# AMHERST TOWN COUNCIL AGENDA

# Wednesday, March 9, 2022 Meeting at 7:00 p.m.

Town Hall, 174 S. Main Street, Amherst, VA 24521

- A. Call to Order for the Town Council 7:00 p.m. Mayor Tuggle
- **B. Pledge of Allegiance -** *I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.*
- **C. Invocation** Any invocation that may be offered before the official start of the Amherst Town Council meeting shall be the voluntary offering to, and for, the benefit of the Council. The views or beliefs expressed by the invocation speaker have not been previously reviewed or approved by Council and do not necessarily represent the religious beliefs or views of the Council in part or as a whole. No member of the audience is required to attend or participate in the invocation, and such decision will have no impact on their right to participate actively in the business of the Council. Copies of the policy governing invocations and setting forth the procedure by which a volunteer may deliver an invocation are available upon request at the Town Hall.
- D. Public Hearings and Presentations
- **E.** Citizen Comments Per the Town Council's policy, any individual desiring to speak before the Council who has not met the agenda deadline requirement will be allowed a maximum of three minutes to speak before the Town Council. Any individual representing a bona fide group will be allowed a maximum of five minutes to speak before the Town Council. Placement on the agenda is at the Mayor's discretion.
- **F.** Consent Agenda Items on the consent agenda can be voted on as a block if all are in agreement with the recommended action or discussed individually.
  - 1. Town Council Minutes (Pgs. 1-6)
  - **2. 0** Draft of the February 9, 2022 and February 23, 20022 meeting minutes are **attached**. Please let Vicki Hunt know of any concerns by Wednesday morning such that any needed corrections can be presented at the meeting.
- **G.** Correspondence and Reports
  - 1. Staff Reports (Pgs. (7-17)
    - a. Town Manager Monthly Report attached
    - b. Police Chief Monthly Report attached
    - c. Office Manager Monthly Report attached
    - d. Clerk of Council Monthly Report- attached
    - e. Public Works Monthly Reports- attached
  - 2. Council Committee Reports (Pg. 18)
    - a. Finance Committee Mrs. Carton- met March 7, 2022, minutes as handout
    - b. Utilities Committee Mr. Watts- met February 10, 20022, minutes attached
  - 3. Other Reports (Pgs.)
    - a. Planning Commission- met March 2,2022, minutes as a handout
    - b. Industrial Development Authority- met February 7, minutes as handout
    - c. Property Maintenance Investigation Board
    - d. Robert E. Lee SWCD
- H. Discussion Items

- 1. Set Public Hearing for FY 23 Capital Improvement Plan and FY 23 Budget Sara McGuffin-. The Planning Commission public hearing on the Capital Improvement Program was March 2, 2022, and a draft CIP has been recommended to Council. Staff recommends that the Council hold a public hearing on both the CIP and the FY 23 budget at their regular April meeting.
- 2. Approval of Bid Process for Centrifuge Purchase- (Pgs. 19-55) Sara McGuffin- Plans are currently being drawn for the approved sludge dewaterer for the Wastewater Treatment Plant, to be purchased with the Town's ARPA funds. Mr. White has recommended that the Town purchase the equipment for the project in advance of the construction so that equipment delays and changes in costs can be managed. Staff recommends that the Town take the centrifuge design and specification out to bid now, with the goal of having it on hand in time for the construction portion of the project.
- 3. Consideration of Ordinance Amendment for Removal of Trash Cans in Public Rights of Way (Pgs. 56-59)- Eric Lansing- Mr. Lansing has prepared a draft ordinance for Council's consideration that would require the removal of trash cans from the public right of way after garbage pickup. If Council agrees with this draft, a public hearing should be scheduled.
- 4. Consideration of an Ordinance Amendment to Convert the Industrial Development Authority to an Economic Development Authority (Pgs. 60-62)- Eric Lansing During the Council's strategic planning process for this term, Council expressed interest in having the Industrial Development Authority become an Economic Development Authority. This code amendment would change the group's title. If Council is satisfied with this language, a public hearing should be set.
- 5. Update on Poplar Grove Wastewater Connection (Pgs. 63-65)- Sara McGuffin- Staff has been working with the developer and the engineering firm for the Poplar Grove development to establish a service agreement for the Town to provide wastewater treatment for a portion of that development. Staff seeks comment from the Council, and authorization to sign the agreement once completed.
- **6. Update on Sweet Briar Water and Sewer Agreements** Sara McGuffin- Staff is working with Sweet Briar College on the update of the water and sewer agreements for the College. Staff anticipates bringing these agreements to the Council for approval in the next few months.
- I. Matters from Staff
- J. Matters from Town Council
- K. Citizen Comments
- L. Adjournment

Mayor D. Dwayne Tuggle called a regular monthly meeting of the Amherst Town Council to order on February 9, 2022, at 7:00 P.M. in the Council Chambers of the Town Hall at 174 S. Main Street.

It was noted that a quorum was present as follows:

P	D. Dwayne Tuggle	P	Sharon W. Turner
P	Rachel A. Carton	P	Janice N. Wheaton
A	Kenneth S. Watts	P	Andra Higginbotham

Also present were the following staff members:

Sara E. Carter	Town Manager	Becky L. Cash	Lead Water Operator
Vicki K. Hunt	Clerk of Council	Robert Shiflett	Chief of Police
Tracie Morgan	Office Manager/Finance	Caleb Martin	Police Officer/Accreditation
	Director		Manager
Eric Lansing	Town Attorney	Brandon Payne	Police Officer/Assistant
_			Accreditation Manager
Charles Thompson	Utilities Maintenance	Alison Davis	Assistant Accreditation Intern
	Foreman		
Gary Williams	Director of Plants		

Recitation of the Pledge of Allegiance to the Flag was followed by an invocation by Charles Thompson.

Eric Smith, Manager for Standards and Policy with the Division of Law Enforcement, Virginia Department of Criminal Justice Services, presented a framed accreditation certificate from the Virginia Law Enforcement Professional Standards Commission to Chief Shiflett for the Police Department's commitment to law enforcement excellence as evidenced by their successful completion of the certification process for the Virginia Law Enforcement Accreditation Program. Out of Virginia's over 400 law enforcement agencies, 103 are accredited, with the Amherst Police Department being the smallest department in the State of Virginia to receive such status.

Mayor Tuggle gave the State of the Town -2021 in Review address. A copy of address is attached and made a part of these minutes.

Mayor Tuggle opened the floor for citizen comment.

Kim Powell, owner of Blue Ridge Slot Car Raceway, came forward in opposition of the need for a special use permit for her business and others that are related to family entertainment not serving alcohol or allowing or encouraging gambling.

Holden Chase, Amherst, VA, came forward in favor of the repeal of §§20-8 (Operation of Bicycles on Certain Sidewalks) and 20-9 (Operation of Skateboards on Certain Sidewalks of the Amherst Town Code.

There being no one else listed to speak on the citizen comment sign-in sheet or otherwise, no comments were made.

Ms. Carton made a motion that was seconded by Ms. Turner to approve the Minutes of the meeting held on January 12, 2022.

There being no discussion, the motion as to the January 12, 2022, minutes carried 4-0 via the roll call method as follows:

D. Dwayne Tuggle		Sharon W. Turner	Aye
Rachel A. Carton	Aye	Janice N. Wheaton	Aye
Kenneth S. Watts	Absent	Andra Higginbotham	Aye

After a report by Town Manager Carter on the final expenditures for the sliplining project, Ms. Turner made a motion that was seconded by Ms. Wheaton to approve purchase of a 2022 John Deere 10SL Backhoe Loader and Tag in the amount of \$131,387.00 from John Deere, allocated from USDA sliplining project funds, as recommended by staff.

There being no discussion, the motion carried 4-0 via the roll call method as follows:

D. Dwayne Tuggle		Sharon W. Turner	Aye
Rachel A. Carton	Aye	Janice N. Wheaton	Aye
Kenneth S. Watts	Absent	Andra Higginbotham	Aye

Town Manager Carter gave a report on the town's survey regarding the necessity of an ordinance on trash cans on public right of way. After discussion, by consensus, Town Attorney Lansing and Town Manager Carter were directed to prepare an ordinance that would limit the amount of time trash cans can be left out in the public right of way for review by Council. Further discussion was deferred to the March 9, 2022, meeting.

Town Attorney Lansing gave a report on optional language amending the Code of the Town of Amherst, Virginia, Chapter 20 (Traffic and Vehicles), Article I (In General), §§20-8 (Operation of Bicycles on Certain Sidewalks) and 20-9 (Operation of Skateboards on Certain Sidewalks). Options presented for consideration were:

- (A) Prohibit skateboards only on sidewalks in the downtown area during business hours and prohibit bicycles on all sidewalks in Town at all times; or,
- (B) Repeal §§20-8 (Operation of Bicycles on Certain Sidewalks) and 20-9 (Operation of Skateboards on Certain Sidewalks; or,
- (C) Require skateboarders and bicyclists to yield to pedestrians and prohibit them from impeding a business or other public building.

A short discussion was held. Further discussion on the matter was deferred to a future meeting when all councilors are present.

Council members discussed whether certain businesses should require a special use permit. By consensus, Ms. Carter and Mr. Lansing were directed to include in the recodification of the Town's zoning ordinances a revision of that portion of Table 7 that would separate and reclassify family entertainment businesses that do not serve alcohol or promote gambling as permitted uses.

Mayor Tuggle opened the floor for citizen comment.

There being no one listed to speak on the citizen comment sign-in sheet or otherwise, no comments were made.

There being no further business, the meeting adjourned at 7:59 P.M., until March 9, 2022, at 7:00 p.m. on motion of Ms. Turner seconded by Ms. Carton.

The motion carried 5-0 as follows:

D. Dwayne Tuggle		Sharon W. Turner	Aye
Rachel A. Carton	Aye	Janice N. Wheaton	Aye
Kenneth S. Watts	Absent	Andra Higginbotham	Aye

	D. Dwayne Tuggle, Mayor
Attest:	
Clerk of Council	

#### 2022 State of the Town Address

At the end of 2020, there was incredible hope that 2021 would be a radically different year. Everyone hoped that there would be an end to the pandemic, and things would go back to normal. After two years of the pandemic, we now know that some things won't ever be quite the same again.

Understanding where we were during this time, the Town focused on fundamentals this year. We made improvements to our core services, reinvested in equipment and facilities, and maintained our positive economic position, ending the calendar year with more in the bank than when we started the year.

In an accomplishment that garnered statewide recognition, the Police Department became the smallest department in the state to become accredited. This accomplishment is based upon four years of consistent hard work- refining policies, expanding outreach, increasing uniform practices, and an incredible commitment to training and excellence. This would not have happened without the investment into the department; the renovated building offered a facility and space to accomplish these goals that should make our citizens proud. At the same time that the Police Department was achieving this goal, they also had their largest toy drive, their largest trick or treat event, and also started clean up campaigns.

The Town reinvested in facilities this year. We replaced the roof on Town Hall and upgraded our Council chambers. We sold and replaced the bucket truck with a new lift. We purchased two new police cars and obtained a generator for the Police building. At our plant's facilities, we continued work on the water plant renovation and the sliplining project. We received approval for a project to have a standby generator for the Waugh's Ferry water tank. Mass grading plans for Brockman Park, including environmental planning to be reviewed by the state was commenced. And the Town did many of these things utilizing competitive grant funds. The Town applied for and received revolving water drinking funds (a \$150,000 grant), a grant for police car and body cameras to bring all officers to a single standard (\$20,000), a grant for the work at Brockman (over \$100,000). Additionally, the Town began work on the Comprehensive Plan, which is being completed at no cost to the Town by our Planning District Commission.

The Town should be proud of the good work done this year, the focus on fundamentals, and the continued financial health of the Town. Staff this year demonstrated that it is possible to be in hard times, get the good work done, and do it well at a low cost.

Thank you, and let's hope for a great 2022.

Mayor D. Dwayne Tuggle called a special meeting of the Amherst Town Council to order on February 23, 2022, at 6:00 P.M. in the Council Chambers of the Town Hall at 174 S. Main Street.

It was noted that a quorum was present as follows:

P	D. Dwayne Tuggle	P	Sharon W. Turner
P	Rachel A. Carton	P	Janice N. Wheaton
A	Kenneth S. Watts	A	Andra Higginbotham

Also present were the following staff members:

Sara E. McGuffin	Town Manager	Robert Shiflett	Chief of Police
Vicki K. Hunt	Clerk of Council	Charles Thompson	Utilities Maintenance Foreman
Tracie Morgan	Office Manager/Finance Director	Gary Williams	Director of Plants

Recitation of the Pledge of Allegiance to the Flag was followed by an invocation by Charles Thompson.

Utilities Maintenance Forman Thompson, Director of Plants Williams, Police Chief Shiflett, and Office Manager Morgan were present to give reports and answer questions on the needs of their department for new/replacement equipment, training, and salary increases.

