Business First in Upstate New York to Scientific American, EcoWatch and others nationally. To investigate how chemical pollutants are transformed in the environment, and whether they pose an ecological threat, Aga capitalizes on her expertise in environmental mass spectrometry to analyze soil and water samples for traces of potentially hazardous compounds.

Her research interest include industrial pollution, emerging contaminants including pharmaceuticals, nanomaterials and flame retardants, wastewater treatment, and antibiotic resistance. She received her B.S. from the University of the Philippines at Los Baños, Laguna, Philippines and her Ph.D. from the University of Kansas, Lawrence, KS.

Thomas J. Grizzard, Jr., Ph.D.*Professor Emeritus**Department of Civil and Environmental Engineering,
Virginia Tech (Manassas, VA)*

Tom Grizzard received his B.S. in 1968 and accepted a position with the U.S Army Engineer District in Norfolk, Virginia. While with the Corps of Engineers, he worked in a variety of assignments, culminating with a position in Water Resources, where he developed an interest in watershed planning and management. In 1971, Mr. Grizzard returned to Virginia Tech as a graduate student in sanitary engineering. During his studies, he conducted research in the Upper Roanoke River Watershed on the relative magnitude of various watershed pollution sources. After receiving his M.S. degree in 1972, he elected to continue his graduate work in the civil engineering Ph.D. program.



During his Ph.D. studies, Mr. Grizzard's research focused on the water quality impacts of nutrient cycling from deposited lake and reservoir sediments. Working again in the Roanoke River Watershed, he developed methods for predicting the downstream water quality effects of nutrient sources.

In 1974, Tom joined the Virginia Tech Civil Engineering Department as Director of the Occoquan Watershed Monitoring Laboratory in Manassas, Virginia, a position he held for 29 years. The laboratory was founded to conduct long-term research and analysis of the water quality and watershed management issues associated with using reclaimed water to enhance the drinking water yield from the Occoquan Reservoir, a large impoundment that is a key part of the water supply for more than one million northern

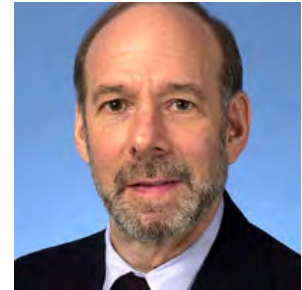
Virginians. He also has published widely in the fields of nonpoint pollution and urban runoff control, as well as in the management of water quality in streams, lakes, and reservoirs.

Throughout his career, Dr. Grizzard has accepted numerous service assignments to his profession, the government, and the university. In recent years, he has served on the Commonwealth's licensing board for water and wastewater plant operators, and he currently is a member of the Scientific and Technical Advisory Committee to the EPA Chesapeake Bay Program. He also is a registered Professional Engineer in the Commonwealth of Virginia.

Mark D. Sobsey, PhD.

Kenan Distinguished Professor

*Department of Environmental Sciences and Engineering
UNC Chapel Hill (Chapel Hill, NC)*



Dr. Mark Sobsey is a Kenan Distinguished Professor of Environmental Science and Engineering in the Department of Environmental Sciences and Engineering, Gillings School of Global Public Health, University of North Carolina at Chapel Hill. He received a B.S. in Biology (1965) and a M.S. in Hygiene (1967) from the University of Pittsburgh, Pa. and a Ph.D. in Environmental Health Sciences from the School of Public Health, University of California at Berkeley (1971). This was followed by a post-doctoral position (1971), instructorship (1972) and assistant professorship (1973) in the Department of Virology and Epidemiology, Baylor College of Medicine, Houston, Texas. He joined the faculty of the Gillings School of Global Public Health at the University of North Carolina – Chapel Hill in 1974 as an assistant professor.

Professor Sobsey is internationally known for research, teaching and service in environmental health microbiology and virology and in water, sanitation and hygiene, with more than 200 published papers and reports. His research, teaching and service encompass the detection, characterization, occurrence, environmental survival/transport/fate, treatment, human health effects characterization and risk assessment of viruses, bacteria and parasites of public health concern in water, wastewater, biosolids, soil, air, fomites and food for the prevention and control of water-, food- and excreta-borne disease. His most recent research focuses on household water treatment and safe storage for improved water quality and health and water microbiological analysis methods to distinguish between safe and unsafe water. Professor Sobsey is an author, consultant and scientific advisor to the World Health Organization, World Bank, UNICEF, US Environmental Protection Agency, US Centers for Disease Control and Prevention, the State of North Carolina and other international, national and state entities. His honors include being the 2001 recipient of the American Water Works Association A.P. Black Award for research excellence, a 2009 recipient of the Water Environment Federation Pioneer Award for Disinfection contributions and a 2010 Water Innovation Award from the LAUNCH program. He is a member of the International Water Association, the American Society for Tropical Medicine and Hygiene and the American Society for Microbiology.

An important focus of this research is combining microbial detection of pathogens (and microbial indicators for them) in these media with human health effects studies (such as diarrheal disease prevalence and incidence) in populations exposed to these media in order to quantify disease risks and burdens, devise and evaluate interventions to reduce these risks, such as water treatment processes that reduce pathogens, and use this information to conduct risk assessments and inform policy decisions for risk management. Hence this research shifts the axis of the university to work that informs integrated environmental decision-making and influences state, national and global policy on water, sanitation and health.

Thomas Missimer, Ph.D., P.G.

*President, Missimer Hydrological Services, Inc., and
Visiting Professor, Florida Gulf Coast University (Fort Myers, FL)*

Thomas Missimer has more than 40 years of experience in the field of hydrogeology and is a recognized expert in artificial recharge and aquifer storage and recovery. He has managed more than 250 technical projects and is the author of nine books, 80 peer-reviewed articles, and 300 technical consulting reports. He is an editor of a newly released book on SWRO intakes and outfall published by Springer. He currently serves as Executive Editor of Groundwater, a technical journal for groundwater hydrogeologists. Missimer co-founded the consulting firm Missimer & Associates, Inc., and helped grow the company's revenues to exceed \$25 million per year. After that, he founded another company that was purchased by CDM and was Vice President and national practice leader in artificial recharge/aquifer storage and recovery technology for CDM. He currently holds a courtesy faculty appointment at Florida Gulf Coast University.



Missimer's education includes degrees in Geology from Franklin and Marshall College (BA), Florida State University (MS), and University of Miami (PhD). He is a registered Professional Geologist in the states of Florida, Georgia, and Virginia, and holds certifications from the American Institute of Professional Geologists and the National Groundwater Association. He was a past member on a science advisory panel co-convened by the California Coastal Commission and Poseidon Resources that evaluated the technical feasibility of subsurface intakes at Huntington Beach, California (Phase 1) and is currently on a follow-up panel on the same site (Phase 2).

R. Shane Trussell, Ph.D., P.E., BCEE

President, Trussell Technologies, Inc. (San Diego, CA)

R. Shane Trussell is the President of Trussell Technologies, Inc. Dr. Trussell has a B.S. in Chemical Engineering from the University of California (U.C.) at Riverside, a M.S. in Environmental Engineering from U.C. Los Angeles and a Ph.D. in Environmental Engineering from U.C. Berkeley. Dr. Trussell is a registered Civil Engineer in the State of California with 17 years of experience who has authored more than 57 publications and presentations. His professional experience has focused around membrane processes in the water, seawater and wastewater treatment field. He is a recognized expert on Membrane Bioreactors (MBR) and has an intimate understanding of the process limitations, both at high organic loadings and high mixed liquor suspended solids. Dr. Trussell performed his doctoral research on the effects of mixed liquor properties on membrane performance in the MBR process with Profs. Hermanowicz and Jenkins as advisors. Dr. Trussell is interested in advanced water and wastewater treatment with a focus on water reclamation and reuse. Dr. Trussell is a member of AWWA, WEF, WRF, ASCE and AIChE.



Mark A. Widdowson, Ph.D.

*Professor
Department of Civil & Environmental Engineering (Blacksburg, VA)*



Dr. Widdowson is the co-author and principal investigator of the solute transport code SEAM3D (Sequential Electron Acceptor Model, 3D Transport) and the decision-support tool NAS (Natural Attenuation Software). His research expertise includes mathematical modeling and experimental studies on the fate and transport of contaminants in soil, sediments and groundwater, including chlorinated solvents (PCE, TCE, vinyl chloride); chlorinated compounds (PCBs); petroleum hydrocarbons (benzene, BTEX, MTBE), coal tar and creosote (PAH compounds); inorganics (nitrate, nitrite); metals (arsenic).

His areas of research interest include: groundwater resources, fate and attenuation of contaminants in aquatic environments, modeling and decision-support tools, subsurface remediation including natural attenuation, bioremediation, phytoremediation.

A 501c3 nonprofit organization, the National Water Research Institute (NWRI) was founded in 1991 by a group of California water agencies in partnership with the Joan Irvine Smith and Athalie R. Clarke Foundation to promote the protection, maintenance, and restoration of water supplies and to protect public health and improve the environment.

Contact Information:

National Water Research Institute
18700 Ward St.
Fountain Valley, CA 92708
(714) 378-3278
www.nwri-usa.org



National Water Research Institute
(NWRI), Sustainable Water
Initiative for Tomorrow (SWIFT)
Advisory Panel
February 2-3, 2017 Meeting

Glen T. Daigger, Ph.D., P.E., BCEE, NAE
Professor of Engineering Practice

Presentation to the HRSD Commission
March 28, 2017

Panel Members



Glen Daigger
U. of Michigan
Panel Chair



Diana Aga
University at Buffalo



Thomas Grizzard
Virginia Tech



Mark Sobsey
UNC Chapel Hill



Thomas Missimer
Florida Gulf Coast
University



Shane Trussell
Trussell Technologies



Mark Widdowson
Virginia Tech



About NWRI

- **Based in Fountain Valley, California**
- **Founded in 1991**
- **501c3 nonprofit organization**
- **Water and wastewater agency members**
- **Purpose:** To collaborate on research projects and activities that produce beneficial change and improved policy decisions
- **Visit www.nwri-usa.org for more information**



Panel Process

- Address project questions
 - Technical, scientific, public health, operations
 - But also policy: outreach, economics, etc.
- Partnership with utilities
 - Technical and policy
- Independent, credible, third party review
 - Provide guidance and advice
- Panel
 - 4-12 panel members
 - Meet quarterly or annually
 - Sometimes multi-year efforts
- Outcome: Assist to Achieve Project Success



Meetings to Date:

- July 29, 2016 Conference Call (Panel Chair and NWRI Executive Director)
- August 26, 2016 Information Package and Feedback From Panel
- November 7, 2016 Conference Call
- February 2-3, 2017 In-Person Meeting



Preliminary Panel Findings: General Comments

- The Panel greatly appreciated the presentation and information provided by the District and its project team. In addition, the pre-meeting materials provided by HRSD were helpful to the Panel in its discussions.
- After a comprehensive discussion of the project goals and the proposed approach, the Panel does not foresee any fatal flaws with this project.
- The Panel agrees that SWIFT is primarily ***a water supply augmentation project***. The project focuses on quantity, with a consideration of the quality needs, and will increase the sustainable yield of the aquifer.
- The panel supports selection of the carbon-based treatment train. It is capable of producing product water more compatible with the project critical geochemistry requirements for aquifer injection than the RO train. An adequate level of biological treatment in the upstream wastewater treatment plant is required with the carbon-based treatment train to remove compounds of concern, such as trace organics, prior to advanced water treatment, generally characterized by achieving stable and consistent nitrification.



Preliminary Panel Findings: Opportunities to Support SWIFT (1 of 2)

- HRSD should consider establishing a Potomac Aquifer System Monitoring Laboratory to coordinate the monitoring associated with the demonstration study and full scale projects. HRSD needs to determine the appropriate level of independence and the institutional structure of the laboratory. The laboratory will serve two functions: 1) provide monitoring and data collection and management; and 2) oversight for the demonstration facility and future full scale projects.
- The advanced treated water may also be appropriate for surface water augmentation (SWA) as practical experience with the advanced treatment train is gained. SWA could serve as a contingency plan if the injection sites are not able to address all the flows.
- The Panel recommends that HRSD present the benefits and/or improvements that would be created by this water supply augmentation project in a manner that manages stakeholder expectations.
Specifically:
 - Regional water levels and local changes may not be immediately evident when injection commences.
 - While land subsidence will be reduced, the amount of rebound may be less than expected.
 - Salt water intrusion will be reduced, but may not be totally alleviated.



Preliminary Panel Findings: Opportunities to Support SWIFT (2 of 2)

- An adaptive (technical) strategy is encouraged for planning and implementing the project. For instance, the project may require different treatment trains and groundwater hydraulics and compatibility at each facility. A review of the program risk and opportunity register by the panel may be productive.
- It may be possible to consider this project for potential emergency and/or backup drinking water supply.
- Identifying and informing regional partners and important local leaders on the purpose and benefits of the project would help gain support. Engage these partners to assist with project implementation in areas and topics where they may be better positioned to do so than HRSD.



Preliminary Panel Findings: Potential Challenges (1 of 4)

- It may be difficult to determine if it possible to inject the total volume of water into the ground (i.e., >120 mgd) using only the already identified injection sites. The Panel recommends that the project team identify additional sites for injection now, as a contingency if the current sites are not ultimately found to provide sufficient capacity.
- Regarding the success of injecting of the water, the pretreatment process to prevent swelling of clays needs to be well thought out and implemented. It can be difficult to assess the potential for swelling and dispersing of clays prior to injection. Consequently, contingency plans are necessary and should be developed.
- The project team will need to determine the most appropriate point of compliance for water quality to recommend to regulators. For example, it could be above ground for both chemicals and pathogens, with due consideration of pathogen credits from SAT.



Preliminary Panel Findings: Potential Challenges (2 of 4)

- Because the effect of the crater is unknown, the Panel recommends that the project team consider further evaluation of the well currently planned for the York River Plant, including the best location for the well. The project team encountered more sand than expected at the site and found that permeability was not what they had anticipated.
- The Panel recommends investigating the timing and level of service impacts for potential users of the injected water. In addition, it is important to identify all pumping wells (including private wells) that could be affected by the project.
- It appears that the hydraulic pressure differs among the three aquifers. This difference should be considered as part of the project implementation.



Preliminary Panel Findings: Potential Challenges (3 of 4)

- While the project creates significant benefits for many parties, it is unclear that mechanisms exist to allow the value of a sufficient number of benefits to be collected to finance the project. Although the panel was not asked to review this component of the project, it is recognized as critical to implementation.
- Regarding the permitting of the project, the panel agrees with the approach to consider permitting the project under the underground injection control (UIC) program under U.S. EPA Region 3. More specifically:
 - The project will need to comply with relevant UIC program requirements. The project team should continue discussions with Region 3 staff as needed.
 - The Panel strongly believes that regulation of Class 5 is the preferred option, since it is more relevant and more flexible than Class 1.
 - The Panel recommends gathering background data on the aquifer to inform the UIC process. The project team should consider installing monitoring wells and collecting samples from selected private wells. In addition, the data can be used for solute transport modeling.

Preliminary Panel Findings: Potential Challenges (4 of 4)

- The Panel recommends implementing a source control strategy. This can include expanding the existing pre-treatment program but should also consider further options such as direct treatment of specific sources (e.g. hospitals) and support of options for alternate means of managing specific industrial and commercial wastes. Expanded specific requirements for select industrial discharges would, of course, also be evaluated.





**CIVIL & ENVIRONMENTAL
ENGINEERING**
UNIVERSITY OF MICHIGAN

Your Questions

HRSD COMMISSION MEETING MINUTES
March 28, 2017

ATTACHMENT #3

AGENDA ITEM 4. – Interim Financing (Line of Credit) Agreement Extension and Interest Accrual Provision Modification

- [Resolution](#)
- [Amendment](#)

SECOND AMENDMENT

Dated as of April 5, 2017

TO THE

CREDIT AGREEMENT

Dated as of October 30, 2015

by and between

HAMPTON ROADS SANITATION DISTRICT

and

BANK OF AMERICA, N.A.

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This SECOND AMENDMENT, dated as of April 5, 2017 (this “Amendment”), to the CREDIT AGREEMENT dated as of October 30, 2015, between, HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia having its principal office at 1434 Air Rail Avenue, Virginia Beach, Virginia (the “District”), and BANK OF AMERICA, N.A., a national banking association organized under the laws of the United States (the “Bank”),

WITNESSETH:

WHEREAS, the District and the Bank have entered the Credit Agreement, dated as of October 30, 2015, as previously modified by the Amendment, dated as of March 30, 2016 (collectively, the “Credit Agreement”), pursuant to which the Bank has agreed, on the terms and conditions set forth in the Credit Agreement, to advance certain sums to the District to provide interim financing or refinancing for the costs of the District’s Capital Improvement Program (the “Projects”); and

WHEREAS, the District issued a Bank Note (the “Bank Note”) to the Bank to evidence its obligation to make principal and interest payments on outstanding amounts owed under the line of credit provided under the Credit Agreement; and

WHEREAS, the Credit Agreement is scheduled to terminate on June 30, 2017, and the Bank has offered to extend the termination date of the Credit Agreement until June 30, 2018; and

WHEREAS, in connection with such extension, the District and the Bank desire to amend the Credit Agreement to provide that (i) the Applicable LIBOR Interest Rate applying to Advances shall be set and reset on the first Business Day of each month rather than established on each Advance Date, and (ii) the Unused Commitment Fee shall be based on the daily outstanding principal amount of all Advances rather than an average outstanding principal amount; and

WHEREAS, in furtherance of the foregoing the District and the Bank propose to enter into this Amendment pursuant to which certain terms of the Credit Agreement will be modified and amended; and

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants hereinafter set forth, the parties hereto agree as follows:

**ARTICLE I
DEFINITIONS AND RULES OF CONSTRUCTION**

Section 1.01. **Definitions.** Unless otherwise defined herein, words defined in the Credit Agreement are used in this Amendment with the meanings assigned to them in the Credit Agreement.

Section 1.02. **Rules of Construction.** Unless the content clearly indicates to the contrary, the following rules shall apply to the construction of this Amendment:

(a) Words importing the singular shall include the plural number and vice versa.

(b) Unless otherwise indicated, all references herein to particular Articles or Sections are references to Articles or Sections of this Amendment.

(c) The headings and herein are solely for convenience of reference and shall not constitute a part of this Amendment nor shall they affect its meaning, construction or effect.

ARTICLE II CREDIT AGREEMENT AMENDMENTS

Section 2.01. **Amended Definitions.** The following definitions in the Credit Agreement are amended to read as follows:

“Applicable LIBOR Interest Rate” means for (i) an Advance that finances a Tax-Exempt Project, 70% of the LIBOR Rate plus 0.35% per annum or (ii) an Advance that finances a Taxable Project, 100% of the LIBOR Rate plus 0.45% per annum. The initial Applicable LIBOR Interest Rate (tax-exempt and taxable) applying to an Advance will be determined as though the Applicable LIBOR Interest Rate had been determined on the first Business Day of the calendar month in which the Advance is made. Thereafter, the Applicable LIBOR Interest Rate will reset on and as of the first Business Day of each calendar month.

“LIBOR Rate” means, for any applicable date of determination, the rate that is equal the London Interbank Offered Rate (or a comparable or successor rate which is approved by the Bank) for U.S. Dollar deposits for delivery on the date in question for a one month term beginning on that date. The Bank will use the London Interbank Offered Rate as published by Bloomberg (or other commercially available source providing quotations of such rate as selected by the Bank from time to time) as determined at approximately 11:00 a.m. London time two (2) London Banking Days prior to the first day of the applicable calendar month for an Applicable LIBOR Interest Rate that automatically sets and resets; provided that (i) to the extent a comparable or successor rate is approved by the Bank in connection herewith, the approved rate shall be applied in a manner consistent with market practice; provided, further that to the extent such market practice is not administratively feasible for the Bank, such approved rate shall be applied in a manner as otherwise reasonably determined by the Bank and (ii) if LIBOR shall be less than zero, such rate shall be deemed zero for purposes of this Agreement. If such rate is not available at such time for any reason, then the rate will be determined by such alternate method as reasonably selected by the Bank. A “London Banking Day” is a day on which banks in London are open for business and dealing in offshore dollars.

“Maturity Date” means June 30, 2018.

“Scheduled Termination Date” means June 30, 2018.

Section 2.02. **Amendments to Section 2.2 and 2.5.**

(a) Section 2.2(b) is deleted.

(b) The first sentence of Section 2.5 is amended and restated in its entirety to read as follows:

“The District shall pay to the Bank quarterly on each January 1, April 1, July 1 and October 1, commencing January 1, 2016, an unused commitment fee equal to 0.15% per annum on the difference between the Commitment and the daily outstanding principal amount of all Advances outstanding during such period (the “Unused Commitment Fee”).”

ARTICLE III

CLOSING CONDITIONS and REPRESENTATIONS and WARRANTIES

Section 3.01. **Conditions to Closing.** This Amendment shall become effective when each of the following conditions precedent has been fulfilled in a manner satisfactory to the Bank.

(a) **Delivery of Documents.** The Bank shall have received the following, each in form and substance satisfactory to the Bank:

(i) certified copies of the resolution of the Commission approving this Amendment;

(ii) a favorable opinion of bond counsel as to the validity of this Amendment;

(iii) a favorable opinion of counsel to the District, as to such matters as mutually agreed to by the parties to this Amendment.

(b) **Fees, etc.** The Bank shall have received the payment of the fees and disbursements of Bank counsel incurred in connection with this Amendment.

(c) **Material Adverse Change.** Since June 30, 2016, no material adverse change in the financial condition, business, assets, liabilities or prospects of the District shall have occurred.

Section 3.02. **Opinion as to Tax Status of Tax-Exempt Note.** In addition to the conditions set forth in Section 4.2 of the Credit Agreement, prior to the Bank approving the initial Advance Notice after the effective date of this Amendment, the District shall provide to the bank an unqualified opinion of bond counsel that the interest on the Tax-Exempt Note is not includable in gross income for purposes of federal income tax.

Section 3.03. **[Reserved].**

Section 3.04. **Representations and Warranties.** The District hereby represents and warrants to the Bank as of the date hereof that:

(a) It is in compliance with all of the terms, covenants and conditions of the Credit Agreement, as amended by this Amendment.

(b) There exists no Event of Default under the Credit Agreement, as amended by this Amendment, and no event has occurred or condition exists which, with the giving of notice or lapse of time, or both, would constitute such an Event of Default.

(c) The representations contained in Section 3.1 of the Credit Agreement are, except to the extent that they relate solely to an earlier date, true with the same effect as though such representations and warranties had been made on the date of this Amendment.

(d) It has full authority to enter into this Amendment and to incur the obligations provided for herein. No consent or approval of, notice to or filing with any public authority is required as a condition to the validity of this Amendment or the performance by the District of its obligations hereunder.

(e) This Amendment, once executed and delivered, will constitute a valid and legally binding obligation of District, enforceable against the District in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency or similar laws affecting the enforcement of creditors' rights generally, and general principles of equity.

(f) There are no actions, suits, proceedings or investigations pending or, so far as the District knows, threatened before any court or administrative agency that will materially adversely affect the (i) financial condition or operations of the District or (ii) the ability of the District to execute, deliver or carry out the terms of this Amendment.

Section 3.05. **Reaffirmation.** Except as expressly amended hereby, the terms of the Credit Agreement shall remain in full force and effect in all respects, and the District hereby reaffirms its obligations under the Credit Agreement as amended by this Amendment. The District hereby waives any claim, cause of action, defense, counterclaim, setoff or recoupment of any kind or nature that it may assert against the Bank arising from or in connection with the Credit Agreement, as amended by this Amendment, or the transactions contemplated thereby or hereby that exist on the date hereof or arise from facts or actions occurring prior hereto or on the date hereof. Nothing contained in this Amendment shall be construed to constitute a novation with respect to the obligations described in the Credit Agreement.

Section 3.06. **References to Documents.** All references to the Credit Agreement in the Bank Note, or any other documents or instruments that refer to the Credit Agreement, shall be deemed to be references to the Credit Agreement as amended by this Amendment.

ARTICLE IV MISCELLANEOUS

Section 4.01. **Agreement Effective.** Upon its execution and delivery, this Amendment shall be effective as of the date set forth in the preamble hereto.

Section 4.02. **Counterparts**. This Amendment may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute one and the same instrument.

Section 4.03. **Governing Law**. This Amendment shall be construed in accordance with and governed by the laws of the Commonwealth of Virginia.

Section 4.04. **Successors and Assigns**. This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed on their behalf by their duly authorized officers.

HAMPTON ROADS SANITATION
DISTRICT

By:  _____
Chief Financial Officer

BANK OF AMERICA, N.A.

By: _____
Senior Vice President

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed on their behalf by their duly authorized officers.

HAMPTON ROADS SANITATION
DISTRICT

By: _____
Chief Financial Officer

BANK OF AMERICA, N.A.

By: 
Senior Vice President

Hampton Roads Sanitation District
Resolution of
March 28, 2017

HAMPTON ROADS SANITATION DISTRICT COMMISSION

RESOLUTION AUTHORIZING THE EXECUTION AND DELIVERY OF AN AMENDMENT TO THE CREDIT AGREEMENT WITH BANK OF AMERICA, N.A. AND THE EXECUTION AND DELIVERY OF ONE OR MORE ADDITIONAL AMENDMENTS TO THE CREDIT AGREEMENT EXTENDING THE TERMINATION DATE OF THE CREDIT AGREEMENT; AND GRANTING THE AUTHORITY TO EXECUTE AND DELIVER SUCH OTHER DOCUMENTS AND AGREEMENTS RELATING TO SUCH TRANSACTION AS MAY BE NECESSARY OR APPROPRIATE.

Adopted March 28, 2017

RESOLUTION AUTHORIZING THE EXECUTION AND DELIVERY OF AN AMENDMENT TO THE CREDIT AGREEMENT WITH BANK OF AMERICA, N.A. AND THE EXECUTION AND DELIVERY OF ONE OR MORE ADDITIONAL AMENDMENTS TO THE CREDIT AGREEMENT; EXTENDING THE TERMINATION DATE OF THE CREDIT AGREEMENT; AND GRANTING THE AUTHORITY TO EXECUTE AND DELIVER SUCH OTHER DOCUMENTS AND AGREEMENTS RELATING TO SUCH TRANSACTION AS MAY BE NECESSARY OR APPROPRIATE

WHEREAS, the Hampton Roads Sanitation District (the “District”) and Bank of America, N.A. (the “Bank”) entered into a Credit Agreement, dated as of October 30, 2015 (the “Original Credit Agreement”) pursuant to which the Bank provided a line of credit to the District (the “Line of Credit”), in an aggregate principal amount of up to \$90,000,000 (the “Original Line of Credit Commitment”) to provide interim financing for costs of the District’s Capital Improvement Program (the “Projects”) and pursuant to the Original Credit Agreement, the Bank is obligated to make advances under the Line of Credit to the District, all for the purpose of providing interim financing for Projects; and

WHEREAS, after the payment of amounts drawn under the Line of Credit, the District and the Bank entered into an amendment, dated March 30, 2016, to the Original Credit Agreement (as so amended and as the same may be further amended from time to time as permitted hereby, the “Credit Agreement”) in order (i) to extend the termination date of the Credit Agreement until June 30, 2017, and (ii) to decrease the Original Line of Credit Commitment to \$1,000,000 (the “Line of Credit Commitment”); and

WHEREAS, the Credit Agreement is scheduled to terminate on June 30, 2017; and

WHEREAS, the District and Bank desire to amend the Credit Agreement to, among other things, extend the scheduled termination date of the Credit Agreement and adjust the method by which the interest due on amounts drawn by the District under the Credit Agreement is calculated, all as further described in the form of the amendment to the Credit Agreement presented to this meeting (the “Credit Agreement Amendment”); and

WHEREAS, the Commission at this time wishes to authorize the execution from time to time of one or more amendments to the Credit Agreement (each, a “Further Amendment to the Credit Agreement”) solely for the purposes of extending the scheduled termination date of the Credit Agreement one or more times, to a date not later than June 30, 2020; and

WHEREAS, the Hampton Roads Sanitation District Commission (the “Commission”) is the District’s governing body; now therefore,

BE IT RESOLVED by the Hampton Roads Sanitation District Commission as follows:

SECTION 1. Authorization of Credit Agreement Amendment. The Commission hereby authorizes the execution of the Credit Agreement Amendment, and the Chairman of the Commission, the Vice Chairman of the Commission, the Secretary of the Commission, the General Manager of the District or the Chief Financial Officer of the District (each a “Delegate”) are hereby each authorized, directed and empowered to execute and deliver, under seal, in the name and on behalf of the District, such Credit Agreement Amendment in substantially the form presented to this meeting together with such changes, modifications and deletions as the Delegate or Delegates, with the advice of counsel, may deem necessary and appropriate; such execution and delivery shall be conclusive evidence of the approval and authorization thereof by the District.

SECTION 2. Authorization of Further Amendments to the Credit Agreement. The Commission hereby authorizes the execution from time to time of one or more Further Amendments to the Credit Agreement solely for the purpose of extending the scheduled termination date of the Credit Agreement, to a date not later than June 30, 2020, and each Delegate is hereby each authorized, directed and empowered to execute and deliver, under seal, in the name and on behalf of the District, one or more Further Amendments to the Credit Agreement in such form and containing substantially the same terms and provisions, with such additions and modifications as shall be approved by the Delegate or Delegates executing such Further Amendments to the Credit Agreement, the execution thereof by such officers being conclusive evidence of such approval.

SECTION 3. Execution of Documents. The execution and delivery by any Delegate of the Amendment to the Credit Agreement, any Further Amendment to the Credit Agreement, and any other agreements, documents, closing papers and certificates executed and delivered pursuant to this Resolution shall be conclusive evidence of their approval of the changes, if any, in the forms thereof.

SECTION 4. Ratification. All actions taken by the District, the members of the Commission, and officers and employees of the District in connection with the authorization, execution and delivery of the Amendment to the Credit Agreement and any Further Amendment to the Credit Agreement and the authorization, execution and delivery of the agreements, certificates and other documents to be executed by the District and delivered in connection with such authorization, execution and delivery are hereby ratified and confirmed.

SECTION 5. Further Actions. The members, officers and employees of the District are hereby authorized and directed to do all acts and things, including without limitation the, execution and delivery of such agreements, documents, certificates and closing papers on behalf of the District required of them by the provisions of the Amendment to the Credit Agreement and any Further Amendment to the Credit Agreement for the full, punctual and complete performance of all the terms, covenants, provisions and agreements of the Amendment to the Credit Agreement and any Further Amendment to the Credit Agreement and, also, to do all acts and things required of them by the provisions of this Resolution. Each Delegate may also provide for the amendment and restatement of the Credit Agreement to reflect the Credit Agreement Amendment and each Further Amendment to the Credit Agreement.

SECTION 6. Delegates' Certificate. Each Delegate may execute a certificate or certificates evidencing the determinations made or other actions carried out pursuant to the authority granted in this Resolution, and any such certificate shall be conclusive evidence of the actions or determinations as stated therein.

SECTION 7. Repeal of Conflicting Resolutions. Any and all resolutions of the Commission or portions thereof in conflict with the provisions of this Resolution are hereby repealed to the extent of such conflict.

SECTION 8. Effective Date. This resolution shall take effect immediately upon its adoption.

[END OF RESOLUTION]

Adopted By the Hampton Roads Sanitation District Commission on March 28, 2017:


Frederick N. Elofson, CPA, Chair

HRSD COMMISSION MEETING MINUTES
March 28, 2017

ATTACHMENT #4

AGENDA ITEM 6. – Sustainable Water Phase 3 – Demonstration Facility PowerPoint Presentation

SWIFT Research Center Design/Build Project Status



Lauren Zuravnsky, P.E.

Presentation to Commission | March 28, 2017

Implementation of this Phase 3 project supports the overall SWIFT Program timeline

- Phase 1 – Concept Feasibility (completed) 2014 - 2015
- Phase 2 – Concept Development & Pilot Testing 2016 - 2017
- **Phase 3 – Concept Demonstration 2016 - 2019**
 - Design Dec 2016 – May 2017
 - Construction April 2017 – January 2018
 - Initial Data Collection & Operation January 2018 – Summer 2019
- Phase 4 – Facility Plan Development 2016 - 2018
- Phase 5 – Implementation Plan 2017 - 2019
- Phase 6 – Full-Scale Facility Implementation 2020 - 2030

Project Objective Statement was developed to maintain focus and improve project delivery.

Statement of Project Objective:

Demonstrate, at a meaningful scale, that advanced treatment will produce finished water that meets primary drinking water standards and is compatible with the receiving aquifer. Collect at least 18 months of operational data and aquifer hydraulic response data to optimize the design and construction of full scale sustainable water facilities starting in 2019. Define permitting requirements with regulators for future full scale sustainable water facilities.

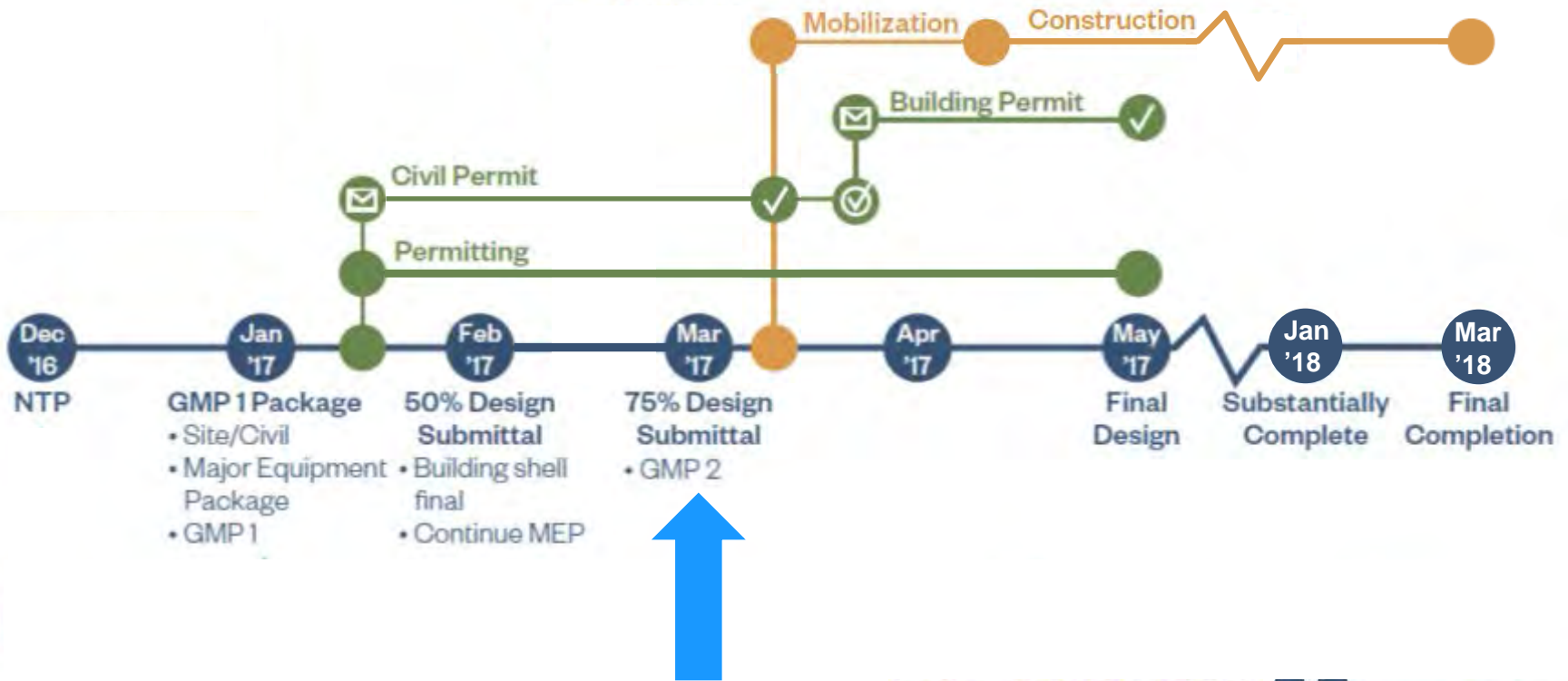
Secondary Project Objectives include:

- *Provide a facility for staff/operator training*
- *Provide a facility for public education*
- *Provide a flexible treatment facility that supports technology/process changes, improvements, and optimization*
- *Monitor the migration of injectate constituents through the aquifer*
- *Support the level of automation consistent with the HRSD Strategic Automation Plan*

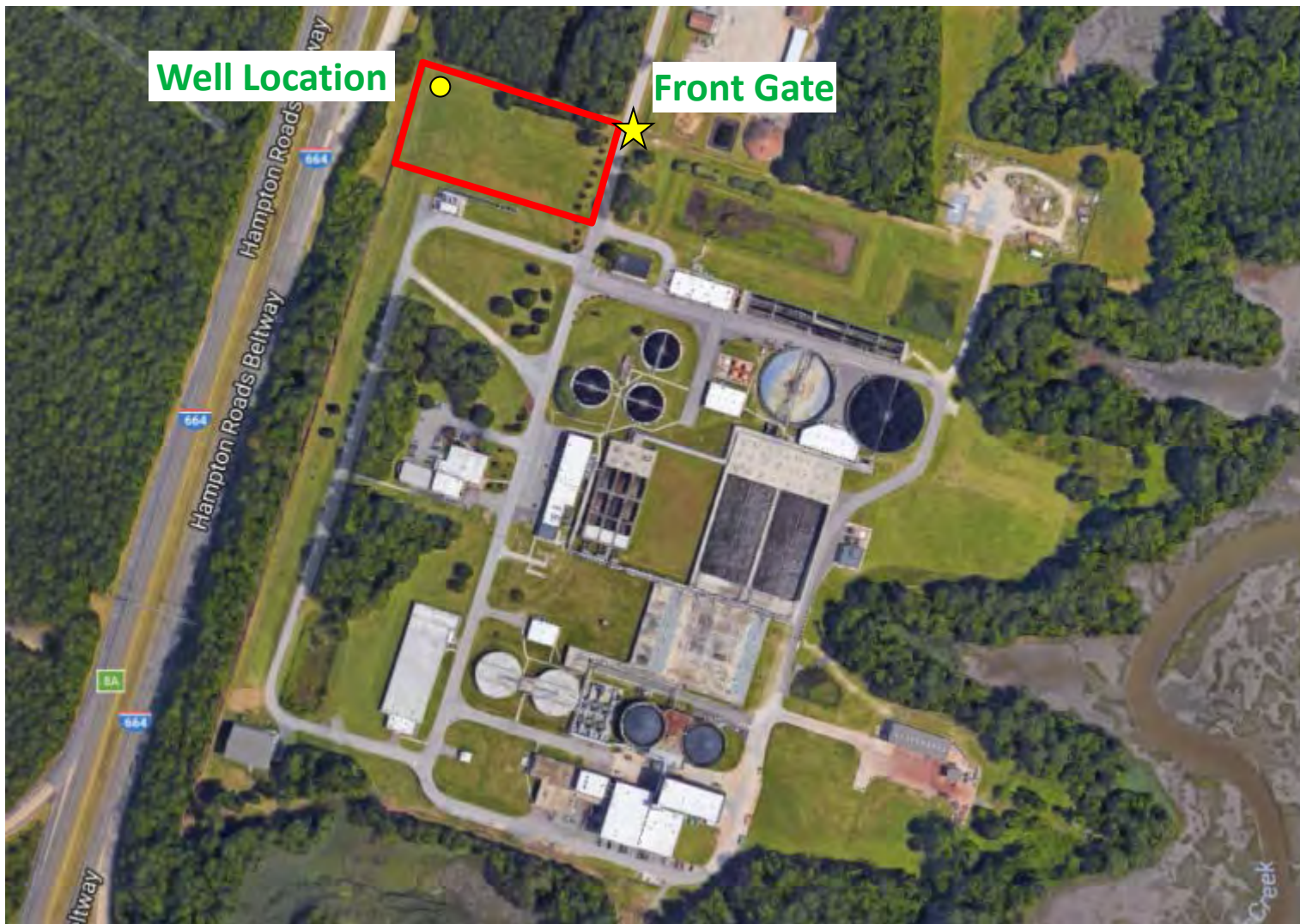
Use of Design/Build project delivery was approved by HRSD Commission in June 2016

- **Contractor input during design**
 - Develop cost-saving and time-saving solutions
- **Collaboration between HRSD and Design/Build team**
 - Develop approaches that support the full scale SWIFT program
- **Overlap of design and construction phases to reduce overall schedule**

Design/Build project delivery supports our goal for project substantial completion in January 2018