Clerk of Council Hunt gave a PowerPoint slide presentation on furniture options for Council and Clerk in the Town's Council Chambers. After discussion, Ms. Hunt was requested to provide additional options, with the idea of changing the aspect of the furniture within the room, for review by council. Further discussion was deferred.

After Town Manager McGuffin gave a report on the town's financial position, Ms. McGuffin recommended that council follow the recommended guidelines for across-the-board employee pay increases based on the 2021 consumer price index of 7.4% with a cap to be placed on salaries over \$60,000.00. Further discussion was deferred.

There being no further business, the meeting adjourned at 7:51 P.M., until March 9, 2022, at 7:00 p.m. on motion of Ms. Turner seconded by Ms. Carton.

The motion carried 4-0 as follows:

D. Dwayne Tuggle		Sharon W. Turner	Aye
Rachel A. Carton	Aye	Janice N. Wheaton	Aye
Kenneth S. Watts	Aye	Andra Higginbotham	Absent

		D. Dwayne Tuggle, Mayor
Attest:		
	Clerk of Council	

# Town Manager's Report March 9, 2022

Status of all items shown in italics

# From the Council's Strategic Plan:

# Ongoing or immediate

- Discuss Brockman Park development with IDA- Mini-retreat with IDA on 8.24
- Advise the IDA about Council's interest in exploring an EDA- Completed 5.3.21
- Review the previously developed walkability plan- Completed 4.15.21
- Town Manager meet with the County Administrator and brief him on Council's desire to improve relationships with the County- *Completed*

# Within three (3) months – by June 1, 2021

- Develop a sidewalk plan in priority blocks downtown- Additional planning to be completed through Comprehensive Plan and continued grant work.
- Mayor and Chair of Amherst County Board of Supervisors meeting
- Develop a business visitation plan and commence visits- *IDA has begun visitation of all businesses in town. Completion pending.*
- Develop a plan for a new Council table/dais, including the layout and components, get price quotes, and report back to Council- Next steps would be new table for Council and Clerk. Options presented to Council at budget meeting. Will poll Council for preferences and whether there is desire to proceed.

# Within six (6) months – by September 1, 2021

- Bring to Council a plan for a pathway forward for the IDA to become an EDA-Ordinance Amendment required. Draft Ordinance to Council for consideration at this meeting.
- Convene a joint Town Council/IDA meeting *Held July 6, 2021*
- Explore creating a façade improvement program, with incentives
- Joint Town Council/Board of Supervisors meeting
- Explore the (additional) resources necessary to implement the workplan and report back to Council

# By January 1, 2022

• Negotiate and approve a revised utility agreement with Sweet Briar College- *Initial* meetings and data completed. Framework completed. Utilities committee has approved concept. Working on legal draft now.

# Within one year – by March 1, 2022

- Develop a workplan for the IDA/EDA with goals- *In process*.
- Comprehensive Plan update, including a Downtown Revitalization Component, *In process*.

# Within two (2) years – by March 1, 2023

- Complete initial visitation of town businesses- *Pending*.
- Adopt a revised Comprehensive Plan- Anticipated completion by Summer, 2022. Staff is working with the PDC on a citizen engagement survey on issues in town, and anticipates that the survey will go live on March 15<sup>th</sup>. Survey to be complete on April 15<sup>th</sup>. Survey meeting with citizens in April.

# **Other Major Projects:**

# Sewer Sliplining Project

Wastewater Treatment Plant improvements are complete. On the collection side of the project, the we have worked with the contractor on a plan of action for the remaining work. Awaiting confirmation from USDA to complete pipe bursting.

#### Water Treatment Plant

The project is proceeding well, although there are time delays due to supply chain issues and a pandemic related shutdown.

#### Brockman Park Engineering Work

Survey and delineation work is complete, and 50% grading plans are complete. Stormwater plans and other regulatory items have been summitted to the state for approval.

# Standalone Generator at Waugh's Ferry Water Tank

Bid process underway.

# Centrifuge Facility (Sludge Dewaterer)

WW has begun work on drawings for the facility. Purchase approval request in this month's packet for the centrifuge equipment. Drawings for the construction project are underway.



# **FEBRUARY 2022 MONTHLY REPORT**

CALLS FOR SERVICE	NUMBER
MOTORIST ASSIST	15
ALARM	8
PHONE COMPLAINT	119
BOLO	15
MISSING PERSON	0
SHOPLIFTING	0
PROBLEM WITH OTHERS	5
DOMESTIC	0
CHECK WELFARE	5
NOISE OR DOG COMPLAINT	1
TRAFFIC CRASH	1
EMS CALLS	5
SUDDEN DEATH	3
SUSPICIOUS PERSON	4
OTHER	23
CALLS AT AMBRIAR	4

OTHER	NUMBER
ASSIST OTHER OFFICER	15
ASSIST OTHER AGENCY	11
COURT	4
REPORTS	8
SCHOOL / TRAINING	14
MEETINGS	8
TOWED / IMPOUNDED VEH	

WARNINGS	NUMBER
SPEEDING	1
EQUIPMENT VIOLATION	
RECKLESS DRIVING	
SUSPENDED LICENSE	
INSPECTION/REGISTRATION	
SEAT BELT / TEXTING	
ALL OTHER VIOLATIONS	

OFFICER INITIATED	NUMBER
BUILDING CHECKS	185
BUSINESS VISIT	20
BUILDING SEARCH	0
TRAFFIC SUMMONS	21
DRUNK IN PUBLIC	0
EXTRA PATROLS/PARKS	127/57
WARRANT SERVICE	1
PROPERTY WALK AROUNDS	40
WARRANTS OBTAINED	1
PARKING TICKETS	1
MISD. INVESTIGATION	1
FELONY INVESTIGATION	2
NARCOTICS INV.	0
SEARCH WARRANT	4
PUBLIC RELATIONS	1
CITIZEN CONTACT	26

TRAFFIC STOPS TICKETED	NUMBER
SPEEDING	12
EQUIPMENT VIOLATION	0
RECKLESS DRIVING	0
SUSPENDED LICENSE	2
INSPECTION/REGISTRATION	6
SEAT BELT / TEXTING	0
ALL OTHER VIOLATIONS	1

ARREST	NUMBER
MISDEMEANOR	1
FELONY	1
EPO/PPO	
ECO	
NARCOTICS VIOLATION	
DUI / DUID	1



# **MONTH OF FEBRUARY ACTIVITIES:**

140 CALL FOR SERVICE (MONTH OF FEBRUARY 2022)

5,528 MILES PATROLLED (MONTH OF FEBRUARY 2022)

# **ASSIST OTHER AGENCY CALLS:**

2/3/22	Crisis Negotiation	110 Penn Lane	Assist
2/8/22	Suicidal female	117 Charity Lane	Assist/shots fired call
2/9/22	Arrestee transport	Dulwich Drive	Arrest
2/12/22	Suspicious Person	Sweet Briar College	Gone on arrival
2/12/22	Assault	127 Estelles Lane	Arrest
2/25/22	Prowler	384 Patrick Henry Hwy	Gone on arrival
2/25/22	Vehicle Unlock	1425 N Amherst Hwy	Unlocked
2/25/22	Drunk in Public	1425 N Amherst Hwy	Arrest made by 5
2/25/22	Motorist Assist	390 Lexington Tpke	Assist

# **AFTER HOURS CALLS:**

2/11/22	Unsecured door	111 Church Street	Advice
2/24/22	Barking dog	128 Walnut Street	Advice



# **MEETINGS/TRAINING:**

Started planning 4<sup>th</sup> of July parade
Officer Robinson attended CIT Instructor School
RASAC meeting attended by Chief Shiflett



# TOWN OF AMHERST

P.O. Box 280 174 S. Main Street Amherst, VA 24521 Phone (434)946-7885 Fax (434)946-2087

To: Town Council

From: Tracie Morgan

**Date:** March 3, 2022

**Re:** February 2022 Monthly Report

Utilities – January utility billing total was \$197,442.52.

**A/P** – The total amount of checks cut for January 2022 bills, including payroll deductions were \$356,482.70.

**Meals and Beverage Tax** – **16** Businesses paid \$44,445.58 in Meals and Beverage Tax for the month of January 2022.

**License Tax Bills** – License Fee Bills were due December 6, 2021. Second notices have been sent out to those that are delinquent. I ran my collection process February 14, 2022 that included bank liens, and intercepting State Tax Refunds.

**Budget** – Personnel costs, department requests, outside agency requests, miscellaneous cost projects as well as revenue projections have been turned into Ms. McGuffin for review.

**Audit**- Due to some conversion issue in Edmunds we are a little behind on the audit completion, however, the Auditors were here February 9, 2022 and should be finishing up soon.

# CLERK OF COUNCIL REPORT FEBRUARY 2022

#### **COMMITTEE MEETINGS**

#### *IDA*

Regular Meeting on 02-02-22: Receive and review agenda materials; assemble packet for meeting; distribute and post agenda packet to website; prepare for and attend meeting; draft minutes for approval; post to Town website.

# **Planning Commission**

Regular Meeting on 02-07-22: Receive and review agenda materials; assemble packet for meeting; distribute and post agenda packet to website; prepare for and attend meeting; draft minutes for approval; post to Town website.

# Town Council

Regular Meeting on 02-09-22: Receive and review agenda materials; assemble packet for meeting; distribute and post agenda packet to website; prepare for and attend meeting; draft minutes for approval; post to Town website.

Special Meeting on 02-23-22; Receive and review agenda; distribute and post to website; prepare for and attend meeting; draft minutes for approval; post to website.

**Quorums:** Confirm meetings with board members

#### **TOWN WEBSITE DESIGN AND CONTENT MANAGEMENT**

Administration of website generating and continuously uploading information/documents; revising website pages with new information and links to documents and/or outside sites; examining traffic through the site; design for overall look and feel of the site, including photos, color, graphics, and layout; creating, editing, posting, updating, and cleaning up outdated content.

# **TOWN FACEBOOK ADMINISTRATOR**

- Create content and/or design and post on Facebook linking to Website, including but not limited to:
  - o Notice: Procedures for Amherst Town Council February meeting
  - o DMV to go service at Town Hall notice
- Share links to community news and events; Monitor feedback.

# ZONING ORDINANCE RECODIFICATION

Email with Municode Attorney; receive proof from Municode

#### **OTHER:**

- Convert and post audio meeting recording to website
- Telephone conferences with Clerk of Court CVPDC certificate
- Prepare and post public hearing notices
- Prepare power point slides on council chambers furniture options
- Attend to refreshments for 2.23.22 meeting
- Install table skirt (Council table)
- Miscellaneous phone calls, correspondence; miscellaneous research.
- Prepare miscellaneous purchase orders.

# Town of Amherst Committees as of February 28, 2022

#### Appointed/Term Expires

#### **TOWN COUNCIL**

D. Dwayne Tuggle, Mayor 01/01/19 12/31/22 Rachel A. Carton, Vice 01/01/21 12/31/24 Kenneth S. Watts 01/01/19 12/31/22 Sharon W. Turner 01/01/21 12/31/24

Andra A. Higginbotham 11/11/21 2022 special election (2024 term)

Janice N. Wheaton 11/12/19 12/31/22

#### **PLANNING COMMISSION**

June Driskill, Chairperson 05/13/20 06/30/24

Janice N. Wheaton 01/01/21 12/31/22 (TC rep)

 William Jones
 07/01/19
 06/30/23

 Nathaniel Holden Case
 11/11/21
 11/10/25

 John Kendrick Vandervelde
 11/11/21
 06/30/22

 Clifford Hart
 07/01/19
 06/30/23

 Anne Webster Day
 03/13/19
 06/30/22

#### **BOARD OF ZONING APPEALS**

 June Driskill
 11/13/20 08/31/25

 Ed Carton
 09/01/19 08/31/24

 Teresa Tatlock
 11/11/21 08/31/26

 Marvin Hensley
 08/31/17 08/31/22

 R.A. "Tony Robertson
 01/13/21 08/31/23

#### INDUSTRIAL DEVELOPMENT AUTHORITY

 Clifford Hart
 07/01/19
 08/31/23

 Sharon Watts Turner
 07/01/18
 06/30/22

 Aaron H. Mahler
 07/01/21
 06/30/25

 Jacob Bailey
 07/01/20
 06/30/24

 Manly Rucker
 07/01/21
 06/30/25

 Kim Odell Stein
 07/11/18
 06/30/22

 Richard Wydner
 07/01/19
 06/30/23

#### PROPERTY MAINTENANCE INVESTIGATION BOARD

C. Manly Rucker, III 05/13/20 06/30/24
Bessie H. Kirkwood 07/01/18 06/30/22
Glenda Hash 05/13/20 06/30/24

#### CENTRAL VIRGINIA PLANNING COMMISSION/MPO

D. Dwayne Tuggle 01/01/21 12/31/22 Sara Carter 01/01/21 12/31/22

Appointed/Term Expires

#### **CENTRAL VIRGINIA TRANSPORTATION COUNCIL (MPO)**

D. Dwayne Tuggle 01/01/21 12/31/22 Sara E. Carter 01/01/21 12/31/22

#### **TOWN/SWEET BRIAR SEWER USE ADVISORY COMMISSION**

Andra Higginbotham 01/01/22 12/31/22 Kenneth S. Watts 01/01/21 12/31/22

#### TOWN COUNCIL COMMITTEES (FOR THE 01/01/21-12/31/22 TERM)

#### FINANCE COMMITTEE

Rachel A. Carton (Chairman) and Sharon W. Turner

- Monitor the budget development process.
- Review accounting procedures, budgets, and bookkeeping activities.
- Interface with auditors.

#### **UTILITIES COMMITTEE**

Kenneth S. Watts (Chairman) and Andra A. Higginbotham

- Monitor the development and construction of capital improvement projects.
- Review proposed utility system upgrades and extensions.
- Interface and assist developers in coordinating Town policies with proposed new developments.

#### TOWN HALL MEETING ROOM REHABILITATION AD HOC COMMITTEE

Rachel Carton (Chairman) and Sharon Turner

• Oversee and monitor rehabilitation and refurbishment



# TOWN OF AMHERST DEPARTMENT OF PLANTS MONTHLY PRODUCTION AND OPERATIONAL REPORT

February -- 2022

SUBMITTED BY: GARY S. WILLIAMS,

DIRECTOR OF PLANTS

SUBMITTED ON: Wednesday, March 2, 2022

#### **Grandview Water Filtration Plant,**

Daily Source Water Withdrawal, Process, and Production Volumes.

	Total, Million Gallons	Average, Million Gallons	Max., Million Gallons	Min., Million Gallons
Raw Source Water	10.760	0.380	0.730	0.200
Plant Production	9.480	0.340	0.640	0.190
Water Delivered to System	8.960	0.320	0.590	0.190

# **Rutledge Creek Wastewater Treatment Facility**

# Daily Process, and Production Volumes.

	Total, Million Gallons	Average, Million Gallons	Max., Million Gallons	Min., Million Gallons
Finial Treated Effluent	8.296	0.296	0.449	0.224

# Stand Out Details of Monthly Operations,



Work on the water plant upgrade is still on going. While the supply chain has slowed work a small construction crew continues to work on a daily basis. 7 new windows have been install on the main floor, others will be put into place when the lab renovation is done. One of the three new finished water pumps has been installed. Since the pump replaced was of great age its use was as an emergency stand by. The installation of the its new replacement served as an installation test run. Going forward the should be little to no issues install the next two pumps. The new chemical feed building has been set in place and once work has progressed it will be used as a temporary lab when the lab renovation is started.





15 Page 1 / 2

• Sentinel Monitoring Covid RNA Results For The Last 19 Weeks.

1	Week	Sample Date and	l Time		Results	Below LOD	LOD Sewage
09/14/21	1	09/14/21	15.00	copies/L wastewater	1,063	yes	1,350.0
10	1	09/14/21	15:00	copies/L wastewater	1,063	yes	9,987.5
09/21/21	_	09/21/21	15.00	copies/L wastewater	5,313	no	1,350.0
1005/21	2	09/21/21	15:00	copies/L wastewater	5,750	yes	9,987.5
1005/21	-	09/28/21	1.5.00	copies/L wastewater	1,313	yes	1,350.0
10/05/21	3	09/28/21	15:00	copies/L wastewater	313	yes	
10/05/21	_	10/05/21		copies/L wastewater	3,813		
5         10/12/21         15:02         copies/L wastewater copies/L wastewater         0         yes         1,350.0           6         10/19/21         15:03         copies/L wastewater         5,250         no         1,350.0           7         10/26/21         15:04         copies/L wastewater         7,625         yes         9,987.5           8         11/02/21         15:04         copies/L wastewater         0         yes         9,987.5           9         11/02/21         12:05         copies/L wastewater         1,100         yes         1,350.0           10         11/10/21         14:00         copies/L wastewater         1,125         yes         9,987.5           10         11/16/21         14:15         copies/L wastewater         271         yes         1,350.0           11         11/23/21         15:00         copies/L wastewater         271         yes         1,350.0           12         11/30/21         15:00         copies/L wastewater         271         yes         1,350.0           12         11/30/21         14:00         copies/L wastewater         3,050         yes         1,350.0           12         11/30/21         15:50         copies/L waste	4	10/05/21	15:01	copies/L wastewater	2,438	no	
10/12/21	_			copies/L wastewater			
10/19/21	5	10/12/21	15:02	copies/L wastewater	250	•	ŕ
10/19/21				copies/L wastewater		•	
10/26/21	6		15:03	•			
Total						•	
8         11/02/21         12:05         copies/L wastewater copies/L wastewater 1,000         yes 1,350.0           9         11/09/21         14:00         copies/L wastewater 1,125         yes 1,350.0           10         11/16/21         14:15         copies/L wastewater copies/L wastewater 1,200         yes 9,987.5           11         11/23/21         15:00         copies/L wastewater 1,200         yes 1,350.0           11         11/23/21         15:00         copies/L wastewater 1,200         yes 1,350.0           12         11/30/21         14:00         copies/L wastewater 2,395         yes 9,987.5           13         12/07/21         15:50         copies/L wastewater 3,050         yes 1,350.0           14         12/14/21         15:30         copies/L wastewater 2,395         yes 9,987.5           14         12/14/21         15:30         copies/L wastewater 3,050         yes 1,350.0           15         12/21/21         16:00         copies/L wastewater 3,650         yes 1,350.0           15         12/21/21         16:00         copies/L wastewater 3,650         yes 1,350.0           16         12/28/21         13:15         copies/L wastewater 22,300         no 9,987.5           17         01/04/22         14:15	7		15:04	•		•	
11/09/21   12:05   copies/L wastewater   1,000   yes   9,987.5   1,350.0   copies/L wastewater   1,125   yes   1,350.0   copies/L wastewater   271   yes   1,350.0   copies/L wastewater   271   yes   1,350.0   copies/L wastewater   136   yes   9,987.5   11   11/23/21   15:00   copies/L wastewater   1,200   yes   9,987.5   12   11/30/21   14:00   copies/L wastewater   2,300   yes   9,987.5   13   12/07/21   15:50   copies/L wastewater   2,395   yes   9,987.5   13   12/07/21   15:50   copies/L wastewater   2,300   no   1,350.0   copies/L wastewater   22,300   no   9,987.5   14   12/14/21   15:30   copies/L wastewater   3,650   yes   1,350.0   copies/L wastewater   22,300   no   9,987.5   15   12/21/21   16:00   copies/L wastewater   224   yes   9,987.5   16   12/28/21   13:15   copies/L wastewater   224   yes   9,987.5   17   01/04/22   14:15   copies/L wastewater   124,246   no   5,400.0   17/18/22   15:30   copies/L wastewater   124,246   no   5,400.0   copies/L wastewater   1,251   yes   5,400.0   copies/L wastewater   1,250   no   6,200.0   copies/L wastewater   1,251   yes   5,400.0   copies/L wastewater   1,250   no   6,200.0   copies/L wastewater   1,251   yes   5,400.0   copies/L wastewater   1,251   no   6,200.0   copies/L wastewater   1,250   no   copies/L wastewater   1,250   no   copies/L wastewater   1,250   no   copies/L wastewater   1,250   no   copies/L wastewater				*			
9	8		12:05	•		•	
11/09/21							
10	9		14:00	•		•	
10						·	
11	10	11/16/21	14:15	•		-	
11		11/16/21				•	
12	11	11/23/21	15:00	•		•	
12		11/23/21				•	
13	12	11/30/21	14:00	•	3,050	yes	
13		11/30/21			2,395	yes	
14	13	12/07/21	15:50	copies/L wastewater	41,500	no	
15:30		12/07/21		copies/L wastewater	22,300	no	
12/14/21	14	12/14/21	15:30	copies/L wastewater	3,650	yes	1,350.0
16:00 copies/L wastewater 224 yes 9,987.5  16 12/28/21 13:15 copies/L wastewater 208,039 no 1,350.0 copies/L wastewater 148,473 no 9,987.5  17 01/04/22 14:15 copies/L wastewater 151,098 no 6,200.0 copies/L wastewater 124,246 no 5,400.0  18 01/11/22 15:00 copies/L wastewater 67,209 no 6,200.0 copies/L wastewater 52,099 no 5,400.0  19 01/18/22 15:30 copies/L wastewater 52,099 no 5,400.0  20 01/25/22 13:15 copies/L wastewater 1,751 yes 6,200.0 copies/L wastewater 1,251 yes 5,400.0  20 01/25/22 13:15 copies/L wastewater 57,759 no 6,200.0 copies/L wastewater 40,399 no 5,400.0  21 02/01/22 12:05 copies/L wastewater 13,565 no 6,200.0 copies/L wastewater 20,490 no 5,400.0  22 02/08/22 14:00 copies/L wastewater 14,250 no copies/L wastewater 16,500 no copies/L wastewater 16,500 no copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5  24 02/22/22 14:00 copies/L wastewater 141,000 no 9,987.5		12/14/21		copies/L wastewater	3,650	yes	9,987.5
12/21/21 copies/L wastewater 224 yes 9,987.5  16	15	12/21/21	16:00	copies/L wastewater	895	yes	1,350.0
16		12/21/21		copies/L wastewater	224	yes	9,987.5
12/28/21 copies/L wastewater 148,473 no 9,987.5  17 01/04/22 14:15 copies/L wastewater 151,098 no 6,200.0  18 01/11/22 15:00 copies/L wastewater 124,246 no 5,400.0  19 01/18/22 15:30 copies/L wastewater 52,099 no 5,400.0  19 01/18/22 15:30 copies/L wastewater 1,751 yes 6,200.0  20 01/25/22 13:15 copies/L wastewater 1,251 yes 5,400.0  20 01/25/22 13:15 copies/L wastewater 57,759 no 6,200.0  21 02/01/22 12:05 copies/L wastewater 40,399 no 5,400.0  22 02/08/22 14:00 copies/L wastewater 20,490 no 5,400.0  23 02/15/22 14:50 copies/L wastewater 14,250 no copies/L wastewater 16,500 no copies/L wastewater 171,000 no 1,350.0  24 02/22/22 14:00 copies/L wastewater 171,000 no 9,987.5  25 02/15/22 14:00 copies/L wastewater 141,000 no 9,987.5	16	12/28/21	13.15	•	208,039	no	1,350.0
17	10	12/28/21	15.15	copies/L wastewater	148,473	no	9,987.5
18	17	01/04/22	14.15	copies/L wastewater	151,098	no	6,200.0
18	1,	01/04/22	11.15	copies/L wastewater	124,246	no	5,400.0
19         01/11/22 01/18/22 01/18/22 15:30         copies/L wastewater copies/L wastewater 1,751 yes 6,200.0 copies/L wastewater 1,251 yes 5,400.0         5,400.0 copies/L wastewater 1,251 yes 5,400.0           20         01/25/22 01/25/22 01/25/22 13:15 copies/L wastewater copies/L wastewater 40,399 no 5,400.0 copies/L wastewater 13,565 no 6,200.0 copies/L wastewater 20,490 no 5,400.0         5,400.0 copies/L wastewater 13,565 no 6,200.0 copies/L wastewater 20,490 no 5,400.0 copies/L wastewater 14,250 no copies/L wastewater 16,500 no copies/L wastewater 16,500 no copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 171,000 no 9,987.5           23         02/15/22 02/15/22 14:50 copies/L wastewater 141,000 no 9,987.5           24         02/22/22 14:00 copies/L wastewater 141,000 no 1,350.0 copies/L wastewater 14,000 no 1,350.0 copies/L	18	01/11/22	15.00	copies/L wastewater	67,209	no	6,200.0
19	10	01/11/22	13.00	copies/L wastewater	52,099	no	5,400.0
01/18/22         copies/L wastewater         1,251         yes         5,400.0           20         01/25/22         13:15         copies/L wastewater         57,759         no         6,200.0           21         02/01/22         12:05         copies/L wastewater         40,399         no         5,400.0           21         02/01/22         12:05         copies/L wastewater         13,565         no         6,200.0           22         02/08/22         14:00         copies/L wastewater         14,250         no           23         02/08/22         14:50         copies/L wastewater         171,000         no         1,350.0           23         02/15/22         14:50         copies/L wastewater         141,000         no         9,987.5           24         02/22/22         14:00         copies/L wastewater         1,440         no         1,350.0	19	01/18/22	15:30	copies/L wastewater	1,751	yes	6,200.0
20	17	01/18/22	13.30	copies/L wastewater	1,251	yes	5,400.0
01/25/22     copies/L wastewater 40,399 no 5,400.0       21     02/01/22 no 02/01/22     12:05 no 06,200.0       22     02/08/22 no 02/08/22     14:00 no 02/01/22       23     02/15/22 no 02/15/22     14:50 no 02/01/22       24     02/22/22     14:00 no 02/01/22         24     02/22/22     14:00 no 02/22/22         24     02/22/22     14:00 no 02/22/22	20	01/25/22	13.15	copies/L wastewater	57,759	no	6,200.0
21 02/01/22 12:05 copies/L wastewater 13,565 no 6,200.0 copies/L wastewater 20,490 no 5,400.0 copies/L wastewater 14,250 no copies/L wastewater 16,500 no copies/L wastewater 16,500 no copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5 copies/L wastewater 1,440 no 1,350.0 copies/L		01/25/22	13.13	copies/L wastewater	40,399	no	5,400.0
21 02/01/22 copies/L wastewater 20,490 no 5,400.0  22 02/08/22 14:00 copies/L wastewater 14,250 no copies/L wastewater 16,500 no copies/L wastewater 16,500 no copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5  24 02/22/22 14:00 copies/L wastewater 1,440 no 1,350.0 copies/L wastewater 1,440 no 1,	21		12.05	copies/L wastewater		no	6,200.0
22 02/08/22 14:00 copies/L wastewater 14,250 no copies/L wastewater 16,500 no  23 02/15/22 14:50 copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5  24 02/22/22 14:00 copies/L wastewater 1,440 no 1,350.0	21		12:05	copies/L wastewater		no	5,400.0
23 02/08/22 14:50 copies/L wastewater 16,500 no 1,350.0 copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5  24 02/22/22 14:00 copies/L wastewater 1,440 no 1,350.0	22	02/08/22	14.00	copies/L wastewater	14,250	no	
23 02/15/22 14:50 copies/L wastewater 171,000 no 1,350.0 copies/L wastewater 141,000 no 9,987.5  24 02/22/22 14:00 copies/L wastewater 1,440 no 1,350.0	2.2		14:00	copies/L wastewater		no	
23	2.2	02/15/22	copies/L wastewater			1,350.0	
24 02/22/22 copies/L wastewater 1,440 no 1,350.0	23		14:50	copies/L wastewater			
24 14:00	24						
		02/22/22	14:00	copies/L wastewater	2,380	yes	9,987.5