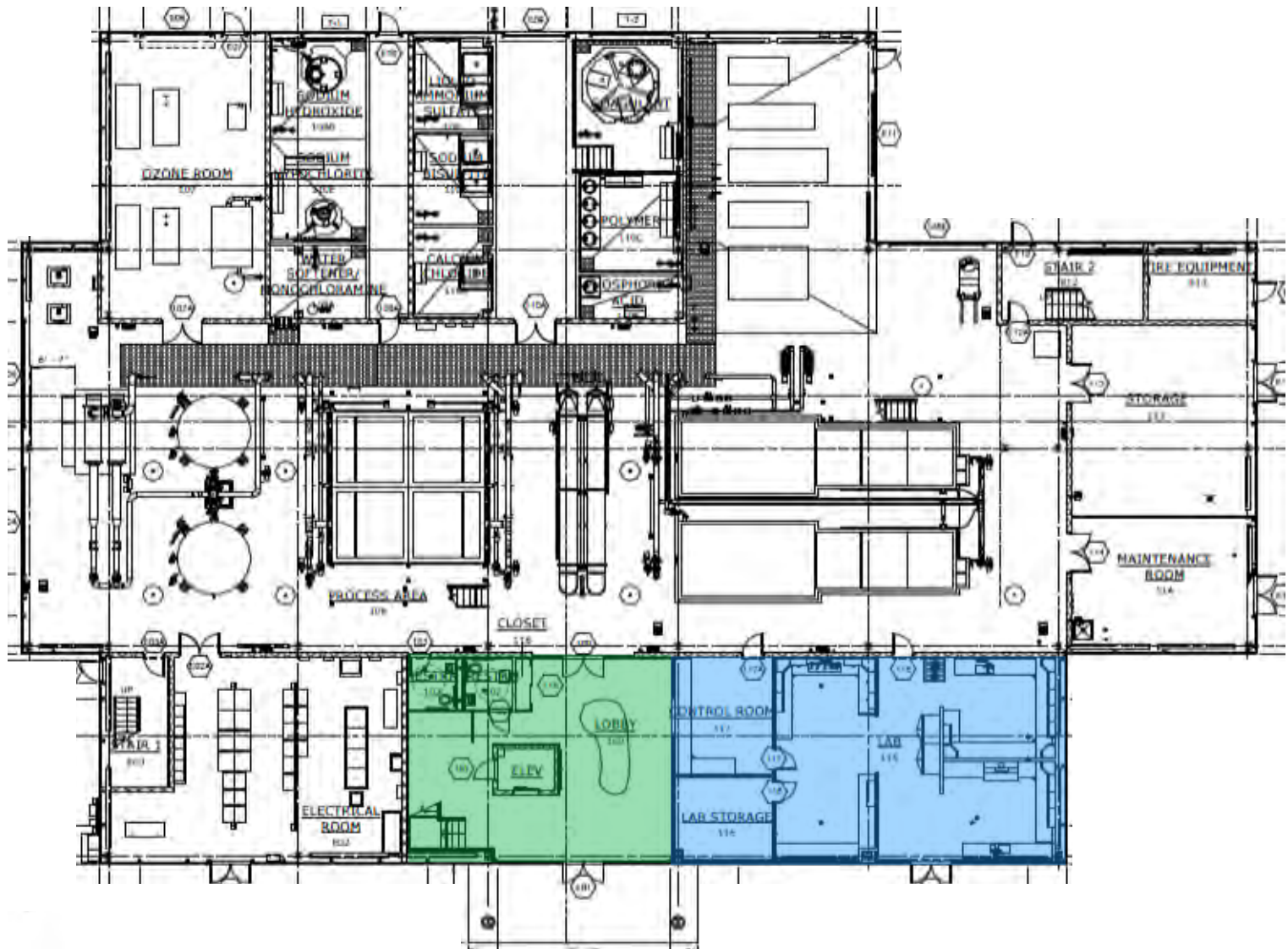
Location of project within Nansemond TP site

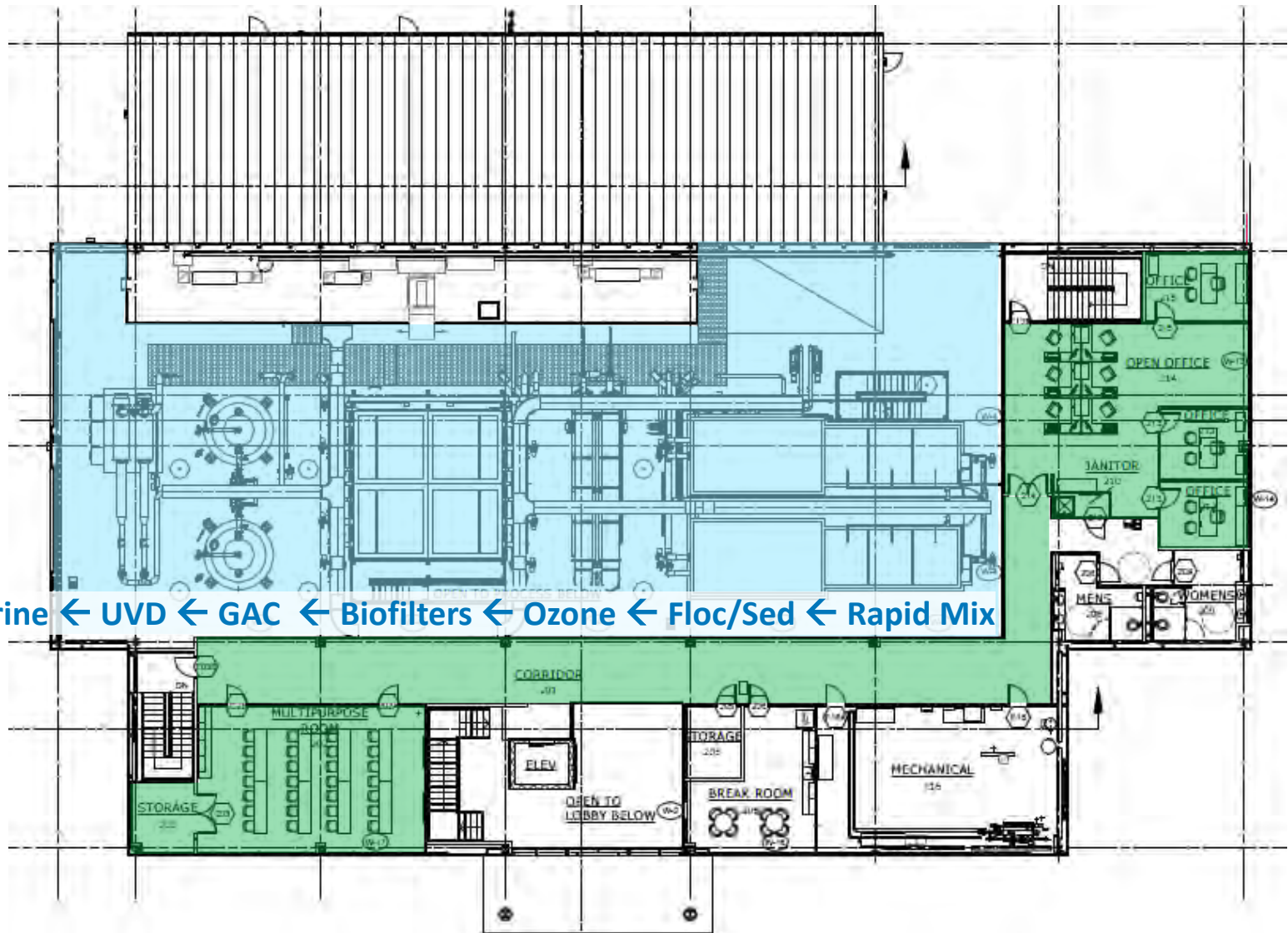




Exterior rendering of SWIFT Research Center







Interior rendering of lobby area



Interior rendering of process view from second floor



Interior rendering of multi-purpose room



Interior rendering of open office work areas



Interior rendering of laboratory area



The total Guaranteed Maximum Price is below the Construction Cost List approved by Commission

- **CCL** **\$25,650,000** – approved in November 2016

- **GMP 1** **\$ 2,722,500** – approved in January 2017
- **GMP 2** **\$21,631,900** – requested today

- **TOTAL** **\$24,354,400**

The project budget is within the approved project appropriations.

\$27,064,623 – Project Appropriations

- \$24,354,400 – Design/Build GMP

- \$ 411,000 – CH2M Owner's Advisor Services

- \$ 610,000 – Additional Direct Project Costs

\$ 1,690,000 – Project Contingency (Owner's)

Two additional sustainability options have been proposed for the SWIFT Research Center

- Installation of a 60 kW solar power generation system
- Pursuit of Envision Certification for project

Solar panel array is easily recognizable to visitors as a sustainable effort to off-set power usage

- **\$100,000 cost estimated for system and installation**
- **60 kW solar power generation system**
- **Greenhouse gas emission off-set is comparable to removing 18 passenger cars from the road annually (*per EPA calculator*)**
- **Center's metal roof design will support a clip-based mounting system and over 200 photovoltaic panels**

Solar panel array is easily recognizable to visitors as a sustainable effort to off-set power usage



Envision Certification is an industry standard, independent verification of a project's sustainability rating

- Triple bottom line based rating system
- Assesses civil infrastructure projects across North America
- Founding organizations: APWA, ACEC, ASCE
- Considers overall contribution to the community
- Are we doing the project right? Are we doing the right project?



Purpose
Wellbeing
Community

Collaboration
Management
Planning

Materials
Energy
Water

Siting
Land + Water
Biodiversity

Emissions
Resilience

Envision checklist is free and used by HRSD to evaluate capital projects; certification is the next step

- *Standards & Preferences* references Envision to define a common understanding of sustainability, requests that firms use the checklist
- Design/Build project team held an Envision workshop in January 2017
- Preliminary, internal rating forecasts a Gold certification level
- Certification level will be subject to third party verification
- \$95,800 cost for certification – design modifications are not included
 - Institute for Sustainable Infrastructure (ISI) membership - *free for public entities*
 - Project registration fee (paid to ISI) - \$1,000
 - Verification fee (paid to ISI) - \$21,000
 - Detailed project assessment and documentation effort - \$73,800

Staff Recommendations

- **Approve GMP 2 in the amount of \$21,631,900**
 - Total GMP 1 + GMP 2 = \$24,354,400
- **Approve additional option to install a solar power system**
 - \$100,000 cost added to total GMP
- **Approve additional option to pursue Envision Certification**
 - \$95,800 cost added to total GMP

HRSD COMMISSION MEETING MINUTES
March 28, 2017

ATTACHMENT #5

AGENDA ITEM 15. – Telecommunications Master Marketing Agreement and Deed of Site Lead Agreement Amendment

TELECOMMUNICATIONS MASTER MARKETING AGREEMENT

This Telecommunications Master Marketing Agreement (“Agreement”) made, entered into and effective as of the 25th day of June, 2013 (“Effective Date”), is by and between the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia (“HRSD”) and Milestone Communications Management III, Inc., a Delaware corporation (“Milestone”). HRSD and Milestone may be referred to individually as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, the School Board of Isle of Wight County, Virginia (“IWC Schools”) solicited proposals pursuant to a competitive bid process for the management of and right to lease certain properties of the IWC Schools; and

WHEREAS, the referenced IWC Schools procurement resulted in that Telecommunications Master Marketing Agreement between IWC Schools and Milestone dated February 14, 2013 (the “IWC Schools Contract”) for the leasing and management of certain properties, a copy of which IWC Schools Contract is attached hereto as **Exhibit A** and made a part hereof; and

WHEREAS, HRSD and Milestone desire to enter into an arrangement similar to that reflected in the IWC Schools Contract whereby Milestone would market HRSD properties with the intent of obtaining the right from HRSD to lease a portion of such properties from HRSD for the purpose of constructing one or more telecommunications monopoles thereon, and leasing space on the monopole(s) and ground to telecommunications service providers;

WHEREAS, HRSD and Milestone intend to initially develop twelve (12) of HRSD Sites for non-exclusive use by HRSD’s SCADA control system (defined below as the HRSD Monopole Sites) and Milestone has agreed to install/construct a Monopole on each HRSD Monopole Site and transfer the same to the Lessor (defined below as an HRSD Monopole). The remainder of the HRSD Sites shall be developed in accordance with the terms of conditions of this Agreement and Milestone shall retain ownership of any Monopoles constructed/installed on such other Sites (each, a “Milestone Monopole Site” and a “Milestone Monopole”); and

WHEREAS, HRSD and Milestone hereby agree to incorporate the IWC Schools Contract as the basis for the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the mutual covenants described below, the parties mutually agree as follows:

AGREEMENT

1. Except as expressly specified herein, the IWC Schools Contract, including all terms and conditions, schedules, riders and other attachments thereto, is hereby incorporated herein by this reference as though set forth in this Telecommunications Master Marketing Agreement.

2. Recognizing that the Parties are incorporating the IWC Schools Contract as the basis for this Agreement, all references in the IWC Schools Contract shall be changed as appropriate to reflect that the services covered by this Agreement are to be performed in HRSD service areas located in Virginia, for HRSD. For example, all references to School Board or Board in the IWC Schools Contract are changed to HRSD; references to Isle of Wight County are changed to HRSD service areas [Cities/Counties]; and references to any properties or sites owned by IWC Schools are changed to properties or sites owned by HRSD in this Agreement.

3. The term of this Agreement shall be ten (10) years with up to five (5) additional five (5) year extension options, which options shall automatically extend for five (5) additional years each unless Lessee provides thirty (30) days written advance notice of its intent not to so renew during either the end of the initial term or any extension term. The term of this Agreement shall commence on the Effective Date of this Agreement.

4. Section 5.5 of the IWC Schools Contract is hereby deleted in its entirety and replaced with the following:

“5.5 In the event that a private Carrier collocates on an HRSD Monopole, within ten (10) days after the date that such Carrier installs its equipment on the HRSD Monopole, Milestone shall pay HRSD a Site Fee of Twenty Thousand and No/100 Dollars (\$20,000.00) (the "Site Fee") plus a collocation fee of Five Thousand and No/100 Dollars (\$5,000.00) (the "Collocation Fee"). In the event Milestone fails to timely pay any Site Fee or Collocation Fee due hereunder, Milestone shall, in addition to owing HRSD such Site Fee or Collocation Fee, pay to HRSD interest on the amount thereof from the eleventh day after such fees became past due to and through the date of payment of such Site Fee or Collocation Fee to HRSD, in an amount equal to the Prime Rate of interest as published from time to time by The Wall Street Journal plus four percent (4%).”

5. The IWC Schools Contract shall be revised to add the following as new section 5.7:

“5.7 (a) In addition to the agreements contained herein, Milestone hereby agrees to construct a tower or monopole (each, an “HRSD Monopole”) on the twelve (12) HRSD Sites specifically identified as an “HRSD Monopole Site” on Schedule 21.18 attached hereto, which HRSD Monopole Sites shall initially be developed for non-exclusive use by HRSD for HRSD’s SCADA control system to be located on each HRSD Monopole as agreed and shown on the exhibits to each Deed of Site Lease (as defined below). This obligation shall be conditioned upon and subject to Milestone successfully obtaining all necessary Governmental Approvals for each such HRSD Monopole Site and the receipt of a fully executed Deed of Site Lease for each HRSD Monopole Site, which shall be in conformance with the requirements of this Agreement. Milestone agrees to file any

necessary zoning application(s) for an HRSD Monopole Site with the appropriate jurisdiction on or before the date that is sixty (60) days after the date HRSD and Milestone agree in writing to the final location of such HRSD Monopole. Provided the parties have entered into a Deed of Site Lease for an HRSD Monopole Site, Milestone agrees to commence construction on the HRSD Monopole within sixty (60) days of obtaining all required Governmental Approvals for such HRSD Monopole Site. In addition, Milestone shall use commercially reasonable diligent efforts to complete the construction of an HRSD Monopole within ninety (90) days of the date Milestone commenced construction on such HRSD Monopole, provided that such 90-day period shall be extended for such period of time as Milestone may be prevented from completing the construction by reason of force majeure. Upon completion of the construction of any HRSD Monopole, Milestone will transfer ownership of such HRSD Monopole to HRSD. Each Deed of Site Lease between Milestone and HRSD for such HRSD Monopole Site shall provide Milestone a ground lease for land located adjacent to the HRSD Monopole, easements for access, construction and utilities to and from the leased space and a license to market and lease/sublease space on the HRSD Monopole to Carriers on behalf of HRSD. HRSD will be permitted to use space on each HRSD Monopole as agreed and shown on the exhibits to each Deed of Site Lease for HRSD's antennas, equipment for HRSD's SCADA control system and/or other HRSD communication equipment ("HRSD's Equipment"), provided that HRSD's Equipment shall in no event interfere with those of any Carrier located on such HRSD Monopole located on the Tower prior to Lessor's installation of Lessor's Equipment (if any).

(b) Prior to submitting for any Governmental Approvals for any HRSD Monopole Site and HRSD Monopole, Milestone and HRSD shall enter into a Deed of Site Lease for such HRSD Monopole Site, which shall be substantially in the form attached hereto as the new Schedule 21.20, except that the Deed of Site Lease will be revised to reflect the terms and conditions of this Section 5.7 related to HRSD Monopoles and HRSD Monopole Sites (as applicable). Upon execution of a Deed of Site Lease for a HRSD Monopole Site, Milestone shall submit all necessary applications and plans for obtaining the Governmental Approvals for such HRSD Monopole Site and upon receipt of all necessary Governmental Approvals, Milestone will construct the HRSD Monopole in compliance with the Deed of Site Lease for such HRSD Monopole Site. Notwithstanding anything to the contrary, Milestone's obligation to construct any HRSD Monopole is contingent on Milestone obtaining all necessary Governmental Approvals for such HRSD Monopole.

(c) During the period between the Lessor's Rent Commencement Date (as such term is defined in the form Deed of Site Lease attached hereto as Schedule 21.20) of the Deed of Site Lease for any HRSD Monopole Site and the date a private Carrier collocates on the HRSD Monopole, HRSD shall pay Milestone (at the address specified in the IWC Schools Contract), as rent, the sum of One Thousand Five Hundred and no/100 dollars (\$1,500.00) per month ("HRSD Monopole Rent"). In the event that a private Carrier collocates on an HRSD Monopole, effective on the date that such Carrier installs its equipment on such HRSD Monopole, (i) HRSD shall no longer be required to pay the HRSD Monopole Rent to Milestone and (ii) HRSD shall be paid forty percent (40%) of the

Gross Revenues pursuant to Section 7.2 of the IWC Schools Contract for such HRSD Monopole Site. Milestone will fund all costs to obtain the required Governmental Approvals for an HRSD Monopole Site, with the understanding that HRSD agrees to cooperate with Milestone in securing any Governmental Approvals or other approvals that may be required in connection with any of Milestone's development of an HRSD Monopole Site.

(d) Nothing in this Section 5.7 shall be construed to prohibit or limit Milestone's ability to lease or license space on an HRSD Monopole and within the associated Base Station to Carriers for their use without HRSD's consent. Also, except for the initial payment of HRSD Monopole Rent and the other terms specified in this Section 5.7, it is intended that all HRSD Monopoles will be operated and managed in the same manner as the Milestone Monopoles and in accordance with the terms and conditions set forth in this Agreement and the IWC Schools Contract (notwithstanding the transfer of ownership of the HRSD Monopoles to HRSD). In the event of any conflict between this Section 5.7 and the remainder of this Agreement and the IWC Schools Contract, the terms of this Section 5.7 shall control.

(e) A schedule for the filing for all required Governmental Approvals, execution of Deed of Site Leases, construction of each HRSD Monopole and implementation of HRSD's SCADA control system shall be mutually agreed upon in advance by HRSD and Milestone (the "Initial Construction Schedule").

6. Section 19, Notices, of the IWC Schools Contract is amended to reflect that the HRSD address for notices is "Accounting, PO Box 5915, Virginia Beach, VA 23471-0915." Copies of all notices given to HRSD shall also be sent to the "c/o Chief of Procurement, PO Box 5913, Virginia Beach, VA 23471-0913."

7. References to the courts of the Commonwealth of Virginia in Isle of Wight County and to those of the United States of America for the Eastern District of Virginia found in Section 20.9 of the IWC Schools Contract are deleted and replaced with the courts of the Commonwealth of Virginia in Norfolk, Virginia.

8. Section 21.1, Zoning and Permitting Application, definition in the IWC Schools Contract is amended to encompass any and all permits of any kind that might be required by HRSD that are related to site, facility or monopole development by Milestone or its lessees.

9. Schedule 21.18, List of Sites, attached to the IWC Schools Contract is hereby deleted in its entirety and replaced by the new Schedule 21.18 attached to this Agreement.

10. Schedule 21.20, Form Deed of Site Lease, attached to the IWC Schools Contract is hereby deleted in its entirety and replaced by the new Schedule 21.20 attached to this Agreement. Also, references to the "Site Leases" found throughout the IWC Schools Contract are deleted and replaced with "Deed of Site Leases".

11. References to the use of a Site as a "public school" are deemed hereby deleted for the purposes of this Agreement.

12. HRSD affirms that it has all requisite power, right and authority to operate and lease the Sites and the Existing Structures to Carriers for wireless communications purposes and to enter into this Agreement and perform its obligations hereunder. Milestone affirms that it is a validly formed and legally existing entity with all requisite power, right and authority to enter into this Agreement and able to perform its obligations hereunder.

13. Milestone agrees to offer marketing, management, telecommunication tower construction and leasing services for telecommunication purposes to any incorporated municipality within HRSD service areas [Cities/Counties] upon the same terms and conditions as this Agreement (and the IWC Schools Contract).

14. In the event of any conflict between this Agreement and the IWC Schools Contract, the terms of this Agreement shall control.

By their signatures hereto, the Parties hereby enter into this Agreement effective as of the date set forth above. This signature page is a part of the Telecommunications Master Marketing Agreement by and between the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia and Milestone Communications Management III, Inc., a Delaware corporation.

MILESTONE COMMUNICATIONS
MANAGEMENT III, INC

By: _____

Name: LEONARD FERKATZ DR.

Title: PRESIDENT

Date: 7.19.13

HAMPTON ROADS SANITATION
DISTRICT

By: _____

Name: EDWARD G. HENIFIN

Title: GENERAL MANAGER

Date: 7/18/2013

SCHEDULE 21.18

List of Sites

HRSD MONOPOLE SITES

Name	Address	City	State	Zip	Facility ID	Lat	Long
Administrative Buildings							
HRSD - Main Office	1434 Air Rail Avenue	Virginia Beach	VA	23455	BLDG-SS-5	36.89654	-76.18745
Middle Peninsula Operations Center	310 Industrial Parkway	West Point	VA	23181	BLDG-MP-1	37.56185	-76.81922
HRSD - North Shore Operations	2389 G Avenue	Newport News	VA	23602	BLDG-NS-13	37.12610	-76.50382
Wastewater Treatment Facilities							
Atlantic Treatment Plant	645 Firefall Drive	Virginia Beach	VA	23454	TP_AT	36.77301	-75.97426
Chesapeake Elizabeth Treatment Plant	5332 Shore Drive	Virginia Beach	VA	23455	TP_CE	36.90788	-76.16394
James River Treatment Plant	111 City Farm Road	Newport News	VA	23602	TP_JR	37.08505	-76.53291
Nansemond Treatment Plant	6909 Armstead Road	Suffolk	VA	23435	TP_NP	36.89223	-76.42542
York River Treatment Plant	515 Back Creek Road	Seaford	VA	23686	TP_YR	37.20195	-76.44643
Army Base Treatment Plant**	401 Lagoon Road	Norfolk	VA	23505	TP_AB	36.92162	-76.32561
Boat Harbor Treatment Plant**	300 Terminal Avenue	Newport News	VA	23607	TP_BH	36.96353	-76.41316
Virginia Initiative Treatment Plant**	4201 Powhatan Avenue	Norfolk	VA	23508	TP_VIP	36.88296	-76.31627
Williamsburg Treatment Plant++	300 Ron Springs Drive	Williamsburg	VA	23185	TP_WB	37.21606	-76.63510

** There is limited space available at the Army Base, Boat Harbor, and the Virginia Initiative Plants. A tower may need to be constructed on the incinerator building roof at these plants. These locations may not be suitable for a monopole or collocation.

++ A monopole at the Williamsburg Treatment Plant is optional. A small Microwave antenna can be mounted on the incinerator building roof. This would be a "spur" off the WAN. HRSD can include the small antenna in the SCADA project if needed.

SCHEDULE 21.18

List of Sites (Cont.)

MILESTONE MONOPOLE SITES

Name	Address	City	State	Zip	FacilityID	Lat	Long
Wastewater Treatment Facilities							
Central Middlesex Treatment Plant	234 Oakes Landing Road	Saluda	VA	23149	TP_CM	37.61006	-76.59270
King Williams Treatment Plant	542 Acquinton Church Road	King William	VA	23086	TP_KW	37.71100	-77.14431
Urbanna Treatment Plant	110 Laurel Hill Road	Urbanna	VA	23175	TP_UB	37.63758	-76.58064
West Point Treatment Plant	600 23rd Street	West Point	VA	23181	TP_WP	37.54544	-76.79956
Pump Stations							
25th Street	11- 25th Street	Newport News	VA	23607	NS-PS-201	36.97651	-76.43378
33rd St.	85- 33rd Street	Newport News	VA	23607	NS-PS-202	36.98193	-76.43618
Arctic Avenue	2814 Arctic Avenue	Virginia Beach	VA	23451	SS-PS-101	36.85660	-75.98079
Ashland Circle	1402 Ashland Circle	Norfolk	VA	23509	SS-PS-102	36.88039	-76.27211
Atlantic PRS	1085 Old Dam Neck Road	Virginia Beach	VA	23456	SS-PRS-140	36.78465	-75.99780
Bainbridge Blvd.	801 Bainbridge Blvd	Norfolk	VA	23523	SS-PS-103	36.82577	-76.28210
Bay Shore Lane	720 Bayshore Lane	Hampton	VA	23664	NS-PS-203	37.03601	-76.29423
Big Bethel	1431 Big Bethel Road	Hampton	VA	23666	NS-PRS-205	37.08550	-76.42478
Bloxoms Corner	5 Beach Road	Hampton	VA	23669	NS-PS-204	37.06007	-76.30043
Bowers Hill PRS	3588 South Military Hwy	Chesapeake	VA	23323	SS-PRS-137	36.77176	-76.35813
Bridge Street	4701 Victoria Blvd.	Hampton	VA	23185	NS-PS-206	37.02014	-76.34507
Camden Ave.	2203 Camden Avenue	Portsmouth	VA	23704	SS-PS-146	36.82188	-76.31307
Cedar Lane	5915 Cedar Lane, Portsmouth	Portsmouth	VA	23703	SS-PS-104	36.87027	-76.37652
Center Ave.	315 Center Avenue	Newport News	VA	23601	NS-PS-207	37.02349	-76.45498
Chesapeake Blvd	5734 Chesapeake Blvd	Norfolk	VA	23513	SS-PS-105	36.88468	-76.24488
Chesterfield Boulevard	2731 Chesterfield Street	Norfolk	VA	23504	SS-PS-147	36.84085	-76.25607
City Park	Ft of La Vallette Avenue	Norfolk	VA	23504	SS-PS-106	36.88087	-76.27674
Claremont Ave.	1210 Chesapeake Ave.	Hampton	VA	23661	NS-PS-208	36.99371	-76.38331
Colley Ave.	715 Fairfax Avenue	Norfolk	VA	23510	SS-PS-107	36.85994	-76.30143
Colonial Williamsburg	1000 Route 132	Williamsburg	VA	23185	NS-PS-229	37.28328	-76.70260
Copeland Park	4401 City Line Road	Newport News	VA	23607	NS-PS-209	37.00114	-76.41005
Deep Creek PRS	1221 Shell Road	Chesapeake	VA	23323	SS-PRS-138	36.76629	-76.32086
Dovercourt Road	948 Dovercourt Road	Norfolk	VA	23518	SS-PS-108	36.91688	-76.24308

Name	Address	City	State	Zip	FacilityID	Lat	Long
Dozier's Corner	1121 Keats Street	Chesapeake	VA	23320	SS-PS-109	36.76501	-76.27323
Elmhurst Lane	600 Elmhurst Lane	Portsmouth	VA	23701	SS-PS-144	36.82555	-76.37822
Ferebee Ave.	2812 Bainbridge Blvd	Chesapeake	VA	23324	SS-PS-110	36.79510	-76.27860
Ferguson Park	227- 75th Street	Newport News	VA	23607	NS-PS-210	37.01256	-76.45326
Fords Colony	430 Hempstead Road	Williamsburg	VA	23188	NS-PS-231	37.29994	-76.76718
Fort Eustis	1619 Taylor Road	Fort Eustis	VA	23604	NS-PS-227	37.15985	-76.60167
Granby Street	4244 Granby Street	Norfolk	VA	23504	SS-PS-111	36.88684	-76.28067
Greensprings	3904 John Tyler Hwy	Williamsburg	VA	23188	NS-PS-232	37.25548	-76.78227
Hampton Institute	54 Shore Drive	Hampton	VA	23669	NS-PS-211	37.01749	-76.33476
Hanover Ave.	900 Hanover Avenue	Norfolk	VA	23508	SS-PS-141	36.89797	-76.29464
Hilton School	223 River Road	Newport News	VA	23601	NS-PS-212	37.02810	-76.46451
Independence Blvd PRS	4562 Southern Blvd	Virginia Beach	VA	23462	SS-PRS-112	36.84045	-76.13768
Ingleside Road	600 Ingleside Road	Norfolk	VA	23502	SS-PS-148	36.84052	-76.23552
Jamestown Crescent	858 Jamestown Crescent	Norfolk	VA	23508	SS-PS-142	36.89410	-76.29584
Jefferson Ave.	300 Terminal Avenue	Newport News	VA	23607	NS-PS-213	36.96279	-76.41283
Kempsville PRS	4765 Ferrell Parkway	Virginia Beach	VA	23464	SS-PRS-151	36.79715	-76.14208
Kingsmill	U.S. RT. 60 @ Anheiser Busch	Williamsburg	VA	23185	NS-PS-214	37.23632	-76.65582
Langley Station	7 Thornrose Avenue	Hampton	VA	23669	NS-PS-217	37.04510	-76.34884
Laskin Road PRS	590 Fremac Avenue	Virginia Beach	VA	23451	SS-PRS-153	36.84875	-76.00757
Lee Hall	17388 Warwick Blvd.	Newport News	VA	23603	NS-PRS-215	37.19112	-76.57124
Lodge Road	202 Lodge Road	York	VA	23185	NS-PS-233	37.25454	-76.65425
Lucas Creek	750 Lucas Creek Road	Newport News	VA	23602	NS-PS-216	37.12033	-76.54767
Luxembourg Avenue	3030 Luxembourg Avenue	Norfolk	VA	23509	SS-PS-113	36.87724	-76.27000
Monroe Place	5808 Monroe Place	Norfolk	VA	23508	SS-PS-114	36.89478	-76.30025
Morrison	1228 Gatewood Road	Newport News	VA	23601	NS-PS-218	37.05465	-76.47334
Newmarket Creek	6000 Orcutt Ave.	Newport News	VA	23605	NS-PS-219	37.01491	-76.43012
Newtown Road	115 Newtown Road	Norfolk	VA	23502	SS-PS-115	36.84172	-76.18867
Norchester Street	935 Norchester Street	Norfolk	VA	23504	SS-PS-116	36.85003	-76.25532
Normandy Lane	116 Normandy Ave.	Newport News	VA	23606	NS-PS-220	37.08419	-76.51327
North Shore Road	1510 1/2 North Shore Road	Norfolk	VA	23505	SS-PS-117	36.91293	-76.30413
Norview Ave.	869 Norview Avenue	Norfolk	VA	23509	SS-PS-118	36.88994	-76.25283
Park Ave.	503 Park Avenue	Chesapeake	VA	23185	SS-PS-119	36.81189	-76.28033
Patrick Henry	215 G. Ave.	Newport News	VA	23602	NS-PS-221	37.12596	-76.50556
Pine Tree PRS	2924 Virginia Beach Blvd	Virginia Beach	VA	23669	SS-PRS-	36.84442	-76.07324

Name	Address	City	State	Zip	FacilityID	Lat	Long
					120		
Plume Street	236 E. Plume Street	Norfolk	VA	23510	SS-PS-121	36.84707	-76.29016
Powhatan Ave.	1548 Buckingham Avenue	Norfolk	VA	23508	SS-PS-122	36.89328	-76.31237
Providence Road PRS	5729 Old Providence Road	Virginia Beach	VA	23464	SS-PRS-133	36.81409	-76.19262
Pughsville PRS	4725 Shoulders Hill Road	Suffolk	VA	23435	SS-PRS-134	36.83797	-76.46324
Quail Avenue	800 Quail Avenue	Chesapeake	VA	23324	SS-PS-123	36.82156	-76.26618
Quail Avenue PRS	822 Quail Avenue	Chesapeake	VA	23324	SS-PRS-139	36.82124	-76.26654
Richmond Crescent	1228 Richmond Crescent	Norfolk	VA	23508	SS-PS-124	36.89848	-76.30446
Rodman Ave.	2412 Rodman Avenue	Portsmouth	VA	23707	SS-PS-145	36.81917	-76.34497
Rolling Hills	402 Rolling Hills Road	York	VA	23324	NS-PS-230	37.25127	-76.64541
Route 337 PRS	2472 Gum Road	Chesapeake	VA	23321	SS-PRS-154	36.82481	-76.43221
Seay Ave.	3541 Seay Avenue	Norfolk	VA	23502	SS-PS-125	36.84768	-76.23946
Shipp's Corner PRS	1423 London Bridge Blvd	Virginia Beach	VA	23453	SS-PRS-143	36.78847	-76.06833
State Street	351 Emmett Place	Norfolk	VA	23523	SS-PS-127	36.83683	-76.28594
State Street	351 Emmett Place	Norfolk	VA	23523	SS-PRS-155	36.83683	-76.28604
Steamboat Creek	1900 E. Indian River Road	Norfolk	VA	23523	SS-PS-128	36.83203	-76.25746
Suffolk PS	1136 Sanders Drive	Suffolk	VA	23434	SS-PS-135	36.74320	-76.56220
Taussig Blvd.	2017 Taussig Blvd	Norfolk	VA	23511	SS-PS-129	36.94307	-76.31973
Terminal PRS	7808 Newport Avenue	Norfolk	VA	23505	SS-PRS-152	36.92114	-76.27950
Victoria Blvd	3705 Victoria Blvd	Hampton	VA	23669	NS-PS-234	37.01772	-76.35976
Virginia Beach Blvd	3514 E. Virginia Beach Blvd	Norfolk	VA	23502	SS-PS-130	36.85496	-76.23849
Washington District	1728 Great Bridge Blvd	Chesapeake	VA	23320	SS-PS-131	36.76831	-76.29109
Washington Street	217 Washington Street	Hampton	VA	23669	NS-PS-223	37.02862	-76.34150
Willard Avenue	219 National Ave.	Hampton	VA	23663	NS-PS-225	37.01324	-76.32311
Williamsburg	540 S. England Street	Williamsburg	VA	23185	NS-PS-226	37.26102	-76.70063
Willoughby Avenue	1912 Willoughby Avenue	Norfolk	VA	23504	SS-PS-132	36.84189	-76.26984
Woodland Road	11 McElhenny Lane	Hampton	VA	23669	NS-PS-224	37.05655	-76.31599

SCHEDULE 21.20

**Form Deed of Site Lease
[Attached]**

DEED OF SITE LEASE AGREEMENT

SITE: [_____.
_____.
_____.

THIS DEED OF SITE LEASE AGREEMENT (the “**Lease**”), made and entered into this _____ day of _____ 2013, by and between HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia, with an address of PO Box 5915, Virginia Beach, VA 23471-0915, Attention: Accounting, herein referred to as “**Lessor**,” and MILESTONE TOWER LIMITED PARTNERSHIP - III, a Delaware limited partnership, with its principal offices located at 12110 Sunset Hills Road, Suite 100, Reston, VA 20190 herein referred to as “**Lessee**,” recites and provides as follows:

RECITALS

R-1. Lessor is the owner of the parcel of improved real estate located in [_____] City/County, Virginia (the “**County**”) known as [_____] and described in **Exhibit A-1** attached hereto and incorporated herein by reference (the “**Site**”). The Site is presently operated by Lessor as a [_____] (“**Lessor’s Use**”).

R-2 Lessee is desirous to lease a portion of the Site and to construct a communications tower capable of supporting multiple wireless communications facilities (the “**Tower**”) and an equipment compound of approximately [_____] (_____) square feet (the “**Equipment Compound**”). Lessee intends to lease space on the Tower and in the Equipment Compound to telecommunications or other wireless communications providers (the “**Carriers**”). Such Carriers may install antennas and construct equipment platforms (as more particularly described below, the “**Equipment Platform**”) to support communications equipment (Equipment Compound, [Tower,] Equipment Platform and Carrier antennas, dishes and other equipment being collectively referred to herein as the “**Base Station**”). Lessee is desirous to [own,] manage and lease the Tower and Base Station in accordance with the terms of this Lease. [If HRSD Monopole Site: “Lessee will construct the Tower and will transfer ownership of the Tower to Lessor and Lessee will maintain the Tower in accordance with the terms of this Lease”. If a Milestone Monopole Site: “Lessee will construct the Tower, retain ownership of the Tower and will maintain the Tower in accordance with the terms of this Lease”].

R-3 The parties now desire to set forth the terms pursuant to which Lessor shall lease a portion of the Site to Lessee for the purposes just described.

DEED OF LEASE

NOW, THEREFORE, for and in consideration of the mutual agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows.

1. LEASE OF LEASED PREMISES:

Subject to and in accordance with the provisions of this Lease, Lessor hereby leases to Lessee and Lessee hereby leases from Lessor that space within the Site as designated on **Exhibit A-2** together with a [[_____ (_____)]] square feet parcel of ground on the Site for the construction and operation of the Base Station, all as shown in **Exhibit A-2** attached hereto. [If an **HRSD Monopole Site**: “In addition, Lessor hereby leases to Lessee and Lessee hereby leases from Lessor the Tower, as shown on **Exhibit A-2** attached hereto, for the purposes of locating wireless communications facilities on the Tower”]. The portion of the Site [and the Tower] hereby leased to Lessee as depicted on **Exhibit A-2** attached hereto and incorporated herein by this reference, which together with the Appurtenant Easements (defined in Section 2) shall be referred to collectively as the “**Leased Premises.**” Lessee acknowledges that with the exception of the air space over the land actually occupied by the Tower, the Leased Premises shall include the air right over the land only to a height of 15 feet above the ground elevation. Lessor and Lessee acknowledge that the exact location of the Leased Premises is, as of the date of the execution hereof, the parties current intent with respect thereto, however the final location may be subject to modification based upon the Lessee’s governmental approval process and final design of the Tower. Lessee and Lessor therefore each covenant and agree to execute an addendum hereto at such time as the final location of the Leased Premises is determined in the event that such location differs from that as set forth on **Exhibit A-2**. Lessee has inspected the Leased Premises and accepts the same “as is” and in its present condition without any representation or warranty except any that may be expressly set forth in this Lease. Lessor’s use and operation of the Site shall continue and Lessee’s rights under this Lease are subject to Lessor’s continuing use and operation. Lessee shall construct the Tower in accordance with the latest applicable design standards pertaining to communication towers. [If an **HRSD Monopole Site**: “Until the termination or expiration hereof, title to the Base Station and the Equipment Platform shall remain with Lessee and title to the Tower shall remain with Lessor”. If a **Milestone Monopole Site**: “Until the termination or expiration hereof, title to the Base Station, Tower and the Equipment Platform shall remain with Lessee.”]

2. EASEMENTS SERVING LEASED PREMISES:

a. Lessor hereby grants to Lessee the easements described below in this Section (such easements collectively, the “**Appurtenant Easements**”) as easements appurtenant to the leasehold granted to Lessee in this Lease. Lessee may grant use of the Appurtenant Easements to Carriers occupying space within the Leased Premises and to utility providers supplying power, telecom and other services to the Leased Premises.

i. Lessor grants Lessee a nonexclusive, temporary construction easement over, on, and through adjoining and adjacent portions of the Site, shown on **Exhibit B-1**, for construction and installation of the Base Station upon the Leased Premises. Such temporary construction easement shall terminate upon the completion of Lessee's construction described in Section 7 provided that such term shall be extended for such period of time as Lessee may be prevented from constructing the Base Station by reason of force majeure, and may be extended for such further period as Lessor in its discretion may agree.

ii. Lessee and the Carriers shall be permitted the non-exclusive use of a right-of-way as shown per the dimensions in the depicted path in **Exhibit B-2** hereof to construct, erect, install, operate and maintain underground communication cables from the Leased Premises, over, across and through that portion of the Site described on **Exhibit B-2**.

iii. Lessor hereby agrees to grant to the local telephone companies and other utility providers any non-exclusive easement(s) or other instrument(s) on terms acceptable to Lessor in its reasonable discretion to construct, maintain, operate and repair communication and power lines and systems over those portions of the Site as shown per the dimensions in the depicted path in **Exhibit B-2** hereof and the right-of-way of Lessee provided for in Section 2(a)(ii) during the term of this Lease for purposes of installation and provision of telephone service and power to the Base Station.

iv. Lessor hereby grants Lessee a non-exclusive easement and right-of-way for ingress to and egress from the Leased Premises by Lessee and the Carriers as shown on **Exhibit B-2**, for vehicular traffic for constructing, installing, maintaining, operating and repairing the Base Station, over that portion of the Site designated on **Exhibit B-2** hereof, or such other right-of-way of similar width as may be designated by Lessor to provide such access to the Leased Premises and the Base Station.

b. Lessor shall have the right to relocate any of the Appurtenant Easements (provided that there shall be no termination thereof, and no interruption of service or access as a result thereof other than such short term interruption as is necessary to effectuate the physical relocation, provided that Lessor and Lessee shall attempt to ensure that the replacement Appurtenant Easement is in place prior to such relocation such that any such interruption shall be as minimal as reasonably practicable). If such relocation occurs after the installation of utilities or facilities therein, such relocation shall be at Lessor's expense.

c. With the exception of the temporary construction easement provided for in Section 2(a)(i), which may expire sooner as provided in such Section, and any utility easements to third-party utility companies, which shall expire in accordance with their terms, the term of all Appurtenant Easements shall automatically expire upon termination of this Lease without the need for further act of any party. Notwithstanding the foregoing, upon expiration or termination of the Appurtenant Easements, if requested by Lessor, Lessee shall execute and deliver to Lessor, in recordable form, such documents as Lessor may request to evidence of record the termination of all Appurtenant Easements as just provided.