# **Utility/Town Maintenance and Construction Report**

Feb-22

Water Meter Read	1150
Water Meter Re-Read	38
Disconnects	17
VA-811 Service locations	37
Vehicle PM Work Orders	12
Pump Station/Plant Work Orders	24
Banners Installed/Dismantled	0
Water Services Installed/Replaced	4
Sewer Services Installed/Replaced	1
Minor Leak: ks Repaired	1
Major Leaks Repaired	0
Minor Sewer Problems Resolved	4
Major Sewer Problems Resolved	0

#### **Man Hours**

Meter Reading	103
Street/Sidewalk Maintenance	211
Safety Training	3
Bush gogging/ Right of way water/ sewer	0
Flushing Water	5
Equipment Maintenance	73
Xmas decorations	0

Major Issu	es & C	omment	S
------------	--------	--------	---

# Routine/Annual Work Projects/Unusual Work

Service Work Orders

Meter Reading

Continue Safety and Shop/Yard Clean-up

Prev-Maint Work Orders

Disconnects

Re-connects

Flushing Program

in Select Locations

Locating Un-marked/Unknown Water & Sewer System Assets

Continue Safety and Shop/Yard Clean-up

Staff has been working on finding water valves and addressing issues

Working on clearing water right of ways.

# UTILITIES COMMITTEE MINUTES

February 10, 2022 6:00 pm

Attendees: Kenneth Watts and Andra Higginbotham

Visitors: Angela Bryant (SBC)

Staff: Sara Carter

Other Councilors visiting: Sharon Turner

Staff presented an overview of the new Sweet Briar College water and wastewater agreement. The wastewater agreement will remain largely the same in concept. On the water side, the bill will be based on a reducing quantity of water over time, with a rate that moves up as usage goes down to hold Town revenues steady and incentivize the College saving water. The new agreement will include a capital investment on the part of the College for any improvements that serve them. Increases in water rates will be based upon the current town rates, rather than an annual adjustment based upon CPI. The new agreement will go for a total of fifty years, including renewals.

The committee also heard an update on wastewater service for Poplar Grove. The committee feels ready to have the Town proceed with this agreement once staff has the final wording satisfactorily completed.

The meeting adjourned at 6:35 pm.



# **REQUEST FOR QUOTATION**

# WASTEWATER TREATMENT PLANT CENTRIFUGE EQUIPMENT

**TOWN OF AMHERST, VIRGINIA** 

# **Prefinal**

February 14, 2022

Prepared by:



968 Olympia Drive, Suite 1 Charlottesville, VA 22911 Phone: 434-984-2700 PO Box 4119 Lynchburg, VA 24502 Phone: 434-316-6080

# Section 01000 Table of Contents

	<u>SECTION</u>
Division 1 – General Requirements	
Request for Quotations	01100
Instructions to Bidders	01200
Bid Form	01300
General Requirements	01400
Division 11 – Equipment	
Centrifuge Sludge Dewatering Equipment	11350

End of Section

# Section 01100 Request for Quotations

Re: Town of Amherst Wastewater Treatment Plant Centrifuge Equipment Amherst, Virginia

Bids on the referenced project will be received by the Town Manager at Town Hall, 174 South Main Street, Amherst, Virginia, until 2:00 PM local prevailing time on 2022, and then publicly opened.

Bids may be withdrawn in accordance with the Code of Virginia Section 11-54(A) Procedure (ii).

The project will consist of quotes to furnish the following:

• One (1) centrifuge with related equipment

Bid documents consisting of project manual and drawings are open to the public for inspection at the following locations:

- Owner: Town of Amherst, 174 South Main Street, Amherst, VA 24521
- Engineer: WW Associates, Inc., 110 Vista Center Drive, Suite 1, Forest, VA 24551, Telephone: 434-316-6080
- WW Associates, Inc., 968 Olympia Drive, Suite 1, Charlottesville, VA 22911

Bid documents in Adobe Acrobat format (pdf) may be obtained from WW Associates, Inc., P.O. Box 4119, Lynchburg, VA 24502.

Town of Amherst, Virginia Sara E. Carter, Town Manager

End of Section

# Section 01200 Instructions to Bidders

#### 1 PROPOSAL

- 1.1 The proposal shall conform in all respects with the request for proposal, drawings, technical and performance specifications, general requirements, and these instructions to bidders. Bidder may not offer alternate quotations. Each item of material or equipment supplied by the manufacturer shall be new, of first-class quality, conform strictly to the specifications contained in this request for proposal, and free from defects in design, workmanship, and materials.
- 1.2 The manufacturer's proposal shall clearly and fully describe the services and equipment to be furnished. The proposal shall include a written description of the proposed services including, but not limited to, equipment, factory testing, consumable spare parts, installation, startup, training, and routine maintenance service. Drawings shall be provided to clearly depict the technical design of the equipment to be provided. Drawings shall be in sufficient detail to show compliance with the indicated and specified requirements.
- 1.4 No verbal or faxed quotations will be accepted.
- - 1.5.1 Sara E. Carter, Town Manager
    Town of Amherst
    174 South Main Street (Note: Use street address for UPS or other delivery services.)
    P.O. Box 280 (Note: Use PO Box address when utilizing the U.S. Post Office.)
    Amherst, VA 24521
- 1.6 The manufacturer's proposal shall include one copy of the Bid Form furnished by WW Associates, Inc. with all blank spaces on the form completed. Proposals shall be enclosed in an envelope addressed to Ms. Carter. Envelopes shall include labels identifying the proposal as follows:

- 1.6.1 "Proposal for Centrifuge Equipment for Town of Amherst Wastewater Treatment Plant, Amherst, Virginia."
- 1.7 Any proposal received by the Authority from a bidder after the closing date and time shall not be accepted.

#### 2 DESCRIPTIVE MATERIALS

2.1 All proposals shall describe fully and clearly by means of drawings, written specifications, or other documents, as required by the nature of the items offered, the equipment, materials, and services covered by the proposal.

#### 3 SPECIAL TOOLS AND HARDWARE

- 3.1 The price quoted shall include all hardware (bolts, nuts, washers, etc.) necessary to assemble the equipment completely.
- 3.2 All special tools required for installation, adjustment, or maintenance of the proposed equipment are to be furnished with the equipment and their cost included and stated separately in the price quoted.

#### 4 PAINTING

4.1 Seller's standard specification for equipment painting will be accepted unless otherwise noted in the documents. The description of parts and components to be painted, type of print, and number of coats to be applied shall be included in the proposal, including any protective coatings applied for shipping purposes.

#### 5 TAGGING

5.1 Each individual piece of equipment shall be tagged with a securely attached tag clearly identifying the equipment item.

End of Section

Manufacturer/Supplier	Date

# Section 01300 Bid Form

#### Gentlemen:

The undersigned, having carefully studied the documents and drawings for the Request for Quotation, Wastewater Treatment Plant Centrifuge Facility, Amherst, VA, hereby proposes to furnish and deliver all equipment, materials, and services and to perform all operations necessary to execute and complete the work required for the project, in strict accordance with the contract documents prepared by WW Associates, Inc. - Engineers • Surveyors • Planners, dated March 1, 2022, together with addenda numbered \_\_\_\_\_\_\_, issued during bidding period and hereby acknowledged, subject to the terms and conditions of the agreement, as follows:

<u>Total Base Bid:</u> is defined as the equipment listed below, in the quantities indicated, complete and in accordance with the drawings and technical specifications, for the lump sum price:

Item No.	Description	Unit	Quantity	Bid Price	
1	Centrifuge sludge dewatering equipment	Ea	1	\$	
	Total Base Bid:			\$	

#### Notes:

- a) The basis of award shall be the low bidder for the Total Base Bid.
- b) The Base Bid Items are founded upon furnishing equipment and materials of specified manufacturers in accordance with the contract documents.
- c) It is understood and agreed that the Owner, in protecting his best interest, reserves the right to:
  - Reject any or all bids.
  - Accept any bid at the base bid price, or any combination items listed under Total Base Bid.
- d) All purchase orders and contracts shall be directly with the equipment manufacturers.

Manufacturer/Supplier	Date
This bid is subject to acceptance within a p	period of 90 days from this date.
	Respectfully Submitted,
	Manufacturer/Supplier
	By
	Address
	Telephone

Date\_\_\_\_\_

# Section 01400 General Requirements

- 1 Manufacturer Package Description of Work
- 1.1 The work under this contract includes the furnishing and delivery of the following items:
  - One (1) centrifuge sludge dewatering equipment
- 1.2 Furnishing and delivery of spare parts, O&M manuals, startup, and testing for the above-mentioned items, necessary for the work described, complete and in accordance with these specifications. Equipment shall be sized and designed to fit in the intended space as shown on the Drawings.
- 2 Contract Specifications
- 2.1 The equipment manufacturer shall provide all equipment and appurtenances required and shall be responsible to the Owner for the complete and satisfactory operation of the systems.
- 2.2 These original specifications may be supplemented by other drawings or specifications or both furnished to the manufacturer and approved by WW Associates, Inc. Additional drawings may be prepared by WW Associates, Inc. and supplied to the manufacturer during the progress of the work as deemed to be necessary or expedient. These original and supplementary drawings constitute the drawings according to which the work shall be done.
- 2.3 Drawings and specifications are deemed essential parts of this contract, and shall be construed as cooperative. Work indicated on the drawings and not specifically mentioned in the specifications or described in the specifications and not particularly shown on the drawings, shall be regarded as included under this contract the same as if fully set forth in the specifications and exhibited on the drawings. Where figures or definite dimensions are given on the drawings or in the specifications, these shall have precedence over dimensions taken by scaling. In case any inconsistency, omission, or conflict shall be discovered in either specifications or drawings, or if any place the meaning of either or both shall be obscure, or uncertain, or in dispute, WW Associates, Inc. shall decide as to the true intent and WW Associates, Inc. decisions shall be final and binding with approval of the Town of Amherst.
- 3 Price
- 3.1 Unless otherwise stated, the prices provided by the manufacturer in Section 01300 Bid Form shall include all labor, technical and professional services; materials; overhead; profit; lease and buyout fees; packaging and preparation for shipment; insurance; transportation; all federal, state and local fees; and freight charges to deliver the merchandise to the Town of Amherst, Amherst, Virginia. Equipment will be installed by separate contract.

- 3.2 Tax Exemption: The purchase of this equipment is tax exempt.
- 4 Schedule/Liquidated Damages
- 4.1 Time is of the essence with the respect to the delivery of the equipment and performance of the services specified herein. The equipment manufacturer shall deliver each item of equipment and perform the services hereunder in accordance with the schedule specified herein. The manufacturer's failure to deliver material or equipment purchased hereunder or to perform services by the dates and time schedules specified herein shall be considered a material breach of the manufacturer's obligations hereunder. Shop drawings shall be submitted within 60 days after execution of a purchase agreement, and the equipment shall be delivered no later than 240 days following shop drawing approval.
- 4.2 The Owner and Equipment Manufacturer recognize that time is of the essence with this agreement and that the Owner will suffer financial loss if the equipment is not delivered within 240 calendar days following shop drawing approval for all equipment associated with the project. They also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by the Owner if the equipment is not delivered on time. Accordingly, instead of requiring any such proof, the Owner and Manufacturer therefore agree that, as liquidated damages for delay (but not as a penalty), the Manufacturer shall pay the Owner One Thousand Dollars (\$1,000.00) for each day that expires after the time specified for equipment delivery for this project.

# 5 Coordination

- 5.1 The equipment manufacturer is advised that the Town is bidding the installation of other equipment items and related site and utility improvements under a separate construction contract. Liaison with the Owner and General Contractor, and coordination and scheduling of activities with the Owner are salient features of this contract.
- 6 Shop Drawings
- 6.1 For shop drawing submittals, any revisions required by WW Associates, Inc. will be incorporated by the manufacturer and the shop drawings resubmitted for WW Associates, Inc. approval. The manufacturer shall submit an electronic copy (PDF format) of details, specifications, cuts, schedules, and drawings necessary for the fabrications, furnishing, and installation of the equipment and any structural work that may be required to WW Associates, Inc. for approval. An electronic copy (PDF format) of approved shop drawings will be returned to the manufacturer. The approval of WW Associates, Inc. shall not relieve the manufacturer of responsibility for errors in the drawings as the review by WW Associates, Inc. is intended to cover compliance with the specifications and not to enter into every detail of the shop work.
- 6.2 Shop drawings of major assemblies shall be submitted in complete sets.

- 6.3 A separate transmittal shall be used for submittal of items under each specification section. Table of contents and data sheets shall be included.
- 6.4 Shop drawings shall identify the detail as specified in the contract documents and be complete as to the detail of the item and location in the project, materials, the thickness and size of members, the method of joining various components, the quantity, the finish, the location and type of anchors, and shall include necessary measurements. Shop assemblies which require markings for erection identification shall have easy-to-read markings on the shop and erection drawings. Variations in tolerances or clearances between various items and other materials shall also be noted on the shop drawings.
- 6.5 Nameplate data for equipment, including electric motors, shall be included on the shop drawings. Electric motor data shall state the manufacturer, horsepower, service factor, voltage, enclosure type, oversize wiring box, etc.
- 6.6 Shop drawings shall indicate shop-painting requirements to include type of paint and manufacturer.
- 6.7 Standard manufactured items in the form of catalog work sheets showing illustrated cuts of items to be furnished, scale details, sizes, dimensions, quantity, and all other pertinent information shall be submitted and approved in a similar manner.
- 6.8 Measurements given on the shop drawings or standard catalog sheets, as established from the contract specifications and as approved by WW Associates, Inc., shall be followed. When it is necessary to verify field measurements, they shall be checked and established by the manufacturer. The field measurements so established shall be followed by the manufacturer.
- 6.9 The manufacturer, when submitting drawings for approval, shall call to the attention of WW Associates, Inc. any modifications or changes from the specifications, as shown on the shop details, and give the reasons for the modifications.
- 6.10 Attention is called to the fact that the manufacturer shall submit shop drawings at the proper time to avoid delays, and in no case will the time for completion be extended on account of failure of the manufacturer to submit shop drawings as required.
- 6.11 No fabrication of equipment shall be undertaken until WW Associates, Inc. has approved the shop drawings.
- 7 Standard Specifications
- 7.1 Reference to standard specifications of any technical society, organization, or association or to codes of local or state authorities shall mean the latest standard, code, specifications, or tentative specification adopted and published at the date of taking bids, unless specifically stated otherwise.
- 8 Operation, Maintenance, Lubrication Instructions, and Parts Lists Manual

- 8.1 Equipment manufacturers shall submit to WW Associates, Inc. one hard copy and one electronic copy (PDF format) of a manual containing specifications, drawings, and descriptions of equipment; installation instructions; operation, maintenance, and lubrication manuals; parts lists; and where applicable, test data with curves, wiring diagrams, and schematics. This information shall be submitted for each item of equipment furnished under this contract.
- 8.2 These manuals shall be in addition to any instructions shipped with the equipment and shall be submitted only after WW Associates, Inc. has given final approval of the shop drawings. All manuals shall be submitted to WW Associates, Inc. following final shop drawing approval and prior to the date of shipment of the equipment to the job site. Each manual shall be bound in a heavy fiberboard or hardback cover having indicated thereon the type of equipment, manufacturer's name, and year of purchase. An index to the information contained therein shall be bound inside the front cover of each manual.
- 9 Quality Assurance
- 9.1 Compliance with OSHA: All equipment furnished under this contract shall meet all the requirements of the federal and state occupational safety and health acts. Equipment manufacturer shall submit to WW Associates, Inc. certification that the equipment furnished is in compliance with OSHA.
- 9.2 Electrical Codes, Ordinances, and Industrial Standards: The design, testing, assembly, and methods of installation of the wiring materials, electrical equipment and accessories proposed under this contract shall conform to the national electrical code and to applicable state and local requirements. UL listing and labeling shall be adhered to under this contract. Any equipment that does not have a UL, FM, CSA, or other listed testing laboratory label shall be furnished with a notarized letter signed by the supplier stating that the equipment furnished has been manufactured in accordance with the national electrical code and OSHA Requirements. Any additional cost resulting from any deviation from codes or local requirements shall be borne by the manufacturer.
- 10 Shipping, Offloading, and Handling Equipment
- 10.1 Transportation and Handling of Equipment
  - 10.1.1 Arrange deliveries of products with the Owner in accordance with construction schedules. Coordinate with the Owner prior to delivery to avoid conflict with work and conditions at the site.
  - 10.1.2 Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
  - 10.1.3 Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.

10.1.4 Equipment manufacturer shall coordinate off-loading with the General Construction Contractor.

# 10.2 Storage and Protection

- 10.2.1 Store products in locations as directed by the Owner.
- 10.2.2 Arrange for transportation, storage, and handling of products, which require off-site storage. Pay all costs for such work, including insurance.
- 10.2.3 Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Use special care in offloading, handling, and storage of products to assure proper function in the completed work.
- 10.2.4 Store products subject to damage by the elements in weathertight enclosures.
- 10.2.5 Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- 10.2.6 Exterior storage: Store fabricated products above the ground, on blocking or skids; prevent soiling or staining; cover products, which are subject to deterioration with impervious sheet coverings; and provide adequate ventilation to avoid condensation.

# 11 Testing

- 11.1 All design, material, and performance testing costs shall be made at the expense of the manufacturer. Testing costs shall include all manpower, equipment, and handling costs, including preparation, collection, transportation, and shoring.
- 11.2 For materials covered by ASTM, AWWA, State, and/or Federal specifications, the required tests shall be made by the manufacturer and his certificates submitted to WW Associates, Inc.
- 11.3 An electronic copy (PDF format) of all test results shall be furnished to WW Associates, Inc.
- 12 Installation and Startup
- 12.1 An experienced, competent, and authorized representative of the manufacturer shall visit the site of the work as specified in the technical specifications; at start-up to check, supervise, and adjust as required; install the equipment; supervise equipment startup; and provide training and instruction for equipment operation. The equipment supplier's representative shall revisit the job site as often as necessary until all trouble is corrected and the equipment installation and operation is satisfactory to WW Associates, Inc.
- 12.2 The equipment manufacturer shall furnish to the Owner, through WW Associates, Inc., a written report certifying that the equipment (1) has been properly installed

and lubricated; (2) is in accurate alignment; (3) is free from any undue stress imposed by connecting piping or anchor bolts; and (4) has been operated under full load condition and that it operated satisfactorily to WW Associates, Inc.

End of Section

# Section 11350 Centrifuge Sludge Dewatering Equipment

#### 1 GENERAL

- 1.1 Scope of Work: Work described in this section includes furnishing labor, equipment, materials, tools and incidentals required for a complete and operable installation of one horizontal decanter centrifuge system, including the following equipment
  - 1.1.1 Centrifuge with; Vibration isolators, drive motor, backdrive system, gear reducer, and vibration switch.
  - 1.1.2 Control Panel
  - 1.1.3 Related appurtenances
- 1.2 All equipment shall be installed, adjusted, tested, and placed in operation in accordance with these specifications, the manufacturer's recommendations and as shown on the drawings.:
- 1.3 Reference Specifications where applicable to work under this section are referred to by abbreviation as follows:

#### 1.4 Quality Assurance

- 1.4.1 The centrifuge sludge dewatering equipment shall be provided as a package system as specified, as indicated on the drawings, and as required to provide a complete sludge dewatering system ready for operation.
- 1.4.2 The centrifuge sludge dewatering equipment specified in this section shall be furnished by one equipment supplier as an integrated design package. The supplier shall provide all equipment and appurtenances and be responsible for the complete and satisfactory operation of the equipment. The equipment supplier shall be the centrifuge sludge dewatering equipment manufacturer.

- 1.4.3 The centrifuge basis of design is a GEA Westfalia Separator Group, CF3000 centrifuge. An Alfa Laval, Inc. Model ALDEC G3-85 decanter centrifuge system is considered an equivalent to the centrifuge design basis. Other substitutions are not acceptable.
- 1.5 Submittals: Provide the following in a timely manner in accordance with the approved submittals schedule as specified in Section 01400 General Requirements.
  - 1.5.1 Catalog cuts, shop drawings, and wiring diagrams for equipment and accessories.
  - 1.5.2 Operation and Maintenance Manual: At the completion of the project, submit O&M Manual in pdf electronic format.
    - 1.5.2.1 The manuals' identification shall be inscribed on the cover.
    - 1.5.2.2 The manuals shall include the names, addresses, and telephone numbers of the local representatives for each item of equipment and each system.
    - 1.5.2.3 The manuals shall have a table of contents and be assembled to conform to the project manual table of contents with the tab sheets placed before instructions covering the subject. Additionally, each manual shall contain a comprehensive index of all manuals submitted in accordance with this paragraph.
    - 1.5.2.4 Manuals and specifications shall be furnished which provide full and complete coverage of the following subjects:
      - 1.5.2.4.1 Operational Requirement: This document shall describe, in concise terms, all the functional and operational requirements for the system.
      - 1.5.2.4.2 Maintenance: Documentation of all user performed maintenance on all system components, including inspection, and periodic replacement of defective units. This shall include calibration, maintenance, and repair of all equipment, instrumentation, and controls, plus diagnosis and repair or replacement of all system hardware.

#### 1.6 Project Conditions

1.6.1 Equipment furnished in accordance with this section shall be installed at the location and in the space allocated on the contract drawings.

- 1.6.2 The package centrifuge system shall be preassembled with the contractor responsible for connecting the sludge feed piping, polymer feed line, flush water piping, power, centrate piping, and conveyor.
- 1.6.3 Manufacturers shall supply equipment as complete units, including motors, drives, belts, couplings, base plates, guards, and all other required accessories and appurtenances, to ensure compatibility and integrity of the individual components, and provide the specified warranty for all components. Assembly by the Contractor of pumps, motors, shafting, couplings, and the like supplied by various independent manufacturers will not be allowed.
- 1.6.4 The equipment is to be engineered and manufactured under the certification of ISO-9001.
- 1.6.5 Motors shall be designed to perform with a reasonable service life when operated continuously or intermittently. Motors shall be designed with a minimum service factor of 1.15. Other motor requirements shall be as specified in this section and as specified in Division 26 Electrical.
- 1.6.6 Electrical Motors, Controllers, Starters, and Disconnects: Furnish motors, controllers, starters, and disconnects with their respective pieces of equipment. Motors, controllers, starters, and disconnects shall conform to and shall have electrical connections in accordance with the National Electrical Code. Controllers and starters shall have a maximum of 120-volt control circuits, and auxiliary contacts for use with the controls furnished.
- 1.6.7 Any structural, piping, electrical requirements, wiring, instrumentation and controls, drawings, or other modifications required to accommodate equipment offered shall be done at no additional cost to the Owner.
- 1.7 Warranty: Each unit shall be warranted to be free from defects in materials and workmanship for a period of twelve months after substantial completion. The warranty shall cover all repairs for all systems furnished by the manufacturer. Manufacturer shall repair or replace, at its option, any such equipment found to be defective, provided written notice of the alleged defect is received within twelve months after substantial completion.

#### 1.8 System Description

#### 1.8.1 General

1.8.1.1 The package centrifuge system specified herein are of the countercurrent design, horizontal, solid bowl type, continuous feed, scroll type unit.