3. USE OF LEASED PREMISES:

a. Lessee shall use the Leased Premises solely for construction, operation and leasing of the Base Station as provided herein, and shall use the Appurtenant Easements solely for the applicable purposes described in Section 2. Lessor makes no representation or warranty whether such use is available and/or permitted by any laws or regulations applicable to the Leased Premises, and Lessee is solely responsible for determining whether such use is permitted, and for securing all necessary licenses, permits and approvals therefor.

b. Lessor hereby grants Lessee the authority to negotiate, lease and manage the Carrier Subleases for space within the Base Station and on the Tower upon the terms of this Lease without requiring Lessor's prior consent to each such Carrier Sublease. Each Carrier Sublease shall include a rider executed by the Carrier in the form attached hereto as Exhibit F ("Carrier Sublease Rider").

c. Notwithstanding any other provision of this Lease, the Lessee acknowledges the absolute primacy of Lessor's Use, and that Lessee's rights under this Lease are subject and subordinate to Lessor's Use and operation of the Site. Accordingly, in exercising its rights under this Lease, Lessee shall use its best efforts to avoid any material adverse construction, operation or other impacts on the Site and Lessor's use and operation thereof, whether such impacts arise from activities conducted on or off of the Site. Lessee shall have access to the Leased Premises at any time upon one (1) business day advance notice to Lessor; provided, however, in case of emergencies threatening life or safety or any component of the Base Station, Lessee may enter the Leased Premises without prior notice to Lessor, provided Lessee notifies Lessor of such entry, and the nature of the work performed or undertaken as a result of such emergency, as soon as practicable after Lessee's entry. Lessee or Lessee's contractors that enter the Site agree to check-in with the appropriate personnel at the Site and, in all cases, follow all reasonable procedures required by Site personnel.

d. Lessor reserves the right to add improvements to or redevelop the Site (including the Leased Premises) in any manner, including additional communications facilities necessary for Lessor's communications needs as is set forth below (but not for commercial resale to third parties). Any such improvements or redevelopment to be performed by Lessor shall be in a way that does not adversely affect the Base Station or the Leased Premises or cause interference to Lessee's use and operation of the Base Station or to any Carrier operating on the Tower. Lessor agrees that the Tower must remain on the Site at all times during the Term of this Lease and Lessor will take no action to cause the removal of the Tower until after the expiration or earlier termination of this Lease.

e. It is the intention of Lessee and Lessor that during the Term of this Lease (including any renewals as defined below), this Lease constitutes an exclusive relationship as it pertains to the construction of telecommunications Towers and the leasing of space thereon to telecommunications service providers on the Site. As such, Lessor agrees that it shall not, during the Term, lease, license or grant any interest in any portion of the Site to any telecommunications or other wireless service provider, or to any party constructing Towers for lease to telecommunications or wireless service providers, other than Lessee, except as is set forth in Section 3(f) below. Except as otherwise set forth herein, the Lessor shall be permitted to license the platform space on the Tower shown on Exhibit A-2

attached hereto to accommodate Lessor's microwave transmission facilities and Lessor's UHF transmission facilities (which license shall include a ground location for Lessor to construct a facility to install its ground based facilities appurtenant thereto), provided that the transmissions do not interfere with those of any Carrier Sublease on the Site at the time such license is granted, and further, Lessor shall be entitled to license space within the Site to any other governmental agency for construction of a Tower for its own use (but not for commercial resale), in accordance with the terms. Lessor reserves the right to add additional communications facilities to the Site necessary for Lessor's communication; provided that Lessor shall not use such additional communications facilities for commercial resale to Carriers or other third parties or in any way compete with Lessee's business on the Site.

f. Provided that Lessee is not in default hereunder, during the Term hereof, Lessor shall not lease any portion of the Site to any person or entity competing with Lessee in the business of constructing towers or monopoles to lease or license to third parties. If Lessor is contacted by any telecommunications carrier or service provider with regard to the Site, Lessor shall direct such carrier to discuss with Lessee the possibility of locating on the Tower. If after not less than sixty (60) days of negotiation, the carrier informs Lessor that it was unable to reach an agreement with Lessee, Lessor shall be entitled to enter into an agreement with that carrier permitting the carrier to construct a tower, monopole or similar structure and operate thereon, or otherwise operate on the Site, provided that such operation does not cause signal interference with any Carrier operating on the Tower at that time. Such agreement shall be on terms and conditions satisfactory to Lessor in its sole discretion. If Lessor breaches this Section 3, Lessee shall have the right to pursue any and all remedies available to Lessee hereunder or under applicable law including, without limitation, injunctive relief.

4. **TERM:**

a. The "**Term**" hereof shall be for an initial term of ten (10) years, commencing on the date of the final execution and delivery hereof ("**Commencement Date**"). After the initial (10) ten year initial term, the initial term shall be automatically extended for five (5) additional five-year (5-year) terms (each an "**Extension Term**") as of the expiration of the then current term unless Lessee provides thirty (30) days advance written notice of its intent not to so renew the term hereof. Any Extension Term which is exercised by Lessee shall constitute a part of the "Term" once exercised. Lessee may terminate this Lease only after the new Tower has been fully constructed by the Lessee if (a) Lessee is unable to obtain or maintain in force all necessary Governmental Approvals, (b) a material change in government regulations makes it impractical or uneconomic for Lessee to continue to operate the Facilities under this Lease, (c) interference by or to Lessee's operation cannot, despite good faith negotiations between Lessee and Lessor in accordance with the terms hereof, be resolved, or (d) the Site or the Facilities are destroyed or damaged or taken in whole or in part (by condemnation or otherwise) sufficient in Lessee's reasonable judgment, adversely to affect Lessee's use of the Site. If this Lease is renewed, then all covenants, conditions and terms will remain the same.

b. At the end of the Term, whether by the passage of time or the exercise by any party of any right of termination, Lessee shall surrender the Leased Premises to Lessor in the condition specified in this Section 4(b). Within sixty (60) days after the end of the Term, Lessor shall notify Lessee of its election to (a) have Lessee remove any or all of the facilities from the Site or (b) have the Base Station remain on the Site [If an HRSD Monopole Site: “; provided, however, that the Tower shall not be removed under the foregoing option (a) or option (b)”]. If Lessor fails to make such an election within the sixty (60) day period, Lessee shall inform Lessor in writing, and Lessor shall have an additional thirty (30) days to make the election. If Lessor fails to make an election, it shall be deemed to have elected option (a). If Lessor elects or is deemed to elect option (a), Lessee shall promptly (and in any event within ninety (90) days) remove the designated facilities from the Site, at Lessee’s sole cost and expense; provided, however, that Lessee shall be entitled to leave in place underground cables which Lessor determines do not present a health or safety risk, and any other improvements which are two (2) feet or more below grade. If Lessor elects option (b), title to the facilities designated by Lessor shall immediately vest in Lessor, without the necessity of further action by Lessor or Lessee. Notwithstanding the foregoing, if so requested by Lessor, Lessee shall execute such further assurances thereof as shall be requested by Lessor. Notwithstanding the foregoing, nothing herein contained shall be deemed to prohibit or restrict any Carrier from removing its equipment to the extent permitted to do so under any Carrier Sublease.

c. Subject to Section 4(b), the Base Station, including any personal property and or equipment installed on the Tower, and any ancillary other equipment of the Lessee, shall during the Term be deemed Lessee’s personal property [If an HRSD Monopole Site: “; provided, however, that the Tower shall before, during, and after the Term or any Term always be deemed to be the Lessor’s personal property”].

5. RENT, ACCESS FEE & SECURITY DEPOSIT:

a. [If an HRSD Monopole Site: “The parties agree and acknowledge that, although it is intended that Carriers will occupy the Tower and Leased Premises in the future, the timing of the Tower construction is to accommodate the initial use by Lessor for its SCADA control system. The antennas and other communication equipment for Lessor’s SCADA control system, which is comprised of the equipment described and shown on Exhibit A-2 attached hereto (“**Lessor’s Equipment**”), shall be located on the Tower as identified in Section 3(e) above and as shown on Exhibit A-2 and shall be in compliance with the structural capacity limitations for the Tower (as determined by Lessee) and shall in no event interfere with those of any Carrier located on the Tower prior to Lessor’s installation of Lessor’s Equipment (if any). During the period between the earlier of (i) the date Lessor installs the Lessor’s Equipment on the Tower and (ii) thirty (30) days after the Tower is substantially complete (“**Lessor’s Rent Commencement Date**”) and the date a private Carrier installs its equipment on the Tower, Lessor shall pay Lessee, as rent for Lessor’s Equipment, the sum of One Thousand Five Hundred and no/100 dollars (\$1,500.00) per month (“Lessor’s Rent”). Effective on the date that a private Carrier installs its equipment on the Tower, (i) Lessor shall no longer be required to pay the Lessor’s Rent to Lessee and (ii) Lessee shall begin payment of the

percentage rent due to Lessor pursuant to Section 5(b) below”]. [NOTE: this entire Section will be deleted for any Deed of Site Lease for Milestone Monopole Sites.]

b. Beginning on the date that a private Carrier installs its equipment on the Tower, and thereafter on the tenth day of each calendar month during the term and any extension term of this Lease, Lessee shall pay to the Lessor, in legal tender of the United States of America without demand, setoff or deduction whatsoever, as monthly rent for the Leased Premises, an amount equal to forty percent (40%) of the Gross Revenues (as defined below) derived from the use, leasing or occupancy of any portion of the Tower or Base Station for the preceding calendar month. The term “Gross Revenues” shall mean all revenue actually collected by Lessee from Carriers with respect to the Site (other than any reimbursement being made to Lessee by a Carrier in connection with construction of the Tower and/or Base Station, connection to any utilities, or reimbursement for any site access fee provided that such reimbursement is not in lieu of or in substitution of any rent thereunder), less any real estate ad valorem taxes (which term specifically excludes personal property taxes and taxes on income derived from the Base Station) payable for such period (or the pro rata share thereof applicable to such period) by Lessee on the Leased Premises or the Base Station and less all expenses related to the Facilities, which shall be borne by Lessee. All rental payments shall be made by check payable to Lessor at PO Box 5915, Virginia Beach, VA 23471-0915, Attention: Accounting, or such other address as the Lessor may from time to time provide.

c. In addition to the rent described in the preceding paragraph, any other amounts payable under this Lease to Lessor, however denominated, shall be deemed additional rent, and Lessor shall have all rights and remedies in respect of payment and collection thereof as are applicable to rent. Any amounts payable hereunder by Lessee that are not paid when due shall bear interest at the rate of ten percent (10%) per annum.

d. In addition, within ten (10) days after the date that the initial private Carrier installs its equipment on the Tower (if any), Lessee shall pay Lessor a one-time site fee of Twenty Thousand and No/100 Dollars (\$20,000.00) (the "**Site Fee**") plus a one-time collocation fee of Five Thousand and No/100 Dollars (\$5,000.00) (the "**Collocation Fee**"). In the event Lessee fails to timely pay the Site Fee or Collocation Fee due hereunder, Lessee shall, in addition to owing Lessor the Site Fee or Collocation Fee, pay to Lessor interest on the amount thereof from the eleventh day after such fees became past due to and through the date of payment of the Site Fee or Collocation Fee to Lessor, in an amount equal to the Prime Rate of interest as published from time to time by The Wall Street Journal plus four percent (4%).

6. REAL ESTATE TAXES, UTILITIES, MAINTENANCE:

a. Lessee shall be solely responsible for all costs and expenses relating to the connection, disconnection, consumption and use of any utilities and/or services in connection with Lessee’s construction, installation, operation and maintenance of the Base Station on the Leased Premises including, without limitation, any electric consumption by its equipment, and Lessee agrees to pay all costs for service and installation of an electric meter directly to the local utility company.

b. Lessee shall be responsible for the declaration and payment of any applicable taxes or assessments against the Base Station or other equipment owned or used by Lessee or allocable (on a pro rata basis) to the Leased Premises, including but not limited to any sales and property taxes, as well as any taxes based on the rent payable hereunder, including gross receipts taxes. During the term, Lessee shall be responsible for the payment of all taxes levied upon the leasehold improvements on the Leased Premises to the extent such taxes are attributable to the use of the Tower for wireless communication purposes. Lessee shall have the right to contest all taxes, assessments, charges and impositions assessed against the Base Station or other equipment owned or used by Lessee or allocable (on a pro rata basis) to the Leased Premises as well as any taxes based on the rent payable hereunder, as defined without limitation herein, and Lessor agrees to join in such contest and to permit the Lessee to proceed with the contest in Lessor's name; provided, however, the expenses associated with any such contest are borne by Lessee and not by Lessor.

c. Lessee shall at all times during the term of this Lease, at its own expense, maintain the Base Station and the Leased Premises in proper operating condition and maintain same in reasonably good condition, and will repair any damage except that caused by Lessor, its agents or servants. Lessee shall keep the Leased Premises free of debris at all times.

d. Lessee shall maintain the Leased Premises at all times in compliance with Lessor's rules and regulations and all governmental regulations including, without limitation, those relating to the lighting and painting of the Base Station, and requirements of the Federal Communications Commission (the "FCC"), the Federal Aviation Administration (the "FAA"), and other federal, state or local government authorities having jurisdiction over the Base Station.

e. Lessee shall be solely responsible, at its sole cost and expense, for keeping the Base Station at all times in reasonably good order, condition and repair, and in compliance with all applicable laws, ordinances and rules. Lessee shall cause the Base Station to be regularly inspected and preventative maintenance to be performed in accordance with the standards of the industry, but in no event less frequently than every three (3) years. Lessee shall provide Lessor with a written report setting forth in reasonable detail the condition of the Base Station, any issues noted during the inspection and any preventative maintenance undertaken.

f. If Lessor installs any lighting fixtures on the Tower, then Lessor shall be responsible for the maintenance and repair of such lighting fixtures installed by Lessor (or by Lessee on behalf of Lessor) on the Tower. Any lighting on the Tower required by the FAA shall be installed and maintained by Lessee. Lessee shall be responsible for the maintenance of the Tower structure including, but not limited to, painting, repair due to force majeure and repair due to normal wear and tear.

7. CONSTRUCTION:

a. Lessee shall use good faith commercially reasonable efforts to obtain all necessary approvals, including, without limitation, those required by the FAA and the FCC, for construction and operation of the Base Station. After obtaining the necessary permits and approvals therefor, Lessee at

its sole cost and expense shall perform or cause to be performed all of the following work (which shall herein be collectively referred to as “**Lessee’s Work**”):

i. Constructing a foundation for a Tower and erecting the Tower at the location with a height as shown on the drawing attached hereto as **Exhibit A-2**.

ii. Installing the utility and equipment compound with dimensions of 8’ high’ x ___’ ___” wide x ___’ ___” deep.

iii. At the request of Lessor at the commencement of the term of this Lease, installing a chain link or wood fence or natural screening on each side and on top of the Compound or any other portion of the Base Station.

iv. Performing or causing to be performed all other improvements and work associated with the work described above that may lawfully be required by [[City/County]] or any other governmental body or official having jurisdiction, as part of or in connection with the work described above

v. Lessee shall coordinate the installation of any Carrier equipment on the Tower or at the Equipment Compound.

b. Lessee’s agreement to perform or cause to be performed at its expense all of the work described above, all at Lessee’s cost and expense, shall be construed broadly to provide for all costs and liabilities of such work, whether or not such costs are anticipated and without regard to Lessee’s present estimates for the cost of same, so that all of such work is fully and properly performed and paid for by Lessee, and upon completion of same the Site, as altered by such work, is as fully functional and suitable for continued use by Lessor as it was prior to the start of Lessee’s Work. Accordingly, the phrase “all work” shall include, without limitation, all of the following work, and Lessee’s promise to pay for such work shall include, without limitation, all of the costs and liabilities associated with the following: all labor and materials; design work; legal and professional fees of Lessee’s consultants; permit drawings and materials; construction costs; construction equipment and materials; utilities extension or relocation; provision of protective fencing and other safety measures; maintenance; removal of construction related debris from the Site; liability, property and workers’ compensation insurance premiums; bond fees; development and construction permits; inspections and approvals; re-sodding of all disturbed areas not covered with impervious surface; replacement or relocation of landscaping; re-striping of paved areas for traffic control and parking; and repairs and restoration required as a result of any damage to the Site caused in the prosecution of the work contemplated by this Lease.

c. Lessee shall cause construction of the Base Station (other than components which may be constructed by future Carriers) to be commenced as soon as practicable after receipt of all necessary permits and approvals and to be completed within a reasonable time thereafter, not to exceed one (1) year from the Commencement Date, excepting periods of delay caused by *force majeure* or delays

caused by Lessor. Once its work on the Base Station is initiated, Lessee shall diligently and continuously prosecute such work to final completion (including obtaining all required inspections and approvals) in a timely manner in accordance with a schedule to be agreed upon by Lessor and Lessee. Such schedule shall limit construction activities to such days and times as Lessor reasonably may require to avoid any material and adverse impacts on Lessor's Use and operation of the Site. Lessee shall keep Lessor fully apprised of its progress, and of any events that might impact the construction schedule. If Lessee fails to perform its work in accordance with the schedule approved by Lessor, including any Lessor-approved revisions thereto, and if such failure threatens the safe, proper and timely conduct and operation of uses of the Site, then Lessor shall have the right to take such measures as it may deem necessary to avoid or abate any interference with such safe, proper operations or uses. Such measures may include, without limitation, engaging additional construction personnel, stopping any construction activities occurring on the Site, removing interfering construction equipment, materials or facilities, and providing alternate or additional drives, sidewalks, parking areas or other facilities. All such measures shall be at the sole cost, expense and liability of Lessee. Lessor shall give Lessee prior notice before commencing any such measures and to coordinate with Lessee in determining the measures that may be necessary. Lessee shall permit Lessor's designated inspector full access to all of Lessee's construction areas and shall provide such inspector access to all construction plans, drawings and other information reasonably requested.

d. The Base Station shall be constructed by Lessee in a good and workmanlike manner and in accordance with the plans, drawings and specifications attached hereto as **Exhibit A-2**. Construction and installation of the Base Station by Lessee shall be in compliance with all applicable rules and regulations including, without limitation, the customary specifications and requirements of Lessor and those of the Occupational Safety and Health Administration ("OSHA"), the FCC, the FAA, and regulations of any governmental agency (town, county, state or federal) including, but not limited to the applicable requirements of the local planning and zoning and building, electrical, communications and safety codes of the [[City/County]]. Lessee, at its sole cost and expense, shall secure all necessary permits and approvals required to permit the construction and operation of the Base Station. Lessor agrees to cooperate reasonably with Lessee in any necessary applications or submissions required to permit construction and operation of Lessee's Base Station as described herein, provided that Lessor shall be reimbursed for all reasonable third-party expenses incurred in providing such cooperation within thirty (30) days of delivery of an invoice to Lessee the expenses, and provided further that obtaining Lessee's permits and approvals shall not result in the imposition of any material restrictions or limitations or adverse impacts on the Site or Lessor's use, operation improvement or redevelopment thereof. All of Lessee's Work and facilities shall be installed free of mechanics', materialmen's and other liens, and claims of any person. Lessee agrees to defend, with counsel approved by Lessor, and to indemnify and save Lessor harmless, from all loss, cost, damage or expense including, without limitation, reasonable attorneys' fees, occasioned by or arising in any connection with the work contemplated by this Lease, and shall bond off or discharge any such liens or other claims within thirty (30) days after written notice from Lessor.

e. Prior to commencing any activities on the Site pursuant to this Lease, Lessee shall provide Lessor with evidence satisfactory to Lessor that Lessee and its contractors and agents who will be working on the Site are covered by insurance as required by Section 14 hereof.

f. Lessee shall, upon Lessor's request and subject to the [[City/County's]] prior approval, fence and buffer the Leased Premises or any portion thereof.

g. Lessee shall restore in compliance with the Federal Americans with Disabilities Act (and any state or local law counterpart or implementation thereof) any of Lessor's existing facilities physically altered by Lessee's Work.

h. Lessee shall be allowed to make further alterations, additions and improvements to the Base Station or the Leased Premises without first obtaining Lessor's written consent. Also, Lessee shall be permitted to lease or license space on the Tower and within the Base Station to Carriers for their use without Lessor's consent.

8. OPERATION OF BASE STATION:

a. Lessee and the Carriers shall operate the Base Station in strict compliance with all applicable statutes, codes, rules, regulations, standards and requirements of all federal, state and local governmental boards, authorities and agencies including, without limitation, OSHA (including, without limitation, OSHA regulations pertaining to RF radiation), the FCC and the FAA, as well as such reasonable rules and regulations which Lessor may publish for the site from time to time. Lessee has the responsibility of carrying out the terms of its FCC license in all respects, including, without limitation, those relating to supporting structures, lighting requirements and notification to FAA. Lessee, prior to constructing of the Base Station, shall have, and shall deliver to Lessor, copies of all required permits, licenses and consents to construct and operate the Base Station. In the event that the operation of the Base Station violates any of the terms or conditions of this Lease, Lessee agrees to suspend operation of the Base Station within twenty-four (24) hours after notice of such violation and not to resume operation of the Base Station until such operation is in strict compliance with all of the requirements of this Lease.

b. In exercising its rights under this Lease, Lessee and the Carriers shall use its best efforts to avoid any adverse construction or other impacts on the Site and Lessor's use and operation thereof, whether such impacts arising from work being conducted on or off the Site (utility outages arising from off-site utility relocation, for example). Lessee and the Carriers shall provide reasonable advance notice of not less than two-business days to Lessor of any work or other activities that will impact the use or operation of the Site, and shall cause such work or activities to be performed at such times and such manner as the Lessor may require to avoid any adverse impacts. Lessee further covenants that the Base Station, Carrier-related equipment, Carrier-related communication lines and appurtenances thereto, and the construction, installation, maintenance, operation and removal thereof, will in no way damage Lessor's property or interfere with the use of the Site by Lessor, its successors and assigns. Lessee agrees to repair any damage caused to the Site by such installation, construction, maintenance, operation or removal and shall be responsible for the payment of any reasonable costs incurred

therefor. If Lessee's activities in the Site result in the need to restore or replace any grass areas, such areas shall be sodded, rather than seeded.

c. Lessee may terminate this Lease with sixty (60) days prior notice to Lessor if Lessee is unable to lease space within the Base Station to Carriers for a period of twelve (12) consecutive months. If, after the execution of this Lease, Lessee is unable to operate the Base Station due to the action of the FCC or by reason of any law, physical calamity, governmental prohibition or other reasons beyond Lessee's control, this Lease may be terminated by Lessee by giving Lessor thirty (30) days' prior notice of termination, subject to Lessee's restoration obligations under Section 4(b) hereof.

9. PERMITS AND SITE SPECIFICATIONS:

It is understood and agreed by the parties that Lessee's ability to use the Leased Premises is contingent upon its obtaining (after execution of this Lease) all of the certificates, permits and other approvals that may be required by federal, state or local authorities for Lessee's use of the Leased Premises as set forth in this Lease (the "**Permits and Approvals**"). Lessee shall use all reasonable efforts promptly to obtain such certificates, permits and approvals, at Lessee's sole expense. Lessor will cooperate reasonably with Lessee at Lessee's sole cost and expense, in its effort to obtain such approvals. In the event any such applications should be finally rejected or any certificate, permit, license or approval issued to Lessee is canceled, expires or lapses, or is otherwise withdrawn or terminated by governmental authority, or soil boring tests are found to be unsatisfactory so that Lessee will be unable to use the Leased Premises for the purposes set forth herein, Lessee shall have the right to terminate this Lease by giving Lessor thirty (30) days' prior notification of termination within sixty (60) days after the date of the event which is the basis of termination. All rentals paid to said termination date shall be retained by Lessor. Upon such termination, the parties shall have no further obligations for charges and liabilities which accrue after the effective date of termination, including the payment of monies, to each other except as otherwise provided herein, but Lessee shall be liable to restore the Leased Premises in accordance with Section 4(b).

10. INDEMNIFICATION:

Lessee shall defend, with counsel acceptable to Lessor, and indemnify and hold harmless, Lessor from all losses, costs, claims, causes of actions, demands and liabilities arising from (a) any breach by Lessee of any covenant of this Lease; (b) any misrepresentation by Lessee contained in this Lease and/or any breach of any warranty contained in this Lease; and (c) any occurrence arising from (i) Lessee's or any Carrier's construction, installation, maintenance, repair, operation, replacement or removal of the Base Station or any other equipment, or any other activities of Lessee or any Carrier on the Site or the Leased Premises, and (ii) the condition of the Base Station and Leased Premises including, without limitation, any personal injury, death, or other accident in any way related to Lessee's or any Carrier's use of the Site or the Leased Premises. Such indemnification shall include the reasonable cost of investigation, all expenses of litigation, and the cost of appeals, including, without limitation, reasonable attorney's fees and court costs, and shall be applicable to Lessee's activities on the Site whether prior to the Commencement Date or after the termination of this Lease. In addition to the Lessor, Lessor's board members, staff, officers, agents, servants, employees,

volunteers, business invitees, customers, students, family members and guests shall be beneficiaries of Lessee's indemnification. Lessee's indemnification shall not be applicable to the extent of any negligence or willful misconduct of Lessor.

Except as resulting from Lessee's negligence or misconduct, and only to the extent permitted by law without waiving Lessor's sovereign immunity or other similar limitation of liability, Lessor shall indemnify, defend, and hold Lessee harmless from and against any and all damage, claim, liability, cost or expense (including without limitation, reasonable attorneys' fees) of every kind and nature arising from any injury or damage to any persons, property or business incurred by or claimed against Lessee arising from Lessor's or its agents or employees (i) ownership, management or control of the Site, (ii) breach of Lessor's obligations under this Lease, (iii) any negligent act or omission of Lessor, its agents or employees, or (iv) any work done by or the presence of Lessor's contractors on the Site.

11. FEASIBILITY:

Prior to the Commencement Date of this Lease, Lessee shall have access to the Leased Premises with prior notice to Lessor and at such times as Lessor agrees for the purposes of undertaking necessary tests, studies, and inspections relating to Lessee's proposed use of the Leased Premises. In the event such tests studies, and inspections indicate that Lessee is unable to utilize the Leased Premises for the purpose stated herein, then Lessee may terminate this Lease by giving Lessor ten (10) days' prior notice of termination, in which case Lessee shall restore the Leased Premises and any other portions of the Site that have been damaged, modified or altered by or on behalf of Lessee to their original condition.

12. INTERFERENCE:

a. Lessee agrees to install (and cause the Carriers to install) equipment of a type and frequency which will not cause frequency interference with other forms of radio frequency communications existing on Lessor's property (including the Lessor's Equipment installed as part of their SCADA control system) as of the date such equipment is installed on the Tower (so long as reasonably prevalent).

b. In the event Lessee's equipment causes such interference, Lessee agrees it will take all steps necessary to correct and eliminate the interference consistent with appropriate government rules and regulations upon receipt of written notification of the interference. Lessee shall be obligated to respond to the problem of interference arising from Lessee's equipment within the Base Station within forty-eight (48) hours of receipt of written notice from Lessor and if the interference is not corrected within five (5) days of receipt of notification (or such time as may reasonably be required with exercise of due diligence provided such repairs are begun within said five (5) days), such Carrier's equipment causing such interference shall be immediately removed from the Leased Premises.

c. In the event Lessor's equipment at the Site causes frequency interference with any equipment installed at the Site prior to the installation of Lessor's equipment, Lessee and Lessor agree

to cooperate to take all steps necessary to correct and eliminate the interference consistent with appropriate government rules and regulations upon receipt of written notification of the interference from either party. In the event Lessor changes, adds to or replaces its equipment at the Site after the initial installation, Lessor shall ensure that such changed, new or replacement equipment does not cause frequency interference with any equipment installed at the Site prior to the date such changes, additions or replacements of Lessor's equipment are made. Lessor shall be obligated to respond to the problem of interference arising from Lessor's equipment at the Site within forty-eight (48) hours of receipt of written notice from Lessee. If the interference is not corrected within five (5) days of receipt of notification (or such time as may reasonably be required with exercise of due diligence provided such repairs are begun within said five (5) days), then, at Lessor's sole cost and expense, Lessor's equipment causing such interference shall be immediately removed from the Site and replaced with such non-interfering equipment of like kind and quality that substantially supports Lessor's existing telecommunications use at the Site. Lessee and Lessor understand and agree that in the event it is determined that the interference is caused by the unlicensed spectrum being used by the Lessor at the time of execution of this Lease, the Lessor shall be under no obligation to replace the unlicensed spectrum with a licensed spectrum to correct the interference.

13. DEFAULT:

a. Each of the following shall be an event of default by Lessee under this Lease:

i. If the rent or any installment thereof or any other payments required pursuant to Section 5 of this Lease shall remain unpaid after it becomes due and payable, and is not paid within ten (10) days after Lessor gives written notice of non-payment (notwithstanding the foregoing, however, if Lessee fails to pay rent when due three (3) times during any twelve-month period after the first year of the Lease term, then Lessee shall not be entitled to any notice or cure period);

ii. If Lessee or its assigns shall fail or neglect to keep and perform any one of the terms of this Lease and such failure or neglect continues for more than thirty (30) days (or such longer period as may be reasonable, provided Lessee is attempting a cure with all due diligence, not to exceed one hundred twenty (120) days plus any period of where cure is prevented by *force majeure*) after Lessor gives written notice specifying the default;

iii. If Lessee abandons the Leased Premises for more than twelve (12) consecutive months; and

iv. If Lessee files a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or under any insolvency act of any state, or is dissolved or makes an assignment for the benefit of creditors, or if involuntary proceedings under any bankruptcy laws or insolvency act or for the dissolution of Lessee are instituted against Lessee, or a receiver or trustee is appointed for all or substantially all of Lessee's property, and the proceeding is not dismissed or the receivership or trusteeship is not vacated within sixty (60) days after institution or appointment.

b. In the case of any event of default, Lessor shall have the right to give Lessee written notice of its intention to terminate this Lease on the date of the notice or on any later date specified in

the notice, and, on the date specified in the notice, Lessee's right to possession of the Leased Premises (which term as used in this Section 13 shall be deemed to include the Base Station) will cease and this Lease will be terminated as if the date fixed in the notice were the end of the term of this Lease, together with any additional rights and remedies that may be available at law or in equity.

c. If Lessor files an action to enforce any agreement contained in this Lease or for breach of any covenant or condition, Lessee shall pay Lessor's reasonable attorney's fees for the services of Lessor's attorney in the action and court costs, all fees to be fixed by the court, provided Lessor prevails in such action.

d. If Lessor shall fail or neglect to keep and perform each and every one of the covenants, conditions and agreements contained herein [If an HRSD Monopole Site: "(including the payment of Lessor's Rent)"], and such failure or neglect is not remedied within thirty (30) days (or such longer period as may reasonably be required to correct the default with exercise of due diligence not to exceed one hundred twenty (120) days plus any period of where cure is prevented by force majeure), after written notice from Lessee specifying the default, then Lessee may terminate this Lease and pursue any other legal remedies available to Lessee at law or equity.

e. The foregoing notwithstanding, in the event of any such default by Lessee hereunder, such shall not provide Lessor the right to attach, utilize, distrain upon or otherwise take possession of any equipment located on the Tower or within a Base Station owned by any Carrier, and such shall at all times be free from any claim by Lessor hereunder.

14. INSURANCE REQUIREMENTS:

a. All property of the Lessee, its employees, agents, business invitees, licensees, customers, clients, guests or trespassers, in and on the Leased Premises shall be and remain at the sole risk of the Lessee, and Lessor shall not be liable to them for any damage to, or loss of such personal property arising from any act of God or any persons, nor from any other reason, nor shall the Lessor be liable for the interruption or loss to Lessee's business arising from any of the above described acts or causes. The Lessor shall not be liable for any personal injury to the Lessee, its employees, agents, business invitees, licensees, guests or trespassers arising from the use, occupancy and condition of the Leased Premises unless such injury is caused by the negligence or willful act or failure to act on the part of the Lessor or its employees.

b. During the term, Lessee will maintain a policy of commercial general liability insurance insuring the Lessor and Lessee against liability arising out of the use, operation or maintenance of the Leased Premises and the installation, repair, maintenance, operation, replacement and removal of the Base Station. The insurance will be maintained for personal injury and property damage liability, adequate to protect Lessor against liability for injury or death of any person in connection with the use, operation and condition of the Leased Premises, and to insure the performance of Lessee's indemnity set forth in Section 10, in an amount not less than Two Million Dollars (\$2,000,000) per occurrence/aggregate. During the term, Lessee shall also maintain workers' compensation and employers' liability insurance, and such other insurance relating to the installation, repair, maintenance, operation, replacement and removal of the Base Station, and the ownership, use,

occupancy or maintenance of the Leased Premises as Lessor may reasonably require. The limits of the insurance will not limit the liability of Lessee. If the Lessee fails to maintain the required insurance the Lessor may, but does not have to, maintain the insurance at Lessee's expense. The policy shall expressly provide that it is not subject to invalidation of the Lessor's interest by reason of any act or omission on the part of Lessee.

c. Insurance carried by Lessee will be with companies reasonably acceptable to the Lessor. The Lessee will deliver to the Lessor certificate evidencing the existence and amounts of the insurance. No policy shall be cancelable or subject to reduction of coverage or other modification except after sixty (60) days prior written notice to the Lessor. Lessee shall, at least sixty (60) days prior to the expiration of the policies, furnish Lessor with renewals or "binders" for the policies, or Lessor may order the required insurance and charge the cost to Lessee.

d. Lessee will not knowingly do anything or permit anything to be done or any hazardous condition to exist ("**Increased Risk**") which shall invalidate or cause the cancellation of the insurance policies carried by Lessor or Lessee. If Lessee does or permits any Increased Risk which causes an increase in the cost of insurance policies, then Lessee shall reimburse Lessor for additional premiums attributable to any act, omission or operation of Lessee causing the increase in the premiums. Payment of additional premiums will not excuse Lessee from termination or removing the Increased Risk unless Lessor agrees in writing. Absent agreement, Lessee shall promptly terminate or remove the Increased Risk.

e. The Lessor shall be named as an "additional insured" on Lessee's liability policies and it shall be stated on the Insurance Certificate that this coverage "is primary to all other coverage the Lessor may possess."

f. To the extent that the following waiver will not increase Lessee's insurance premiums or cause the invalidation of any of Lessee's insurance, Lessee waives all rights to recover against Lessor for any loss or damage arising from any cause covered by any insurance required to be carried by Lessee pursuant to this Section 14, or any other insurance actually carried by Lessee. Lessee will request its insurers to issue appropriate waiver of subrogation rights endorsements to all policies of insurance carried in connection with the Leased Premises.

g. If an "ACCORD" Insurance Certificate form is used by the Lessee's insurance agent, the words, "endeavor to" and "...but failure to mail such notice shall impose no obligation or liability of any kind upon the company" in the "Cancellation" paragraph of the form shall be deleted or crossed out.

h. All insurance required by this Section 14 shall be written by insurers, in such forms, and shall contain such terms, as Lessor may reasonably require.

15. HAZARDOUS MATERIALS:

a. Neither Lessee nor the Carriers shall cause or permit any hazardous or toxic wastes, substances or materials (collectively, "**Hazardous Materials**") to be used, generated, stored or disposed of on, under or about, or transported to or from, the Leased Premises (collectively

“**Hazardous Materials Activities**”) without first receiving Lessor’s written consent (“**Lessor’s HazMat Consent**”) and then only in compliance (which shall be at Lessee’s sole cost and expense) with all applicable legal requirements and using all necessary and appropriate precautions. Lessor’s HazMat Consent may be withheld by Lessor for any reason whatsoever. Lessor’s HazMat Consent may be revoked at any time upon written notice to Lessee of Lessor’s specific objections to Lessee’s Hazardous Materials Activities; provided, however, Lessor may not revoke such consent without first granting Lessee a commercially reasonable period of time to redress Lessor’s specific objections to Lessee’s Hazardous Materials Activities. Notwithstanding the foregoing sentence, Lessor’s HazMat Consent may be revoked at any time in response to Lessee’s negligence associated with Hazardous Materials Activities.

Lessee shall indemnify, defend with counsel acceptable to Lessor and hold Lessor harmless from and against any claims, damages, costs and liabilities, including court costs and legal fees, arising out of Lessee’s or Carriers’ Hazardous Materials Activities on, under or about the Leased Premises, regardless of whether or not Lessor has approved Lessee’s Hazardous Materials Activities.

For the purposes of this Lease, Hazardous Materials shall include but not be limited to oil, radioactive materials, PCBs, and substances defined as “hazardous substances” or “toxic substances” in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. Sec. 9601 et seq.; Hazardous Materials Transportation Act, 49 U.S.C. Sec. 1801 et seq.; and Resources Conservation and Recovery Act, 42 U.S.C. Sec. 6901 et seq., and those substances defined as “hazardous wastes” in the regulations adopted and publications promulgated pursuant to said laws. Subject to the foregoing provisions of this Section, Lessee shall, prior to the Commencement Date, submit to Lessor for Lessor’s review and approval, a list of Hazardous Materials Activities, including types and quantities, which list to the extent approved by Lessor shall be attached hereto as **Exhibit C**. Prior to conducting any other Hazardous Materials Activities, Lessor shall update such list as necessary for continued accuracy. Lessor shall also provide Lessee with a copy of any Hazardous Materials inventory statement required by any applicable legal requirements. If Lessee’s activities violate any legal requirements, Lessee shall cease such activities immediately upon notice from Lessor. Lessor, Lessor’s representatives and employees may enter the Leased Premises at any time during the term to inspect Lessee’s compliance herewith, and may disclose any violation of legal requirements to any governmental agency with jurisdiction. The provisions of this Section 15 shall survive termination or expiration of the term of this Lease.

b. Lessor acknowledges that Lessee’s (and the Carriers’) equipment cabinets shall contain batteries and/or diesel generators for back-up power and that the presence of such batteries and/or diesel generators does not violate this provision if such batteries or generators comply with all laws, regulations and ordinances relating to Hazardous Materials.

c. Lessee will immediately notify Lessor and provide copies upon receipt of all written complaints, claims, citations, demands, inquiries, reports, or notices relating to the condition of the Leased Premises or compliance with environmental laws. Lessee shall promptly cure and have dismissed with prejudice any of those actions and proceedings to the satisfaction of Lessor. Lessee will keep the Leased Premises free of any lien imposed pursuant to any environmental laws.

d. Lessor shall have the right at all reasonable times and from time to time to conduct environmental audits of the Leased Premises, and Lessee shall cooperate in the conduct of those audits. The audits will be conducted by a consultant of Lessor's choosing, and if any Hazardous Materials generated, stored, transported or released by Lessee are detected or if a violation of any of the representations or covenants in this Section 15 is discovered, the fees and expenses of such consultant will be borne by Lessee.

e. If Lessee fails to comply with any of the foregoing representations and covenants, Lessor may cause the removal (or other cleanup acceptable to Lessor) of any Hazardous Materials from the Leased Premises. The costs of removing Hazardous Materials and any other cleanup (including transportation and storage costs) shall be reimbursed by Lessee promptly after Lessor's demand and will be additional rent under this Lease. Lessee will give Lessor access to the Leased Premises to remove or otherwise clean up any Hazardous Materials. Lessor, however, has no affirmative obligation to remove or otherwise clean-up any Hazardous Materials, and this Lease will not be construed as creating any such obligation.

f. Notwithstanding the foregoing, Lessor represents and warrants that to the best of its knowledge and belief there are no Hazardous Materials on, in or under the Site. Lessor covenants not to bring onto the Site any Hazardous Materials. To the extent permitted by law without waiving Lessor's sovereign immunity or other similar limitation of liability, Lessor shall indemnify Lessee and hold it harmless against any claims, damages, losses or liabilities (including reasonable attorney's fees) incurred by Lessee and arising from any breach of the foregoing representation and warranty and from the presence or removal of Hazardous Materials.

16. NO PARTNERSHIP:

Nothing contained in this Lease shall be deemed or construed to create a partnership or joint venture of or between Lessor and Lessee, or to create any other relationship between the parties hereto other than that of lessor and lessee.

17. NOTICES:

All notices, payments, demands and requests hereunder shall be in writing and shall be deemed to have been properly given when mailed by United States First Class, Registered or Certified Mail, postage prepaid, or by reliable overnight courier, and addressed to the Lessor as follows:

Hampton Roads Sanitation District
Accounting
PO Box 5915
Virginia Beach, VA 23471-0915

with a copy to:
c/o Chief of Procurement
PO Box 5913
Virginia Beach, VA 23471-0913

and to Lessee as follows:

Milestone Communications
12110 Sunset Hills Road, Suite 100
Reston, Virginia 20190
Attn: Leonard Forkas, Jr.

with a copy to:

Cooley LLP
11951 Freedom Drive
Reston, Virginia 20190
Attn: John G. Lavoie, Esquire

or to such other addresses as either of the parties may designate from time to time by giving written notice as herein required.

18. ASSIGNMENT OR SUBLETTING; FINANCING:

a. Lessee may assign this Lease, without Lessor's consent, to any corporation, partnership or other entity which (i) is controlled by, controlling or under common control with Lessee; (ii) shall merge or consolidate with or into Lessee; (iii) shall succeed to all or substantially all the assets, property and business of Lessee; (iv) in which Milestone Tower Limited Partnership-III or a wholly owned affiliate of Milestone Tower Limited Partnership-III is at all times the general partner; or (v) has an adjusted net worth (determined in accordance with generally accepted accounting principles consistently applied) of at least \$100,000,000; provided such assignment shall be without reduction for Lessee's contractual obligations incurred under this Agreement for a period of two (2) years after such assignment. In the event of such an assignment or sublease, Lessee shall provide to Lessor at least sixty (60) days before the proposed transfer (a) the name and address of the assignee and (b) a document executed by the assignee by which it acknowledges the assignment and assumption of all of Lessee's obligations hereunder. Lessee may also, without Lessor's consent, sublease or license portions of space on the Tower and within the Base Station to Carriers; provided Lessee furnishes Lessor and its counsel with a copy of such sublease within thirty (30) days after execution thereof.

b. The termination of this Lease shall automatically terminate all Carrier Subleases; provided, however, that Lessor agrees that, provided that Lessee has complied with the provisions of Section 18 hereof, upon a termination hereof as a result of Lessee's default hereunder, and the failure by any Mortgagee (as defined in Exhibit D attached hereto) to either succeed to Lessee's interest hereunder or to enter into a new lease with Lessor in accordance with the terms of such Exhibit D, Lessor shall provide such Carrier the opportunity to continue such Carrier's occupancy of the Tower for the unexpired term of the Carrier Sublease (including any renewals) at the same rental rate contained in its Carrier Sublease under terms and conditions required by Lessor in its sole and absolute discretion including, but not limited to, that (i) Carrier is not in default under the Carrier Sublease; (ii) upon request by Lessor, Carrier will provide to Lessor a certified true and correct copy of the Carrier Sublease; (iii) Carrier agrees, in writing, that Lessor shall not be liable for any act or omission of Lessee under the Carrier Sublease; (iv) Carrier executes within thirty days of receipt from Lessor, Lessor's then standard form of license or lease agreement; and (v) upon execution of such license or lease agreement, Carrier posts with Lessor a security deposit in the amount of two (2) months' rent under the Carrier Sublease.

c. Lessee shall cause the Carriers to comply with, and not violate, those terms and conditions of this Lease that may be applicable to the Carriers. Lessee shall enforce all of the terms and provisions of any Carrier Subleases, licenses or other documents (the “**Carrier Subleases**”). Without limiting the generality of the foregoing, Lessee shall exercise any or all of its rights and remedies under the Carrier Subleases immediately if requested to do so by Lessor. Lessee shall, at its sole cost and expense, perform all obligations of the landlord under the Carrier Subleases. Lessor shall have no liability under the Carrier Subleases.

d. Lessee shall have the right to finance the Tower and Base Station on the terms and conditions as are set forth on **Exhibit D** attached hereto.