#### 2 PRODUCTS

#### 2.1 Design Requirements

- 2.1.1 The equipment shall be suitable for exposure to continuous 95 percent relative humidity conditions and for operation in ambient air temperatures from 40 to 104 degrees F.
- 2.1.2 The sludge to be dewatered will be product of a municipal wastewater facility.
- 2.1.3 The unit shall be capable of continuous operation for up to 24 hours per day, seven days a week.
- 2.1.4 The centrifuge shall be optimized for dewatering. In addition, the adjustable pond setting dams may require changing for optimum process capabilities.
- 2.1.5 The design criteria for the centrifuge shall be as follows:

Type of sludge	Aerobically digested secondary sludge
Feed concentration, % TS	2.5% TS
Sludge feed rate, gpm	50 GPM
Solids loading, lbs/hr	900 lbs/hr
Minimum cake solids, % TS	20% TS
Maximum polymer dosage, lbs/ton d.s.	28 lbs/ton
Minimum recovery, % SS	95% SS

## 2.2 General Description

- 2.2.1 The centrifuge shall be a Westfalia Separator CF3000 specifically designed to utilize all new technology. The centrifuge shall be a solid bowl, horizontal, continuous feed, scroll type unit. The centrifuge equipment shall be designed and built to operate continuously or intermittently. The centrifuge shall be designed for counter-current flow characteristics such that no centrate tubes are required. The bowl/scroll design shall utilize the conical section for optimal dewatering of the cake solids. In order to maximize operating capacity and minimize power consumption the decanter shall be of deep pond design. The ratio of product discharge diameter to bowl diameter shall be minimum 0.47.
- 2.2.2 The centrifuge manufacturer shall be responsible for providing a complete centrifuge system, as described herein.
- 2.2.3 All equipment specified herein, shall be fabricated, assembled, erected and placed in proper operating condition in full conformity with drawings, specifications, engineering data, instructions, and recommendations of the equipment manufacturer. The centrifuge units shall be the product of suppliers with a minimum of ten (10) years North American experience in

the design and manufacture of centrifuges for water and wastewater applications and shall be specifically designed for the intended conditions of service. Appurtenant equipment shall be new and shall be designed, fabricated and assembled in accordance with the best engineering and shop practices. All facilities shall be ISO 9001 certified. Individual parts shall be manufactured to standard sizes and gauges. Components of the centrifuge shall be designed for the stresses, which may occur during fabrication, shipping, erection or maintenance. Materials shall be suitable for service conditions and as described herein.

2.2.4 The unit shall be completely tested in the manufacturing facility with a standard factory test panel. The equipment shall be shipped in a minimum number of components and they shall typically be comprised of the centrifuge frame, rotating assembly, main drive assembly, control panel, power panel, and a separate crate of tools and spare parts.

#### 2.3 Materials of Construction

2.3.1 All wetted parts of the centrifuge rotating assembly shall be a minimum of 316 stainless steel, except for the "O" rings, seals, and abrasion-resistant material. "O" rings shall be NBR rubber; lip type seals shall be NBR rubber. The feed tube shall be constructed of 316 stainless steel. The bowl cover shall be of stainless steel and of one-piece design. Fiberglass reinforced plastic covers shall not be allowed. The frame and casing shall be fabricated of carbon steel. All protective guards shall be constructed of painted carbon steel.

#### 2.4 Bowl

- 2.4.1 The centrifuge bowl shall be 53" in length, with the inside diameter of 13" in the cylindrical section, plus a conical beach extension. The bowl shall be manufactured from centrifugal castings of duplex stainless steel type ASTM 2205 / DIN 1.4462. All centrifugal cast material shall be inspected for cracks, shrinkage, porosity, or other defects, by means of a liquid dye penetrant test. The bowl shell shall be designed to operate at a minimum speed of 5,050 rpm and produce a force of 4800 x G. Fabricated or statically cast bowl shells shall not be allowed.
- 2.4.2 The front and rear bowl hubs shall be centrifugally cast of duplex stainless steel. The pool depth in the bowl shall be adjustable by use of plate dams at the large diameter end of the bowl. Optionally, the liquid discharge shall be fitted with Energy Jets to utilize the discharging liquid's energy to propel the bowl. The bowl shell and extension shall be grooved to trap a layer of solids between the bowl wall and the conveyor.
- 2.4.3 The solids shall be conveyed up the conical section of the bowl by the scroll rotating at a positive differential speed. The solids shall be discharged from the bowl via a series of circular discharge ports. Each port shall be protected

by a field replaceable tungsten carbide bushing. A removable stainless steel hood shall be provided so that the bushings are easily inspected. The bushings shall be weight balanced in pairs.

## 2.5 Scroll Conveyor

- 2.5.1 The centrifuge shall include a horizontal scroll conveyor equipped with solid helical flights and independently mounted concentrically within the centrifuge bowl. Both the centrifuge bowl and the scroll conveyor shall be independently balanced such that a scroll conveyor can be interchanged with another from the same model centrifuge. The scroll shall utilize a differential speed, which is greater than the bowl speed to convey solids from the cylindrical section to the conical section and out of the bowl with a minimum disturbance to the pool. The edge and the face of the conveyor flights shall be protected by a series of (STC) Sintered Tungsten Carbide Tiles over the entire length of the conveyor.
- 2.5.2 The STC Tiles shall be bonded to a Stainless Steel (Grade ASTM 2205 or DIN 1.4462) backer utilizing a non-corroding solder brazing for protection against corrosive gases and materials. The tile assemblies are then to be welded onto the edge of the flights the entire length of the scroll. Each tile shall contain wear characteristics as tested by ASTM G65-94 Method A of less than 2mm³ wear.
- 2.5.3 In order to minimize downtime, the manufacturer shall offer a scroll exchange/loaner program. The scroll loaner program shall be established where a loaner scroll shall be shipped to the plant site for installation into the centrifuge. The original scroll shall be subsequently shipped back to the North American repair facility for rework and sent back to the Owner.
- 2.5.4 The wear tiles shall be able to be measured for wear in three locations without removing from the bowl.

#### 2.6 Bearings

- 2.6.1 The centrifuges shall be designed so that the entire rotating assembly is supported by two main pillow block bearings. Each main bearing shall be grease lubricated ball or cylindrical roller type bearing. Bearings for the scroll shall be permanently grease lubricated with lithium-saponified grease.
- 2.6.2 The bearings shall have a minimum L10 lifetime rating of 100,000 hours. The L10 life is to be calculated with the centrifuge running at maximum rated throughput, full speed, with a product using a specific gravity of 2.7 at 4300 RPM. Proof of calculations is required during submittals.
- 2.6.3 The main bearings shall be equipped with RTD type temperature sensors which monitor the temperature of the bearing race directly. The sensors

shall be platinum ohm resistance type PT100. Monitoring of the oil temperature shall not be an acceptable method of protection for the bearings.

## 2.7 Frame and Casing

2.7.1 The rotating assembly and bearings of the centrifuge shall rest on a carbon steel frame, specifically designed for rigidity and noise reduction. Frames containing concrete shall not be allowed. The stainless case shall be designed to act as a protective guard and to provide a complete enclosure for odor containment. The bottom of the casing shall contain flanged connections for sludge cake. The product collection chambers shall be stainless steel with flanges for the sludge cake and centrate discharge. Fiberglass reinforced plastic casings (covers) shall not be allowed.

## 2.8 Drive Systems

#### 2.8.1 Main Drive System

- 2.8.1.1 The main drive system shall consist of a 22 KW (15 Hp) AC inverter duty electric motor and a belt drive system. The belt drive system shall consist of multiple V-belts to provide full load capacity and to withstand the full starting torque of the system, with an ABB, Allen Bradley, or Danfoss variable frequency drive.
- 2.8.1.2 The main motor shall be a squirrel cage induction motor and shall be provided with thermal protection. The motor shall have copper windings and be of a high thermal capacity design for operation of 460 / 3 / 60 power. The motor shall have Class F insulation with a B Rise, TEFC, 1.0 service factor, NEMA design A, oversized cast iron terminal box, and continuous duty. The motor temperature shall not exceed 130°C at 90% nameplate voltage. The noise level shall not exceed 85 dbA sound pressure measured at 1 meter from the motor in all directions.
- 2.8.1.3 With the motor at ambient temperature, it shall be capable of making two (2) complete starts in succession with coasting to rest between starts. The motor shall also be capable of at least one restart within one hour after any shutdown. The motor bearings shall be grease lubricated, ball or roller anti-friction type of standard manufacture. The bearings shall be conservatively designed to withstand all stresses of the service specified.

## 2.8.2 Scroll Drive System

2.8.2.1 The scroll drive system shall be a "SummationDrive®" and shall consist of an AC inverter duty motor mounted on the frame and an automatic torque control module incorporated into the control panel PLC. The scroll drive shall be equipped with an approved 6 pulse variable frequency drive, with self-tuning. The drive shall

have a minimum wire length to motor of 1000 feet. Drive shall be constant torque and factory tested for severe centrifuge duty. The electrical noise shall be in accordance with IEEE standards. The drive shall include a DC link filter and fundamental power factor of 0.98, an IGBT inverter output, primary filter (EMI/ RFI type), and output line chokes with LC filters to control line harmonics.

- 2.8.2.2 The centrifuge shall be equipped with a positive differential speed drive gear reducer to provide control of the differential speed between the centrifuge bowl and conveyor. The control of the differential speed between the bowl and scroll shall be fully automatically adjusted according to the feed product characteristics. The speed adjustment accuracy shall be maximum 0.05 rpm per regulation step. The gears shall be oil lubricated (filled with oil incl. expansion tank with electrical level switch for oil level control).
- 2.8.2.3 The positive differential speed drive drive shall be protected from damage due to high torque overload. A thermal overload protection device in the drive motor shall not be considered as providing for sufficient protection for the differential-drive and shall be protected by torque limits. The positive differential speed drive shall have a continuous torque rating of 4200 Nm over the complete differential speed range. The drive system shall use an 11 kW AC motor for the scroll drive

## 2.9 Noise and Vibration

- 2.9.1 The centrifuge shall be designed such that the average noise level measured at one (1) meter around the periphery of the complete centrifuge assembly shall not exceed 85 dbA when tested at the manufacturing facility without feed and with the inlet and discharges closed. Manufacturers that do not meet the specified noise level must provide a complete sound enclosure with the centrifuge.
- 2.9.2 The centrifuge, when running without feed, shall be measured for vibration in the manufacturing facility. The vibration velocity shall be less than 7 mm/s when measured under dry shop test conditions.

#### 2.9.3 Vibration Isolators

- 2.9.3.1 The centrifuge shall be mounted on rubber-type vibration isolators. The number and vibration constant of the isolator shall be as recommended by the manufacturer for the load and impact resulting from the operation of the centrifuge.
- 2.9.3.2 There shall be no rigid connections at the feed tube, vents, solids discharge, liquid discharge or other components whatsoever to the

machine, thus preventing transmission of vibration to structure, piping and appurtenant equipment.

#### 2.9.4 Flexible Connectors

- 2.9.4.1 To insure a quiet installation, flexible connectors shall be provided to isolate the centrifuge from the building structure. The solids and centrate chutes shall be equipped with 304 stainless steel backup flanges. All hardware shall be supplied by the installing contractor. Flexible pipe connections shall be supplied for the sludge feed line, polymer connection and frame drain. All flexible connections shall be flanged for simple connection to associated piping.
- 2.9.4.2 Due to local conditions, flexible connectors for the main drive motor, "SummationDrive®" motor and centrifuge junction boxes must be furnished by the installing contractor, such that all local electrical codes are met.

## 2.9.5 Vibration Monitoring

- 2.9.5.1 The centrifuge shall be equipped with a vibration monitoring system consisting of an accelerometer, digital display, 4-20 mAmp output, alert alarm and danger alarm.
- 2.9.5.2 Upon reaching an alert (stage 1) alarm, the control system will issue a warning alarm at the panel. Upon reaching a danger alarm (stage 2), the control system will shut down the centrifuge in a controlled shut down sequence.

#### 2.10 Lubrication

2.10.1 The two main pillow block bearings on the centrifuge are grease lubricated with lithium saponified grease. The gearbox is filled with oil. The scroll bearings shall be permanently grease lubricated with a lithium saponified grease.

#### 2.11 Guards

2.11.1 Guards for all gearboxes and belt drives shall be a minimum 11 gauge steel and shall be designed to OSHA standards. Completely enclose the entire belt drive system and construct to minimize vibration. Guards manufactured from fiberglass reinforced plastic shall not be allowed.

#### 2.12 Anchor Bolts

2.12.1 Anchor bolts shall be supplied by the installing contractor and be constructed of 304 stainless steel.

#### 2.13 Standard Tools and Accessories

- 2.13.1 One set of standard tools shall be provided to disassemble and re-assemble the centrifuge as required.
- 2.13.2 The following tools shall be supplied as a minimum:
  - 2.13.2.1 One scroll lifting device
  - 2.13.2.2 One bowl lifting device
  - 2.13.2.3 One complete set of threaded spindles and plates used for disassembling and assembling close tolerance parts
  - 2.13.2.4 One set spare drive belts
  - 2.13.2.5 One complete set of main and conveyor bearings, including "O"-rings.
- 2.13.3 Provide one year's supply of lubricants.

#### 2.14 Instrumentation and Controls

#### 2.14.1 General

- 2.14.1.1 The centrifuge control system shall have a PLC with an integrated torque control module and an Operator Interface Terminal (OIT). The control system shall be designed to work in manual and automatic modes. Should a disruption occur, the centrifuge monitoring system shall indicate the cause with a first out sequence and define the interruption.
- 2.14.1.2 The scroll drive is controlled by the automatic torque control module which controls differential speed in the manual mode and torque in the automatic mode. The torque control module is integral to the PLC and OIT. In the automatic torque mode, scroll drive speed is automatically adjusted to maintain constant torque, thereby compensating for varying feed characteristics while optimizing residence time and separation. The OIT provides digital display of bowl speed, differential speed and torque. Set points for the differential speed, torque, gradient, etc. are entered via a numeric keypad on the OIT.

## 2.14.2 Centrifuge Control Panel

2.14.2.1 NEMA 4X stainless steel wall-mounted enclosure. An Allen-Bradley CompactLogix shall be supplied and programmed to operate any and all necessary sequences. Included shall be a centrifuge automatic torque control module that shall maintain

process optimization within adjustable preset limitations and operate in differential speed and torque modes. Included in the front door shall be an E-stop pushbutton, an alarm acknowledge pushbutton, an alarm silence pushbutton, and alarm horn. All pushbuttons and pilot lights shall be water tight and corrosion resistant. The OIT shall be utilized for major operational adjustments.

2.14.2.2 All components in the control panel shall be completely factory wired. All external control connection points shall terminate on a terminal strip. There shall be a minimum of 10% spare terminal connections supplied. The PLC shall be capable of interfacing via Ethernet, to the SCADA systems. The OIT shall display fault messages with actual time and date.

## 2.14.3 Centrifuge Power Panel

2.14.3.1 NEMA 12 free-standing enclosure with fan and filter, plus a through—the—door operated main disconnect that can be locked in the off position. The enclosure shall have lifting eyes and can be arranged to have top or bottom conduit entry. The enclosure shall have a pad-lockable 25,000 UL interrupting capacity rated main circuit breaker, main drive VFD, scroll drive VFD and industrial hardware components

## 2.15 Sequence of Operations

#### 2.15.1 Centrifuge Sequence

- 2.15.1.1 CENTRIFUGE START The control system verifies that no fault conditions exist and maintenance mode is not active. The startup sequence of the centrifuge is initiated by pushing the CENTRIFUGE START button at the Centrifuge Control Panel. The Operator Interface Terminal (OIT) will request user to confirm centrifuge start request. The user may cancel the operation if the start button was pressed accidently.
  - 2.15.1.1.1 Diverter Gate is closed, or Discharge Conveyor runs in reverse
  - 2.15.1.1.2 Scroll motor is started
  - 2.15.1.1.3 Bowl motor is started
  - 2.15.1.1.4 When bowl speed is reached, and no alarms are active, the centrifuge READY FOR SLUDGE signal is turned on

- 2.15.1.1.5 Idle mode active until process started or centrifuge shutdown
- 2.15.1.2 CONTROLLED SHUTDOWN A controlled shutdown will be initiated when the user presses the CENTRIFGUE STOP button on the OIT. It will also be triggered by some alarm conditions.
  - 2.15.1.2.1 READY FOR SLUDGE signal is turned off
  - 2.15.1.2.2 Feed Is Stopped
    - 2.15.1.2.2.1 Sludge Pump Is Turned Off
    - 2.15.1.2.2.2 Grinder Is Turned Off (if used)
    - 2.15.1.2.2.3 Polymer Pump Is Turned Off
  - 2.15.1.2.3 Centrifuge Shutdown Starts
    - 2.15.1.2.3.1 Main motor shuts off, allowing the bowl to coast to a stop.
  - 2.15.1.2.4 Flush Water Sequence
    - 2.15.1.2.4.1 Centrifuge Flush Water Valve Opens
    - 2.15.1.2.4.2 Flush Water Valve Closes When Preset Bowl Speed Is Reached
  - 2.15.1.2.5 When Torque Reaches a Preset Setpoint, The Diverter Gate Closes, or The Discharge Conveyor Runs in Reverse.
  - 2.15.1.2.6 Centrifuge Stops
    - 2.15.1.2.6.1 Scroll Motor Stops
    - 2.15.1.2.6.2 Discharge Conveyor Stops
- 2.15.1.3 IMMEDIATE SHUTDOWN An immediate shutdown is triggered by scroll motor alarms.
  - 2.15.1.3.1 READY FOR SLUDGE Signal is turned off
  - 2.15.1.3.2 Feed Is Stopped
    - 2.15.1.3.2.1 Sludge Pump Is Turned Off
    - 2.15.1.3.2.2 Grinder Is Turned Off (if used)

## 2.15.1.3.2.3 Polymer Pump Is Turned Off

- 2.15.1.3.3 Centrifuge Stops
  - 2.15.1.3.3.1 Discharge Conveyor Stops
- 2.15.1.4 EMERGENCY SHUTDOWN ALL EQUIPMENT OFF IMMEDIATELY
  - 2.15.1.4.1 The Emergency Shutdown is issued with the E-Stop pushbutton at the control panel, starter panel, or via the owners DCS. All equipment associated with the system will be stopped instantaneously with no flush water. The E-Stop is interlocked with the centrifuge power panel main circuit breaker and will short trip when the E-Stop is issued.
  - 2.15.1.4.2 The centrifuge will coast to a stop.
- 2.15.2 Centrifuge Equipment
  - 2.15.2.1 BOWL MOTOR The centrifuge manufacturer will start and stop the bowl motor.
    - 2.15.2.1.1 Maintenance mode: The bowl motor can be run by pressing and holding the bowl motor button on the maintenance screen when maintenance mode has been activated.
    - 2.15.2.1.2 Automatic: The bowl will start when the pre lube is complete, and the scroll motor has been running for a preset time. It will run until the centrifuge stop button has been pressed and the process is off.
    - 2.15.2.1.3 Interlocks: The bowl motor will stop when:
      - 2.15.2.1.3.1 Controlled stop
      - 2.15.2.1.3.2 Immediate stop
      - 2.15.2.1.3.3 Emergency stop
  - 2.15.2.2 SCROLL MOTOR The centrifuge manufacturer will start and stop the scroll motor.
    - 2.15.2.2.1 Maintenance mode: The scroll motor can be run by pressing and holding the scroll motor button on the maintenance screen when maintenance mode has been activated.

- 2.15.2.2.2 Automatic: The scroll motor will start when the pre lube is complete. It will run until the centrifuge stop button has been pressed and the shutdown timer has expired.
- 2.15.2.2.3 Interlocks: The scroll motor will stop when:
  - 2.15.2.2.3.1 Immediate stop
  - 2.15.2.2.3.2 Emergency stop
- 2.15.2.3 FLUSH WATER The centrifuge manufacturer will open and close the flush water valve.
  - 2.15.2.3.1 Manual: The flush water valve "OPEN" button will open the flush water valve and the "CLOSE" button will close the flush water valve.
  - 2.15.2.3.2 Automatic: The flush water will turn on under several circumstances.
    - 2.15.2.3.2.1 Centrifuge Shutdown (Controlled or Immediate) the valve will open when a shutdown has been initiated and will remain on until the bowl speed drops below the FLUSH OFF set point.
    - 2.15.2.3.2.2 High Torque alarm the valve will open for a set amount of time
    - 2.15.2.3.2.3 High Vibration alarm the valve will open for a set amount of time
    - 2.15.2.3.2.4 Idle mode when the centrifuge is running, but process is not active, the flush water valve will open for 5 minutes every 30 minutes.
  - 2.15.2.3.3 Interlocks: The flush water valve will close when:
    - 2.15.2.3.3.1 Emergency stop
- 2.15.3 Process Sequence
  - 2.15.3.1 The ancillary equipment can be stopped and started as a group following a preset sequence by the PROCESS START and PROCESS STOP buttons on the screen. The centrifuge must first be up to speed before the start sequence is initiated. Also, each piece of equipment may be manually started with the associated

start button or open button. However, each piece of equipment will still have all process interlocks enforced.

- 2.15.3.1.1 The ancillary equipment includes:
  - 2.15.3.1.1.1 Diverter gate (Optional)
  - 2.15.3.1.1.2 Cake conveyor (Reversible if no Diverter Gate)
  - 2.15.3.1.1.3 Polymer feed pump
  - 2.15.3.1.1.4 Grinder (Optional)
  - 2.15.3.1.1.5 Sludge feed pump
- 2.15.3.2 PROCESS START SEQUENCE Centrifuge ancillary equipment can be started when the centrifuge is ready for process. The PROCESS START button may be pressed to start all ancillary equipment in the proper sequence. The user must confirm the process start before the sequence is initiated.
  - 2.15.3.2.1 Ready For Process Signal is on
  - 2.15.3.2.2 Process Start sequence is initiated by the user
  - 2.15.3.2.3 Diverter Gate is closed if not already closed
  - 2.15.3.2.4 Cake conveyor is started
    - 2.15.3.2.4.1 Cake conveyor starts in reverse if reversible conveyor is used
  - 2.15.3.2.5 Polymer System turned on
    - 2.15.3.2.5.1 Polymer Pump run timer started
    - 2.15.3.2.5.2 Polymer Pump run timer expires
  - 2.15.3.2.6 Grinder turned on (If Used)
    - 2.15.3.2.6.1 Grinder run timer started
    - 2.15.3.2.6.2 Grinder run timer expires
  - 2.15.3.2.7 Feed Pump turned on
    - 2.15.3.2.7.1 Feed pump run timer started
    - 2.15.3.2.7.2 Feed pump run timer expires

- 2.15.3.2.8 Diverter Gate (If Used)
  - 2.15.3.2.8.1 Torque above TORQUE/OPEN DIVERTER GATE Set point for preset time
  - 2.15.3.2.8.2 Open Diverter Gate
- 2.15.3.2.9 Cake conveyor runs forward (If Reversible Conveyor Is Used)
  - 2.15.3.2.9.1 Torque above TORQUE CONVEYOR FWD Set point for preset time
  - 2.15.3.2.9.2 Cake conveyor switched to forward
- 2.15.3.3 PROCESS STOP SEQUENCE Pressing the PROCESS STOP button can stop the ancillary equipment. All equipment will stop in the proper order. The user must confirm the process stop before the shutdown sequence is initiated.
  - 2.15.3.3.1 Feed pump is stopped
    - 2.15.3.3.1.1 Feed pump is confirmed off
  - 2.15.3.3.2 Grinder is stopped (If Used)
    - 2.15.3.3.2.1 Grinder is confirmed off
  - 2.15.3.3.3 Polymer system is stopped
    - 2.15.3.3.3.1 Polymer system is confirmed off
  - 2.15.3.3.4 Diverter Gate (If Used)
    - 2.15.3.3.4.1 Torque below TORQUE / CLOSE DIVERTER GATE set point for preset time or bowl speed below BOWL  $\circ$  SPEED / CLOSE DIVERTER GATE
    - 2.15.3.3.4.2 Close Diverter Gate
    - 2.15.3.3.4.3 Diverter gate confirmed closed
  - 2.15.3.3.5 Cake conveyor
    - 2.15.3.3.5.1 Torque below TORQUE CONVEYOR REV Set point for preset time
    - 2.15.3.3.5.2 Conveyor switches to reverse

## 2.15.3.3.5.3 Cake conveyor stops

## 2.15.4 Process Equipment

- 2.15.4.1 DIVERTER GATE The centrifuge manufacturer will provide two outputs for open/close function of the diverter gate. The diverter gate will operate in accordance with its Auto switch.
  - 2.15.4.1.1 Manual: When the "OPEN" button is pressed, the diverter gate will open. The diverter gate will close when the "CLOSE" button is pressed.
  - 2.15.4.1.2 Auto: The diverter gate is opened after the process start has been initiated the torque has risen above the TORQUE/OPEN DIVERTER GATE set point for a preset time. It remains open until the torque falls below the TORQUE/CLOSE DIVERTER GATE set point for a preset time, or the bowl speed has dropped below the BOWL SPEED/CLOSE DIVERTER GATE set point.
  - 2.15.4.1.3 Interlocks: The diverter gate will close when:
    - 2.15.4.1.3.1 The conveyor has been stopped for a preset time.
- 2.15.4.2 CAKE CONVEYOR The centrifuge manufacturer will provide an output for start/stop function of the cake conveyor. The cake conveyor will operate in accordance with its Auto switch.
  - 2.15.4.2.1 Manual: When the "START" button is pressed, the screw conveyor will start. The conveyor will stop when the "STOP" button is pressed.
    - 2.15.4.2.1.1 If a reversible conveyor is used, the "FORWARD" button will start the conveyor in the forward direction. The "REVERSE" button will start the conveyor in the reverse direction
  - 2.15.4.2.2 Auto: The conveyor is started after the process start has been initiated and will remain on until the scroll motor has stopped.
    - 2.15.4.2.2.1 If a reversible conveyor is used, the conveyor will start in reverse. It will switch to forward when above a preset set point. It will switch to reverse when below a preset set point.