19. ACCESS AND INSPECTIONS:

Lessor shall have full access to the Leased Premises and the Base Station for operating, repairing, removing, installing and otherwise working with communications equipment owned by Lessor or any third party permitted to use the Base Station pursuant to this Lease with the exception of Lessee’s or Carriers’ equipment and antennas. In addition, Lessee shall allow Lessor, upon prior notification to Lessee and with an escort by an agent of Lessee or without notice in the event of any emergency, to enter the Leased Premises or any part thereof at any reasonable time and in a manner so as not to interfere more than reasonably necessary with Lessee’s use of the Base Station, for the purpose of inspecting the Leased Premises. In the event of an emergency whereby Lessor enters the Leased Premises, Lessor shall give notice to Lessee of such entry immediately following such emergency. Lessee shall at all times provide the Lessor copies of all keys needed to unlock all of the gates and locks to the fences in the Leased Premises.

20. QUIET ENJOYMENT:

Lessee shall be entitled to use and occupy the Leased Premises during the Term hereof for the purposes herein permitted and subject to the terms and conditions herein contained, without molestation or interference by Lessor.

21. DAMAGE AND DESTRUCTION:

a. If the Leased Premises or the Base Station are damaged or destroyed by reason of fire or any other cause, or if damage to the Leased Premises or the Base Station causes damage to portions of the Site or other property of Lessor, Lessee will immediately notify Lessor and will promptly repair or rebuild the Base Station, incidental improvements, and other damage to Lessor’s property to its condition immediately prior to such damage, at Lessee’s expense.

b. Monthly rent and additional rent will not abate pending the repairs or rebuilding except to the extent to which Lessor receives a net sum as proceeds of any rental insurance or to the extent rent due from Carriers abate pursuant to the Carrier Subleases.

c. If at any time the Leased Premises or Base Station are so damaged by fire or otherwise that the cost of restoration exceeds fifty percent (50%) of the replacement value of the Base Station immediately prior to the damage, Lessee may, within thirty (30) days after such damage, give notice of its election to terminate this Lease and, subject to the further provisions of this Section 21, this Lease

will cease on the tenth (10th) day after the delivery of that notice. Monthly rent will be apportioned and paid to the time of termination. If this Lease is so terminated, Lessee will have no obligation to repair or rebuild except that Lessee shall be liable to restore the Leased Premises in accordance with Section 4(b).

22. CONDEMNATION:

If all or any part of the Leased Premises is taken by eminent domain or sale in lieu thereof, and if said taking or sale renders the Leased Premises unusable for its intended purpose hereunder, then, at Lessor's or Lessee's option, this Lease may be terminated upon sixty (60) days written notice to the other party and there will be no further payment of rents except that which may have been due and payable at the time of said taking or sale. In the event of a partial taking or sale and Lessee, subject to mutual agreement with Lessor, wishes to maintain its operation, Lessee may continue to use and occupy the Leased Premises under the terms and conditions hereunder, provided Lessor's and Lessee's obligations under this Lease are not otherwise altered, and provided Lessee, at its sole cost, restores so much of the Leased Premises as remains to a condition substantially suitable for the purposes for which it was used immediately before the taking. Upon the completion of restoration, Lessor shall pay Lessee the lesser of its proportionate share (based on the leased space to total space of the Site) of the net award made to Lessor on account of the taking (after deducting from the total award attorneys', appraisers', and other costs incurred in connection with obtaining the award), or Lessee's actual out-of-pocket cost of restoring the Leased Premises, and Lessor shall keep the balance of the net award. In connection with any taking subject to this Section, Lessee may prosecute its own claim by separate proceedings against the condemning authority for damages legally due to it (such as the loss of fixtures which Lessee was entitled to remove and moving expenses) only so long as Lessee's award does not diminish or otherwise adversely affect Lessor's award.

23. SALE OF SITE:

Any sale by Lessor of all or part of the Leased Premises to a purchaser other than Lessee shall be under and subject to this Lease and Lessee's right hereunder. Lessor shall be released from its obligations under this Lease in the event of a sale and the assignee assumes Lessor's obligations hereunder (including the recognition of Lessee's rights hereunder).

24. GOVERNING LAW:

The execution, performance and enforcement of this Lease shall be governed by the laws of the Commonwealth of Virginia without application of conflicts of law principles.

25. MISCELLANEOUS:

The invalidation of any one of the terms or provisions of this Lease by judgment or court order shall in no way affect any of the other terms of this Lease which shall remain in full force and effect. Lessor and Lessee agree to execute any additional documents necessary to further implement the purposes and intent of this Lease. Time is of the essence with respect to each provision of this Lease.

26. BINDING EFFECT:

This Lease shall bind and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

27. LESSOR'S RIGHT TO PERFORM:

If Lessee fails to perform any obligations under this Lease, Lessor shall be entitled, but shall not be obligated, to perform any or all of such obligations and any cost of performing same shall be payable by Lessee to Lessor upon written demand as additional rent hereunder. Any amounts so incurred by Lessor and not repaid by Lessee within ten days after demand shall bear interest at a rate of ten percent (10%) per annum.

28. HOLDING OVER:

If Lessee remains in possession of the Leased Premises after the end of this Lease, Lessee will occupy the Leased Premises as a lessee from month to month, subject to all conditions, provisions, and obligations of this Lease in effect on the last day of the term.

29. ESTOPPEL CERTIFICATES:

Within no more than two weeks after written request by either party, the other will execute, acknowledge, and deliver a certificate stating:

- a. that the Lease is unmodified and in full force and effect, or, if this Lease is modified, the way in which it is modified accompanied by a copy of the modification agreement;
- b. the date to which rental and other sums payable under this Lease have been paid;
- c. that no notice has been received of any default which has not been cured, or, if the default has not been cured, what such party intends to do in order to effect the cure, and when it will do so;
- d. (if from Lessee) that Lessee has accepted and occupied the Leased Premises;
- e. (if from Lessee) that Lessee has no claim or offset against Lessor, or, if it does, stating the date of the assignment and assignee (if known to Lessee); and
- f. other factual matters as may be reasonably requested.

Any certificate may be relied upon by any prospective purchaser, lender or other person with a bona fide interest in the Leased Premises.

30. NO WAIVER:

No waiver of any condition or agreement in this Lease by either Lessor or Lessee will imply or constitute a further waiver by such party of the same or any other condition or agreement. No act or thing done by Lessor during the term of this Lease will be deemed an acceptance of surrender of the Leased Premises, and no agreement to accept the surrender will be valid unless in writing signed by Lessor. The delivery of Lessee's keys to Lessor will not constitute a termination of this Lease unless

Lessor has entered into a written agreement to that effect. No payment by Lessee, or receipt from Lessor, of a lesser amount than the rent or other charges stipulated in this Lease will be deemed to be anything other than a payment on account of the earliest stipulated rent. No endorsement or statement on any check or any letter accompanying any check or payment as rent will be deemed an accord and satisfaction. Lessor will accept the check for payment without prejudice to Lessor's right to recover the balance of the rent or to pursue any other remedy available to Lessor.

31. AUTHORITY:

Each of the persons executing this Lease on behalf of Lessee warrants to Lessor that Lessee is a duly organized and existing limited partnership under Delaware law, that Lessee is authorized to do business in the Commonwealth of Virginia, that Lessee has full right and authority to enter into this Lease, and that each and every person signing on behalf of Lessee is authorized to do so. Upon Lessor's request, Lessee will provide evidence satisfactory to Lessor confirming these representations.

Lessor and the person executing and delivering this Lease on Lessor's behalf each represents and warrants to Lessee that such person is duly authorized to so act and has the power and authority to enter into this Lease; and that all action required to authorize Lessor and such person to enter into this Lease has been duly taken.

32. LIMITED LIABILITY:

Lessee's sole recourse against Lessor, and any successor to the interest of Lessor in the Leased Premises, is to the interest of Lessor, and any successor, in the Leased Premises. Lessee will not have any right to satisfy any judgment which it may have against Lessor, or any successor, from any other assets of Lessor, or any successor, or from any of Lessor's board members, staff, officers, agents, servants, employees, volunteers, business invitees, customers, or guests. The provisions of this Section are not intended to limit Lessee's right to seek injunctive relief or specific performance.

33. RECORDATION:

Lessee may record, at Lessee's expense, a memorandum or short form hereof in the form attached hereto as **Exhibit E**.

34. ENTIRE AGREEMENT:

This Lease plus the Exhibits hereto contain the entire agreement between the parties and may not be amended, altered or otherwise changed except by a subsequent writing signed by the parties to this Lease.

35. EXHIBITS:

Attached to this Lease and made a part hereof are the following exhibits:

- Exhibit A-1:** Description of Site
- Exhibit A-2:** Site Plan
- Exhibit B-1:** Construction Easement Plan
- Exhibit B-2:** Right-of-Way Plan

- Exhibit C:** Hazardous Materials Activities
- Exhibit D:** Financing Terms
- Exhibit E:** Memorandum of Agreement
- Exhibit F:** Carrier Sublease Rider Form

[Signature Page and Exhibits to Follow]

IN WITNESS WHEREOF, the parties hereto execute this Site Lease in two parts on the latest date indicated. This signature page is a part of the Deed of Site Lease Agreement by and between the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia and Milestone Tower Limited Partnership - III, a Delaware limited partnership.

LESSOR:

HAMPTON ROADS SANITATION DISTRICT

By: _____

Its: _____

Date: _____

LESSEE:

MILESTONE TOWER LIMITED PARTNERSHIP-III, a Delaware limited partnership

By: MILESTONE COMMUNICATIONS
MANAGEMENT III, INC., a Delaware corporation,
its general partner

By: _____

Name/Tile: Leonard Forkas, Jr., President

Date: _____

**EXHIBIT A-1 to
LEASE**

Description of Site

EXHIBIT A-2 to LEASE

Site Plan

**EXHIBIT B-1
TO
LEASE
Construction Easement Plan**

**EXHIBIT B-2
TO
LEASE
Right-of-Way Plan**

**EXHIBIT C
TO
LEASE**

Hazardous Materials Activities

- Lead acid batteries
- Diesel emergency power generator(s) with fuel tank(s)

EXHIBIT D
TO
LEASE
Financing Terms

Equipment Financing.

Lessor acknowledges that Lessee may in the future enter into a financing arrangement including promissory notes and financial and security agreements for the financing of the Base Station and that Lessee's tenants, lessees or licensees may have entered into (or may in the future enter into) such financing arrangements for the financing of their equipment installed as part of the Base Station (collectively, the “**Collateral**”). In connection therewith, Lessor (i) consents to the installation of the Collateral (subject to the terms and provisions of the Lease); and (ii) disclaims any interest in the Collateral, as fixtures or otherwise.

Leasehold Financing.

Notwithstanding anything to the contrary contained in this Lease, at any time and from time to time Lessee may mortgage, pledge and encumber its interests in this Lease and in any subleases, and assign this Lease and any subleases, licenses and other occupancy and use agreements as collateral security for such mortgage(s). The making of a leasehold mortgage (or any other such assignment, pledge or encumbrance) shall not be deemed to constitute a prohibited assignment of this Lease, or of the leasehold estate hereby created, nor cause the holder of the leasehold mortgage (a “**Mortgagee**”) to be deemed an assignee of this Lease. Such Mortgagee (or its nominee) shall be deemed an assignee of this Lease only at such time it succeeds to the Lessee's interest in this Lease by foreclosure of any leasehold mortgage, or assignment in lieu of the foreclosure, or if it exercises or attempts to exercise any rights or privileges of Lessee under the Lease. Upon such succession such Mortgagee (or nominee) shall be bound by the terms of this Lease only with respect to obligations first arising after such succession and shall be released and relieved of all further liabilities and obligations under this Lease once it assigns its interest in this Lease. Notwithstanding the foregoing, Mortgagee or such successors shall be liable for all rent due under the Lease, and for curing any breaches or defaults which continue after the Mortgagee or such successor acquire Lessee's interest in this Lease. Notwithstanding anything to the contrary continued in this Lease, any Mortgagee (or other person or entity) that succeeds to Lessee's interest in this Lease by way of foreclosure, assignment in lieu of foreclosure or the exercise of any other remedies relating to the enforcement of any leasehold mortgage may assign this Lease to any telecommunications company with net worth in excess of One Hundred Million Dollars (\$100,000,000) and upon such assignment, such assignee shall be released from all further liability under this Lease; provided, however, that the provisions hereof shall become null and void upon such assignment. When used in this Lease, “mortgage” shall include whatever security instruments are used in the locality of the Premises, such as, without limitation, mortgages, deeds of trust, security deeds, and conditional deeds, as well as financing statements, security agreements, and

other documentation required pursuant to the Uniform Commercial Code or successor or similar legislation.

If a Mortgagee shall send to Lessor and its counsel a true copy of the leasehold mortgage, together with written notice specifying the name and address of the Mortgagee and the pertinent recording data with respect to such leasehold mortgage, Lessor agrees that the following provisions shall apply to such mortgage so long as the leasehold mortgage has not been released by the Mortgagee:

No Modification/No Merger.

There shall be no cancellation, surrender or modification of this Lease by Lessor and Lessee without the prior consent in writing of each Mortgagee. If the leasehold interest under this Lease shall ever be held by the same person or party who then holds the reversionary interest under this Lease, no merger shall result therefrom and both the leasehold and reversionary interests shall continue.

Notice/Cure.

Lessor shall, upon serving Lessee with any notice of default or other notice provided for in this Lease, simultaneously serve a copy of such notice upon the Mortgagee and no such notice to Lessee shall be effective unless a copy of such notice is so served on the Mortgagee. Upon receipt of such notice the mortgagee shall have the same period, after and commencing upon receipt of such notice, to elect (in its sole discretion) to remedy or cause to be remedied the defaults complained of, and Lessor shall accept such performance as if the same had been done by Lessee.

Termination.

Upon any termination of this Lease, at the election of the Mortgagee, Mortgagee may request the Lessor to enter into a new lease of the Premises with such Mortgagee or its nominee for the remainder of the Term, effective as of the date of such termination at the rent and upon the terms, provisions, covenants, and agreements as herein contained, provided:

Such Mortgagee(s) or its nominee(s) shall make written request upon Lessor for such new lease within thirty (30) days after the date of such termination;

Such Mortgagee(s) or its nominee(s) pay to Lessor at the time of the execution and delivery of such new lease any sums that would at the time of the execution and delivery thereof be due pursuant to this Lease but for such default or termination (e.g., excluding all, if any, accelerated rent), less one-quarter (1/4) of the net income collected and retained by Lessor subsequent to the date of termination of this Lease and prior to the execution and delivery of the new lease; and

Upon the execution and delivery of such new lease, all subleases, licenses and other occupancy and use agreements that theretofore may have been assigned and transferred to Lessor shall thereupon be assigned and transferred by Lessor to the mortgagee or its nominee, and assumed by the Mortgagee or nominee, and such party shall indemnify and hold Lessor harmless from and against any further liability thereunder. Lessor hereby agrees that, with respect to any such sublease so assigned, Lessor

will not modify or amend any of the terms or provisions thereof, during the period between the expiration or termination of this Lease and the execution and delivery of a new lease.

Application of Certain Proceeds.

The mortgagee may reserve the right to apply to the mortgage debt all or any part of Lessee's share of the proceeds from any insurance policies or arising from a condemnation.

**EXHIBIT E
TO
LEASE**

Memorandum of Lease

Prepared by and when recorded return to:

Cooley LLP
11951 Freedom Drive
Reston, Virginia 20190
Attn: John G. Lavoie, Esquire

A portion of Property with
Tax Map Number: _____

MEMORANDUM OF LEASE

THIS MEMORANDUM OF LEASE is entered into as of the ____ day of _____, 20____, by and between HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia with an address of PO Box 5915, Virginia Beach, VA 23471-0915, Attention: Accounting (“**Lessor**”) and MILESTONE TOWER LIMITED PARTNERSHIP - III, a Delaware limited partnership, with its principal offices located at 12110 Sunset Hills Road, Suite 100, Reston, VA 20190 (“**Lessee**”).

Recitals:

A. Lessor and Lessee are parties to a Lease Agreement, dated _____, _____ (the “Lease”), pursuant to which Lessor has leased to Lessee certain real property in [[_____ City/County, _____ described in Exhibit “A-1” attached hereto.

B. Lessor and Lessee wish to enter into this Memorandum of Lease.

NOW, THEREFORE, in consideration of the premises, the sum of Five Dollars (\$5.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Lessor and Lessee hereby agree as follows:

1. The name of the lessor under the Lease is Hampton Roads Sanitation District.
2. The name of the lessee under the Lease is Milestone Tower Limited Partnership-III doing business as Milestone Communications.
3. The address of Lessor, as stated in the Lease, is PO Box 5915, Virginia Beach, VA 23471-0915, Attention: Accounting. The address of Lessee, as stated in the Lease, is Milestone Communications, 12110 Sunset Hills Road, Suite 100, Reston, VA 20190.

4. The leased premises, as described in the Lease, consists of a portion of the property owned by the Lessor located at [_____] and commonly known as [_____] and as more particularly described on the attached **Exhibit A-1**.

5. The date of commencement of the term of the Lease was _____, _____. The term hereof shall be for an initial term of ten (10) years, commencing on the date of the final execution and delivery of the Lease.

6. Provided Lessee is not in default under the Lease beyond any applicable cure period, after the initial (10) ten year initial term, the initial term shall be automatically extended for five (5) additional five-year (5-year) terms (each an “**Extension Term**”) as of the expiration of the then current term unless Lessee provides thirty (30) days advance written notice of its intent not to so renew the term hereof. Accordingly, the latest date to which the term of the Lease may be extended is _____, 20____.

(Signatures continue on the following 2 pages)

IN WITNESS WHEREOF, the undersigned LESSEE has duly executed this Memorandum of Lease under seal as of the first date stated above. This signature page is a part of the Memorandum of Lease by and between the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia and Milestone Tower Limited Partnership - III, a Delaware limited partnership.

MILESTONE TOWER LIMITED PARTNERSHIP-III, a Delaware limited partnership

By: MILESTONE COMMUNICATIONS MANAGEMENT III, INC., a Delaware corporation, its general partner

By: _____

Name/Title: Leonard Forkas, Jr., President

Date: _____

STATE OF _____)

) **TO WIT:**

COUNTY OF _____)

I hereby certify that on this ___ day of _____, 20__, before me, a Notary Public for the state and county aforesaid, personally appeared Leonard Forkas, Jr., known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the foregoing instrument, acting in his capacity as President of MILESTONE COMMUNICATIONS MANAGEMENT III, INC., the general partner of MILESTONE TOWER LIMITED PARTNERSHIP-III for the purposes therein set forth.

Notary Public

My Commission Expires: _____

IN WITNESS WHEREOF, the undersigned LESSOR has duly executed this Memorandum of Lease under seal as of the first date stated above. This signature page is a part of the Memorandum of Lease by and between the Hampton Roads Sanitation District, a political subdivision of the Commonwealth of Virginia and Milestone Tower Limited Partnership - III, a Delaware limited partnership.

HAMPTON ROADS SANITATION DISTRICT,
a political subdivision of the Commonwealth of Virginia

By: _____
Name:
Title:

STATE OF _____)
)
COUNTY OF _____)

TO WIT:

I hereby certify that on this ___ day of _____, 20__, before me, a Notary Public for the state and county aforesaid, personally appeared _____, known to me or satisfactorily proven to be the person whose name is subscribed to the foregoing instrument, and acknowledged that he executed the foregoing instrument, acting in his capacity as _____ of Hampton Roads Sanitation District, for the purposes therein set forth.

Notary Public

My Commission Expires: _____

**Exhibit A-1 to
Memorandum of Lease**

**EXHIBIT F
TO
LEASE**

Carrier Sublease Rider

LEASE RIDER

THIS LEASE RIDER (“Rider”) is executed simultaneously with and constitutes a substantive part of that certain Lease Agreement of even date herewith by and between MILESTONE TOWER LIMITED PARTNERSHIP - III, a Delaware limited partnership having an office at 12110 Sunset Hills Road, Suite 100, Reston, Virginia 20190 (“Lessor”) and [_____] (“Lessee”).

RECITALS

R-1 Lessor and Lessee are simultaneously entering into a Lease Agreement (including this Rider, the “Lease”) whereby Lessee shall lease from Lessor certain rights to place, on Lessor’s Tower, Lessee’s telecommunications equipment, and to locate on the Site on which Lessor’s Tower is constructed (or is to be constructed after the date hereof) Lessee’s ground based equipment incident thereto, all in accordance with the terms of the Lease.

R-2 Lessor has disclosed to Lessee and Lessee acknowledges that the site and the Tower on which the equipment facility is located, or is to be located (the “Site”), is not owned in fee simple by Lessor, but rather is owned by Hampton Roads Sanitation District (“HRSD”), and is under lease to Lessor pursuant to a Deed of Site Lease Agreement dated as of the ___ day of _____, 20__ (the “Site Lease”) or will hereafter be under lease to Lessor under the form of site lease previously agreed upon between Lessor and HRSD. Capitalized terms used herein and not defined shall have the meaning give to such terms in the Site Lease.

R-3 HRSD has required, as a condition precedent to Lessor and Lessee entering in to the Lease, and as a condition to the effectiveness thereof, that Lessor and Lessee simultaneously enter into this Rider as a substantive and material part of the Lease.

NOW THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, Lessor and Lessee agree as follows:

1. The foregoing Recitals are true and correct and are incorporated herein as a substantive part of this Rider and of the Lease.

2. All capitalized terms used herein and not otherwise defined herein shall have the meanings given them in the Lease.

3. Lessee has been provided, and hereby acknowledges that it has received, a copy of the Site Lease (or, in the event that the Site Lease for the Site is not, as of the date hereof, executed, Lessee has received and reviewed the form of site lease previously agreed upon between Lessor and HRSD). Lessee has had an opportunity to review and understand the Site Lease, and acknowledges the absolute primacy of the terms and conditions of the Site Lease over the terms and conditions of the Lease.

4. Notwithstanding any other provision of the Lease, Lessee acknowledges the absolute primacy of HRSD's use of the Site as a _____, and that Lessee's rights under the Lease are subject and subordinate to HRSD's use and operation of the Site. Prior to any entry upon the Leased Premises, Lessee shall provide not less than two (2) business days prior notice to Lessor and HRSD which notice shall specify the type of work or other activities that are to be performed or undertaken on the Leased Premises or which may impact the Site. In exercising their rights under the Lease and this Rider, Lessee will avoid any adverse construction, operational or other such impact on the Site or HRSD's use and operation thereof, whether such impacts arise from work or activities being performed or undertaken on or off of the Site (utility outages arising from off-site utility relocation, for example), and, notwithstanding any other provision of the Lease, Lessee will cause such entry, work or activities to be performed or undertaken at such times, and to occur in such manner, as HRSD may require, in its sole discretion, to avoid any adverse impacts to the Site or HRSD's use thereof. In case of emergencies threatening life or safety or Lessee's equipment, Lessee may enter the Leased Premises without prior notice to Lessor or HRSD, provided Lessee notifies Lessor and HRSD of such entry, and the nature of the work performed or undertaken as a result of such emergency, as soon as practicable after Lessee's entry. Notwithstanding the foregoing, Lessee shall have the right to make customary and routine inspections of the Leased Premises upon one (1) business day prior notice, provided that (i) such entry is only for the purpose of inspecting the Leased Premises, conducting routine maintenance and repairs (provided such maintenance and/or repairs do not require alteration of the structural elements to the Base Station or the Tower or the addition or substitution of any electrical cabinet or equipment shelter) and (ii) the worker or workers who make such inspections check-in with the appropriate personnel at the Site prior to accessing the Leased Premises and, in all cases, follow all procedures required by Site personnel.

5. Lessee shall defend, with counsel acceptable to HRSD, and indemnify and hold harmless, HRSD from all losses, costs, claims, causes of actions, demands and liabilities arising from (a) any breach by Lessee of any covenant of the Lease; (b) any misrepresentation by Lessee contained in the Lease and/or any breach of any warranty contained in the Lease; and (c) any occurrence, of any kind or nature, arising from (i) Lessee's construction, installation, maintenance, repair, operation, replacement or removal of Lessee's equipment in the Base Station, on the Leased Premises or on the Site, or any other activities of Lessee in the Base Station, on the Leased Premises or on the Site of any kind or nature, (ii) the condition of Lessee's equipment, the Base Station or the Leased Premises and (iii) any personal injury, death, or accident in any way related to Lessee's use, operation or maintenance of the Base Station, the Site, the Leased Premises and/or any of Lessee's equipment or

antennas contained therein or on the Tower, of any kind or nature, whether foreseeable or not. Such indemnification shall include the cost of investigation, all expenses of litigation, and the cost of appeals, including, without limitation, attorneys' fees and court costs, and shall be applicable to Lessee's activities on the Site whether prior to the Commencement Date or after the termination of the Lease. In addition to HRSD, HRSD's board members, staff, officers, agents, servants, employees, volunteers, business invitees, customers, family members and guests shall be beneficiaries of Lessee's indemnification.

6. The term of the Lease shall not extend beyond the term of the Site Lease and any termination of the Site Lease shall automatically effectuate a termination of the Lease, without any further action from HRSD.

7. During the term of the Lease, Lessee shall maintain a policy of commercial general liability insurance insuring Lessor and HRSD against liability arising out of the use, operation or maintenance of the Leased Premises. The insurance will be maintained for personal injury and property damage liability adequate to protect Lessor and HRSD against liability for injury or death of any person in connection with the use, operation and condition of the Leased Premises, and to insure the performance of Lessee's indemnity set forth in Section 4 of this Rider, in an amount not less than \$2,000,000 per occurrence/aggregate. During the term of the Lease, Lessee shall also maintain workers' compensation and employers' liability insurance, and such other insurance relating to the installation, repair, maintenance, operation, replacement and removal of Lessee's equipment and the use of the Leased Premises. The limits of the insurance will not limit the liability of the Lessee. All insurance required to be carried by Lessee shall name, in addition to Lessor, HRSD as an additional insured. Certificates of such insurance shall be delivered to Lessor and HRSD and it shall be stated on the insurance certificate that this coverage "is primary to all commercial liability coverage the Lessor or HRSD may possess."

8. Lessee shall not cause or permit any hazardous or toxic wastes, substances or materials (collectively, "Hazardous Materials") to be used, generated, stored or disposed of on, under or about, or transported to or from the Leased Premises (collectively, "Hazardous Materials Activities") without first receiving written consent from Lessor, which Lessee acknowledges is contingent upon Lessee's receipt of written consent from HRSD, which may be withheld by HRSD for any reason whatsoever and which may be revoked at any time, and then only in compliance (which shall be at Lessee's sole cost and expense) with all applicable legal requirements and using all necessary and appropriate precautions. Lessor and HRSD shall have the right at all reasonable times, and from time to time, to conduct environmental audits of the Leased Premises and Lessee shall cooperate in the conduct of those audits. The term "Hazardous Materials" shall have the same meaning ascribed to it in the Site Lease.

9. Prior to commencing any activities on the Site, Lessee shall provide Lessor, and Lessor shall provide HRSD, with evidence satisfactory to Lessor and HRSD that Lessee and its contractors and agents who will be working on the Site are covered by insurance as required by Section 6 hereof. All of Lessee's work and facilities shall be installed free of mechanics', materialmen's and other liens and claims of any person. Lessee shall bond off or discharge any such liens or other claims within

thirty (30) days after notice from Lessor or HRSD. In the event that Lessee damages any grassed area as a result of its activities on the Site, Lessee shall re-sod the disturbed areas, and as soon as reasonably practicable, return them to the condition existing immediately prior to the activity.

10. Lessee shall operate the Base Station in strict compliance with all applicable statutes, codes, rules, regulations, standards and requirements of all federal, state and local governmental boards, authorities and agencies including, without limitation, OSHA (including, without limitation, OSHA regulations pertaining to RF radiation), the FCC and the FAA, and with such reasonable rules and regulations governing the use of the Site as HRSD may adopt from time to time; provided that in all events the same shall not materially interfere with or impede the use of the Base Station by Lessee, or materially increase the cost of the use and operation thereof. In the event that the operation of the Base Station violates any of such statutes, codes, rules, regulations, standards or requirements, Lessee agrees to suspend operation of the Base Station within twenty-four (24) hours after notice of such violation and not to resume operation of the Base Station until such operation is in strict compliance with all of the requirements of the Lease.

11. Lessee shall allow Lessor and HRSD, upon prior notification to Lessee, or without notice in the event of any emergency, to enter the Leased Premises or any part thereof at any reasonable time and in a manner so as not to interfere more than reasonably necessary with Lessee's use of the Base Station, for the purpose of inspecting the Leased Premises.

12. Lessee acknowledges that HRSD has the right, under the terms and conditions of the Site Lease, to cause Lessor to enforce all of the provisions, rights and remedies hereunder, and that HRSD shall not, as a result be deemed to incur any liability therefor.

13. Any notice required to be given to Lessor under the terms and conditions of the Lease shall simultaneously be delivered to HRSD at the address set forth on the signature page hereto or such other notice as HRSD shall specify from time to time.

14. Under no circumstances shall HRSD have any liability whatsoever to Lessee pursuant to the Lease, and Lessee hereby specifically and fully disclaims any and all right to pursue any claim or cause of action arising from this transaction against HRSD, whether at law, in equity or otherwise.

15. Notwithstanding anything contained herein to the contrary, Lessee represents and warrants that it has read, understands and will comply with Section 12 of the Site Lease, and each such other provision thereof, relating to interference.

16. Lessee agrees (i) to repair any damage to the Site or the Leased Premises caused by Lessee, its employees, agents, or contractors, including, but not limited to, any damage to utility lines, drains, waterways, pipes, grass fields or paved surfaces, occurring as a result of Lessee's operations at the Leased Premises or on the Site, including but not limited to construction, installation, maintenance, repair, operation, replacement or removal of Lessee's equipment on the Leased Premises or the Site, and Lessee shall restore the Leased Premises and/or the Site to the condition existing immediately prior to such damage, (ii) that any repair work undertaken on the Site or the Leased Premises shall be completed as soon as possible after notice thereof, (iii) that if Lessee's activities on the Site or the Leased Premises result in the need to restore or replace any grass areas, such areas shall be sodded,

rather than seeded, and (iv) that it shall be responsible for the full and timely payment of any costs incurred in connection with the repairs described in clauses (i) through (iii) of this sentence. Upon expiration of all applicable notice and cure provisions provided in the Lease, HRSD shall have the right, but not the obligation, to make, or cause to be made, any repairs to the Site or the Leased Premises which Lessee has failed to make pursuant to the terms of the Lease, and Lessee shall, immediately upon demand therefor, reimburse HRSD for the costs incurred in connection with such repairs.

17. This Rider shall be governed by and construed in accordance with the laws of the State of Virginia, and may be executed in counterparts, all of which when taken together shall constitute one original. In the event of any conflict between this Rider and the Lease, the terms of this Rider shall control.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE OF LEASE RIDER

LESSOR:

By: _____

LESSEE:

By: _____

HRSD's Notice Address:

Hampton Roads Sanitation District

PO Box 5915

Virginia Beach, VA 23471-0915

Attn: _____

EXHIBIT A

IWC Schools Contract

[Attached]

556297 v7/RE

TELECOMMUNICATIONS MASTER MARKETING AGREEMENT

THIS TELECOMMUNICATIONS MASTER MARKETING AGREEMENT (this "Agreement") is dated this 14th day of February, 2013, by and between **THE SCHOOL BOARD OF ISLE OF WIGHT COUNTY, VIRGINIA**, a body corporate ("Board"), and **MILESTONE COMMUNICATIONS MANAGEMENT III, INC.**, a Delaware corporation ("Milestone"), with reference to the following:

A. Board owns certain real property located in Isle of Wight County, Virginia, and more particularly described in this Agreement.

B. Board and Milestone wish to enter into this Agreement by which Board shall provide Milestone with the right to lease a portion of such properties from Board for the purpose of constructing one or more telecommunications monopoles thereon, and leasing space on the monopole(s) and ground to telecommunication service providers.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Agreement to Lease. Subject to the terms and conditions set forth below, with respect to each Approved Site, Board shall lease to Milestone a mutually acceptable portion of such Approved Site reasonably sufficient for the construction of up to two (2) Monopoles and an Equipment Facility. Milestone shall have the right to request a third Monopole on any Approved Site, which Board agrees to reasonably consider, given all relevant facts and circumstances. Together with the lease of a portion of the Approved Site, Board shall also provide Milestone and/or the applicable utility company with usual and customary easements for electrical and other utility service, and ingress and egress to the Monopole and Equipment Facility, in a location deemed acceptable to Board. At the request of Milestone, Board shall execute a Memorandum of each executed Site Lease, which Milestone may cause to be recorded among the land records of Isle of Wight County, Virginia, at Milestone's sole cost and expense. Upon termination or expiration of the applicable Site Lease, Milestone agrees to execute and deliver to Board a release of any such Memorandum of Site Lease recorded, which Board shall be entitled to record when the applicable Site Lease expires or is terminated.

2. Term of Agreement.

2.1. The term of this Agreement shall be three (3) years with up to four (4) five (5) year extension options, commencing on the date of this Agreement, subject to any earlier termination as set forth herein (the "Term"). If either party wishes to so extend the Term, it shall provide written notice to other party thereof and the other party shall respond in writing within fourteen (14) days whether it elects to so extend the Term or allow the Agreement to terminate at the end of the current Term. In the event that the parties agree to extend the term of this Agreement, an amendment to this Agreement confirming the extension of the Term shall be executed and delivered.

2.2. If at the end of the Term, Milestone has received Final Approval and filed a Zoning and Permitting Application with respect to an Approved Site, then Milestone shall have

up to an additional twelve (12) months to obtain all Governmental Approvals for the Approved Site; provided, however, that Milestone at all times shall diligently pursue such Governmental Approvals. If Milestone obtains the Governmental Approvals within such twelve (12) month period, Board shall execute a Site Lease with regard to such Approved Site notwithstanding that the Term hereof has expired. Not later than thirty (30) days after the end of the Term, Milestone shall present to Board a list of Sites subject to lease under this Section 2.2, and shall keep the Board Project Manager apprised at least monthly in writing of the status of such Governmental Approvals.

2.3. Board and Milestone acknowledge and agree that the expiration of the Term hereof shall in no way affect, reduce or terminate the term of any Site Lease then (or thereafter in accordance with Section 2.2 above) in existence or Milestone's rights thereunder.

3. Duration of Site Leases; Terms.

3.1. The term of each Site Lease shall be an initial term of ten (10) years, with up to four (4) 5-year extension terms, commencing on that date such Site Lease is executed. The term of each Site Lease shall be set forth therein, and shall control over any contrary provision of this Agreement. Notwithstanding the foregoing, if after the execution of any Site Lease, at least one Monopole is not constructed within eighteen (18) months after the date of the Lease, and one (1) Carrier Sublease executed and paying full rent, such Site Lease may be terminated by Board with thirty (30) days written notice to Milestone. Further, in the event that at any time after the initial construction of a Monopole on a Site, and the occupancy thereof pursuant to a Carrier Sublease, such Monopole remains vacant (i.e., with no Carrier Sublease applicable thereto) and no Carrier is paying rent therefor for a period in excess of twelve (12) consecutive months, such Site Lease may be terminated by Board with thirty (30) days written notice to Milestone. Milestone may terminate any Site Lease with sixty (60) days prior notice to Board if (a) Milestone is unable to obtain or maintain in force all necessary Governmental Approvals, (b) a material change in government regulations makes it impractical or uneconomic for Milestone to continue to operate the Facilities under such Site Lease, (c) interference by or to Milestone's operation cannot, despite good faith negotiations between Milestone and Board in accordance with the terms hereof, be resolved, or (d) the Site or the Facilities are destroyed or damaged or taken in whole or in part (by condemnation or otherwise) sufficient in Milestone's reasonable judgment, adversely to affect Milestone's use of the Facilities.

3.2. Each lease for an Approved Site shall be in the form of the Site Lease, with such minor modifications as shall be reasonably required to reflect the particular conditions on the Site.

4. Duration of Carrier Subleases; Terms.

4.1. Each Carrier Sublease shall be for a term no longer than the term of the Site Lease for the applicable Site.

4.2. Milestone shall be entitled to sublease space on a Monopole or in an Equipment Facility without Board's prior approval provided that (a) the Carrier Sublease have a rider attached in the form of Schedule 4.2-1 attached hereto, (b) the sublessee is an Approved

Carrier, (c) no Event of Default exists hereunder and (d) the term of the Carrier Sublease does not exceed the term of the applicable Site Lease. Otherwise, any lease, sublease, license or other occupancy agreement with respect to any Site shall be in form and substance approved by Board, which approval shall not be unreasonably withheld, conditioned or delayed.

5. Site Assessments; Approved Sites; Development.

5.1. Within a commercially reasonable period after the date hereof, Milestone shall, at its sole cost and expense, prepare and deliver to Board a Site Assessment with regard to each Site. Should Milestone wish to perform any on-site tests or studies with respect to any Site, Milestone shall first contact Board to arrange a mutually acceptable time for such tests and studies to be conducted. Board may elect to have Board personnel accompany the person or persons performing such tests and studies. Following any such tests and studies, Milestone shall immediately restore the Site to its previous condition. Milestone shall perform any such tests and studies in a manner so as to minimize any impact on any Board uses on the Site. Board shall have the right to withhold its consent to any tests or studies which, in the sole and absolute determination of Board, may materially alter any Site or interfere with Board's use of the Site. At Board's request, Milestone shall also furnish proof that Milestone and its contractors have the insurance coverage required under Section 13 hereof.

5.2. At any time during the Term, Milestone may submit to the Board Project Manager a Request for Approval with respect to one or more Sites. Upon Milestone's Request for Approval of a Site for Development, the following shall occur:

(a) The Board Project Manager shall contact the manager of the Site (if any) for the purpose of scheduling a meeting to solicit the parties' input into and concerning Development of the Site, and thereafter obtaining Preliminary Approval.

(b) At such time as Preliminary Approval has been obtained for a Site, Milestone shall cause to be prepared and deliver to the Board Project Manager a Site Plan for the Site, consistent with the Preliminary Approval.

(c) At such time as the Site Plan is approved by the Board Project Manager, Milestone and Board shall execute a Site Lease for the applicable Site.

(d) Upon execution of the Site Lease for the applicable Site, Milestone shall promptly file a Zoning and Permitting Application with respect to the Site, and shall thereafter diligently seek all other Governmental Approvals. Milestone shall provide the Board Project Manager with copies of such Zoning and Permitting Applications promptly when filed, and shall keep the Board Project Manager apprised of its progress.

(e) Upon approval of the Zoning and Permitting Application, Board hereby authorizes the Board Project Manager to enter into any additional documents necessary for Milestone's Development of the Site without further Board Approval.

5.3. In connection with Milestone's Zoning and Permitting Application and the processing by Milestone of all other Governmental Approvals, when a Site receives Final Approval, at Milestone's request, the Board Project Manager shall execute a letter confirming

that Board and Milestone intend to enter into a Site Lease upon approval of the Zoning and Permitting Application and that Milestone is authorized by Board to submit the Zoning and Permitting Application. Board, at no cost to Board, agrees to cooperate with Milestone in securing any Governmental Approvals or other approvals that may be required in connection with any of Milestone's Development of any Site.

5.4. Upon securing all Governmental Approvals and upon the execution of a Site Lease, Milestone shall promptly commence and diligently pursue the Development of the Approved Site.

5.5. Within ten (10) days after the date on which Milestone commences construction related work on such Site, Milestone shall pay Board a Site Fee of Twenty-Five Thousand and No/100 Dollars (\$25,000.00) (the "Site Fee"). In the event Milestone fails to timely pay any Site Fee due hereunder, Milestone shall, in addition to owing Board such Site Fee, pay to Board interest on the amount thereof from the eleventh day following the earlier to occur of (i) or (ii) above to and through the date of payment of such Site Fee to Board, in an amount equal to the Prime Rate of interest as published from time to time by The Wall Street Journal plus four percent (4%).

5.6. It is the intention of Milestone and Board that during the Term hereof this Agreement constitute an exclusive relationship as it pertains to the construction of telecommunications monopoles and the leasing of space thereon to telecommunications service providers on the Sites. Board agrees that it shall not, during the Term, lease, license or grant any interest in any portion of any Site to any telecommunications or other wireless service provider, or to any party constructing monopoles for lease to telecommunications or wireless service providers, other than Milestone, except as may be permitted in accordance with Section 10 hereof. Notwithstanding the foregoing, Board shall be permitted to license, without the requirement for payment of any compensation to Milestone, one (1) platform on the Monopole on each Site to governmental entities (which license shall include a ground location for Board to construct a facility to install its ground based facilities appurtenant thereto), provided that the transmissions do not interfere with those of any Approved Carrier on the Site (or under a letter of intent) at the time such license is granted, and further, Board shall be entitled to license space within a Site to any other governmental agency for construction of a monopole for its own use (but not for commercial resale), in accordance with Section 10 hereof.

6. Duties of Milestone; Compensation.

6.1. Milestone shall exercise commercially reasonable efforts to market and lease Sites to maximize revenue to both parties.

6.2. As its sole compensation for performing any of the duties hereunder and for performing the obligations of the sublandlord under any Carrier Sublease, Milestone shall be entitled to retain sixty percent (60%) of the Monthly Gross Rental Revenues derived from the use, leasing or occupancy of any Monopole, Equipment Facility or Site pursuant to this Agreement and the applicable Site Lease.

7. Duties of Board: Compensation.

7.1. Board shall receive no other consideration from Milestone for entering into this Agreement.

7.2. In consideration of the leasing of any particular Site under and pursuant to a Site Lease, not later than the tenth day of each calendar month during the term thereof, Milestone shall pay to Board an amount equal to forty percent (40%) of the Monthly Gross Rental Revenues derived from the use, leasing or occupancy of any Monopole, Equipment Facility or Site pursuant to the Site Lease for the preceding calendar month. As of the date of this Agreement, the monthly base rent charged to each Carrier by Milestone is \$2,500. All expenses related to the Facilities shall be borne by Milestone. The following reimbursable expenses paid by Carriers to Milestone are one-time payments and shall be excluded from the calculation of Monthly Gross Rental Revenues (provided that such reimbursable expenses are not in lieu of or in substitution for any rent under the Carrier Sublease): (a) expenses incurred to extend power, telecommunication lines/equipment and any other utilities to the Facilities, (b) any extraordinary expenses incurred to clear, grade and construct the vehicular access from the nearest road to the Facilities and (c) any expenses incurred to purchase and install a stealth monopole (i.e. tree, clock tower or any other nonstandard monopole) above and beyond the expenses for a standard monopole. The expenses described in the preceding sentence shall include, but not be limited to, engineering, construction administration, application and legal fees and expenses. As an example of the calculation of the Monthly Gross Rental Revenue, if a Site has one Carrier occupying the Monopole on such Site and the Carrier is paying \$2,500 per month, then \$1,000 ($\$2,500 \times 0.40 = \$1,000$) of the \$2,500 will be paid to Board every month until the expiration of the term or termination of the Carrier Sublease (subject to any increases in monthly rent). The compensation hereunder to Board shall be accompanied by a statement, signed by an officer of Milestone, verifying the calculation of the compensation for the applicable month.

7.3. In addition to the foregoing, any sum not paid by Milestone when due shall (a) be subject to a late charge of five percent (5%) of the amount due and (b) bear interest from the date due at a rate of fifteen percent (15%) per annum.

7.4. Board shall appoint from time to time a Board Project Manager for the performance of Board's review function hereunder. The Board Project Manager shall have the authority to review and approve those submissions to be made by Milestone hereunder, to attend meetings and represent Board thereat, and to execute Site Leases on behalf of Board.

8. Ownership of Site Improvements: Removal. Ownership of the Facilities located on an Approved Site shall remain with Milestone until the term of the Site Lease for the Approved Site expires or otherwise terminates. Within sixty (60) days after the end of such term, Board shall notify Milestone of its election to (a) have Milestone remove any or all of the Facilities from the Approved Site or (b) have the Monopole and/or Equipment Facility remain on the Approved Site. If Board fails to make such an election within the sixty (60) day period, Milestone shall inform Board in writing, and Board shall have an additional thirty (30) days to make the election. If Board fails to make an election, it shall be deemed to have elected option (a). If Board elects or is deemed to elect option (a), Milestone shall promptly (and in any event

within one hundred twenty (120) days) remove the designated Facilities from the Approved Site, at Milestone's sole cost and expense; provided, however, that Milestone shall be entitled to leave in place underground cables which do not and will not present a health or safety risk, and any other improvements which are 2 feet or more below grade. If the Lessor elects option (b), upon termination or expiration of the applicable Site Lease, title to those Facilities designated by the Lessor shall vest in the Lessor, without the need for additional action by the Lessor or Milestone, and Lessor agrees to assume all responsibility and liability for the Facilities and any damages or claims related thereto. Notwithstanding the foregoing, if so requested by either party, Milestone shall execute and deliver such further assurances thereof as requested by the other party.

9. Assignment; Financing.

9.1. This Agreement may be assigned in whole or in part, without the prior consent of Board, to any corporation, partnership or other entity which (i) is controlled by, controlling or under common control with Milestone; (ii) shall merge or consolidate with or into Milestone; (iii) shall succeed to all or substantially all the assets, property and business of Milestone; (iv) in which Milestone Communications Management III, Inc. or a wholly owned affiliate of Milestone Communications Management III, Inc. is at all times the general partner; or (v) has an adjusted net worth (determined in accordance with generally accepted accounting principles consistently applied) of at least \$100,000,000.

9.2. Individual Site Leases and Carrier Subleases may be collaterally assigned by Milestone to a Lender as security for Milestone's financing, subject to the terms and conditions set forth therein.

10. Right of First Offer. Subject to Section 5.6 hereof, during the Term (and any extension of the Term) and thereafter during the first ten (10) years of the term of each Site Lease, Board shall not lease any Site to a person or entity competing with Milestone in the business of constructing towers or monopoles to lease or license to third parties. If Board is contacted by any telecommunications carrier or service provider with regard to a Site, Board shall direct such Carrier to discuss with Milestone the possibility of locating on one of the Monopoles. If after not less than sixty (60) days negotiation, the Carrier informs Board that it was unable to reach an agreement with Milestone, Board shall be entitled to enter into an agreement with that Carrier permitting the Carrier to construct a monopole, tower or similar structure and operate thereon, or otherwise operate on the Site, provided that such operation does not cause signal interference with any Carrier operating on a Monopole at that time. Such agreement shall be on terms and conditions satisfactory to Board in its sole discretion. If Board breaches this Section, Milestone shall have the right to pursue any and all remedies available to Milestone under this Agreement, the applicable Site Lease or applicable law including, without limitation, injunctive relief.

11. Condition of Property. Except as specifically provided in this Agreement, Milestone acknowledges and agrees that each Approved Site will be leased to Milestone in an "AS IS, WHERE IS," condition, without warranty of any kind, express or implied, including without limitation warranty of merchantability or fitness for a particular purpose, subject to all defects, latent or patent, known and unknown, apparent or hidden, including environmental conditions and matters, which currently exist or may in the future arise. Milestone hereby waives all rights,

remedies and causes of action against Board resulting from or relating to the condition of the Site. By executing a Site Lease, Milestone acknowledges that it has had the opportunity to inspect the Site, and is relying solely on that inspection, and not on any representation or warranty of Board in leasing the Site. Notwithstanding the foregoing, Board represents and warrants that to the best of its knowledge and belief there are no hazardous materials on, in or under each Approved Site. Board covenants not to bring onto any Approved Site any hazardous materials.

12. Subject to Board Uses. Milestone's rights under this Agreement are subject and subordinate to Board's use and operation of the Site. Accordingly, in exercising its rights under this Agreement, Milestone shall use commercially reasonable efforts to avoid any adverse construction, operation or other impacts on the Site and Board's use and operation thereof, whether such impacts arise from activities conducted on or off of the Site. Prior to any entry upon any Site, Milestone shall provide reasonable advance notice to Board of such entry (the timing of such entry shall be subject to Board's approval) and of any work or activities to be conducted on the Site. Notice may be given by Milestone to security personnel designated by Board. Such entry, work and other activities shall occur only at such times, and shall occur in such manner, as may be required by Board to avoid any adverse impacts. In case of emergencies threatening life or safety, Milestone may enter a Site without prior notice to Board, provided Milestone notifies Board of same as soon as practicable.

13. Insurance.

13.1. All property of Milestone, its employees, agents, business invitees, licensees, customers, clients, subtenants, guests or trespassers, in and on any Site shall be and remain at the sole risk of Milestone, its employees, agents or business invitees, and except if due to the gross negligence or willful misconduct of Board, Board shall not be liable to them for any damage to, or loss of such personal property arising from any act of God or any persons, nor from any other reason, nor shall Board be liable for the interruption or loss to Milestone's business arising from any of the above described acts or causes. Board shall not be liable for any personal injury to Milestone, its employees, agents, business invitees, licensees, customers, clients, subtenants, guests or trespassers arising from the use, occupancy and condition of any Site unless such injury is caused by the gross negligence or willful act or failure to act on the part of Board or its employees.

13.2. Upon execution of any Site Lease, Milestone will maintain a policy or policies of commercial general liability insurance insuring Board and Milestone against liability arising out of the use, operation or maintenance of the applicable Site and the installation, repair, maintenance, operation, replacement and removal of the Facilities. Such insurance shall be as set forth in Site Lease.

13.3. Insurance carried by Milestone will be with companies reasonably acceptable to Board. Milestone will deliver to Board certificate evidencing the existence and amounts of the insurance. No policy shall be cancelable or subject to reduction of coverage or other modification except after thirty (30) days prior written notice to Board. Milestone shall, at least sixty (60) days prior to the expiration of the policies, furnish Board with renewals or "binders" for the policies.

13.4. Milestone will not knowingly do anything or permit anything to be done by Milestone's tenants, users, business invitees or agents, or any hazardous condition to exist ("Increased Risk") which shall invalidate or cause the cancellation of the insurance policies carried by Board or Milestone. If Milestone does or permits any Increased Risk which causes an increase in the cost of insurance policies, then Milestone shall reimburse Board for additional premiums directly attributable to any act, omission or operation of Milestone causing the increase in the premiums. Payment of additional premiums will not excuse Milestone from termination or removing the Increased Risk unless Board agrees in writing. Absent agreement, Milestone shall promptly terminate or remove the Increased Risk.

13.5. Board shall be named as an "additional insured" on Milestone's liability policies and it shall be stated on the Insurance Certificate that this coverage "is primary to all other coverage Board may possess."

13.6. If an "ACCORD" Insurance Certificate form is used by Milestone's insurance agent, the words, "endeavor to" and "...but failure to mail such notice shall impose no obligation or liability of any kind upon the company" in the "Cancellation" paragraph of the form shall be deleted or crossed out.

13.7. All insurance required by this Section 13 shall be written by insurers, in such forms, and shall contain such terms, as Board may reasonably require.

14. Indemnity; Waiver.

Milestone shall defend, with counsel acceptable to Milestone, and indemnify and hold harmless, Board from all losses, costs, claims, causes of actions, demands and liabilities arising from (a) any action by any Carrier under or pursuant to a Carrier Sublease, or with which Milestone has had negotiations concerning any Site and (b) Milestone's entry onto any of the Sites in connection with its investigations there. Milestone shall also provide Board with those specific Site indemnifications as are set forth in the Site Lease. Such indemnifications shall include the cost of investigation, all expenses of litigation, and the cost of appeals, including, without limitation, attorney's fees and court costs. In addition to the Board, the Board's board members, staff, officers, agents, servants, employees, and volunteers shall be beneficiaries of Milestone's indemnification. Milestone's indemnification shall not be applicable to the extent of any gross negligence or willful misconduct of Board

14.1. Milestone hereby waives any right of recovery against Board or its officers, directors and contractors for any claim, loss, liability, injury or damage that is covered by any policy of property insurance maintained by Milestone (or would have been insured against if Milestone had complied with its obligations under this Agreement) with respect to this Agreement or the Sites. Milestone will cause its insurers to issue appropriate waiver of subrogation rights endorsements to all policies of insurance carried in connection with the Site.

15. Default; Remedies.

15.1. Each of the following shall be an Event of Default:

(a) Failure to cure, within five (5) business days after written notice to Milestone (with specificity), any default in the payment when due of any amount required to be paid by Milestone under this Agreement or any Site Lease; or

(b) Failure to cure, within thirty (30) days after written notice to Milestone, any default by Milestone in the performance or observance of, or compliance with, any covenant, agreement, term or condition contained in any Site Lease or this Agreement; or

(c) An "Event of Default" as defined in any Site Lease; or

(d) The liquidation, termination or dissolution of Milestone; or

(f) An Event of Bankruptcy; or

(g) If any final judgment or judgments in an aggregate amount (including interest and costs) of more than \$500,000.00 is entered against Milestone, and any such judgment or judgments shall not have been paid or otherwise discharged within sixty (60) days after all applicable appeal periods have terminated.

15.2. Upon the occurrence of an Event of Default hereunder, Board shall, in addition to any other remedy that may be available to it at law or in equity, have the following remedies:

(a) To terminate this Agreement with written notice to Milestone; or

(b) To seek specific performance of this Agreement.

Provided that Milestone fully complies with its post-default obligations under Section 15.3 and all applicable Site Leases, Board shall in no event have any right to obtain a judgment against Milestone in the nature of consequential or punitive damages, or on account of lost or anticipated profit or economic advantage.

15.3. Upon the termination of this Agreement, Milestone shall promptly and in no event later than thirty (30) days following the date of termination, deliver to Board, or such other person or persons designated by Board, at Milestone's sole cost and expense, copies of all books and records regarding the Sites desired by Board, and all funds in the possession of Milestone belonging to Board. Milestone shall be entitled to retain originals or copies of all such books and records for its files.

The termination of this Agreement shall not cause the termination of any Site Lease which has been executed by Milestone and Board.

16. [Intentionally Deleted].

17. Representations and Warranties.

17.1. Milestone is a corporation duly organized under the laws of the State of Delaware, has qualified to do business in the Commonwealth of Virginia and has all corporate power and authority necessary to perform its obligations hereunder.

17.2. Milestone is in the business of and has substantial expertise in locating, permitting, leasing and constructing Facilities.

17.3. Milestone shall exercise commercially reasonable efforts to obtain entitlements, approvals, permits and Carrier Subleases for as many of the Sites as practicable, in an effort to maximize revenue and benefit to each of Board and Milestone.

17.4. Milestone shall obtain and at all times during the term of this Agreement keep in good standing any and all licenses and other permits legally required in the conduct of Milestone's business and that of its principals, employees and agents and other parties from time to time authorized to act for Milestone.

17.5. Milestone shall upon request attend and participate in any meetings with Board regarding this Agreement or any Site.

17.6. Milestone shall not knowingly violate any federal, state, municipal or other governmental law, ordinance, rule or regulation in performing its services under this Agreement and Milestone shall use reasonable diligence to comply with any and all such laws, ordinances, rules and regulations affecting the Sites.

17.7. If Milestone shall be apprised of any claim, demand, suit or other legal proceeding made or instituted or threatened against Board on account of any matter directly connected with the Sites, Milestone shall promptly give Board all information in its possession in respect thereof, and shall timely assist and cooperate with Board in all reasonable respects in the defense of any such suit or other legal proceedings.

17.8. Milestone shall at all times comply with the terms of all Site Leases, and shall cause Carriers under Carrier Subleases to comply with the terms of such Carrier Subleases.

18. Monthly Reports: Access to Records.

18.1. On or before the tenth (10th) day of each calendar month (or such other date as the Board Project Manager may agree), Milestone shall provide Board with a written report setting forth in reasonable detail (a) the Monthly Gross Rental Revenue for the previous month, on a Site-by-Site and Carrier Sublease-by-Carrier Sublease basis, (b) any new Carrier Subleases entered into by Milestone, (c) the status of Milestone's progress on all Sites which have received Preliminary or Final Approval, (d) any Sites which Milestone intends to submit a Request for Approval within the next ninety (90) days, and (e) any issues which have arisen or which Milestone anticipates may arise which could materially affect Board's activities on any Site.

18.2. Milestone shall keep full and correct records and books of account in accordance with generally accepted accounting principles, consistently applied, showing in detail

all income and expenses relating to the Sites and this Agreement, and shall permit Board or its representatives to examine such books and records and makes copies or extracts thereof.

18.3. In the event that any audit of Milestone's books and records reveals a discrepancy between the amounts due to Board hereunder and the actual amount paid by Milestone of greater than three percent (3%), in addition to the late charges and penalties due hereunder, Milestone shall pay all costs of Board's audit.

19. Notices. All notices, payments, demands and requests hereunder shall be in writing and shall be deemed to have been properly given three (3) days after the date when mailed by United States First Class, Registered or Certified Mail, postage prepaid, or upon receipt when delivered by reliable overnight courier or hand delivery, and addressed as follows:

If to Board:

School Board of Isle of Wight County
820 West Main Street
Smithfield VA 23430
Attn: _____

with a copy to:

If to Milestone:

Milestone Communications
12110 Sunset Hills Road, Suite 100
Reston, Virginia 20190
Attn: Leonard Forkas, Jr.

with a copy to:

Cooley LLP
11951 Freedom Drive
Reston, Virginia 20190
Attn: John G. Lavoie, Esquire

or to such other addresses as either of the parties may designate from time to time by giving written notice as herein required.

20. Miscellaneous.

20.1. Nothing in this Agreement shall confer on Milestone any property right or right in and to any Site until the execution of a Site Lease.

20.2. In performing its duties under this Agreement, Milestone shall at all times be an independent contractor, and not as an employee, agent, partner or joint venturer of Board. Milestone shall have no right or authority, expressed or implied, to commit or otherwise obligate Board in any manner.

20.3. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

20.4. Waiver of any of the terms or provisions hereof may only be in writing and shall be operative only for the time and to the extent therein stated. No waiver of any default or breach of any of the terms or provisions hereof by either party hereto shall be implied from the failure by either party to take action on account of such default or breach. No waiver shall affect any default other than the default specified in the waiver. No waiver of any term or provision

contained herein by either party shall be construed as a waiver of any subsequent breach of the same term or provision. The consent or approval by either party to, or of, any act by the other party requiring further consent or approval shall not be deemed to waive or render unnecessary their consent or approval to, or of, any subsequent similar acts.

20.5. Any provision of this Agreement may be amended if, but only if, such amendment is in writing and is signed by Board and Milestone.

20.6. The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

20.7. This Agreement shall be deemed to be a contract made under seal and shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, without reference to conflicts of laws principles.

20.8. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement shall become effective when Board shall have received counterparts hereof signed by both parties.

20.9. Any legal action or proceeding with respect to this Agreement or any document related hereto or thereto shall be brought in the courts of the Commonwealth of Virginia in Isle of Wight County or of the United States of America for the Eastern District of Virginia and in no other courts, and by execution and delivery of this Agreement, Milestone hereby accepts for itself and in respect of its property, general and unconditionally, the jurisdiction of the aforesaid courts. Milestone consents to the service of process in any such action or proceeding by the mailing of copies of such process to it by certified mail at the address indicated in Section 19. Nothing in this section shall affect Board's right to serve process in any other manner permitted by law or to bring proceeding against Milestone in any other court having jurisdiction.

20.10. This Agreement and the Site Leases set forth the entire agreement of the parties with respect to the subject matter hereof and thereof and supersede all previous understandings, written or oral, in respect thereof.

20.11. All rights, remedies and powers provided in this Agreement may be exercised only to the extent that the exercise thereof does not violate any applicable provision of law, and all the provisions of this Agreement are intended to be subject to all applicable mandatory provisions of law which may be controlling and be limited to the extent necessary so that they will not render this Agreement invalid or unenforceable in whole or in part. If any provision hereof is invalid and unenforceable in any jurisdiction, then, to the fullest extent permitted by law, (i) the other provisions hereof shall remain in full force and effect in such jurisdiction and shall be strictly construed in order to carry out the intentions of the parties hereto as nearly as may be possible and (ii) the invalidity or unenforceability of any provision hereof in any jurisdiction shall not affect the validity or enforceability of such provision in any other jurisdiction.

20.12. The headings of the various sections of this Agreement are inserted only for convenience of reference and are not intended, nor shall they be construed, to modify, define, limit, or expand the intent of the parties as expressed in this Agreement. Any pronoun used herein shall be deemed to refer to any gender, and singular pronouns shall be deemed to include the plural and vice versa. The use in this Agreement of the word "including" when following any general statement, term or matter, shall not be construed to limit that statement, term or matter to the specific items or matters, whether or not nonlimiting language (such as "without limitation", or "but not limited to" or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of that general statement, term or matter. This Agreement shall not be construed as if it had been prepared by one of the parties, but rather as if both parties had prepared the same.

20.13. Neither Milestone nor Board intends by any provision of this Agreement to confer any right, remedy or benefit upon any third party.

20.14. Time is strictly of the essence of each and every provision of this Agreement.

20.15. Board and the person executing and delivering this Agreement on Board's behalf each represents and warrants that such person is duly authorized to so act and has the power and authority to enter into this Agreement; and that all action required to authorize Board and such person to enter into Agreement Lease has been duly taken.

21. Definitions.

21.1. Zoning and Permitting Application. A request or application for site plan approval, zoning certificate and/or building permit filed with Isle of Wight County, Virginia Planning and Development Review, Planning Commission, Zoning Administration or other departments of Isle of Wight County, Virginia having jurisdiction over the Site.

21.2. Approved Carrier. A telecommunications service provider licensed by the Federal Communication Commission ("F.C.C.") and any other governmental agencies for which approval is needed to conduct such company's business.

21.3. Approved Site. A Site that has received Final Approval for Development.

21.4. Carrier Sublease. A sublease, license or similar occupancy agreement with an Approved Carrier for space on a Monopole or in an Equipment Facility.

21.5. Development. The construction of up to two (2) Monopoles and an Equipment Facility on a Site, and the leasing of space on the Monopoles and within the Equipment Facility to Approved Carriers.

21.6. Equipment Facility. A building shelter, structure, or other facility, determined by Milestone on a site by site basis subject to the reasonable approval of Board, in which ground-based equipment necessary for the use of the Monopole(s) shall be located.

21.7. Event of Bankruptcy. shall mean the occurrence of any one or more of the following:

(a) If a court of competent jurisdiction shall enter a decree or order or relief in respect of Milestone in any involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of Milestone or of any substantial part of its property, or ordering the winding up of its affairs or liquidation of its property, and such decree or order shall continue unstayed and in effect for a period of thirty (30) days; or

(b) If Milestone shall commence a voluntary case under any applicable bankruptcy, insolvency or similar law now or hereafter in effect, shall consent to the entry or an order for relief in an involuntary case under any such law, or shall consent to the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator (or other similar official) of Milestone or of any substantial part of its property, or shall make any general assignment for the benefit of creditors or shall take any action in furtherance of any of the foregoing.

21.8. Facilities. (a) Up to two (2) Monopoles, (b) an Equipment Facility, (c) Milestone's antennas and those of its tenants, lessees and licensees, equipment, ancillary and related structures, cables, accessories and improvements, and (d) all other equipment on any Site, other than equipment owned by Board, located on the Site pursuant to the Site Lease or any Carrier Sublease, together with any additions approved by Board.

21.9. Final Approval. The final approval granted by the Board Project Manager upon receipt of Milestone's final Site Plan. Final Approval may be given or withheld in Board's sole and absolute discretion.

21.10. Governmental Approvals. All permits, approvals and permissions required by any governmental or quasi-governmental agency for the construction, use, leasing and operation of the Facilities.

21.11. Monthly Gross Rental Revenues. All monthly rental income or revenue derived from the Carriers on any Monopole owned by Milestone on any Site. As of the date of this Agreement, the monthly base rent charged to each Carrier by Milestone is \$2,500. The following reimbursable expenses paid by Carriers to Milestone are one-time payments and shall be excluded from the calculation of Monthly Gross Rental Revenues (provided that such reimbursable expenses are not in lieu of or in substitution for any rent under the Carrier Sublease): (a) expenses incurred to extend power, telecommunication lines/equipment and any other utilities to the Facilities, (b) any extraordinary expenses incurred to clear, grade and construct the vehicular access from the nearest road to the Facilities and (c) any expenses incurred to purchase and install a stealth monopole (i.e. tree, clock tower or any other nonstandard monopole) above and beyond the expenses for a standard monopole. The expenses described in the preceding sentence shall include, but not be limited to, engineering, construction administration, application and legal fees and expenses.

21.12. Lender. A bona fide reputable banking or financial institution with net assets of at least \$100,000,000. There shall not be more than one Lender with respect to any Site.

21.13. Milestone. The Milestone named in the initial paragraph hereof, together with its permitted successors and assigns, and, following the termination of this Agreement, the lessee under any Site Lease, with respect to such Site.

21.14. Monopole. A monopole or flagpole tower not exceeding 150 feet in height. Each Monopole shall be designed to accommodate no less than 3 and no more than 8 telecommunications providers. The exact type of Monopole to be constructed is subject to Board's prior consent. The height of a Monopole may exceed the height set forth herein with the prior written approval of Board, which may be given or withheld in its sole and absolute discretion.

21.15. Preliminary Approval. The conceptual approval by the Board Project Manager of Milestone's conceptual development plan for a Site, following Board's receipt of a Request for Approval. Preliminary Approval may be given or withheld in Board's sole and absolute discretion.

21.16. Request for Approval. A written request by Milestone that a Site be considered for Development, in accordance with the process set forth in Section 5.2 hereof.

21.17. Board Project Manager. Board's then appointed designated representative for purposes of performing the functions of Board hereunder. The Board Project Manager may be changed from time to time by Board, at Board's sole and absolute discretion, upon notification thereof to Milestone.

21.18. Site. Each parcel of real property described in Schedule 21.18 attached hereto; provided, however, that any such Site shall cease to be a Site available for further Development if it is sold or conveyed by Board.

21.19. Site Assessment. A report on the viability of a Site for telecommunications purposes.

21.20. Site Lease. A lease in the form set forth in Schedule 21.20 attached hereto.

21.21. Site Plan. A plan showing in reasonable detail the proposed Development on any Site, including, without limitation the location of the Facilities, proposed ingress-egress routes and all requested easements.

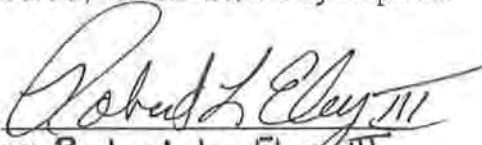
21.22. Third Party. A party other than Board, the Commonwealth of Virginia, Isle of Wight County or any agency or instrumentality thereof.

[Signatures on the following page]

IN WITNESS WHEREOF, the parties hereto execute this Telecommunications Leasing Master Agreement in two parts on the dates indicated.

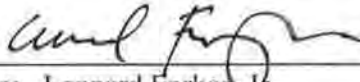
BOARD:

SCHOOL BOARD OF ISLE OF WIGHT COUNTY, VIRGINIA, a body corporate

By: 
Name: Robert L. Eley III
Its: Chairman
Date: February 14, 2013

MILESTONE:

MILESTONE COMMUNICATIONS MANAGEMENT III, INC., a Delaware corporation

By: 
Name: Leonard Forkas, Jr.
Its: President
Date: 2.20.2013.

Approved as to form:


A. Paul Burton, School Board Attorney

SCHEDULE 4.2-1

FORM CARRIER SUBLEASE RIDER

LEASE RIDER

THIS LEASE RIDER (“Rider”) is executed simultaneously with and constitutes a substantive part of that certain Lease Agreement of even date herewith by and between MILESTONE COMMUNICATIONS MANAGEMENT III, INC., a Delaware corporation having an office at 12110 Sunset Hills Road, Suite 100, Reston, Virginia 20190 (“Lessor”) and [_____] (“Lessee”).

RECITALS

R-1 Lessor and Lessee are simultaneously entering into a Lease Agreement (including this Rider, the “Lease”) whereby Lessee shall lease from Lessor certain rights to place, on Lessor’s Monopole, Lessee’s telecommunications equipment, and to locate on the Site on which Lessor’s Monopole is constructed (or is to be constructed after the date hereof) Lessee’s ground based equipment incident thereto, all in accordance with the terms of the Lease.

R-2 Lessor has disclosed to Lessee and Lessee acknowledges that the site on which the Monopole and equipment facility is located, or is to be located (the “Site”), is not owned in fee simple by Lessor, but rather is owned by the School Board of Isle of Wight County, Virginia (“Board”), and is under lease to Lessor pursuant to a Real Property Deed of Lease Agreement dated as of the ___ day of _____, 20__ (the “Site Lease”) or will hereafter be under lease to Lessor under the form of site lease previously agreed upon between Lessor and Board. Capitalized terms used herein and not defined shall have the meaning give to such terms in the Site Lease.

R-3 Board has required, as a condition precedent to Lessor and Lessee entering in to the Lease, and as a condition to the effectiveness thereof, that Lessor and Lessee simultaneously enter into this Rider as a substantive and material part of the Lease.

NOW THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, Lessor and Lessee agree as follows:

The foregoing Recitals are true and correct and are incorporated herein as a substantive part of this Rider and of the Lease.

1. All capitalized terms used herein and not otherwise defined herein shall have the meanings given them in the Lease.

2. Lessee has been provided, and hereby acknowledges that it has received, a copy of the Site Lease (or, in the event that the Site Lease for the Site is not, as of the date hereof, executed, Lessee has received and reviewed the form of site lease previously agreed upon

between Lessor and Board). Lessee has had an opportunity to review and understand the Site Lease, and acknowledges the absolute primacy of the terms and conditions of the Site Lease over the terms and conditions of the Lease.

3. Notwithstanding any other provision of the Lease, Lessee acknowledges the absolute primacy of Board's use of the Site as a public school or administration center, as the case may be, and that Lessee's rights under the Lease are subject and subordinate to Board's use and operation of the Site. Prior to any entry upon the Leased Premises, Lessee shall provide not less than two (2) business days prior notice to Lessor and Board which notice shall specify the type of work or other activities that are to be performed or undertaken on the Leased Premises or which may impact the Site. In exercising their rights under the Lease and this Rider, Lessee will avoid any adverse construction, operational or other such impact on the Site or Board's use and operation thereof, whether such impacts arise from work or activities being performed or undertaken on or off of the Site (utility outages arising from off-site utility relocation, for example), and, notwithstanding any other provision of the Lease, Lessee will cause such entry, work or activities to be performed or undertaken at such times, and to occur in such manner, as Board may require, in its sole discretion, to avoid any adverse impacts to the Site or Board's use thereof. In case of emergencies threatening life or safety or Lessee's equipment, Lessee may enter the Leased Premises without prior notice to Lessor or Board, provided Lessee notifies Lessor and Board of such entry, and the nature of the work performed or undertaken as a result of such emergency, as soon as practicable after Lessee's entry. Notwithstanding the foregoing, Lessee shall have the right to make customary and routine inspections of the Leased Premises upon one (1) business day prior notice, provided that (i) such entry is only for the purpose of inspecting the Leased Premises, conducting routine maintenance and repairs (provided such maintenance and/or repairs do not require alteration of the structural elements to the Base Station or the Monopole or the addition or substitution of any electrical cabinet or equipment shelter) and (ii) the worker or workers who make such inspections check-in with the appropriate personnel at the Site prior to accessing the Leased Premises and, in all cases, follow all procedures required by Site personnel.

4. Lessee shall defend, with counsel acceptable to Board, and indemnify and hold harmless, Board from all losses, costs, claims, causes of actions, demands and liabilities arising from (a) any breach by Lessee of any covenant of the Lease; (b) any misrepresentation by Lessee contained in the Lease and/or any breach of any warranty contained in the Lease; and (c) any occurrence, of any kind or nature, arising from (i) Lessee's construction, installation, maintenance, repair, operation, replacement or removal of Lessee's equipment in the Base Station, on the Leased Premises or on the Site, or any other activities of Lessee in the Base Station, on the Leased Premises or on the Site of any kind or nature, (ii) the condition of Lessee's equipment, the Base Station or the Leased Premises and (iii) any personal injury, death, or accident in any way related to Lessee's use, operation or maintenance of the Base Station, the Site, the Leased Premises and/or any of Lessee's equipment or antennas contained therein or on the Monopole, of any kind or nature, whether foreseeable or not. Such indemnification shall include the cost of investigation, all expenses of litigation, and the cost of appeals, including, without limitation, attorneys' fees and court costs, and shall be applicable to Lessee's activities on the Site whether prior to the Commencement Date or after the termination of the Lease. In addition to Board, Board's board members, staff, officers, agents, servants, employees,

volunteers, business invitees, customers, students, family members and guests shall be beneficiaries of Lessee's indemnification.

5. The term of the Lease shall not extend beyond the term of the Site Lease and any termination of the Site Lease shall automatically effectuate a termination of the Lease, without any further action from Board.

6. During the term of the Lease, Lessee shall maintain a policy of commercial general liability insurance insuring Lessor and Board against liability arising out of the use, operation or maintenance of the Leased Premises. The insurance will be maintained for personal injury and property damage liability adequate to protect Lessor and Board against liability for injury or death of any person in connection with the use, operation and condition of the Leased Premises, and to insure the performance of Lessee's indemnity set forth in Section 4 of this Rider, in an amount not less than \$2,000,000 per occurrence/aggregate. During the term of the Lease, Lessee shall also maintain workers' compensation and employers' liability insurance, and such other insurance relating to the installation, repair, maintenance, operation, replacement and removal of Lessee's equipment and the use of the Leased Premises. The limits of the insurance will not limit the liability of the Lessee. All insurance required to be carried by Lessee shall name, in addition to Lessor, Board as an additional insured. Certificates of such insurance shall be delivered to Lessor and Board and it shall be stated on the insurance certificate that this coverage "is primary to all commercial liability coverage the Lessor or Board may possess."

7. Lessee shall not cause or permit any hazardous or toxic wastes, substances or materials (collectively, "Hazardous Materials") to be used, generated, stored or disposed of on, under or about, or transported to or from the Leased Premises (collectively, "Hazardous Materials Activities") without first receiving written consent from Lessor, which Lessee acknowledges is contingent upon Lessee's receipt of written consent from Board, which may be withheld by Board for any reason whatsoever and which may be revoked at any time, and then only in compliance (which shall be at Lessee's sole cost and expense) with all applicable legal requirements and using all necessary and appropriate precautions. Lessor and Board shall have the right at all reasonable times, and from time to time, to conduct environmental audits of the Leased Premises and Lessee shall cooperate in the conduct of those audits. The term "Hazardous Materials" shall have the same meaning ascribed to it in the Site Lease.

8. Prior to commencing any activities on the Site, Lessee shall provide Lessor, and Lessor shall provide Board, with evidence satisfactory to Lessor and Board that Lessee and its contractors and agents who will be working on the Site are covered by insurance as required by Section 6 hereof. All of Lessee's work and facilities shall be installed free of mechanics', materialmens' and other liens and claims of any person. Lessee shall bond off or discharge any such liens or other claims within thirty (30) days after notice from Lessor or Board. In the event that Lessee damages any grassed area as a result of its activities on the Site, Lessee shall re-sod the disturbed areas, and as soon as reasonably practicable, return them to the condition existing immediately prior to the activity.

9. Lessee shall operate the Base Station in strict compliance with all applicable statutes, codes, rules, regulations, standards and requirements of all federal, state and local

governmental boards, authorities and agencies including, without limitation, OSHA (including, without limitation, OSHA regulations pertaining to RF radiation), the F.C.C. and the FAA, and with such reasonable rules and regulations governing the use of the Site as Board may adopt from time to time; provided that in all events the same shall not materially interfere with or impede the use of the Base Station by Lessee, or materially increase the cost of the use and operation thereof. In the event that the operation of the Base Station violates any of such statutes, codes, rules, regulations, standards or requirements, Lessee agrees to suspend operation of the Base Station within twenty-four (24) hours after notice of such violation and not to resume operation of the Base Station until such operation is in strict compliance with all of the requirements of the Lease.

10. Lessee shall allow Lessor and Board, upon prior notification to Lessee, or without notice in the event of any emergency, to enter the Leased Premises or any part thereof at any reasonable time and in a manner so as not to interfere more than reasonably necessary with Lessee's use of the Base Station, for the purpose of inspecting the Leased Premises.

11. Lessee acknowledges that Board has the right, under the terms and conditions of the Site Lease, to cause Lessor to enforce all of the provisions, rights and remedies hereunder, and that Board shall not, as a result be deemed to incur any liability therefor.

12. Any notice required to be given to Lessor under the terms and conditions of the Lease shall simultaneously be delivered to Board at the address set forth on the signature page hereto or such other notice as Board shall specify from time to time.

13. Under no circumstances shall Board have any liability whatsoever to Lessee pursuant to the Lease, and Lessee hereby specifically and fully disclaims any and all right to pursue any claim or cause of action arising from this transaction against Board, whether at law, in equity or otherwise.

14. Notwithstanding anything contained herein to the contrary, Lessee represents and warrants that it has read, understands and will comply with Section _____ of the Site Lease, and each such other provision thereof, relating to interference.

15. Lessee agrees (i) to repair any damage to the Site or the Leased Premises caused by Lessee, its employees, agents, or contractors, including, but not limited to, any damage to utility lines, drains, waterways, pipes, grass fields or paved surfaces, occurring as a result of Lessee's operations at the Leased Premises or on the Site, including but not limited to construction, installation, maintenance, repair, operation, replacement or removal of Lessee's equipment on the Leased Premises or the Site, and Lessee shall restore the Leased Premises and/or the Site to the condition existing immediately prior to such damage, (ii) that any repair work undertaken on the Site or the Leased Premises shall be completed as soon as possible after notice thereof, (iii) that if Lessee's activities on the Site or the Leased Premises result in the need to restore or replace any grass areas, such areas shall be sodded, rather than seeded, and (iv) that it shall be responsible for the full and timely payment of any costs incurred in connection with the repairs described in clauses (i) through (iii) of this sentence. Upon expiration of all applicable notice and cure provisions provided in the Lease, Board shall have the right, but not the obligation, to make, or cause to be made, any repairs to the Site or the Leased Premises

which Lessee has failed to make pursuant to the terms of the Lease, and Lessee shall, immediately upon demand therefor, reimburse Board for the costs incurred in connection with such repairs.

16. This Rider shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, and may be executed in counterparts, all of which when taken together shall constitute one original. In the event of any conflict between this Rider and the Lease, the terms of this Rider shall control.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE OF LEASE RIDER

LESSOR:

By: _____

LESSEE:

By: _____

Board Notice Address:

School Board of Isle of Wight County, Virginia
820 West Main Street
Smithfield, VA 23430
Attn: _____

SCHEDULE 21.18

LIST OF SITES

[Attached]

SCHEDULE 21.20

FORM SITE LEASE

[Attached]

543442 v3/RE

SECOND AMENDMENT TO DEED OF SITE LEASE AGREEMENTS

SITES: All Sites (see Exhibit A)

THIS SECOND AMENDMENT TO DEED OF SITE LEASE AGREEMENTS (this "Second Amendment"), made and entered into this 3rd day of April, 2017, by and between HAMPTON ROADS SANITATION DISTRICT, a political subdivision of the Commonwealth of Virginia ("Lessor") and MILESTONE TOWER LIMITED PARTNERSHIP – III, a Delaware limited partnership ("Lessee"), recites and provides as follows:

RECITALS

A. As of the date hereof, Lessor and Lessee have entered into twelve (12) Deed of Site Lease Agreements, pursuant to which Lessor leases to Lessee the leased premises located on the sites more particularly described in the Deed of Site Lease Agreements set forth on Exhibit A attached hereto and incorporated herein (collectively, as each are amended, the "HRSD Leases").

B. Lessee and Lessor desire to amend the Section 5(a) of all of the HRSD Leases upon the terms set forth herein.

AGREEMENT

NOW, THEREFORE, for and in consideration of Ten and 00/100 Dollars (\$10.00), the mutual agreements set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows.

1. Recitals. The Recitals set forth above are true and correct in all respects and are incorporated herein as a substantive part of this Second Amendment.

2. Section 5 - Rent.

a. Section 5(a). Lessor and Lessee agree that the following is hereby inserted immediately prior to the last sentence of Section 5(a) of the HRSD Leases: "*On the first anniversary of the commencement of the monthly rent contemplated in this Section 5(a) (and on each anniversary thereafter), such monthly payment shall increase by an amount equal to two and one half percent (2.5%) of the amount for the previous year. For purposes of clarity, Lessor and Lessee hereby represent and warrant that the rent provisions set forth in this Section 5(a) are intended to be and shall be considered effective as of date defined as Lessor's Rent Commencement Date in each HRSD Lease.*"

3. Inconsistencies. If any inconsistencies exist between the terms and conditions contained in the HRSD Leases and the terms and conditions contained in this Second Amendment, then the terms and conditions in this Second Amendment shall control.

4. Ratification. Except as amended herein, the HRSD Leases shall remain in full force and effect and is hereby ratified and reaffirmed by Lessor and Lessee.

5. Governing Law. The execution, performance and enforcement of this Amendment shall be governed by the laws of the Commonwealth of Virginia without application of conflicts of law principles.

6. Counterpart Signature. This Second Amendment may be signed in one or more counterparts, each of which, when executed with the same formality and in the same manner as the original, shall constitute an original and binding copy of this Second Amendment. Photocopies of this Second Amendment shall be as binding as the original.

IN WITNESS WHEREOF, the parties hereto execute this Second Amendment to Deed of Site Lease Agreements effective as of the date first written above.

LESSOR:

HAMPTON ROADS SANITATION DISTRICT

By: 
Edward G. Henifin, P.E., General Manager

Date: 3/30/2017

LESSEE:

MILESTONE TOWER LIMITED PARTNERSHIP
III, a Delaware limited partnership

By: Milestone Communications Management
III, Inc., a Delaware corporation, its General
Partner

By: 
Leonard Forkas, Jr., President

Date: April 3, 2017

EXHIBIT A

1. Atlantic Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated May 14, 2015, as amended.
2. Army Base Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated August 26, 2014, as amended.
3. Boat Harbor Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated October 14, 2014, as amended.
4. Chesapeake-Elizabeth Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated March 16, 2015, as amended.
5. James River Treatment Plant Site – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated February 9, 2015, as amended.
6. Middle Peninsula Operations Center (West Point) – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated February 9, 2015, as amended.
7. Nansemond Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated June 16, 2014, as amended.
8. North Shore Operations Center – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated August 26, 2014, as amended.
9. South Shore Operations Center – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated February 9, 2015, as amended.
10. Virginia Initiative Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated August 14, 2014, as amended.
11. Williamsburg Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated February 9, 2015, as amended.
12. York River Treatment Plant – Deed of Site Lease Agreement between Hampton Roads Sanitation District and Milestone Tower Limited Partnership – III, dated March 4, 2015, as amended.

HRSD COMMISSION MEETING MINUTES
March 28, 2017

ATTACHMENT #6

AGENDA ITEM 20. – Informational Items

- a. Management Reports
 - (1) [General Manager](#)
 - (2) [Communications](#)
 - (3) [Engineering](#)
 - (4) [Finance](#)
 - (5) [Information Technology](#)
 - (6) [Operations](#)
 - (7) [Special Assistant for Compliance Assurance](#)
 - (8) [Talent Management](#)
 - (9) [Water Quality](#)
 - (10) [Report of Internal Audit Activities](#)
- b. [Strategic Planning Metrics Summary](#)
- c. [Effluent Summary](#)
- d. [Air Summary](#)



March 20, 2017

Re: General Manager's Report

Dear Commissioners:

As a large regional organization, it is easy to underestimate the amount of time and energy required to support our smaller communities. After 15 months of discussions, numerous briefings and a court order, the County of Surry Board of Supervisors approved a service agreement with HRSD at the beginning of February. Now the real work begins. Staff is identifying the specific real and personal property assets that will be received from the County and negotiating continuing service and billing service contracts with Sussex Service Authority to provide uninterrupted services through the transition period. HRSD will assume ownership and operational responsibility once the property issues are resolved and we take ownership of all required assets. It is anticipated this will occur at the end of May or June.

The addition of Surry County will add approximately 600 customers, one 60,000 gallon per day treatment plant and all associated appurtenances. Surry County increases our customer accounts by 0.13 percent and our treatment capacity by 0.025 percent, yet has required a full team approach. Operations staff have assessed the condition of the facilities and identified the property required. Engineering staff have developed GIS mapping and obtained property data required to transfer ownership. Finance staff have worked to identify appropriate billing processes and procedures and developed the rates to apply to Surry County customers. Water Quality staff have coordinated permit related issues and performed sampling and analysis. The process to add Surry County to the HRSD territory has provided another opportunity for our incredibly talented staff to shine, working together as one HRSD on initiatives small and large.

1. **Treatment Compliance and System Operations:** All plants met all VPDES and air permit requirements during the month. There was one system spill in West Point.

PO Box 5911, Virginia Beach, VA 23471-0911 • 757.460.7003

Commissioners: Frederick N. Elofson, CPA, Chair • Maurice P. Lynch, PhD, Vice-Chair • Vishnu K. Lakdawala, PhD
Michael E. Glenn • Arthur C. Bredemeyer • Stephen C. Rodriguez • Willie Levenston, Jr. • Ann W. Templeman
www.hrsd.com

2. **Internal Communications:** I participated in the following meetings/activities with HRSD personnel:
 - a. Two length of service breakfasts
 - b. Several meetings focused on the Fiscal Year 2018 operational budget
 - c. A meeting to discuss reuse regulations
 - d. A new employee orientation session
 - e. A meeting to discuss VDOT right-of-way issues in Small Communities
 - f. Several meetings to plan the SWIFT celebration
 - g. A meeting to discuss regulatory reform opportunities
 - h. A meeting to discuss the Deltaville sewer collection system project
 - i. A meeting to review the current status of the Wet Weather Management Plan

3. **External Communications:** I participated in the following meetings/activities:
 - a. The regular meeting of the Surry County Board of Supervisors to address questions about the service agreement between HRSD and Surry County
 - b. The out-brief by the SWIFT expert panel convened by the National Water Research Institute (NWRI)
 - c. The regular meeting of the Council of the Town of Surry to address questions regarding HRSD assuming ownership and operation of their sewer system
 - d. A Hampton City Council work session to present details of the nutrient trading agreement between HRSD and the City of Hampton
 - e. A meeting with Virginia Department of Health staff to explore methods for locating drinking water wells within 3 miles of HRSD SWIFT well locations
 - f. A presentation on real-time controls
 - g. A presentation on concrete fabric products
 - h. A presentation on drone use for pipeline and right-of-way inspections
 - i. A meeting with Emerson officials regarding challenges and importance of the HRSD SCADA project
 - j. A briefing on the preliminary results of the High Strength Waste Study by HDR

- k. A briefing by AECOM on their program management experience and capabilities
- l. A meeting with USDA officials and Middlesex County regarding USDA Rural Water funding for Deltaville sewer
- m. The monthly meeting of the HRPDC Director of Utilities Committee
- n. A conference call about the Value of Water Campaign

Planning for the March 31st SWIFT celebration is in full swing. This three-in-one event promises to be memorable for guests and participants. I hope your schedules will allow you to attend.

Thanks for your continued dedicated service to HRSD, the Hampton Roads region, the Commonwealth and the environment. **I look forward to seeing you on Tuesday, March 28, 2017 in Virginia Beach.**

Respectfully submitted,

Ted Henifin

Ted Henifin, P.E.
General Manager

TO: General Manager
FROM: Director of Communications
SUBJECT: Monthly Report for February 2017
DATE: March 16, 2017

A. Publicity and Promotion

1. [Loan for Portsmouth, grant for HRSD in proposed House budget](#) | The Virginian-Pilot, February 8, 2017
2. [HRSD going to Surry](#) | Smithfield Times, February 8, 2017
3. [How treated sewage water could help combat sea-level rise](#) | Fox News, February 7, 2017
4. "Think Globally, Act Locally To Spark Interest In Our Water Future" – (VWEA Conduit)
5. Developed an Engineering Week ad that ran in the February 20 issue of *The Virginian-Pilot* to call attention to the many contributions of HRSD's engineers and encourage readers to visit our website to learn about our initiatives and employment opportunities
6. Planned the schedule of events and made arrangements for the March 31 ceremony to: break ground for the Sustainable Water Initiative for Tomorrow (SWIFT) Research Center, sign the Water Quality Credit Agreement and cut the ribbon for HRSD's Extensometer
7. Worked with the SWIFT Research Center project team to design invitations and other ceremony graphics

B. Community Engagement

1. Facebook Reach: 8,444
2. Twitter: 3,194 tweet impressions
3. SWIFT website visits: 434
4. Construction Project Page Hits: 5,775

C. News Releases and Project Notices

1. February 2, 2017 - National Water Research Institute Convenes Independent Advisory Panel to Review HRSD's Sustainable Water Initiative for Tomorrow (SWIFT)
2. February 27, 2017 - Templeman Named HRSD Commissioner
3. Weblin Place Rehabilitation Project Notice
4. Kecoughtan Road Pipeline Project Notice
5. Bayshore Pipeline Project Notice
6. Holland Road Pipeline Project Notice

D. Special Projects

1. Tracked legislation of special interest during the 2017 General Assembly session and prepared status reports
2. Worked with the graphic designer on art to be hung in the South Shore Operations Center
3. Prepared the SWIFT celebration guest list of more than 250 individuals representing business, government, research and environmental interests in Virginia.
4. Began design of the P3 Luncheon program

E. Internal Communications

Created five photo collages featuring women scientists at HRSD to share on social media and SharePoint in celebration of the UN's annual International Day of Women and Girls in Science.

F. Metrics

1. Educational and Outreach Activities: 5
 - a. Provided "What about wastewater?" teacher training at the annual Hampton Roads Association of Christian Schools (HRAC) winter conference

- b. Conducted a “Girls in Engineering Day” for Granby High School students at the Virginia Initiative Plant
- c. Engaged students and parents attending John B. Dey Elementary School’s STEM night in “Amazing Aquifers” activities
- d. Presented “What Not to Flush” to all Machen Elementary School kindergarten students
- e. Staffed a Hampton Roads Home Show exhibit as representatives of askHRgreen

2. Number of Community Partners: 5

- a. HRAC
- b. Granby High School
- c. John B. Dey Elementary School
- d. askHRgreen
- e. Machen Elementary School

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Total Training Hours per Full Time Employee (1) - Current Month	Hours / #FTE	0
M-1.4b	Total Training Hours per Full Time Employee (1) - Cumulative Fiscal Year-to-Date	Hours / #FTE	0
M-5.2	Educational and Outreach Events	Number	5
M-5.3	Number of Community Partners	Number	5

Leila Rice

Director of Communications

TO: General Manager

FROM: Director of Engineering

SUBJECT: Engineering Monthly Report for February 2017

DATE: March 13, 2017

A. General

1. Capital Improvement Program (CIP) spending for the seventh month of Fiscal Year-2017 was \$5.45 million, while the planned expenditure for the month was estimated at \$11 million. The largest single CIP project, the VIP Treatment Plant Nutrient Reduction Improvements Contract B, did not submit a pay request this month, which accounted for much of the deficit. CIP spending continues to track at only 80 percent of planned spending for the fiscal year. There were no Water Quality Improvement Fund (WQIF) grant reimbursements for the month.
2. The Engineering Department coordinated a number of activities for National Engineers Week from February 20-24. The week began with an Egg Drop Competition in which 10 contestants created designs to protect an egg from a 20-foot fall. The second event was a contest to design a scale model sewer pump station made of only recycled materials. The third event was a game of Jeopardy, which allowed staff to learn more about the Engineering Department and basic science facts. The week ended with the Engineer's Banquet sponsored by the Engineer's Club of Hampton Roads, where HRSD won the Project of the Year Award for the South Trunk Sewer Section G Replacement project. HRSD's Chief of Planning and Analysis also gave a presentation on the SWIFT Program at the banquet.

B. Asset Management Division

1. Staff continues conducting a pilot study at the Atlantic Treatment Plant (ATP) to evaluate data gaps in the Computerized Maintenance Management System (CMMS) and to assess critical assets. Staff completed a risk matrix to assess data accuracy and completeness in CMMS, as well as an inventory of assets that require protective coatings for future maintenance and budgeting projections.
2. Staff continues working with the Interceptor Systems Division to update the assessment process for the condition and operation of valves within the sewer system. Each valve is inspected every five years; staff initiates a Secondary Valve Assessment Process if a valve displays operational or maintenance issues. Staff updated the secondary process to include

documenting compliance efforts and linked it to the CMMS and the GIS to share data. Staff conducted a preliminary risk assessment of valves believed to be in poor condition and rated each valve based on a likelihood and consequence of failure to determine the relative risk at each location.

C. North Shore and South Shore Design & Construction Divisions

1. The design for the Atlantic Treatment Plant Thermal Hydrolysis Process project is now complete and the bid phase of the project is underway. HRSD selected The Construction Manager (CM) firm Crowder Construction last year, who has assisted with the design effort. Staff created numerous bid packages to facilitate the construction effort; the final scope of the project and guaranteed maximum price is under final negotiation and will be complete by April 2017. Procuring the pre-dewatering centrifuges is underway and will be coordinated with work at two other HRSD treatment plants. This delivery method allows for close collaboration between the designer and the CM firm. This is HRSD's first attempt with this delivery method and we look forward to learning the pros and cons for the possible application on future projects.
2. Construction efforts are now complete for the York River Treatment Plant Outfall and Diffuser Modifications project. The final connection to the existing outfall pipeline will be completed in March; some restoration work on land and potentially in the York River is still required. Constructing and activating the outfall needs to be complete in March since Dominion Virginia Power (DVP) plans to close the cooling water canal currently in use by HRSD to discharge the treated effluent from the York River Treatment Plant.

D. Planning & Analysis Division

1. Preparation of the Fiscal Year 2018 CIP continues. Staff met with the Operations Department to discuss new projects and update existing efforts. The CIP process includes using the Hyperion budgeting program within Enterprise Resource Planning (ERP), allowing staff to seamlessly approve and manage all financial aspects of projects. There are 149 existing projects within the CIP valuing \$1.7 billion, and 20 new CIP projects under consideration valuing \$38 million.
2. The Planning & Analysis Division continues leading the Flow Meter Accuracy & Assurance (FAAT) Team. This cross-departmental team was formed in 2015 to consider flow meter concerns at HRSD's treatment plants. The accuracy of these flow meters is critical for both operational and

regulatory reasons. The FAAT Team recommends operational and installation changes by analyzing real-time and historical data.

E. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 6

- a. Staff made a SWIFT presentation to HDR Engineering, Inc. on February 8.
- b. Staff made a SWIFT presentation at the Intergovernmental Water and Sewer Task Force Meeting on February 8.
- c. Staff moderated a Technical Session at the Utility Management Conference entitled, "Executing Large Scale Projects with the Public" on February 8.
- d. Staff made a presentation to students from Granby High School on February 22.
- e. Staff made a SWIFT presentation to the Naval Facility Command (NAVFAC) Climate Ready Group on February 22.
- f. Staff made a SWIFT presentation to the Engineer's Club of Hampton Roads on February 24.

2. Number of Community Partners: 5

- a. HDR Engineering, Inc.
- b. Intergovernmental Water and Sewer Task Force
- c. Granby High School
- d. NAVFAC Climate Ready Group
- e. Engineer's Club of Hampton Roads

3. Number of Research Partners: 0

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Total Training Hours per Full Time Employee (39) - Current Month	Hours / #FTE	2.68
M-1.4b	Total Training Hours per Full Time Employee (39) - Cumulative Fiscal Year-to-Date	Hours / #FTE	25.02
M-5.2	Educational and Outreach Events	Number	6
M-5.3	Number of Community Partners	Number	5
M-5.4	Number of Research Partners	Number	0

Bruce W. Husselbee, P.E.

Bruce W. Husselbee, P.E.

TO: General Manager
FROM: Director of Finance
SUBJECT: Monthly Report for February 2017
DATE: March 15, 2017

A. General

1. After reading HRSD's Commission minutes, the Federal Emergency Management Agency (FEMA) reached out to staff to potentially receive Federal grant funds for Hurricane Matthew damage. HRSD may receive up to 75 percent reimbursement for the two damaged pipelines on Independence Boulevard and Laskin Road, respectively, and a damaged pump at the Chesapeake-Elizabeth Treatment Plant (CETP) may receive up to \$400,000 in grant funds.
2. Revenues continue to track higher than budget, with water consumption flat relative to last fiscal year. Surcharge revenues are projected to exceed the budgeted amount this fiscal year. Staff believes the difference is a combination of conservative revenue forecasting and higher than expected revenue. A portion of the Interest Income includes market value fluctuations. In the July monthly report, staff is planning to separate true interest income and market value fluctuations to clarify the month over month changes. Municipal Assistance is tracking lower due to a reduction in work from the City of Virginia Beach. Expenses are tracking lower than budget, but there should be an uptick on Major Repairs and Capital Assets before the end of the fiscal year. Based on the current trends, staff expects revenues to exceed expenses by the end of this fiscal year.
3. Enterprise Resource Planning (ERP) staff worked with Operations and Procurement staff on the Renewable Energy Credit sales Request for Proposals (RFP) as requested by the Director of Water Technology and Research. Staff estimates the Combined Heat and Power (CHP) system at the Atlantic Treatment Plant (ATP) to produce \$40,000 of renewable energy credits annually net of commission and fees.
4. Customer Interaction Center statistics declined in February, while seasonal Debt Set Off interactions and Online Self Service registrations increased. The temporary increase in Online Self Service registration interactions was due to CC&B 2.5 go-live. By the end of February, 50 percent of online service customers have registered with the enhanced platform. Staff expects statistics to improve as the seasonal and temporary interactions decline and staffing vacancies are filled. Recruitment is underway for two positions within the Customer Interaction Center. Staff continues to look for ways to provide excellent service while managing the service level.

B. Interim Financial Report

1. Operating Budget for the Period Ended February 28, 2017

	Amended Budget	Current YTD	Current YTD as % of Budget (67% Budget to Date)	Prior YTD as % of Prior Year Budget
Operating Revenues				
Wastewater	\$ 242,810,000	\$ 166,311,754	68%	68%
Surcharge	1,500,000	1,250,821	83%	71%
Indirect Discharge	2,500,000	1,769,840	71%	69%
Norfolk Sludge	90,000	50,305	56%	54%
Fees	2,843,000	1,971,760	69%	63%
Municipal Assistance	1,250,000	602,328	48%	56%
Miscellaneous	750,000	557,536	74%	61%
Total Operating Revenue	251,743,000	172,514,344	69%	68%
Non Operating Revenues				
Facility Charge	5,850,000	3,825,650	65%	57%
Interest Income	1,400,000	392,994	28%	75%
Build America Bond Subsidy	2,400,000	1,193,083	50%	51%
Other	840,000	463,965	55%	65%
Total Non Operating Revenue	10,490,000	5,875,692	56%	59%
Total Revenues	262,233,000	178,390,036	68%	68%
Transfers from Reserves	7,901,331	5,267,554	67%	67%
Total Revenues and Transfers	\$ 270,134,331	\$ 183,657,590	68%	68%
Operating Expenses				
Personal Services	\$ 52,521,153	\$ 34,358,607	65%	60%
Fringe Benefits	24,287,503	16,059,099	66%	60%
Materials & Supplies	7,374,956	4,648,185	63%	81%
Transportation	1,448,541	866,523	60%	55%
Utilities	12,286,132	7,372,074	60%	55%
Chemical Purchases	9,360,735	5,147,935	55%	52%
Contractual Services	31,903,100	16,566,774	52%	57%
Major Repairs	9,846,266	3,850,970	39%	33%
Capital Assets	3,519,171	1,764,354	50%	35%
Miscellaneous Expense	2,378,476	1,509,446	63%	54%
Total Operating Expenses	154,926,033	92,143,967	59%	57%
Debt Service and Transfers				
Debt Service	61,947,000	44,764,077	72%	71%
Cost of Issuance Bonds	900,000	2,809	0%	25%
Transfer to CIP	52,101,298	34,734,199	67%	67%
Transfer to Risk management	260,000	173,341	67%	67%
Total Debt Service and Transfers	115,208,298	79,674,426	69%	69%
Total Expenses and Transfers	\$ 270,134,331	\$ 171,818,393	64%	62%

2. Notes to Interim Financial Report

The Interim Financial Report summarizes the results of HRSD's operations on a basis of accounting that differs from generally accepted accounting principles. Revenues are recorded on an accrual basis, whereby they are recognized when billed; expenses are generally recorded on a cash basis. No provision is made for non-cash items such as depreciation and bad debt expense.

This interim report does not reflect financial activity for capital projects contained in HRSD's Capital Improvement Program (CIP).

Transfers represent certain budgetary policy designations as follows:

- a. Transfer to CIP: represents current period's cash and investments that are designated to partially fund HRSD's capital improvement program.
- b. Transfers to Reserves: represents the current period's cash and investments that have been set aside to meet HRSD's cash and investments policy objectives.

3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended February 28, 2017

	General	Risk Management	Reserve	Capital
Beginning of Period - July 1, 2016	\$ 155,644,784	\$ 2,740,508	\$ -	\$ 124,405,496
Add: Current Year Sources of Funds				
Cash Receipts	204,613,593			
Capital Grants				6,491,831
Line of Credit				-
Bond Proceeds (includes interest)				97,253
Transfers In	-	173,341	31,754,250	34,734,199
Sources of Funds	<u>204,613,593</u>	<u>173,341</u>	<u>31,754,250</u>	<u>41,323,283</u>
Total Funds Available	<u>\$ 360,258,377</u>	<u>\$ 2,913,849</u>	<u>\$ 31,754,250</u>	<u>\$ 165,728,779</u>
Deduct: Current Year Uses of Funds				
Cash Disbursements	165,458,403			82,513,281
Transfers Out	34,907,540			31,754,250
Uses of Funds	<u>200,365,943</u>	<u>-</u>	<u>-</u>	<u>114,267,531</u>
End of Period - February 28, 2017	<u>\$ 159,892,434</u>	<u>\$ 2,913,849</u>	<u>\$ 31,754,250</u>	<u>\$ 51,461,248</u>

4. Capital Improvements Budget and Activity Summary for Active Projects the Period Ended February 28, 2017

Classification/ Treatment Service Area	Expenditures		Year to Date		Total Expenditures	Outstanding Encumbrances	Available Balance
	Budget	prior to June 30, 2016	FY 2017 Expenditures				
Administration	\$ 40,961,073	\$ 35,489,810	\$ 2,347,013	\$ 37,836,823	\$ 1,793,165	\$ 1,331,085	
Army Base	156,834,000	117,268,663	1,248,077	118,516,740	4,584,726	33,732,534	
Atlantic	91,488,147	37,540,037	1,807,030	39,347,067	7,560,023	44,581,057	
Boat Harbor	86,663,081	33,305,878	4,656,914	37,962,792	11,403,262	37,297,027	
Ches-Eliz	30,148,274	4,781,814	932,043	5,713,857	1,211,501	23,222,916	
James River	74,913,961	36,167,539	6,529,896	42,697,435	11,107,985	21,108,541	
Middle Peninsula	37,394,839	5,170,712	559,418	5,730,130	3,963,341	27,701,368	
Nansemond	74,720,570	24,996,903	6,285,343	31,282,246	5,295,906	38,142,418	
VIP	252,375,811	195,724,686	20,352,785	216,077,471	27,349,354	8,948,986	
Williamsburg	11,396,383	7,646,446	873,523	8,519,969	1,493,763	1,382,651	
York River	45,160,886	30,560,270	4,908,974	35,469,244	4,535,055	5,156,587	
General	231,727,960	141,618,472	11,957,376	153,575,848	49,685,822	28,466,290	
	<u>\$ 1,133,784,985</u>	<u>\$ 670,271,230</u>	<u>\$ 62,458,392</u>	<u>\$ 732,729,622</u>	<u>\$ 129,983,903</u>	<u>\$ 271,071,460</u>	

5. Debt Management Overview

	Debt Outstanding (\$000's)				
	Principal January 2017	Principal Payments	Net Refunding	Principal February 2017	Interest Payments
Fixed Rate					
Senior	\$ 434,738	\$ 136	\$ -	\$ 434,602	\$ 69
Subordinate	302,703	190	-	302,513	5,657
Variable Rate					
Subordinate	50,000	-	-	50,000	26
Line of Credit	-	-	-	-	-
Total	<u>\$ 787,441</u>	<u>\$ 326</u>	<u>\$ -</u>	<u>\$ 787,115</u>	<u>\$ 5,752</u>

Series 2016 Variable Rate Interest Summary - Variable Rate Debt Benchmark (SIFMA) as of 02/24/17

	SIFMA Index	HRSD	Spread to SIFMA
Maximum	0.87%	0.88%	0.01%
Average	0.17%	0.16%	-0.01%
Minimum	0.01%	0.01%	0.00%
As of 02/24/17	0.64%	0.62%	-0.02%

* Since October 20, 2011 HRSD has averaged 16 basis points on Variable Rate Debt

6. Financial Performance Metrics for the Period Ended February 28, 2017

	Current YTD	Policy Minimum
Capital % Cash Funded	40%	15%
General Reserve as % of Operations	103%	75-100%
Risk Management Reserve as % of Projected Claims Costs	25%	25%

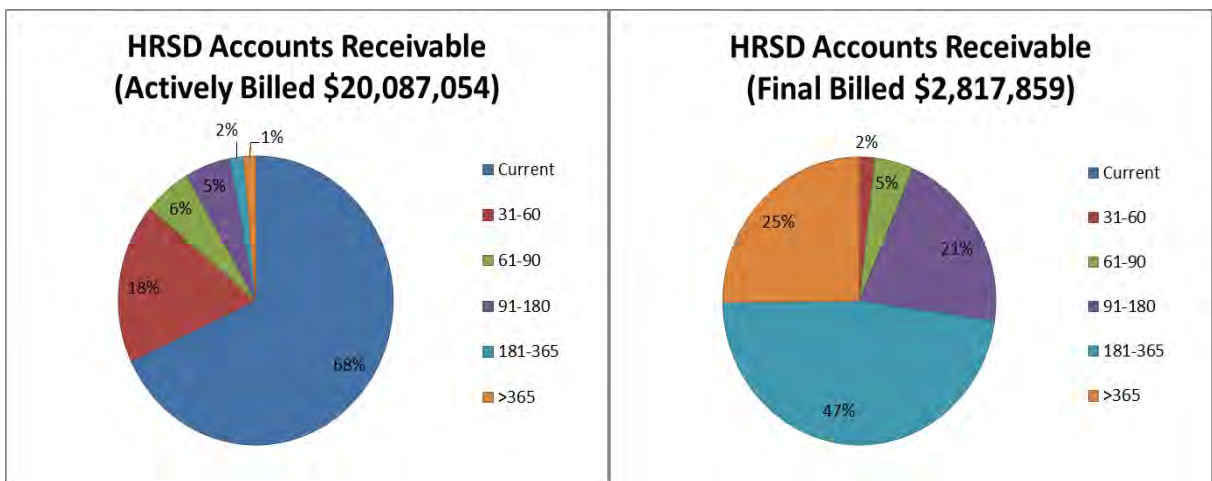
7. Summary of Billed Consumption

Summary of Billed Consumption (ccf)							
Month	Cumulative 3 Year Average	Cumulative 2016 Actual	2017 Cumulative		% Difference		
			Budget Estimate	2017 Cumulative Actual	From Budget	From 2016	From 3 Year Average
July	4,902	4,819	4,784	4,776	-0.2%	-0.9%	-2.6%
Aug	9,774	9,783	9,382	9,275	-1.1%	-5.2%	-5.1%
Sept	14,337	14,290	13,595	14,227	4.6%	-0.4%	-0.8%
Oct	19,210	18,976	18,284	19,017	4.0%	0.2%	-1.0%
Nov	23,362	23,486	22,761	23,282	2.3%	-0.9%	-0.3%
Dec	27,733	27,627	26,918	27,761	3.1%	0.5%	0.1%
Jan	31,997	31,844	31,009	32,036	3.3%	0.6%	0.1%
Feb	36,132	35,960	34,750	36,263	4.4%	0.8%	0.4%
March	40,991	40,706	40,257	-	N/A	N/A	N/A
Apr	45,205	44,834	44,861	-	N/A	N/A	N/A
May	49,487	49,022	48,879	-	N/A	N/A	N/A
June	54,069	53,503	52,788	-	N/A	N/A	N/A

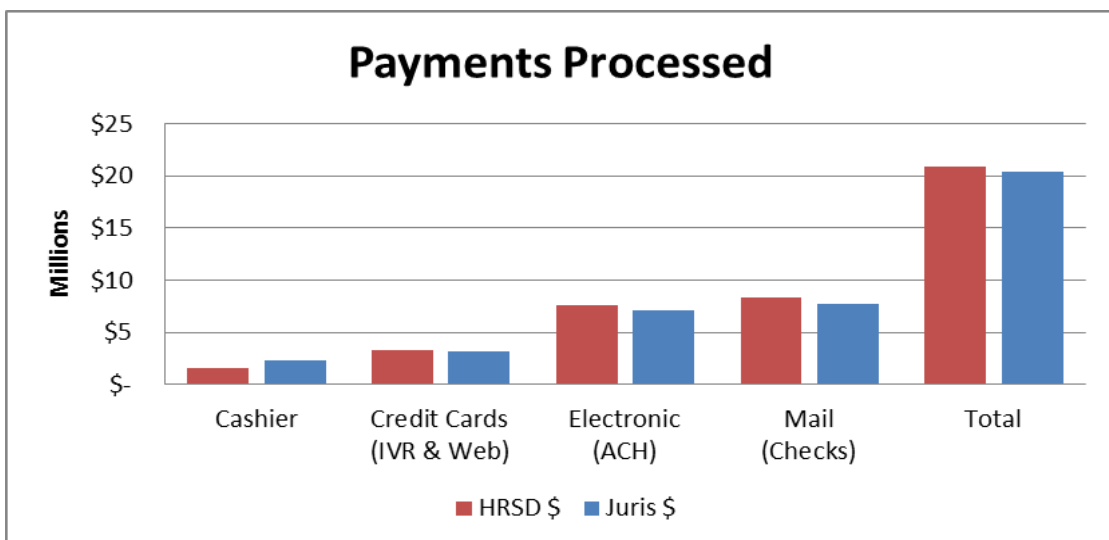
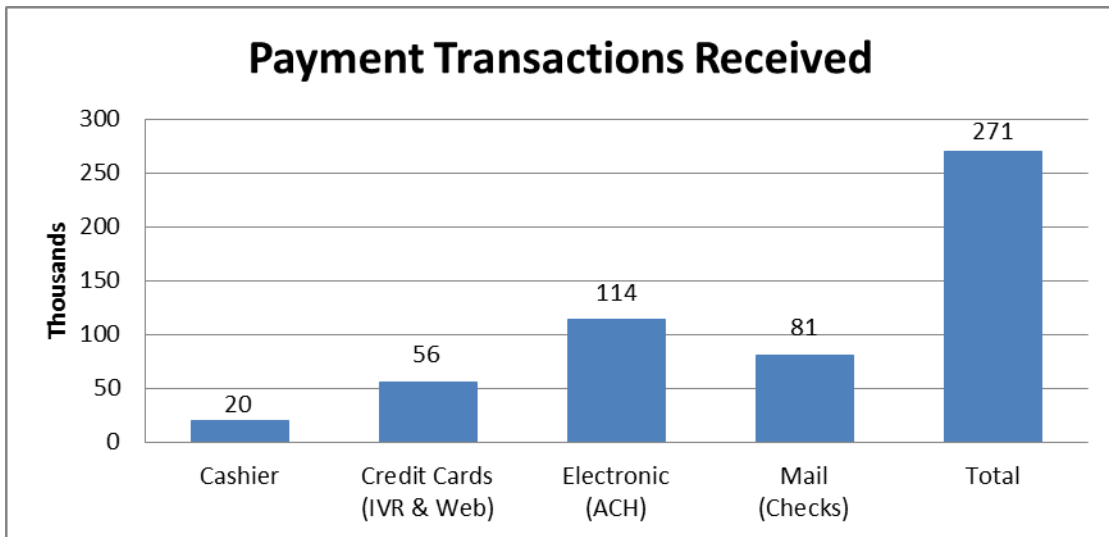
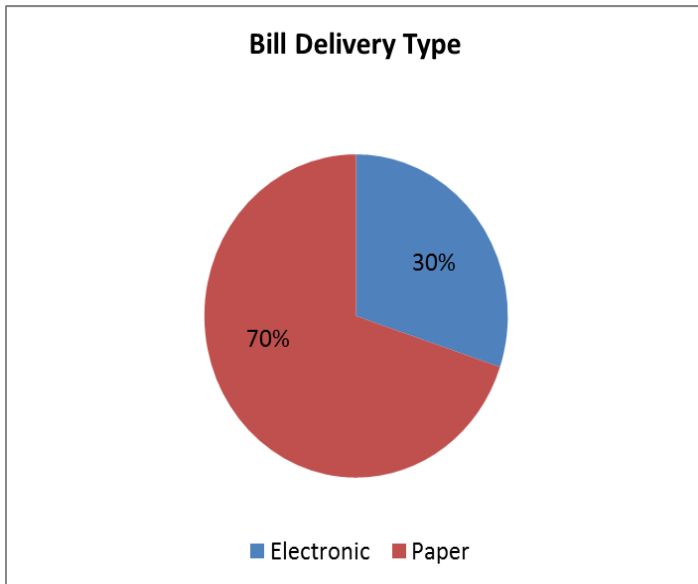
C. Customer Care Center

1. Accounts Receivable Overview

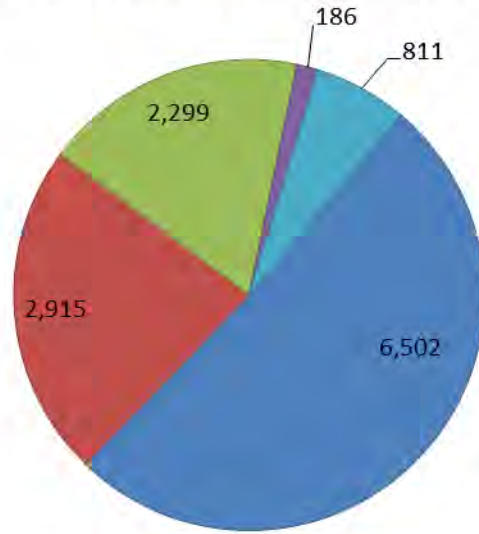
	HRSD	Juris	Total
Roll Forward			
January A/R Balance	\$ 23,294,386	\$ 26,505,968	\$ 49,800,354
Billings	18,247,291	21,814,598	40,061,889
Payments	(21,022,407)	(20,861,277)	(41,883,684)
Delinquency Activity Fees	147,280	-	147,280
Late Payment Charges	48,324	20,943	69,267
Adjustments	2,352,934	(2,547,385)	(194,451)
Balances Written Off	(162,894)	(143,027)	(305,921)
February A/R Balance	\$ 22,904,913	\$ 24,789,820	\$ 47,694,733



2. Customer Care Center Statistics for the Period Ended February 28, 2017

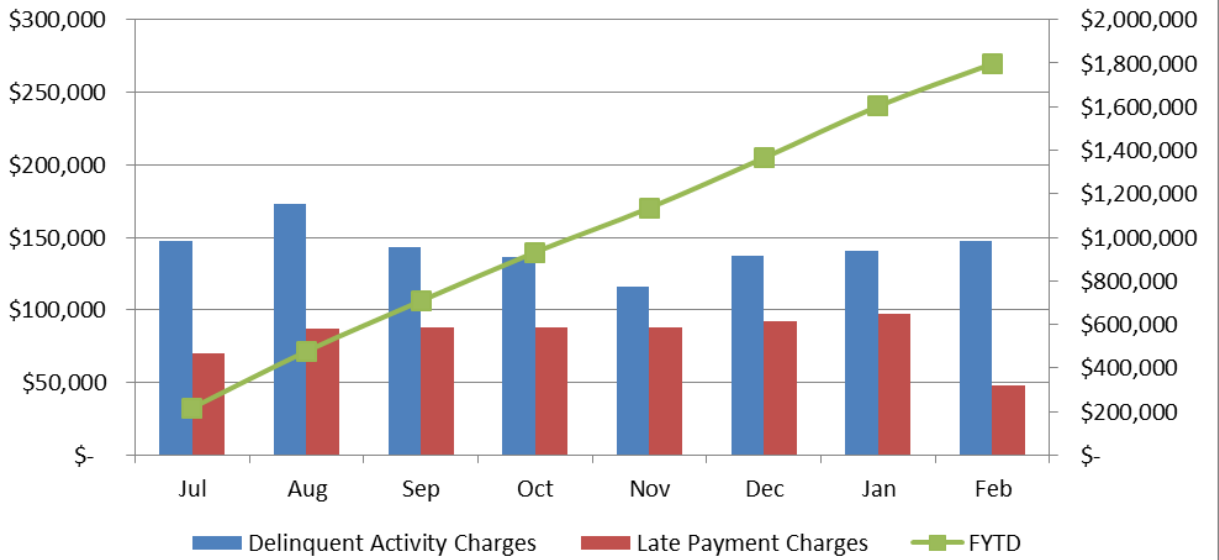


Delinquent Field Activity

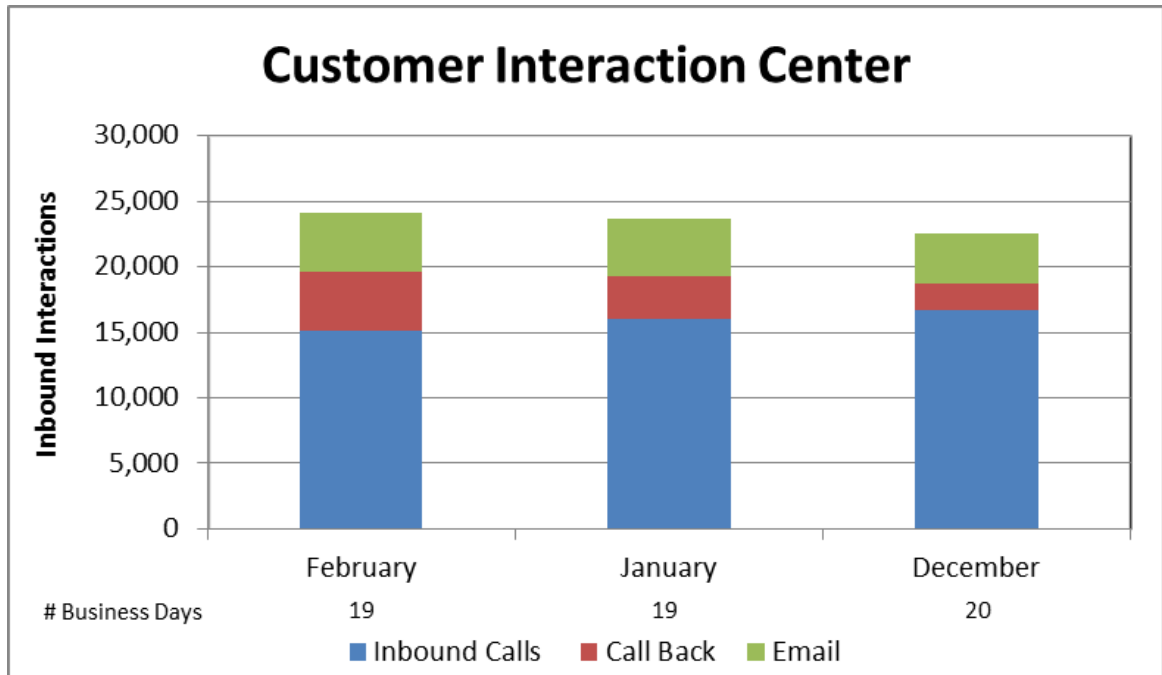


■ Leave Tag
 ■ Cut off
 ■ Turn On
 ■ Lock Meter
 ■ Back Check

Delinquent Fees



■ Delinquent Activity Charges
 ■ Late Payment Charges
 ■ FYTD



Customer Interaction Statistics	February	January	December
Calls Answered within 3 minutes	53%	69%	74%
Average Wait Time	4:40	3:03	2:20
Calls Abandoned	3,231	2,550	1,643

D. Procurement

1. Procurement Statistics

	Current Period	FYTD
Bid Cost Savings	\$ 446,350	\$4,836,204
Negotiated Cost Savings	\$ 3,625	\$ 67,538
Salvage Revenues	\$ 267	\$ 19,145
Corporate VISA Card - Estimated Rebate	\$ 17,841	\$ 142,526

Average Cycle Time (Receipt of Requisition to Award)

Solicitation Types	Award Amounts	Jan-17		Feb-17	
		No. Days	Count	No. Days	Count
RFQs	< \$10,000	11	10	4	11
	\$10,000 - \$50,000	48	7	4	9
IFBs	\$50,000 - \$100,000	46	3	37	3
IFBs/RFPs	>\$100,000	-	0	35	4

Requisition Volume Comparison			
Requisition Amounts	7/1/2015 - 6/30/2016 Requisitions	7/1/2016 - 2/28/2017 Requisitions	Percent Comparison of Past Year
< \$10,000	260	158	61%
\$10,000 – \$50,000	274	158	58%
\$50,000 – \$100,000	47	37	79%
>\$100,000	78	51	65%
Total	659	404	61%

2. Some of the more formal technical competitive bid solicitations for the month include:
 - a. Eaton Motor Control Center Replacement at Atlantic Treatment Plant for South Shore Electrical Division
 - b. Online Wastewater Training Services for the Operations Department

E. Business Intelligence – Enterprise Resource Planning (ERP)

1. ERP Helpdesk currently has 434 open work orders in the following status: 12 escalated, 117 in progress, 12 on hold, 275 open, 18 waiting on user. ERP Helpdesk received 230 work orders in February. In February, 240 work orders were closed and 73 were closed within one hour.
2. ERP staff worked with Hyperion users to update projection and budget data for the Fiscal Year-2018 budget.
3. The ERP team worked with Accounting, Human Resources and Information Technology staff to validate and mail 2016 Affordable Care Act (ACA) 1095C/1095B forms.
4. Staff attended the Implementing Lean for Operational Excellence Conference and has begun identifying possible HRSD pilots.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Community Partners: 0

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Training During Work Hours Per Full Time Employee (100) – Current Month	Hours / #FTE	1.78
M-1.4b	Total Training During Work Hours Per Full Time Employee (100) – Cumulative Fiscal Year-to-Date	Hours / #FTE	24.97
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0
	Wastewater Revenue	Percentage of budgeted	101%
	General Reserves	Percentage of Operating Budget less Depreciation	103%
	Accounts Receivable (HRSD)	Dollars	\$22,904,913
	Aging Accounts Receivable	Percentage of receivables greater than 90 days	19%

Respectfully,

Jay A. Bernas

Jay A. Bernas, P.E.
Director of Finance

TO: General Manager
FROM: Director of Information Technology (IT)
SUBJECT: Information Technology Department Report for February 2017
DATE: March 15, 2017

A. General

1. Following last month's successful upgrade of the Customer Care and Billing (CC&B) platform, staff began decommissioning the test and development platforms, which were used in preparation for the upgrade. Staff took six physical servers offline and will assess and prepare them for redeployment or sale as surplus property.
2. In conjunction with the Operations Department and consultants from Emerson Process Management, staff will begin deploying Emerson's Enterprise Data Server (EDS), an advanced analytics and reporting tool for treatment processes. Next month, the EDS servers and software will be installed at the York River Treatment Plant.
3. IT systems engineers completed the migration of 155 virtual servers' stored data to a recently installed, larger, faster, and more secure, storage array.
4. In the course of testing hardware and software for the new Supervisory Control and Data Acquisition (SCADA) project, staff discovered a communications bottleneck. The radios used to communicate between the remote sites (e.g. pump and pressure reduction stations) and their designated master stations, are incapable of handling the volume of data required. IT is working closely with members of the engineering and operations departments and their consultants to identify an acceptable alternative which meets current and projected operational needs.

B. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Number of Community Partners: 0

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Training During Work Hours Per Full Time Employee (48) – Current Month	Total Training Hours / # FTE	1.08
M-1.4b	Total Training During Work Hours Per Full Time Employee (48) – Cumulative Fiscal Year-to-Date	Total Training Hours / # FTE	9.13
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully,
Don Corrado

TO: General Manager
FROM: Director of Operations
SUBJECT: Operations Report for February 2017
DATE: March 6, 2017

A. Interceptor Systems

1. North Shore (NS) Interceptor Systems

Staff responded to one odor complaint and two system alarms during the month. The odor complaint originated at the Bridge Street pump station in the City of Hampton. The most likely cause was related to odor scrubber cleaning efforts earlier the same morning.

Staff finalized work on the infrastructure repairs and piping to initiate the treatment plan for the pond water at the Lawnes Point Treatment Plant. HRSD will continue to pump and haul wastewater from the Lawnes Point facility.

Staff initiated property acquisition and easement transfer activities in preparation for the Surry County wastewater system becoming part of HRSD.

Staff completed improvements to the control strategy and programming at Coliseum PRS and Off-line storage tank.

2. South Shore (SS) Interceptor Systems

Staff cleared a densely vegetated area along the Nansemond Treatment Plant (NTP) perimeter, and located and marked a force main that serves the Tidewater Community College. Staff is evaluating the force main to connect the new SWIFT Demonstration Facility's bypass pipeline. The goal is to determine condition and viability of the pipe that will take SWIFT bypass flows to the head of the plant.

Staff assisted Virginia Initiative Plant (VIP) by removing twenty yards of sand from the plant's grit tank channel.

Staff cleaned a gravity thickener at the Chesapeake-Elizabeth Treatment Plant (CETP).

During preventative maintenance inspections, staff found and repaired two inoperable mainline valves on Hampton Boulevard in Norfolk.

B. Major Treatment Plant Operations

1. Army Base Treatment Plant (ABTP) – Staff had three regulatory reportable air quality events. The first event occurred when the total hydrocarbon analyzer (THC) failed to recalibrate. Staff replaced the THC unit. The second occurred when an air compressor malfunctioned, causing the induced draft fan to shut down. The third event occurred when the staff shut down the incinerator for a contractor to access a motor control center.
2. Atlantic Treatment Plant (ATP) – Bids opened for the construction of a new Administration Building. The Commission approved the award of the construction contract to Conrad Brothers of Virginia.

Staff retested the Combined Heat and Power (CHP) engines. Preliminary test results look positive; final results should be available next month.

Staff continues participating in a pilot study using mobile devices to complete CMMS/work order, ERP and other treatment plant activities.

3. Boat Harbor Treatment Plant (BHTP) – Staff experienced one power failure resulting in the use of the emergency bypass stack. This resulted in one air quality reporting deviation. In addition, one low flow deviation occurred on the scrubber water.

BHTP experienced one reportable event when the plant operator did not collect a chlorine residual sample. Staff collected and analyzed the next regularly scheduled sample.

Staff continues making significant progress on multiple projects. The split piping project work in the furnace building is nearing completion. The purpose of this project is to separate the primary solids from the waste activated solids (WAS) to improve dewatering and the treatment process. Ideally, there will be a decrease in the amounts of both polymer and ferric needed.

In addition, the work on furnace #1 is complete and ready for air quality testing in April. The improvements included installing new burners, reconfiguring hearths to include a zero hearth/afterburner in the top hearth, and the linking critical equipment to the new Distributed Control System. The objectives of these improvements are to; increase compliance with air quality regulations; reduce natural gas usage; and decrease the potential

for damage to the furnace caused by running the furnace at the higher than optimal designed temperatures for regulatory compliance.

Staff successfully maintained nitrification through the winter, with a monthly average of 14.7 mg/L on TN. Barring significant wet weather events, staff will continue to tune and optimize nitrification at the plant throughout the year.

4. CETP – The plant experienced five air permit deviations.
 - a. On February 6, a power anomaly caused a shutdown of the Induced Draft fan. This caused the Emergency Bypass Stack to open.
 - b. On February 14, an air leak prevented the venturi pressure from becoming stable, causing a scrubber pressure drop.
 - c. On February 15, a depleted FID fuel tank lowered the system pressure, which caused the THC monitor to fail to record two valid readings per hour.
 - d. On February 25, a VFD malfunction caused a shutdown of the Induced Draft Fan. This caused the Emergency Bypass Stack to open.
 - e. On February 28, unbalanced scrubber flows to two furnaces resulted in low scrubber spray water flow to the furnace in service. This caused a less-than-minimum average scrubber water flow.

Staff operated #1 furnace for the annual air permit testing on February 22. Test indicators are positive.

Staff rebuilt the #2 compactor by replacing the trough, bearings, brushes and gear unit.

5. James River Treatment Plant (JRTP) – Staff removed corroded odor covers on the gravity thickener #1. Staff also modified the #3 and #4 primary clarifier scum pipeline to prevent plugging of the pipe and replaced a worn non-potable water (NPW) spray pipeline in the #5 secondary influent chambers used to control foam.

Staff constructed a rack to mount new cyclones to test for improved secondary clarifier settling. Staff operated Integrated Fixed Film Activated Solids (IFAS) tanks in Ammonia Based Aeration Control (ABAC) mode and varied Nitrified Recycle (NRCY) pump speeds to optimize nitrogen removal.

On the JRTP Hydraulic Improvement Project, the 42-inch pipe connecting manholes #8 and #41 passed leakage tests. Staff used by-pass pumps and piping to bypass flow and connect new manholes and the new 42-inch primary effluent pipe. Staff initiated concrete coatings work on new and existing structures.

6. Nansemond Treatment Plant (NTP) – The rehabilitation of digester #1 is complete. Rehabilitation of digester #2 will negatively affect biological phosphorus (Bio-P) removal during cleanout and dewatering operations. Staff will add ferric sulfate to minimize the effects to the Struvite Recovery Facility and Bio-P removal process.

The Sustainable Water Initiative for Tomorrow (SWIFT) Demonstration Facility design is approaching the 75 percent design milestone. A ground breaking ceremony will take place on March 31.

7. Virginia Initiative Plant (VIP) – Staff experienced one overflow, two air permit deviations, two Regulatory Reportable events and the use of the effluent short outfall.

Contractors working near Final Effluent Parshall Flume broke the de-chlorination feed line, causing a loss of de-chlorination for 81 minutes. Contractors released a solution of Sodium bisulfite and NPW, which contained approximately 1,080 gallons of NPW and approximately 1.3 gallons of sodium bisulfite into a construction excavation area and could not recover it. Staff repaired the 4-inch line and restarted de-chlorination.

On February 21, staff utilized the short outfall for 4 hours and 36 minutes to facilitate the connection of the new contact tank channel and new Parshall Flume. 1.85 million gallons of fully treated, chlorinated final effluent was discharged through the short outfall into the canal leading to the Elizabeth River.

An air permit deviation occurred on February 8 when a DCS hardware malfunction caused the furnace induced (ID) fan to trip, causing the bypass stack to open. Staff replaced the hardware. On February 12, a power interruption caused the ID fan to trip once again, opening the bypass stack.

The following two reportable Total Hydrocarbon (THC) events were due to invalid data longer than one hour. On February 16, the oxygen probe clogged; once cleared, the oxygen and THC returned to normal. On February 25, the THC data was out of range and staff performed a manual calibration to resolve the issue.

The odor control ID fan malfunctioned and caused a shutdown of the odor control system for five hours. Plant personnel switched ID fans to bring the odor control system back in service.

8. Williamsburg Treatment Plant (WBTP) – Staff experienced a power failure resulting in one reportable air permit deviation for use of the emergency bypass stack for six minutes.

A contractor performed stack testing on the #1 incinerator. Field results indicate that test results will be within permit limits for all parameters.

9. York River Treatment Plant (YRTP) – Plant flows returned to near normal in February, averaging about 12 million gallons per day (MGD). The daily final effluent total nitrogen averaged 1.6 milligrams per liter (mg/l), which is likely the lowest monthly average since the new denitrification filter became operational.

Staff completed final effluent pump modifications.

C. Small Communities Division (SCD)

1. SC Treatment:

- a. West Point Treatment Plant (WPTP) - The new sodium hypochlorite chemical system continues to work well. The sodium bisulfite chemical system is now online; staff continues fine-tuning the feed parameters to generate chemical cost savings while still maintaining permit levels.
- b. Urbanna Treatment Plant (UBTP) - The in-house coatings work for train #2 is complete. The walkway extension project for the equalization project is also complete. Restoration is underway across the plant site. To accommodate additional anticipated flow and loadings from the Bethpage Campground and to improve settleability and nutrient removal, the fine bubble diffuser and anoxic selector extension project is beginning. Staff anticipates this work will be complete this spring.
- c. King William Treatment Plant (KWTP) - Staff continues evaluating membranes for facility improvements. Staff exchanged an in-use membrane with an out-of-use membrane to allow cleaning.

- d. Central Middlesex Treatment Plant (CMTP) - Staff continues investigating pathogen microbe issues occurring at the plant. Staff plans to install a redundant UV system and alter the re-aeration process to improve disinfection at the plant.

2. SC Collections:

West Point System – SC experienced one sanitary sewer overflow (SSO) for this month. On February 13, an employee removed a pipe fitting from the emergency bypass pump setup at WP PS#1 without closing the bypass valve to the forcemain, resulting in the release of approximately 20,165 gallons of raw wastewater. Staff cleaned the area and applied pelletized lime. Staff recovered approximately 150 gallons. Approximately 20,015 gallons entered a storm drain to the Pamunkey River. Staff made several changes to its standard operation procedures to ensure this does not occur again.

- D. Support Systems

1. Automotive

- a. Engine repairs on the #2 generator at ABTP continue. Engine startup and testing is scheduled for the third week of April 2017.
- b. Generator emissions testing for ATP CHP generators occurred February 24. Carbon Monoxide (CO) and Nitrogen Oxides (NOx) were within permitted limits. Volatile Organic Compound (VOC) levels are under evaluation.
- c. Staff finished installing the SCD fuel tank and dispenser at the West Point Operations Center.
- d. Automotive and Electrical Staff performed generator load bank tests at Copeland Park, Fort Eustis, Freeman Drive, Gum Road, Luxembourg Avenue and Newtown Road Pump Stations (PSs). Staff also conducted tests at the Atlantic and Shipps Corner Pressure Reducing Stations (PRSs). All generators operated as designed and were returned to service.

2. Carpentry Shop

Staff completed 26 projects. This included installing the HRSD Memorial Wall, which is located on the rear patio of 1434 Air Rail Avenue. Staff also constructed cabinetry and shelving units for various work centers to include

Technical Services Division (TSD) and the Central Environmental Laboratory (CEL), built display pieces for the Operations Division and General Manager's office, repaired numerous doors, walls, and locks and repaired old flooring in the CEL's Biochemical Oxygen Demand (BOD) room.

3. Coatings and Concrete

- a. BHTP concrete and coating rehabilitation of the aeration and secondary clarifier tank's exterior walls and roof decks progresses. Phase I is complete. Contract work on Phase II begins.
- b. The concrete and coating rehabilitation of NTP #1 digester tank is complete. NTP personnel are emptying the tank of digester #2 so its rehabilitation may begin. Staff is emptying NTP's secondary clarifier #5 is for the coating of the weir trough.
- c. At YRTP, the contractor finished rehabilitating the 36-inch pipe on aeration tanks #1 through #6, and restored the rake arm assembly coating system on primary clarifier #1.

4. Facilities Maintenance

- a. Contractor work continues on the CEL's roof and heating, ventilation, and air conditioning (HVAC) upgrade project. Contractors are installing the two existing 200-ton chillers and associated piping. A delay has pushed the tentative start-up date for the new chillers to mid-March.
- b. Contractors completed the concrete walkway for the main entry plaza of 1434 Air Rail Avenue. Benches and handrails should arrive in March. Contractors finished installing 5,000 plants, shrubs, flowerbeds, and mulch throughout the SS Air Rail Complex.

5. Machine Shop

The Machine Shop completed seven projects, including repairing a valve operator, fabricating a pump cart, manufacturing impeller bolts and shaft sleeves, and constructing a safe stand for the Customer Care Center (CCC).

E. Electrical and Energy Management (EEM)

Staff continues supporting the construction work for the major upgrades at ABTP and VIP. The teams are working with generators, distributed control systems (DCS's), loop checks, medium voltage breaker maintenance and cable testing.

Staff updated the Electrical Safety Program and is preparing a training program.

F. Water Technology and Research

Research Intern, Stephanie Klaus, passed a major milestone in her work at HRSD. Stephanie successfully defended her PhD proposal and passed her preliminary exam at Virginia Tech. The research associated with her proposal has been and will continue to be conducted at the CETP pilot facility. The primary focus of this proposal is piloting mainstream deammonification in support of an evaluation of this technology for the needed upgrade at YRTP. In addition, achieving Biological Phosphorus Removal (Bio-P) via return activated sludge (RAS) fermentation simultaneously with shortcut nitrogen removal is an exciting prospect. Two smaller objectives include exploring the effect of high ammonia loading rate on nitrite shunt and achieving simultaneous nitrification denitrification (SND) during low dissolved oxygen (DO) operation. The high loading rate task serves the purpose of improving understanding of NOB out-selection mechanisms. The SND task serves to better understand the effect of heterotrophic denitrification on shortcut nitrogen removal. This proposal has the potential to make some significant advances in understanding biological nutrient removal. Experiments will be performed at an adsorption-bio-oxidation (A/B) pilot plant, which consists of a high-rate activated sludge step (A-stage), followed by a nitrogen removal step (B-stage).

G. Strategic Measurement Data

1. Education and Outreach Events: 14

- a. VIP tour for Granby High School students participating in Engineering Week
- b. CETP plant tour for members of ODU, Regent University and the Navy
- c. Facilities Maintenance Superintendent and VIP Maintenance Specialist, held a presentation on Physical Plant Maintenance as part of the Hampton Roads Public Works Academy (HRPWA) curriculum. Both taught two classes to students at New Horizons Regional Education Center.
- d. Charles Bott and Chris Wilson participated in the National Water Research Institute Panel review of the SWIFT Program

- e. Charles Bott hosted a training session for consultants on sidestream deammonification processes
- f. Charles Bott presented a Graduate Seminar at Virginia Tech on SWIFT
- g. Charles Bott participated in a technology Review Meeting for WEF and WE&RF LIFT Program
- h. Charles Bott participated in the Borchardt-Glysson Environmental Engineering Conference at University of Michigan
- i. Charles Bott participated in and presented at the Virginia Tech Environmental Engineering Graduate Student Recruiting Weekend
- j. Charles Bott was invited to give two presentations at the Florida Wastewater Process Seminar
- k. Charles Bott participated in a National Science Foundation research proposal review panel
- l. Charles Bott gave a presentation on SWIFT to a technical audience in Northern Virginia
- m. WTP tour for staff from J.M. Smucker Company
- n. Chief of Interceptors – SS supported AECOM, who received an award for the South Trunk Sewer Section G project with HRSD’s support, at the Engineering Club of Hampton Roads Awards Banquet

2. Community Partners: 9

- a. Chesapeake Bay Foundation – oyster restoration
- b. Granby High School
- c. Regent University
- d. Hampton Public Works Academy
- e. New Horizons Regional Education Center
- f. Virginia Institute of Marine Science
- g. Old Dominion University
- h. J.M. Smucker Company
- i. Engineering Club of Hampton Roads Awards Banquet

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Training During Work Hours per Full Time Employee (FTE) (507) – Current Month-	Hours / FTE	3.81
M-1.4b	Total Training During Work Hours per FTE (507) – Cumulative Year-to-Date	Hours / FTE	29.38

Item #	Strategic Planning Measure	Unit	February 2017
M-2.3a	Planned Maintenance Total Maintenance Hours	Total Recorded Maintenance Labor Hours	28,142.5
M-2.3b	Planned Maintenance – Preventive and Condition Based	% of Total Maintenance Hours	43.05
M-2.3c	Planned Maintenance - Corrective Maintenance	% of Total Maintenance Hours	22.47
M-2.3d	Planned Maintenance-Projects	% of Total Maintenance Hours	34.48
M- 4.1a	Energy Use: Treatment *reported for January 2017	kWh/MG	2,281
M-4.1b	Energy Use: Pump Stations *reported for January 2017	kWh/MG	180
M-4.1c	Energy Use: Office Building *reported for January 2017	kWh/MG	97
M-5.2	Educational and Outreach Events	Number	14
M-5.3	Number of Community Partners	Number	9

Respectfully submitted,

Steve de Mik
Director of Operations

TO: General Manager
FROM: Special Assistant for Compliance Assurance
SUBJECT: Monthly Report for February 2017
DATE: March 7, 2017

A. General

HRSD continues implementing the hybrid regionalized approach to the Regional Wet Weather Management Plan (RWWMP) with the next major Consent Decree milestone, the submittal of the final RWWMP, scheduled for October 1, 2017.

In late December, HRSD received a draft Minor Modification to the Consent Decree from the U.S. Environmental Protection Agency (EPA) and Virginia Department of Environmental Quality (DEQ). After HRSD and EPA provided additional language modification, the Federal government representatives agreed to and signed the minor change. Staff submitted the requested 308 information to the EPA on February 9, 2017 and filed the Minor Modification in court on February 21, 2017.

B. Submittals Completed in February 2017 – No submittals required during this period.

C. Activities

1. **Phase 6 – Rehabilitation Plan.** Work continues on the Rehab Action Plan projects with the next major milestone on May 5, 2018, for Phase 0.
2. **Phase 7 – RWWMP.** Optimization of the RWWMP solution sets from the Alternatives Analysis Report continued in February, and the final series of optimization workshops will be completed in early March. Staff is using the regional Hydraulic Model to test the developed solutions. Staff updated the locality Hydraulic Models and are testing them against the new flow and boundary condition set.

Staff balanced revisions to the Infiltration and Inflow (I/I) Reduction Program against capacity improvements to reduce the overall program cost.

The Technical Coordination Team met on **February 2 and 16** to review overall progress. The HRSD project manager for the Chesapeake-

Elizabeth Treatment Plant Closure continues attending monthly coordination meetings as part of an ongoing effort to ensure that the closure of this treatment plant is properly modeled and accounted for in the final RWWMP.

3. **Phase 8 – EPA Consent Decree Services.** HRSD continues sharing information with the localities through the regional SharePoint site and flow, pressure and rainfall data portal.

Staff provided assistance with attendance at SSO Ad hoc Action Committee meetings on **February 15 and 16**.

4. **Phase 9 – Supplemental Services.** A monthly compliance program meeting was held on **February 1** to review overall progress. A program budget review meeting was held on **February 14**.

Management, Operations and Maintenance (MOM) Program elements are ongoing including the Hydrogen Sulfide (H₂S) Monitoring Program and implementation of a Business Intelligence (BI) system for the Small Communities Division (SCD). This includes a MOM update manual guidance document for use on the next major update expected in 2018.

The Flow, Pressure and Rainfall (FPR) monitoring program continued in February, with data collection and analysis being performed as part of the MOM Program.

Condition assessment work under Phase II of the Force Main Condition Assessment (FMCA) program progressed in February. Force main inspection work order status is as follows:

- FMP2 039 Bowers Hill II: Completed
- FMP2 043 Kempsville Road: Under development
- FMP2 044 Battlefield: Completed
- FMP2 047 Bowers Hill III: Under development

Gravity inspection work order status is as follows:

- GMP2 039 Hickman's Branch 1: Field work in progress
- GMP2 040 Hickman's Branch 2: Work order issued

Other work orders are under development for 18,000 linear feet (LF) of gravity pipe, 1,500 LF of gravity siphons and 110 manholes.

Work on the Fiscal Year-2016 Condition Assessment Annual Report continued in February.

D. Next Submittals

Semi-Annual Report – May 1, 2017

E. Program Budget Status

The overall program budget is **\$131,191,858**, excluding the Master Metering Program. A summary of appropriations and expenses is attached.

F. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 0
2. Number of Community Partners: 0

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Total Training Hours Per Full Time Employee (1) – Current Month	Total Training Hours / # FTE	0
M-1.4b	Total Training Hours Per Full Time Employee (1) – Cumulative Fiscal Year to Date	Total Training Hours / # FTE	44
M-5.2	Educational and Outreach Events	Number	0
M-5.3	Number of Community Partners	Number	0

Respectfully submitted,

Phil Hubbard, P.E.

Attachments: [Consent Order State & EPA Expenditures](#)

Consent Order State & EPA Expenditures

	Total Appropriation	February 2017 Obligations	Available Balance
Regional Consent Order and Other Consent Order Requirements			
Regional Hydraulic Model	\$104,248,712	\$108,272,534	-\$4,023,822
Manhole Rehab/Replacement Phase I & North Shore Siphon Chamber	\$2,834,000	\$441,822	\$2,392,178
Pump Station Wet Well Rehabilitation Phase I	\$2,890,000	\$317,920	\$2,572,080
Locality System Monitoring and Condition Assessment	\$21,219,146	\$20,384,092	\$835,054
Subtotal - In progress	\$131,191,858	\$129,416,368	\$1,775,490

Completed Work

Regional Consent Order and Other Consent Order Requirements	(Included in subtotal above)
Master Metering Program III	\$2,005,140
Master Metering Program IV	\$13,628,635
Total	\$145,050,142

TO: General Manager
FROM: Director of Talent Management
SUBJECT: Monthly Report for February 2017
DATE: March 15, 2017

A. Human Resources

1. Recruitment Summary

New Recruitment Campaigns	11
Job Offers Accepted	
Internal Selections	4
External Selections	4
Internal Applications	42
External Applications	125
Average Days to Fill Position	48

2. Enterprise Resource Planning (ERP)

- a. HRSD worked with the managed services vendor on benefit module issues and reconfiguration.
- b. Accounting, Talent Management and Information Technology staff met to address 2016 Internal Revenue Service Affordable Care Act (ACA) mandatory reporting requirements. Staff validated data and mailed 1095C/1095B forms to employees prior to the deadline.
- c. Staff addressed the following service requests with Oracle:
 - (1) ACA form coding clarification
 - (2) Self-service functionality

3. Benefits and Compensation

- a. Staff evaluated Fiscal Year-18 Plan Renewal options including costs and coverage for medical, vision and dental plans.
- b. The Compensation and Classification team continued evaluating several positions based on Department requests and compensation study outcomes.

- c. Staff completed the Benefits Administration Internal Audit Action Plan, outlining improvements, schedules, status, roles and responsibilities. All items are either completed or in progress.

4. Wellness

a. Participation Activities

Year 3 Participation Activities	Unit	February 2017	Year to Date (March 2016–February 2017)
Biometric Screenings	Number	434	578
Preventive Health Exams	Number	186	340
Preventive Health Assessments	Number	167	665
Coaching Calls	Number	1	5
On-Line Health Improvement Programs	Number	649	2426
Web-MD Online Health Tracking	Number	244	1968
Challenges Completed	Number	0	1
Fit-Bit Promotion	Number	6	102

- b. Wellness Year 4 ended and the Wellness Specialist and Optima team began evaluating data to identify participants qualifying for a lower health plan deductible and incentive levels. Overall, program participation increased over Year 3. Data will be finalized following completion of the appeals process.
- c. The Wellness Specialist and Optima Teams held ten on-site biometric screenings, with 374 employees and spouses participating.

5. Workers Compensation

Staff opened one new case. Eleven cases remain active.

6. Employee Relations

- a. Staff continued partnering and meeting with work center supervisors to support employee relations and Human Resources (HR) issues:
 - (1) Began reviewing and revising Engineering Department’s job descriptions
 - (2) Clarified time and pay policies for Operations Department

- b. On-line Equal Employment Opportunity Refresher Training continued for Operations employees unable to attend previous work center sessions.
- c. Staff conducted several American with Disabilities Act (ADA) training sessions for HRSD supervisors at the Air Rail complex. Additional sessions will be offered at the North Shore Operations Center.

7. General

- a. Staff attended the following training:

- (1) Mercer's Annual Healthcare Seminar
- (2) HRSD's Your Role in Quality class
- (3) Mentor Coach's on-line *Appreciative Inquiry*

- b. Staff participated in the following:

Water Environment Federation Utility Management Committee's Human Resources and Operations Workgroup to develop a webcast, *Bridging the Human Resources/Operations Gap*.

B. Organization Development and Training (OD&T)

- 1. The HRSD University team continued developing two e-learning pilot projects: *HR Open Enrollment* and *Introduction to Biological Nutrient Removal*. Team members met with subject matter experts and vendors. The OD&T Coordinator organized activities and tracked progress.
- 2. Staff began updating administrative procedures for OD&T programs including Apprenticeship, Leadership and Quality.
- 3. The OD&T Manager assisted with the following:
 - a. Coordinated *Strength Finders* training for the Army Base, Boat Harbor, and Nansmond Treatment Plants.
 - b. Collaborated with Engineering Department staff to develop *Effective Meeting Training* in response to an annual planning day item.
 - c. Worked with Engineering Department staff to create an organization-wide *Project Management* course.

4. Apprenticeship Program

- a. Continued revising the Training Superintendent job description.
- b. Continued evaluating math curriculum, refresher course and placement exams. The math refresher course will be examined during the spring and summer sessions to evaluate the correlation of skills and placement test scores with refresher course pass rates.
- c. Presented an Apprenticeship Program update to the Operations QST. Gathered input to evaluate changes, continue improvements and facilitate communication.

C. Safety

1. Mishaps and Work Related Injuries

- a. HRSD-Wide Injury Mishap Status to Date (OSHA Recordable)

	<u>2016</u>	<u>2017</u>
Mishaps	42	4
Lost Time Mishaps	8	1
<i>Numbers subject to change pending HR review of each case.</i>		

- b. MOM Program Year Performance Measure Work Related Injuries

February 2017 Injuries For Operations	February 2017 Injuries for Other HRSD Departments	Total Lost Time Injuries Since July 2016	Total HRSD Injuries Since July 2016
1	0	4	25

- c. A follow-up investigation was performed on one work related injury.

2. HRSD Safety Training

Strategic Planning Measure	Unit	February 2017
Total Safety Training Hours per Full Time Employee (814) All HRSD – February 2017	381.75 Hours / 814 FTE	0.47
Total Safety Training Hours Per Full Time Employee (814) – Cumulative July 2016	2574.17 Hours / 814 FTE	3.16

3. In addition to regularly scheduled safety training and medical monitoring, staff conducted the following sessions:

- a. Three external briefings for contractors working at HRSD treatment plants and pump stations
- b. Respiratory Protection Program training at the following work centers:
 - (1) Army Base Treatment Plant
 - (2) Atlantic Treatment Plant
 - (3) Chesapeake-Elizabeth Treatment Plant
 - (4) James River Treatment Plant
- c. Annual Forklift Safety training for North Shore Electrical and Energy Management (EEM) employees
- d. Chemical Hygiene Plan training for Water Technology and Research interns

4. Safety Inspections, Testing and Monitoring

- a. Weekly on-site inspections of the following construction sites:
 - (1) Virginia Initiative Plant
 - (2) York River Treatment Plant
 - (3) James River Treatment Plant
 - (4) Central Environmental Lab (CEL)

- b. Quarterly safety inspections of the following work centers:
 - (1) Air Rail Main Office Complex
 - (2) CEL
 - (2) South Shore Pretreatment & Pollution Prevention (P3)
 - (3) Technical Services Division
 - (4) Virginia Initiative Plant
 - (5) York River Treatment Plant

- c. Monitoring and testing for the following:
 - (1) Air sampling for organic vapors in a CEL section during solvent recovery system operation
 - (2) Monthly CEL and Technical Services lab hood velocity tests
 - (3) Pulmonary function and respirator fit testing for CEL employees

- d. Conducted the following safety walk-throughs or evaluations:

Escorted Virginia Beach Fire Marshall on inspection of the Atlantic Treatment Plant

5. Safety Programs

- a. The Safety Manager presented updates to the Electrical Safety Program in conjunction with EEM staff.

- b. Staff presented the annual Safety Recognition Program review to the HRSD QST and to the Operations QST, including a review of work related injuries and auto accident trends, costs and recommendations.

- c. Staff completed and submitted Superfund Amendments and Reauthorization Act (SARA) Title III, Tier I and II reports for all HRSD facilities, including electronic submissions for Norfolk and Virginia Beach facilities.

- d. Staff met with Virginia Initiative Plant Superintendents and MEB General Contractor representatives to discuss safety issues related to the use of methanol and on-going construction activities.

- e. Staff met with the SWIFT project contractor on safety issues related to construction start-up at the Nansemond Treatment Plant.

- f. The following was performed for the Confined Space Program:
 - (1) Updated York River Treatment Plant permits
 - (2) Reviewed North Shore and South Shore Interceptors permits

- g. The Safety Coordinator continued maintaining Operation's Safety Accident Tracking report.
- h. Staff participated in the Water Environment Research Foundation's Bio-contaminant Wastewater survey.

6. General

- a. The HRSD Safety Team met to address the following:
 - (1) Development of a prescription safety eyewear program
 - (2) A computer-based safety training demonstration
 - (3) Annual review of the Safety Recognition Program
 - (4) Updates to the Electrical Safety Program
 - (5) Review a safety notice on Towing
- b. Safety staff attended Applied Lab's Asbestos Worker/Supervisor training
- c. Safety staff participated a SWIFT Demonstration Project design review meeting

D. Monthly Strategic Planning Metrics Summary

- 1. Education and Outreach Events: (2)
 - a. City of Suffolk Career and Technical Education Center's Non-Traditional Career Fair
 - b. City of Norfolk Technical Center's Career Fair
- 2. Community Partners: (2)
 - a. City of Norfolk
 - b. City of Suffolk

Item #	Strategic Planning Measure	Unit	February 2017
M-1.1a	Employee Turnover Rate (Total)	Percentage	0.38%
M-1.1b	Employee Turnover due to Service Retirements	Percentage	0
M-1.4a	Total Training Hours Per Full Time Employee (15) – Current Month	Total Training Hours/ FTE	1.13
M-1.4b	Total Training Hours Per FTE (15) Cumulative Fiscal Year-to-Date	Total Training Hours/ FTE	33.5
M-5.2	Educational and Outreach Events	Number	2
M-5.3	Community Partners	Number	2

Respectfully submitted,

Paula A. Hogg

Director of Talent Management

TO: General Manager

FROM: Director of Water Quality (WQ)

SUBJECT: Monthly Report for February 2017

DATE: March 15, 2017

A. General

1. Pretreatment and Pollution Prevention (P3) division staff did not assess civil penalties this month.
2. The Director of Water Quality attended the National Association of Clean Water Agencies (NACWA) winter conference.. Attendees broadly discussed affordability of wastewater treatment services in the United States (US). Affordability is steadily becoming an issue, but there is no analysis defining the reasons for the inability of US citizens to pay their wastewater conveyance and treatment bills. There is an assumption that it is due to mean household income, which does not address why rates in the US are rising so quickly. There is also no analysis proving the industry assumption that it is due solely to replacing aging infrastructure and meeting new regulatory requirements. An analysis that considers affordability and its drivers in other advanced economies would be enlightening. Wastewater treatment works in the US might learn from studying other countries' economies and regulations. In particular, addressing the cascading, multiplicative levels of conservatism in US permitting may allow change in the cost of treating wastewater without compromising human health and environmental protection. Reducing conservatism in setting and enforcing environmental regulations and improving efficiency in operations, resource recovery and financial innovation may reduce the costs of wastewater treatment services. Water treatment and consumption rates, national social support programs (taking pressure off incomes) and household incomes can all be drivers for affordability. The Director of Water Quality is pursuing analysis of the variables driving affordability and cost of wastewater treatment in other economically-sound countries, where the environment and human health are adequately protected, to help the wastewater treatment community in the US develop an approach to this issue.

B. Quality Improvement and Strategic Activities

1. The Sustainability Advocacy Group (SAG) reported no activities in the month of February.

2. The Pretreatment Information Management System (PIMS) Team reported limited activity in the month of February.
3. The Technical Services Division (TSD) Technology Team and HRSD's Information Technology Department completed a digital transformation forms program evaluation. Staff made a presentation at the February Operations Quality Steering Team (QST) meeting to determine if this group could benefit from the technology. The Operations Department did not see any added value in this program for their needs. The TSD Technology Team will next evaluate the ESRI ArcGIS Data Collector application to determine if this will meet the division's data capture needs. Availability and support of this software is internal to HRSD.
4. The WQ Communication Team continues monitoring and measuring inter-divisional communication issues within the WQ Department. Team members will distribute quarterly reports to the QST.

C. Municipal Assistance

HRSD provided sampling and analytical services to Accomack County and Northampton County to support their groundwater monitoring programs, and to Hanover County to support its Virginia Pollution Discharge Elimination System (VPDES) permit application process.

D. Strategic Planning Metrics Summary

1. Educational and Outreach Events: 7
 - a. Laboratory Division staff hosted a laboratory tour for Old Dominion University Environmental Health students.
 - b. TSD staff presented Indian River water quality results to the Friends of the Indian River monthly meeting.
 - c. TSD staff presented microbial source tracking presentation to the Nansemond River Preservation Alliance officers.
 - d. TSD staff presented "A Career in Water Quality" for Christopher Newport University (CNU) grad students as part of their Wednesdays4Work program.
 - e. TSD staff conducted two James River Plant tours for CNU microbiology classes.
 - f. TSD staff assisted a Nansemond Suffolk Academy high school student with a project on the benefits of modern wastewater treatment.

- g. Laboratory Division and TSD staff hosted a three day workshop on microbial source tracking for staff from the Virginia Department of Health (VDH) Division of Shellfish Sanitation and the San Antonio River Authority.

2. Community Partners: 8

- a. P3 staff participated in an askHRgreen.org (Fats, Oils, Grease) FOG Committee meeting.
- b. P3 staff participated in the work of the HRSD United Way committee.
- c. TSD and the Laboratory Division assisted the City of Newport News with a microbial source tracking project at Hilton Beach.
- d. TSD and the Laboratory Division assisted the City of Virginia Beach in its bacteria study in Mill Dam Creek watershed.
- e. TSD staff collaborated with the Virginia Department of Health Division of Shellfish Sanitation and the City of Suffolk with a fecal source identification project in the Nansemond River.
- f. TSD and the Laboratory Division provided Chlorophyll Monitoring and Assessment Program support to the Virginia Department of Environmental Quality in monitoring the James River.
- g. TSD and the Laboratory Division assisted the City of Chesapeake and the Elizabeth River Project with bacterial monitoring and fecal source identification in the Indian River.
- h. TSD and the Laboratory Division assisted the City of Norfolk with a microbial source tracking project at Knitting Mill Creek.

3. Odor Complaints

An odor complaint was received by North Shore Operations on February 14, 2017. The complaint was for odors originating from the Bridge Street pump station, Hampton, VA. North Shore Maintenance immediately responded to the complaint and identified that the scrubber cleaning from earlier in the morning was the most likely cause for the odors and/or the source of the complaint. At the time of investigation no odors were detected and the complainant was satisfied with the response. No further odors from the pump station have been observed nor complaints received.

Item #	Strategic Planning Measure	Unit	February 2017
M-1.4a	Training During Work Hours Per Full Time Employee (105) (Current Month)	Total Hours / # FTE	2.8
M-1.4b	Total Training During Work Hours Per Full Time Employee (105) (Cumulative Fiscal Year-to-Date)	Total Hours / # FTE	40.24
M-2.5	North Shore/South Shore Capacity Related Overflows	# within Level of Service	0
M-3.1	Permit Compliance	# of Exceedances: # of Permitted Parameters	7:34,994
M-3.2	Odor Complaints	#	1
M-3.4	Pollutant Removal	Total Pounds Removed	126,727,227
M-3.5	Pollutant Discharge	% Pounds Discharged/Pounds Permitted	23%
M-5.2	Educational and Outreach Events	#	7
M-5.3	Community Partners	#	8
	Average Daily Flow	Total MGD for all Treatment Plants	139.72
	Industrial Waste Related System Issues	#	0

Respectfully submitted,
James Plett, PhD
 Director of Water Quality

Engagement Background

Our team is continuing to progress with the planned internal audit assignments. During February, we conducted preliminary walkthrough discussions for the Procurement/ P-Card Process Review. We subsequently drafted process flowcharts and provided these documents to Procurement for review. Additionally, we finalized fieldwork procedures for the Inventory Process Review and drafted the audit report.

Our audit process consists of three phases:

- **Planning**: Reviewing relevant background information, gaining an understanding of, and documenting the key areas to be reviewed
- **Fieldwork**: Testing and examining pertinent documents, reports, transactions, and information to confirm the strength of the processes and related controls
- **Reporting**: Discussing the conclusions of our audit work and ultimately issuing a written report with suggestions being provided (if identified)

Project Accomplishment Summary

During the month of February, our team performed the following:

- **Inventory Process Review**:
 - Communicated final open items requests
 - Prepared internal draft of the audit report
- **Procurement/ P-Card Process Review**:
 - Conducted walkthrough meetings with process owners
 - Prepared process flowcharts and audit documentation

Projected Tasks for March

During the month of March, our team will:

- **Inventory Process Review**:
 - Discuss findings with the process owners
 - Incorporate management action plans for confirmed observations and finalize deliverables
- **Procurement Process Review**:
 - Finalize process flowcharts and audit documentation
 - Draft and finalize review objectives and audit program
 - Perform testing to achieve the objectives detailed in the audit program

Engagement Notes/ Delays

No delays in our audit process were incurred. The HRSD teams continue to be helpful and supportive of the internal audit function.

Annual Metrics

Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16
M-1.1a	Employee Turnover Rate (Total)	Percentage	< 8%	5.63%	4.09%	6.64%	7.62%	8.22%	9.97%	6.75%
M-1.1b	Employee Turnover Rate within Probationary Period		0%		2.22%	8.16%	14.58%	9.68%	0.66%	0.13%
M-1.2	Internal Employee Promotion Eligible	Percentage	100%		59%	80%	69.57%	71.43%	64.00%	69.00%
M-1.3	Average Time to Fill a Position	Calendar Days	< 30		70	60	52	43.76	51	56
M-1.4	Training Hours per Employee - cumulative fiscal year-to-date	Hours	> 40		30.0	43.8	37.5	35.9	42.8	49.0
M-1.5a	Safety OSHA 300 Incidence Rate Total Cases	# per 100 Employees	< 3.5	6.57	6.15	5.8	11.2	5.07	3.87	7
M-1.5b	Safety OSHA 300 Incidence Rate Cases with Days Away	# per 100 Employees	< 1.1	0.74	1.13	1.33	0.96	1.4	0.82	1.9
M-1.5c	Safety OSHA 300 Incidence Rate Cases with Restriction, etc.	# per 100 Employees	< 0.8	3.72	4.27	2.55	4.5	2	1.76	3.6
M-2.1	CIP Delivery - Budget	Percentage			113%	96%	124%	149%	160%	151%
M-2.2	CIP Delivery - Schedule	Percentage			169%	169%	161%	150%	190%	172%
M-2.3a	Total Maintenance Hours	Total Available Mtc Labor Hours Monthly Avg			16,495	22,347	27,615	30,863	35,431	34,168
M-2.3b	Planned Maintenance	Percentage of Total Mtc Hours Monthly Avg			20%	27%	70%	73%	48%	41%
M-2.3c	Corrective Maintenance	Percentage of Total Mtc Hours Monthly Avg			63%	51%	12%	10%	18%	25%
M-2.3d	Projects	Percentage of Total Mtc Hours Monthly Avg			18%	22%	20%	18%	32%	34%
M-2.4	Infrastructure Investment	Percentage of Total Cost of Infrastructure	2%		8.18%	6%	6%	4%	7%	7%
M-3.3	Carbon Footprint	Tons per MG Annual Total			1.61	1.57	1.47	1.46	1.44	1.45
M-3.6	Alternate Energy	Total KWH			0	0	0	5,911,289	6,123,399	6,555,096
M-4.1a	Energy Use: Treatment	kWh/MG Monthly Avg			2,473	2,571	2,229	2,189	2,176	2205
M-4.1b	Energy Use: Pump Stations	kWh/MG Monthly Avg			197	173	152	159	168	163
M-4.1c	Energy Use: Office Buildings	kWh/MG Monthly Avg			84	77	102	96	104	97
M-4.2	R&D Budget	Percentage of Total Revenue	> 0.5%		1.0%	1.4%	1.0%	1.3%	1.0%	0.8%
M-4.3	Total Labor Cost/MGD	Personal Services + Fringe Benefits/365/5-Year Average Daily Flow		\$1,028	\$1,095	\$1,174	\$1,232	\$1,249	\$1,279	\$1,246
M-4.4	Affordability	8 CCF Monthly Charge/ Median Household Income	< 0.5%		0.48%	0.48%	0.41%	0.43%	0.53%	0.55%
M-4.5	Total Operating Cost/MGD	Total Operating Expense/ 365/5-Year Average Daily Flow		\$2,741	\$2,970	\$3,262	\$3,316	\$3,305	\$3,526	\$3,434
M-5.1	Name Recognition	Percentage (Survey Result)	100%	67%	71%	N/A	62%	N/A	60%	N/A
M-5.4	Value of Research	Percentage - Total Value/HRSD Investment			129%	235%	177%	149%	181%	178%
M-5.5	Number of Research Partners	Annual Total Number			42	36	31	33	28	35
	Rolling 5 Year Average Daily Flow	MGD		157.8	155.3	152	154.36	155.2	151.51	153.09
	Rainfall	Annual Total Inches		66.9	44.21	56.21	46.65	46.52	51.95	54.14
	Billed Flow	Annual Percentage of Total Treated		71.9%	82.6%	78%	71%	73%	74%	72%
	Senior Debt Coverage	Net Revenue/Senior Annual Debt Service	> 1.5	2.51%	2.30%	2.07%	1.88%	1.72%	1.90%	2.56%
	Total Debt Coverage	Net Revenue/Total Annual Debt	>1.4	1.67%	1.67%	1.46%	1.45%	1.32%	1.46%	1.77%

Monthly Updated Metrics

Item	Strategic Planning Measure	Unit	Target	FY-10	FY-11	FY-12	FY-13	FY-14	FY-15	FY-16	Jan-17	Feb-17
	Average Daily Flow	MGD at the Plants	< 249		136	146.5	158.7	156.3	153.5	155.8	167.1	139.7
	Industrial Waste Related System Issues	Number	0		3	6	6	6	2	4	0	0
	Wastewater Revenue	Percentage of budgeted	100%		97%	96%	98%	107%	102%	104%	103%	101%
	General Reserves	Percentage of Operating and Improvement Budget	75% - 100%		72%	82%	84%	92%	94%	95%	104%	103%
	Accounts Receivable (HRSD)	Dollars (Monthly Avg)			\$ 17,013,784	\$ 17,359,488	\$ 18,795,475	\$ 20,524,316	\$ 20,758,439	\$ 22,444,273	\$23,294,386	\$22,904,913
	Aging Accounts Receivable	Percentage of receivables greater than 90 days			21%	20%	18%	19%	21%	20%	19%	19%
M-2.5	Capacity Related Overflows	Number within Level of Service	0		25	1	30	5	11	16	0	0
M-3.1	Permit Compliance	# of Exceedances to # of Permitted Parameters	0		12:55,045	1:51995	2:52491	1:52491	2:52491	2:52,491	7:30620	7:34994
M-3.2	Odor Complaints	Number	0		6	2	7	11	5	9	1	1
M-3.4	Pollutant Removal (total)	Total Pounds Removed			178,163,629	171,247,526	176,102,248	185,677,185	180,168,546	193,247,790	112,473,345	126,727,227
M-3.5	Pollutant Discharge (% of permitted)	Pounds Discharged/Pounds Removed	< 40%		25%	22%	25%	22%	22%	20%	23%	23%
M-5.2	Educational and Outreach Events	Number			302	184	238	322	334	443	23	46
M-5.3	Number of Community Partners	Number			280	289	286	297	321	354	25	30

EFFLUENT SUMMARY FOR FEBRUARY 2017

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	TKN mg/l	NH3 mg/l	CONTACT TANK EX
ARMY BASE	8.39	47%	6	3.9	5	3	0.73	0.66	3.4	4.3	NA	NA	3
ATLANTIC	25.61	47%	11	10	1	<1	NA	NA	NA	NA	NA	NA	4
BOAT HARBOR	12.84	51%	6	6.1	1	<1	0.32	0.30	15	14	NA	NA	0
CENT. MIDDLESEX	0.011	44%	<2	1.6	4	4	NA	NA	NA	NA	NA	NA	NA
CHES-ELIZ	17.01	71%	14	14	63	4	1.1	0.95	32	31	NA	NA	7
JAMES RIVER	11.17	56%	5	4.0	1	1	0.59	0.63	13	11	NA	NA	0
KING WILLIAM	0.041	41%	<2	<1.0	NA	<1	0.033	0.036	0.53	2.1	0.63	NA	NA
NANSEMOND	17.54	58%	6	4.3	1	1	0.61	0.82	7.3	8.7	NA	NA	5
URBANNA	0.041	41%	12	21	2	3	4.5	4.4	36	29	NA	<0.20	NA
VIP	27.47	69%	4	4.3	2	1	0.77	0.70	8.7	8.4	NA	NA	1
WEST POINT	0.396	66%	24	18	1	2	3.0	2.9	17	17	NA	11	0
WILLIAMSBURG	7.12	32%	3	3.0	3	1	0.39	0.40	4.6	5.3	NA	NA	8
YORK RIVER	12.09	81%	5	2.5	<1	<1	0.32	0.27	1.6	2.6	NA	NA	2
	<u>139.72</u>		<u>9</u>	<u>8</u>									

	% of Capacity
North Shore	52%
South Shore	58%
Mid Peninsula	57%

Tributaries	Tributary Summary					
	Annual Total Nitrogen			Annual Total Phosphorus		
	Discharged	Operational		Discharged	Operational	
	YTD	Projection	CY17	YTD	Projection	CY17
	%	Lbs	%	%	Lbs	%
James River	15%	3,531,404	78%	12%	244,151	77%
York River	8%	219,828	76%	12%	13,613	71%
Rappahannock	43%	NA	NA	93%	NA	NA

Permit Exceedances: Total Possible Exceedances, FY17 to Date: 7:34,994
Pounds of Pollutants Removed in FY17 to Date: 126,727,227
Pollutant Lbs Discharged/Permitted Discharge FY17 to Date: 23%

	Rainfall (inch)		
	North Shore (PHF)	South Shore (ORF)	Small Communities (FYJ)
	Month	1.36"	0.66"
Normal for Month	2.70"	2.66"	2.54"
Year to Date Total	5.75"	5.07"	5.78"
Normal for YTD	6.00"	5.64"	5.94"

AIR EMISSIONS SUMMARY FOR FEBRUARY 2017

MHI PLANT	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters								Part 503e Limits		
	BZ Temp	Venturi(s) PD	Precooler Flow	Spray Flow	Venturi Flow	Tray/PBs Flow	Scrubber	Any	THC	THC	BZ Temp
	12 hr ave	12 hr ave	12 hr ave	12 hr ave	12 hr ave	12 hr ave	pH	Bypass	Mo. Ave	DC	Daily Ave
(F)	(in. WC)	(GPM)	(GPM)	(GPM)	(GPM)	(GPM)	3 hr ave	Stack Use	(PPM)	(%)	Days >Max
ARMY BASE	1	0	0	0	0	0	0	1	27	99	0
BOAT HARBOR	0	0	0	n/a	1	0	0	1	43	100	0
CHES-ELIZ	0	1	1	0	0	0	0	2	34	99	0
VIP	0	0	0	n/a	0	0	0	2	84	100	0
WILLIAMSBURG	0	0	0	n/a	0	0	0	1	12	97	0

ALL OPERATIONS

DEQ Reportable Air Incidents:	1	No. of Permit Deviations/Possible No. of Permit Deviations (2/17) = 11/2772
DEQ Request for Corrective Action (RCA):	0	No. Permit Deviations/No. Possible Permit Deviations (CY17 to date) = 18/5759
DEQ Notice of Violation (NOV):	0	Total Time on Bypass/Total Time Operating (2/17) = 2.5 hrs/ 3166 hrs Total Time on Bypass/Total Time Operating (CY17 to date) = 3.15 hrs/ 6616 hrs
Other Air Permit Deviations:	0	Dry Tons Solids Processed (2/17) = 2347
Odor Complaints Received:	1	Total Dry Tons Solids Processed (CY17 to date) = 4757 Monthly average Dry Ton per Day (DTD) per MHI unit = 16.8
Odor Scrubber HRSD Exceptions:	1	

HRSD COMMISSION MEETING MINUTES
March 28, 2017

ATTACHMENT #7

AGENDA ITEM 21. – Fiscal Year 2017-2018 Annual Budget Work Session PowerPoint Presentation



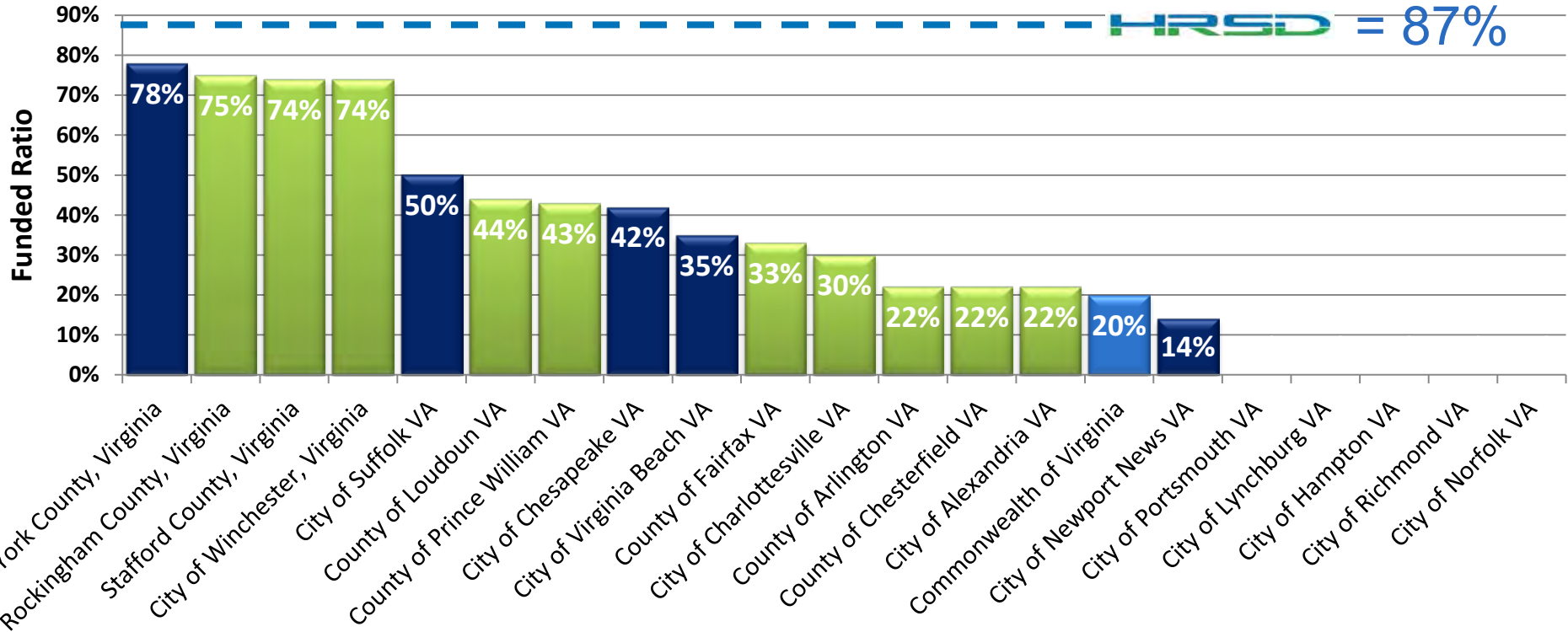
FY2018 Budget Work Session
March 28, 2017

- Finance Committee Follow-up
- Revenues
- Plan of Finance
- Operating Budget

Finance Committee Follow-up

Retiree Health Plan Trust – FY 16 Funded Ratio Comparison

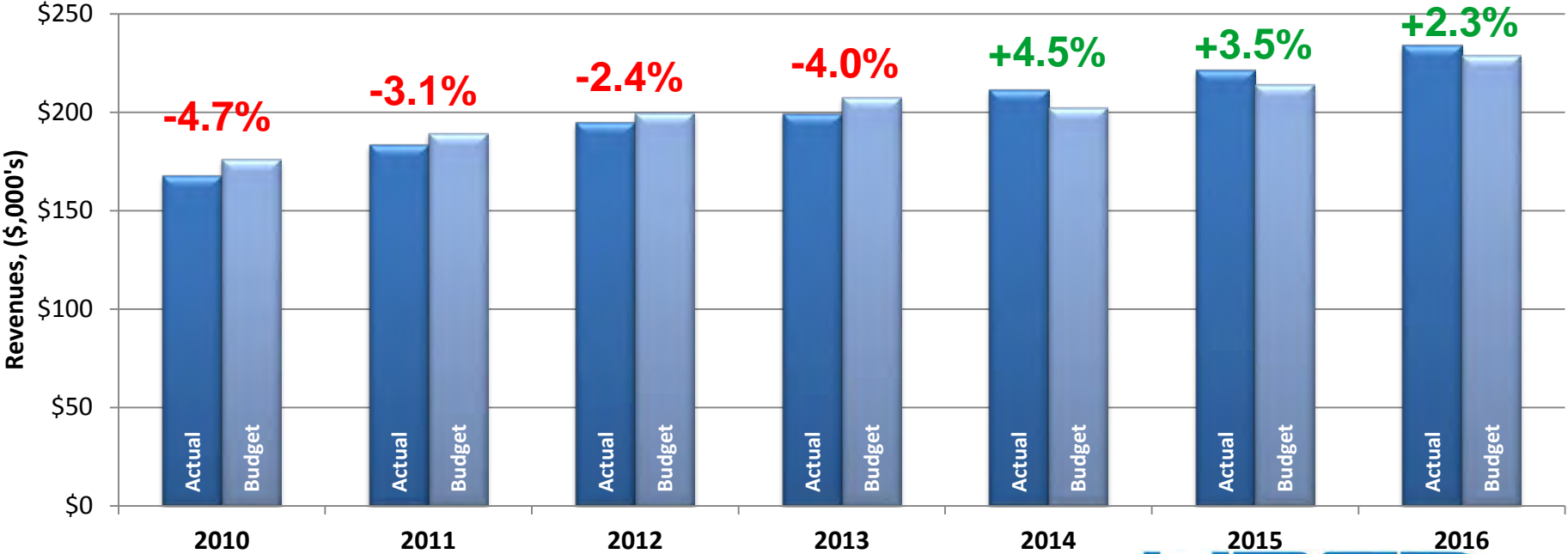
Bloomberg Report from 2014 CAFR data



Revenues & Water Consumption

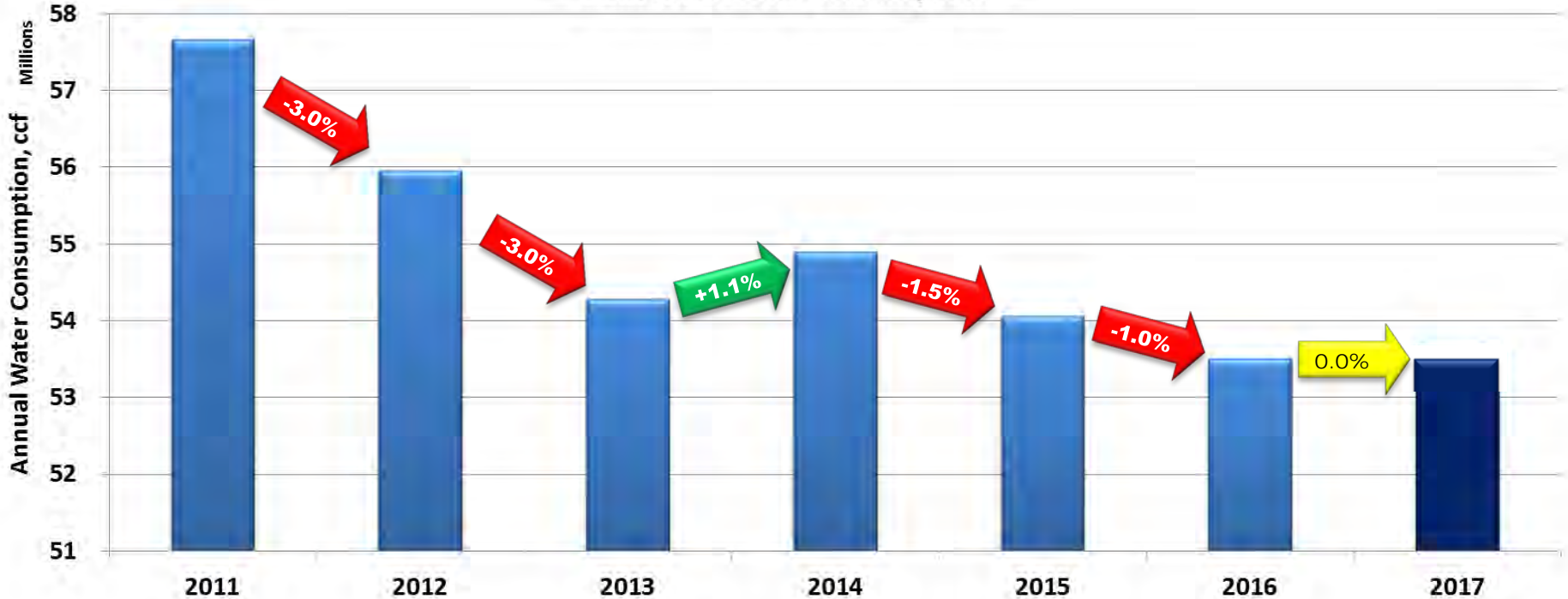
Historical Wastewater Treatment Charges – Budget vs Actual

Revenues Wastewater Treatment Charges



Water consumption may be flattening

Annual Water Consumption



FY18 Water Consumption Proposal

- **52.9** million ccf
- 5 year regression
- 1% decline from FY17 projected

FY17 projected ≈ FY16 actual



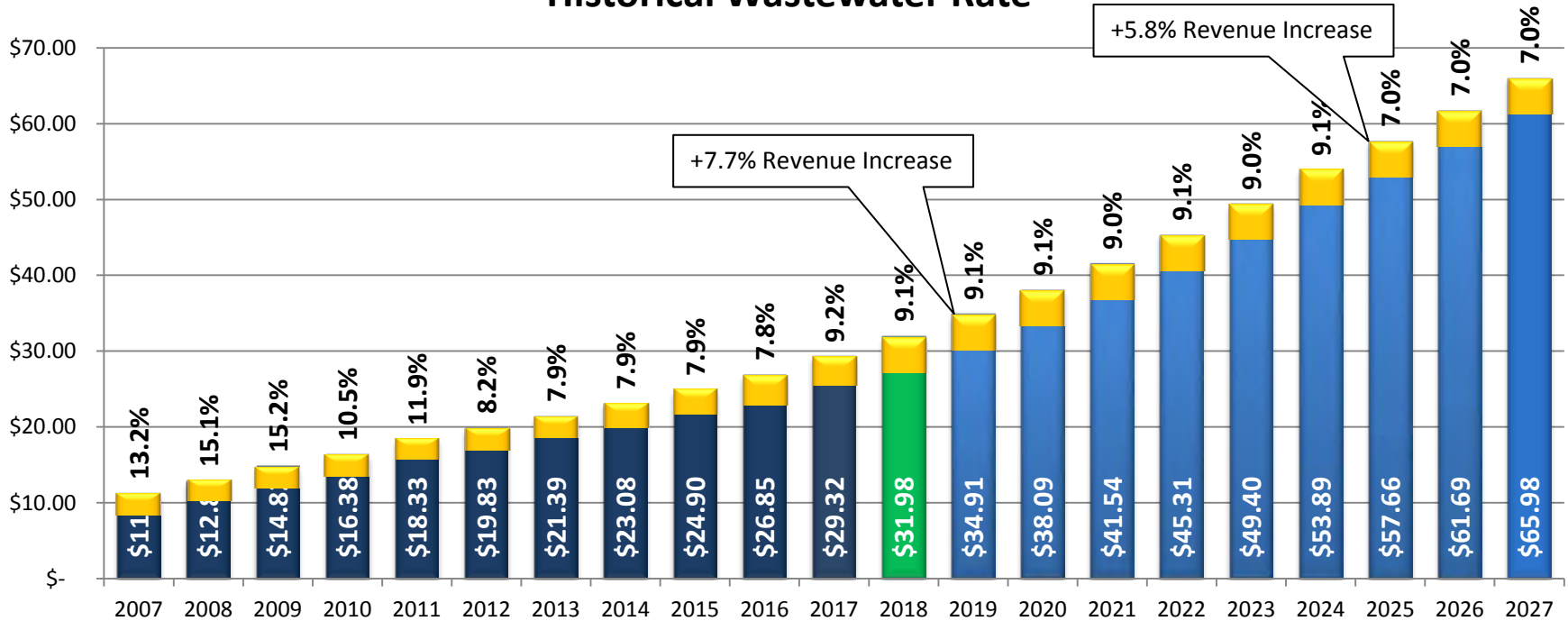
Impact of 1% water consumption decline in the Financial Forecast

- “Conservative”
- Highly sensitive
- If water consumption remains flat
 - +\$1.2B in additional total revenue by Year 2037
 - 180 basis point increase in Debt Service Coverage (3.8x vs 2.0x)

- FY18 – 9.1% rate increase
 - 7.9% revenue increase (*compared to FY17 projected*)
 - 1.2% to cover water consumption declines
 - \$4.92 per ccf (up from \$4.51 per ccf)
 - Increase of less than \$0.09 per day for average household with FY18 HRSD bill only about \$1 per day

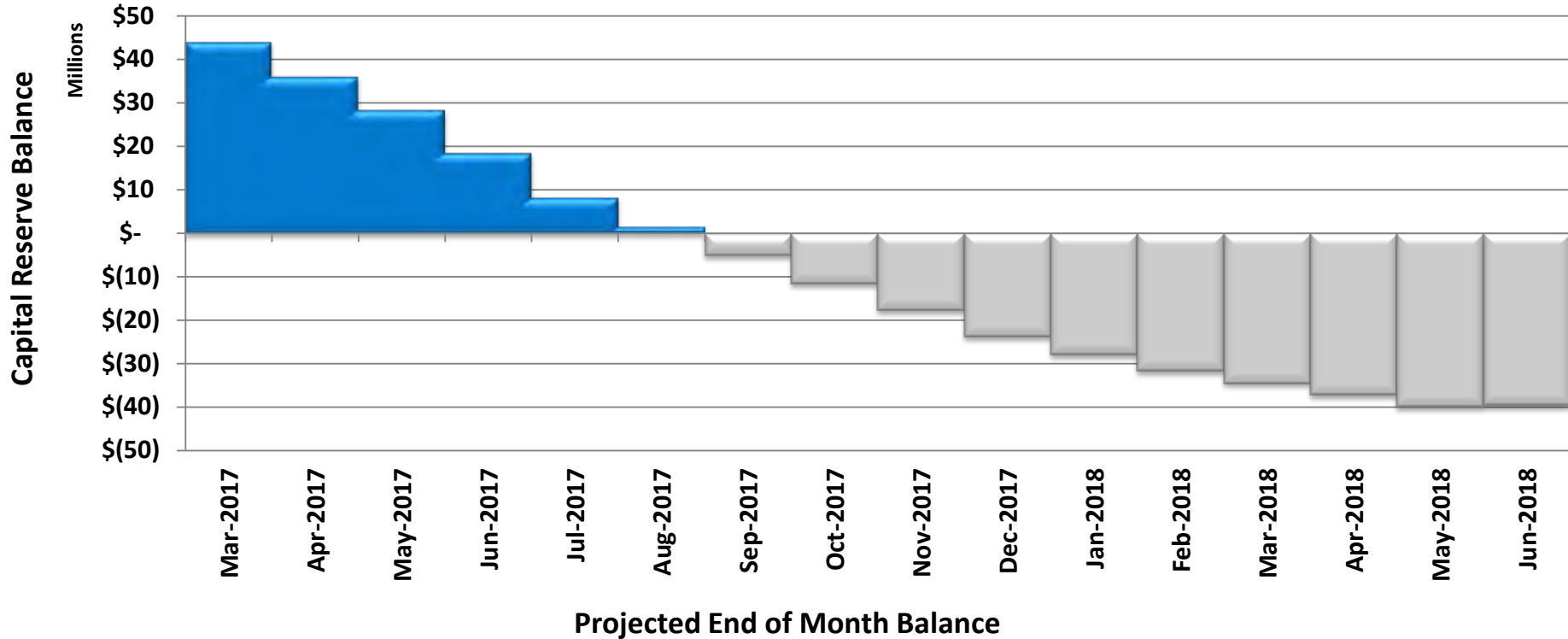
Rate Increases account for Water Consumption declines

Historical Wastewater Rate



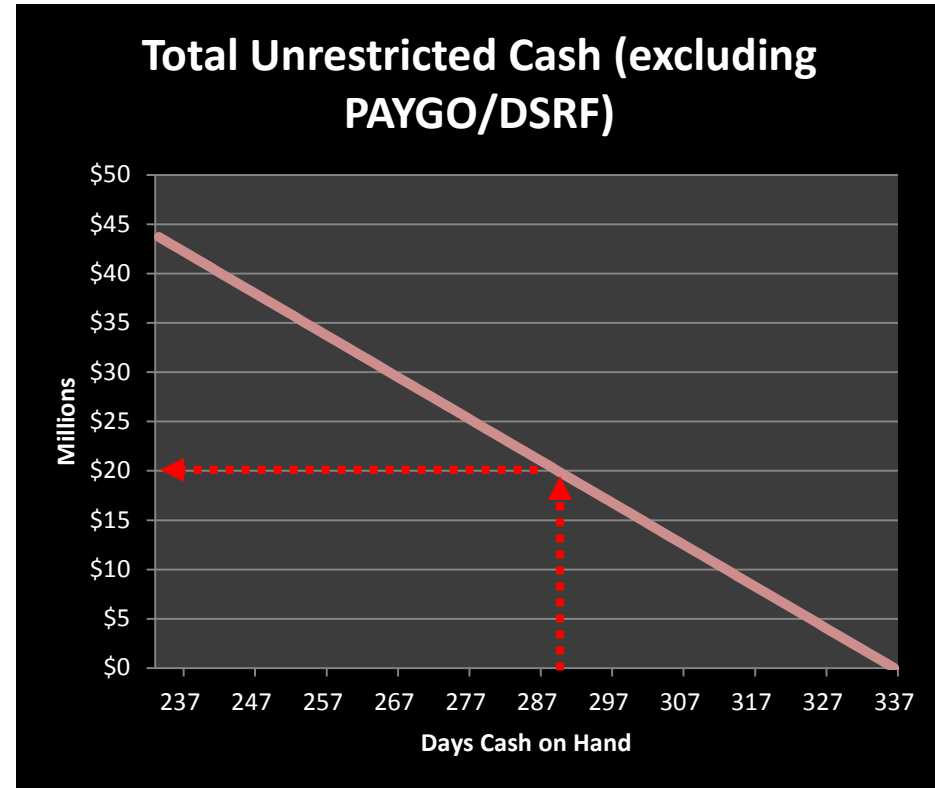
Capital Program - Plan of Finance

Transfer Cash to Capital Reserve to Reduce Liquidity



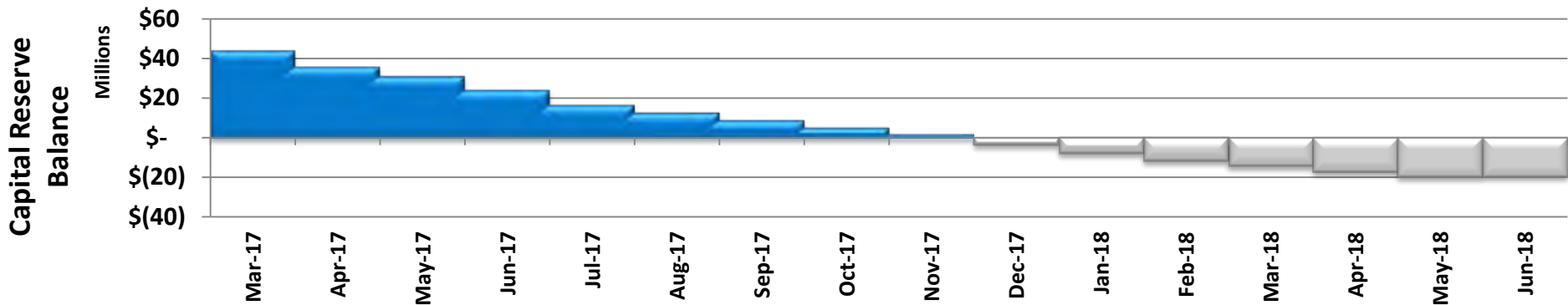
Recommended Transfer = \$20M

- 290 days Cash on Hand (DCOH)
- Assumes
 - Uses existing PAYGO
 - \$31.7 DSRF* intact
- Actual DCOH = 365 days
 - With DSRF added

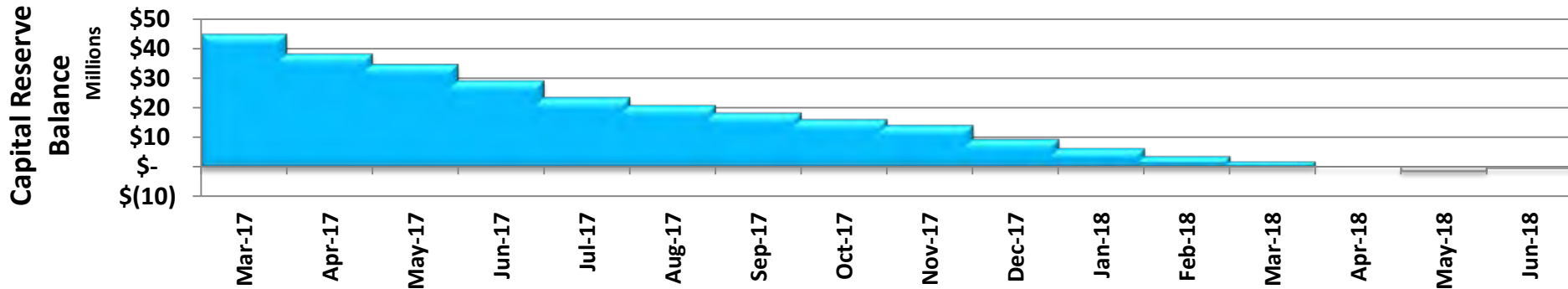


*Debt Service Reserve Fund (DSRF) is unrestricted

Transfer Impact & Sensitivity Analysis



Assumes Capital Spend is **10% less**



Operating Budget

Historical Budget Comparison

- Operating Expenses increase 3.5% to \$151M
 - FY 17 forecast for FY 18 budget at \$154M
 - FY 10 forecast for FY 18 budget at \$172M
 - Average annual increase over past six years 3.3%
- Operating Revenues over the past six years
 - Average annual revenue increase = 5.7%
 - Average annual wastewater treatment rate increase = 7.4%
 - \$2.82/CCF in FY10 to \$4.92/CCF in FY18

Proposed 2018 Revenues

		Adopted	Increase/ (Decrease)	Percent Change
	FY-2018	FY-2017		
Operating Revenues				
Wastewater Treatment Charges	\$ 273,088	\$ 249,743	\$ 23,345	9%
Miscellaneous	1,545	2,120	\$ (575)	(27%)
Total-Operating Revenue	274,633	251,863	22,770	9%
Non-Operating Revenues				
Wastewater Facility Charges	5,850	5,850	-	0%
Investment Earnings	1,800	1,400	400	29%
Build America Bond Subsidy	2,400	2,400	-	0%
Other	720	720	-	0%
Total Non-Operating Revenues	10,770	10,370	400	4%
Total Revenues	285,403	262,233	\$ 23,170	9%

		Adopted	Increase/	Percent
	FY-2018	FY-2017	(Decrease)	Change
Operating Appropriations				
General Management	\$ 681	\$ 953	\$ (272)	(29%)
Communications	\$ 471	\$ -	\$ 471	0%
Talent Management	2,280	2,243	37	2%
Finance	13,594	13,274	320	2%
Information Technology	16,229	15,319	911	6%
Operations	94,173	90,914	3,259	4%
Engineering	5,732	5,667	64	1%
Water Quality	14,206	13,478	728	5%
General Expenses	3,888	4,177	(289)	(7%)
Total-Operating Appropriations	151,253	146,025	5,228	4%
Appropriations for Debt Service and Transfers				
Debt Service	60,149	63,847	(3,698)	(6%)
Transfer to CIP	67,898	52,101	15,797	30%
Transfer to General Reserve	5,843	-	\$ 5,843	0%
Transfer to Risk Management Reserve	260	260	-	0%
Total Appropriations for Debt Service and Transfers	134,150	116,208	17,942	15%
Total Appropriations	\$ 285,403	\$ 262,233	\$ 23,170	9%

Positions

- FY17 budget 818 FT
- FY17 mid-year count 821 FT, 3 mid-year additions
- FY 18 budget proposal 830 FT, 9 new positions
- New Positions
 - 1 Financial Analyst in Accounting
 - 1 Telecommunications Support Coordinator in IT
 - 1 Industrial Control Systems Manager in Industrial Controls
 - 1 Maintenance Operator in SWIFT Demo Facility
 - 1 Plant Operator in SWIFT Demo Facility
 - 1 Electrical & Instrumentation Specialist in Electrical & Energy Management
 - 1 P3 Specialist in P3
 - 2 TSD Specialist in TSD
- Proposed but NOT added in FY18
 - 2 Electrical & Instrumentation (postponed)
 - 2 Water Quality Specialists for Muni Assistance groundwater program

- People related costs - wages
 - Shifted part-time to full-time
 - Reduced OT by over 6% with addition of strategic new positions (\$139k)
 - Minor increase in total wages (2.3%)
 - Includes new positions
 - 2.2% merits for Step 9 (top of range)
 - Merits per existing pay structure

HRSD Health Benefits

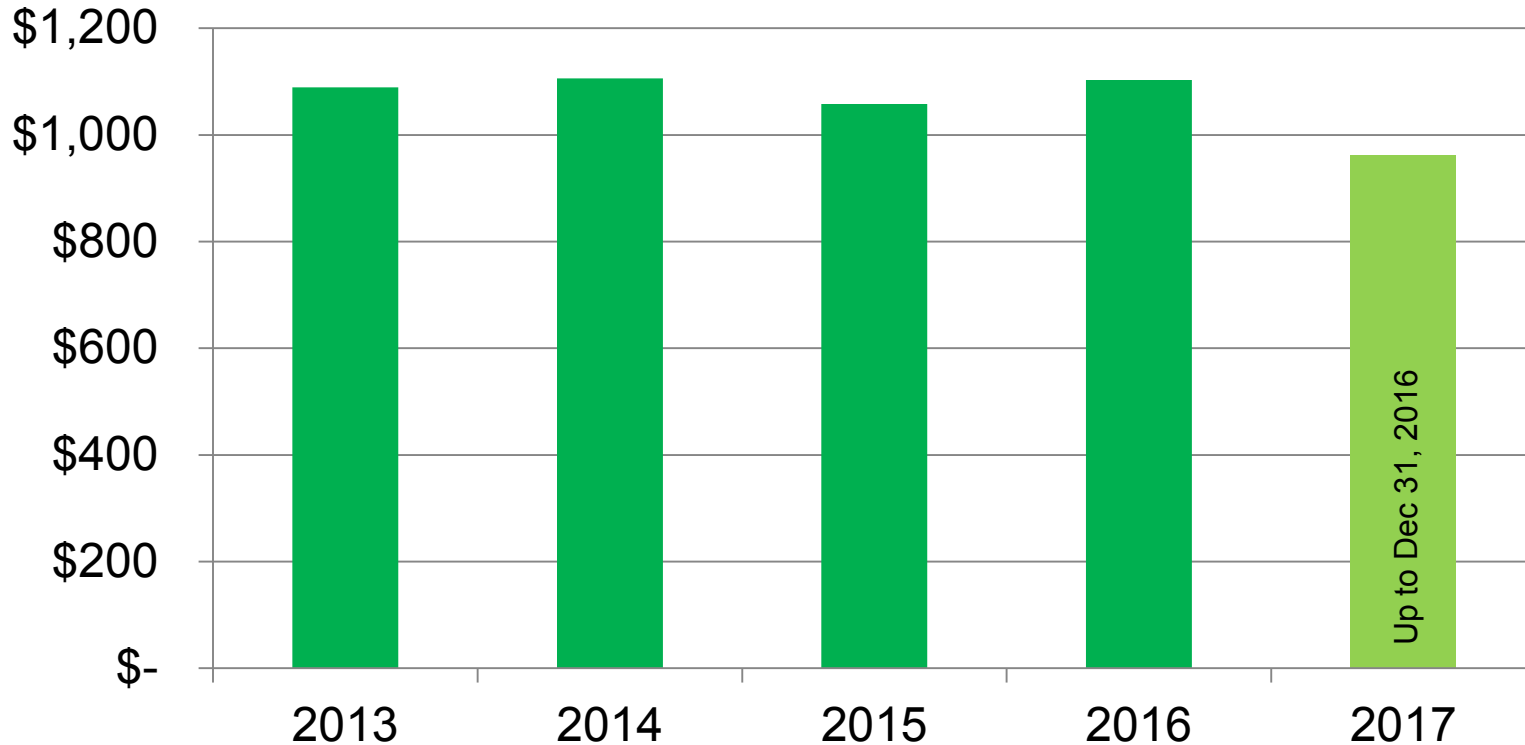
- High Deductible Health Plan- No Premiums

Type	Deductible	Out of Pocket Max
Wellness –Single	\$1500	\$3000
Non-Wellness - Single	\$2000	\$4000
Wellness - Family	\$3000	\$6000
Non-Wellness -Family	\$4000	\$8000

- Pharmacy
 - No Cost Preventative Generics
 - \$10/\$30/\$50 Co-Pays after deductibles
- Health Savings Account
- Basic Vision – No Premiums
- Premium Vision
 - Employee \$4.54/Month
 - Family \$12.71/Month
- Dental – No Premiums

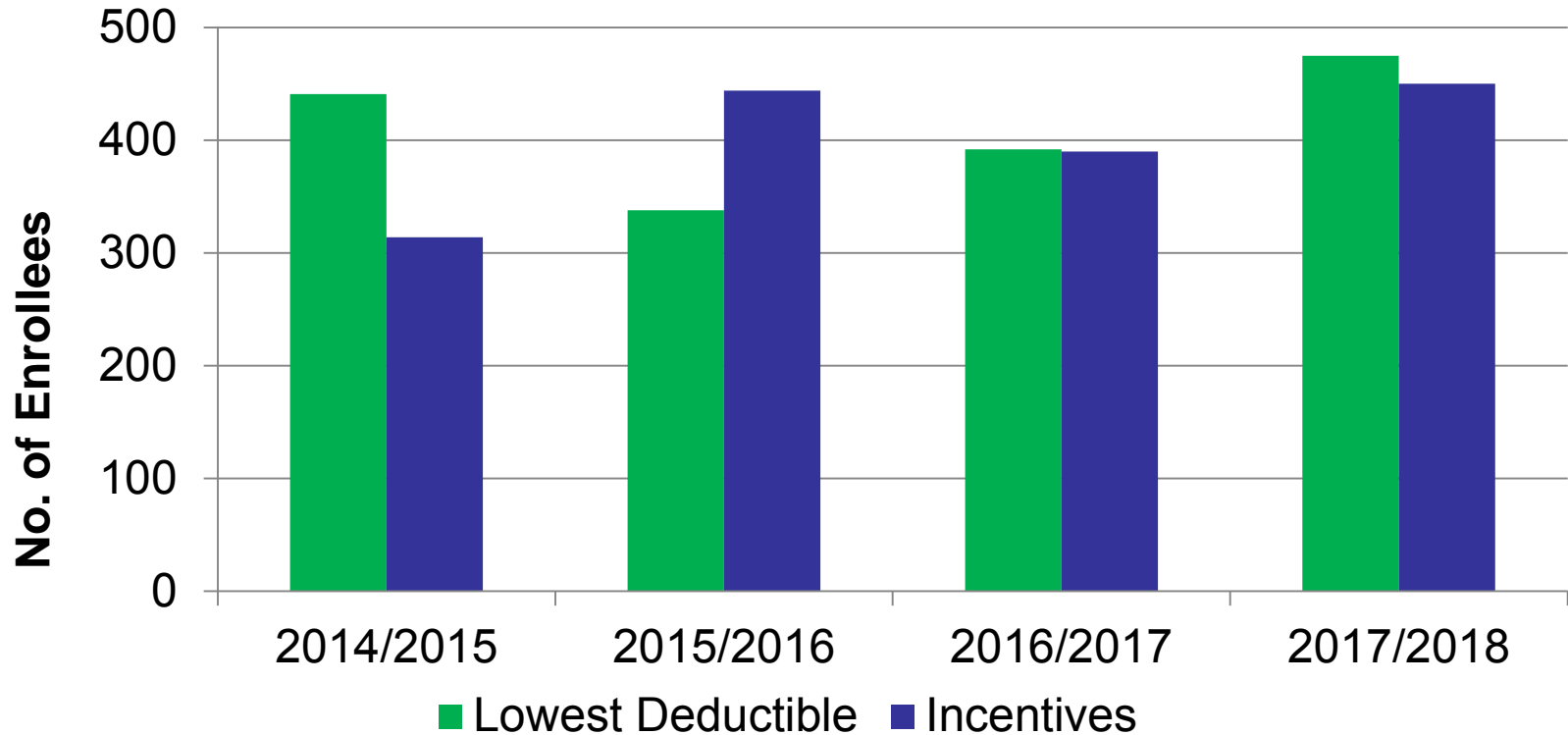
- FY16 Plan Year
 - Enrollment- 772 employees
 - Expected Plan Costs: \$11,529,937(\$1245 PEPM)
 - Actual Plan Costs: \$10,218,226 (\$1103 PEPM)
11% under expected liability
- FY17 Plan Year to Date (Dec 2016)
 - Enrollment – 788 employees
 - YTD Expected Plan Costs: \$6,220,578 (\$1316 PEPM)
 - YTD Actual Plan Costs: \$4,543,840 (\$961 PEPM)
27% under expected liability
- FY18 Projections
 - Enrollment – 792
 - Expected Plan Costs: \$11,980,172(\$1261 PEPM)
5.2% decrease

Medical Actual Per Member Per Month (PEPM) – Cost Trends



- HDHP Design
- Increased Pharmacy Costs Offset by Decreased Medical Costs
- Decreased Catastrophic (>\$50,000)
- Decreased Outpatient Costs
- Increased Pharmacy Rebates
- Generic Dispensing Rates Higher than Norm
- FY17 Increase to Non-Wellness Deductible
- Lower Emergency Room Usage
- Higher Employee Engagement in Health & Wellness

Wellness Program Trends



Renewal Highlights and New Benefits

- HDHP
 - No Changes to Deductible
 - Fertility Benefits : Remove Lifetime Maximum
 - Transgender Services (Federally Mandated)
 - MD Live (\$38 to \$40 Cost)
 - Nutritional & Weight Loss Benefits
 - Bariatric Surgery
 - Prescription
 - Nutritional Counseling
- Premium Vision
 - Increased Premiums
- Dental
 - No Plan Changes or Increases
- Overall Budget
 - Medical – \$12.2M, Flat Year-over-Year (YOY)
 - Wellness (– \$90,000)

- Notable increase in contractual services
 - SWIFT Research
 - Ovation (DCS) Upgrades at James River and York River
 - Virginia Beach Monthly Billing
 - Software Maintenance/Support
 - Roof maintenance services
 - Ash Handling
 - Surveying
 - Cathodic Protection
 - Legal services for water quality issues (Aqualaw)
 - Surry operating contracts (Sussex Service Authority)

- Notable increase in consulting services
 - Plant Process Modeling
 - Small plant and pump station projects
 - BIM (Building Information Management)
 - Corrosion protection services
 - Banking fees
 - Benefits consultant fees (Cigna audit)

- Chemical costs increases - both unit costs & usage
 - Methanol increase to meet WLA with VIP & AB on-line
 - Ferric sulfate in lieu of ferric chloride
 - Increase in dosage of sodium hydroxide for alkalinity control related to nutrient removal efficiencies
 - Two Surry plants

- Holding previous rate increase schedule
- Capital targets under revision
- Holding Debt Service Coverage Ratio (DSCR) 1.7x-2.0x
- Short-run DSCR > 2.0x due to change in Locality spend

- *March 28 – Budget Work Session*
- March 30 – Final CIP Meeting
- April 12 – Finance Committee
- April 25 – Draft Budget Submittal
- May 23 – Formal Budget Adoption
- 4 Consecutive weeks – newspaper advertisement
- July 1 – Budget Effective

Questions?