- 2.15.4.2.3 Interlocks: The cake conveyor will stop when:
  - 2.15.4.2.3.1 The scroll motor stops.
  - 2.15.4.2.3.2 Emergency stop
- 2.15.4.3 POLYMER PUMP The centrifuge manufacturer will provide an output for start/stop function of the Polymer pump.
  - 2.15.4.3.1 Manual: When the START button is pressed, the polymer pump will start and run at the preset speed. When the STOP button is pressed the pump will stop.
  - 2.15.4.3.2 Auto: The polymer pump is started automatically when the process start sequence has been initiated and the conveyor has been running for a short period of time. It will shut down when the process stop is active and the grinder has turned off.
  - 2.15.4.3.3 Interlocks: The polymer will stop when:
    - 2.15.4.3.3.1 The feed pump has been off for a preset time.
    - 2.15.4.3.3.2 The conveyor has been off for a preset time
    - 2.15.4.3.3.3 The centrifuge is not ready for process
    - 2.15.4.3.3.4 Emergency stop
- 2.15.4.4 GRINDER The centrifuge manufacturer will provide an output for start/stop function of the grinder.
  - 2.15.4.4.1 Manual: When the START button is pressed, the grinder will start and run at the preset speed. When the STOP button is pressed the grinder will stop.
  - 2.15.4.4.2 Auto: The grinder is started automatically when the process start sequence has been initiated and the polymer pump has been running for a short period of time. It will shut down when the process stop is active and the feed pump has turned off.
  - 2.15.4.4.3 Interlocks: The grinder will stop when:
    - 2.15.4.4.3.1 The feed pump has been off for a preset time.
    - 2.15.4.4.3.2 The conveyor has been off for a preset time

- 2.15.4.4.3.3 The centrifuge is not ready for process
- 2.15.4.4.3.4 Emergency stop
- 2.15.4.5 FEED PUMP The centrifuge manufacturer will provide an output for start/stop function of the Feed Pump.
  - 2.15.4.5.1 Manual: When the "START" button is pressed, the feed pump will start and run at the preset speed. When the "STOP" button is pressed the pump will stop.
  - 2.15.4.5.2 Auto: The feed pump is started automatically after the grinder has been running for a preset time. The feed pump will run continuously until the FEED STOP button is pressed or an alarm condition occurs that shuts down the feed pump.
  - 2.15.4.5.3 Interlocks: The feed pump will stop when:
    - 2.15.4.5.3.1 The conveyor has been off for a preset time
    - 2.15.4.5.3.2 The centrifuge is not ready for process
    - 2.15.4.5.3.3 Emergency stop
- 2.15.5 Auto Torque Control Logic Anytime the scroll motor is running, the auto torque control logic will compute the proper output for the scroll motor speed. The system can be set up with PID control or SJM control.
  - 2.15.5.1 PID Control When PID control is active, a standard PID loop is used to compute the differential speed output based on the torque set point. When the PID is in automatic mode, the PID will compute the necessary differential speed to maintain the torque set point. If the PID is in manual the user may set the differential speed directly, and the calculation will not be computed. The three gain set points are used to tune the calculation for the specific process. The following set points are used for PID control:
    - 2.15.5.1.1 Torque Set point
    - 2.15.5.1.2 Differential Speed Output
    - 2.15.5.1.3 Proportional Gain
    - 2.15.5.1.4 Integral Gain
    - 2.15.5.1.5 Derivative Gain
  - 2.15.5.2 SJM Control When SJM control is active, the differential speed increases as the torque increases. This allows the centrifuge to

maintain process equilibrium, while not maintaining a specific torque value. The following set points are used for SJM control:

- 2.15.5.2.1 Base Differential
- 2.15.5.2.2 Control Begin
- 2.15.5.2.3 Gradient

#### 3 EXECUTION

## 3.1 Factory Testing

3.1.1 Factory testing of the centrifuge shall be performed at the centrifuge manufacturer's facility to demonstrate the absence of mechanical or electrical defects and that the centrifuge operates within the specified limits. Factory testing of the control and power panels shall be at the panel fabrication facility.

## 3.1.2 Shop Testing Procedure

- 3.1.2.1 Centrifuge manufacturer shall allow inspection and witness of the shop test of the equipment by the Engineer.
- 3.1.2.2 Equipment to be shop tested and witnessed by the Engineer shall include:
  - 3.1.2.2.1 Centrifuge.
  - 3.1.2.2.2 Control Panel and Power Panel.
- 3.1.2.3 Centrifuge manufacturer shall notify Engineer of the test schedule not less than 14 days in advance.
- 3.1.2.4 Test conditions: The following tests shall be completed before each centrifuge is released for shipment.
  - 3.1.2.4.1 Vibration measurement with bowl empty.
  - 3.1.2.4.2 Vibration measurement with bowl filled with water.
  - 3.1.2.4.3 Operation of machine for several hours with water.
  - 3.1.2.4.4 Motor starting amperage.
  - 3.1.2.4.5 Test equipment/procedures:
    - 3.1.2.4.5.1 Test equipment shall be calibrated.

- 3.1.2.4.5.2 Unit and control system shall be tested with a simulation panel.
- 3.1.2.4.5.3 All circuits shall be checked and all alarms and shutdown conditions simulated to check the alarm circuits.
- 3.1.2.5 Certified test results shall be submitted after completion.

## 3.2 Field Mechanical Testing

- 3.2.1 Field testing of the centrifuge shall be performed to demonstrate the equipment was not damaged during storage, transportation, or installation. Also, that the equipment is properly installed and aligned, and that there are no mechanical defects in any parts. The proper interaction of the centrifuge, drive motor, scroll drive, and control panel will also be demonstrated.
- 3.2.2 The test procedure, submitted by the manufacturer and approved by the Engineer or Owner, shall be run by a qualified representative of the centrifuge manufacturer in the presence of the Owner and/or Engineer.
- 3.2.3 The field tests shall consist of a two-hour dry run of the centrifuge followed by a four-hour wet run of the centrifuge together with the polymer system, sludge feed system, washwater system, cake conveyance equipment, and associated instrumentation and controls.

## 3.2.4 Field Testing Procedure

3.2.4.1 Field Inspection – The centrifuge manufacturer will inspect the final installation and supervise the field acceptance tests of the equipment.

#### 3.2.4.2 Functional Test

- 3.2.4.2.1 Functional testing shall be conducted after the installation of the centrifuge and all appurtenances and the equipment has been operated a sufficient period to make any corrections or adjustments. The complete unit shall be subject to field acceptance tests under actual operating conditions to determine that operation is satisfactory.
- 3.2.4.2.2 The functional test shall be made under the direct supervision of the centrifuge manufacturer and in the presence of the Engineer.
- 3.2.4.2.3 The functional test shall determine the characteristics of the unit and shall demonstrate that under all conditions of operation the unit:

- 3.2.4.2.3.1 Has not been damaged by transportation
- 3.2.4.2.3.2 Has been properly installed.
- 3.2.4.2.3.3 Has no mechanical defects.
- 3.2.4.2.3.4 Is in proper alignment.
- 3.2.4.2.3.5 Has been properly connected.
- 3.2.4.2.3.6 Is free of overheating of any parts.
- 3.2.4.2.3.7 Is free of objectionable vibration.
- 3.2.4.2.3.8 Is free of overloading of any parts.
- 3.2.4.2.4 Prior to acceptance, the centrifuge manufacturer shall operate the centrifuge for a one day 6 hour per day period under actual conditions with sludge from the Owner's facility.
- 3.2.4.3 Vibration Test The centrifuge manufacturer shall verify operations are within tolerances.
- 3.2.4.4 Acceptance Test
  - 3.2.4.4.1 After satisfactory completion of the functional start-up test and after the Engineer has agreed that all ancillary equipment both upstream and downstream of the centrifuges is in satisfactory operating condition, an acceptance test shall be conducted using representative sludge.
  - 3.2.4.4.2 Prior to testing, the Contractor shall supply the manufacturer with sufficient quantities of representative sludge to conduct bench scale testing of polymers. Based upon the test result, the centrifuge manufacturer shall recommend the polymer for use in acceptance testing.
  - 3.2.4.4.3 The Contractor shall furnish all operating and support personnel, power, water, chemicals, heat and all other incidentals required to take samples and perform the tests. The Contractor shall be responsible for collecting all required samples and measurements. The Contractor shall be responsible for supplying all polymers.

3.2.4.4.4 The centrifuge shall be fed representative sludge and polymer in a proportion recommended by the centrifuge manufacturer. The acceptance test shall demonstrate satisfactory operation of all equipment, controls, interlocks and alarms. The unit shall operate continuously, trouble free, for a minimum of three 6-hour periods on three separate days.

## 3.3 Field Process Performance Testing

- 3.3.1 After satisfactory completion of acceptance tests conducted on the centrifuge, the centrifuge shall be tested for three (3), 4-hour periods to determine acceptable performance in accordance with the Design Requirements.
- 3.3.2 The unit shall be fed representative sludge and polymer during which the average performance of the unit must equal or exceed the design performance parameters.
- 3.3.3 During each day's performance test, the Contractor shall be responsible for collecting all required samples and measurements at 1-hour intervals in order to make the following determinations. The first set of samples and measurements shall be taken 1 hour after the beginning of the test run.
  - 3.3.3.1 Sludge feed total solids.
  - 3.3.3.2 Centrate total solids.
  - 3.3.3.3 Centrate suspended solids.
  - 3.3.3.4 Final cake discharge total solids.
  - 3.3.3.5 Plant water (one or two daily composites) total solids.
  - 3.3.3.6 Polymer feed rate gallons per minute.
  - 3.3.3.7 Sludge feed rate gallons per minute.
  - 3.3.3.8 Solids capture percent.
  - 3.3.3.9 Setting for polymer feed pump.
  - 3.3.3.10 Setting for sludge feed pump.
  - 3.3.3.11 Differential speed.
  - 3.3.3.12 Motor amperage.
  - 3.3.3.13 Sludge feed percent volatile solids.

#### 3.3.3.14 Sludge feed – SVI

- 3.3.4 During the entire Performance Test period, all laboratory analyses shall be performed by the Owner.
- 3.3.5 All data collected during performance tests shall be made available for the Engineer for determining compliance with the Specifications.
- 3.3.6 The average values of the tests conducted shall meet or exceed the performance criteria.
- 3.3.7 Polymer dosage shall be determined as the total active polymer consumed divided by the dry solids fed to the machine.
- 3.3.8 Test data that are in apparent error shall be discarded.
- 3.3.9 In the event the equipment is not meeting the guaranteed performance, the manufacturer shall, at his own expense modify the equipment to meet these standards.
- 3.3.10 The equipment shall be modified and the test repeated until successfully completed, or one year has elapsed since the failure of the first attempted performance test.

#### 3.4 Technical Services

- 3.4.1 Technical Services of the manufacturer's representative shall be supplied in the following areas:
  - 3.4.1.1 Five (5) days to confirm proper installation, alignment, mechanical start-up, and field mechanical.
  - 3.4.1.2 Five (5) days for process start-up, training and field process performance testing.
  - 3.4.1.3 For every five (5) days of time allotted to the project, one trip shall be included. One trip shall consist of the associated expenses of airfare and carfare, plus accommodations and meals.

## End of Section

## TOWN OF AMHERST

Office of the Town Attorney
P.O. Box 280 174 S. Main Street Amherst, VA 24521

Eric M. Lansing, Esq.
Deal & Lacheney P.C.
TOWN ATTORNEY
eric.lansing@amherstva1.us
PHONE: (888) 456-1547
FAX: (877) 457-1231



Mailing Address: 174 S. MAIN STREET P.O. BOX 280 AMHERST, VA 24521

FROM: Eric M. Lansing, Town Attorney

**TO:** Town Council of the Town of Amherst

**DATE:** March 1, 2022

SUBJECT: Ordinance to Prohibit the Placement of Trashcans in Public Right-of-Way

Dear Mayor and Councilors:

Please find enclosed an ordinance prohibiting the placement of trashcans or recycling cans in the public right-of-way. The following comments are also provided on each subsection of the draft ordinance:

- Civil penalties vs. return fee. The original version of this draft ordinance was patterned after the enabling legislation in Virginia Code § 15.2-928. However, this enabling legislation only allowed for an ordinance that was difficult to enforce (requiring notification prior to the implementation of civil penalties). Notification requirements can be an impediment to enforceability, because the notifier must testify in court; and they are sometimes misinterpreted to provide stringent requirements that render a statute unenforceable (for example, requiring a defendant to be notified every single time he leaves his trashcan in the street). On the recommendation of the Town Manager, I have drafted this ordinance to give Town staff the authority to remove a trashcan from the public right-of-way, and to return the trashcan only upon payment of a \$50 return fee. This is outside the scope of what is authorized in Virginia Code § 15.2-928; however, it is permitted by broader grants of authority from the General Assembly under the Town Charter.
- Collection times. This draft ordinance would exempt the placement of trashcans in the public right-of-way during designated pickup times, including the evening before until the afternoon afterward. The pickup times are designed to be consistent with Town Code § 14-21(1), which provides: "Such containers shall be placed at the curb in front of the dwelling or place of business after 6:00 p.m. of the day preceding the scheduled trash pickup."
- **Public nuisance.** A classic example of a public nuisance is obstruction of a public right-of-way. Even if a person is leaving a trashcan in the street during pickup times, he might

<sup>&</sup>lt;sup>1</sup> Breeding ex rel. Breeding v. Hensley, 258 Va. 207, 213 (1999) ("[A]ny unauthorized use of a public highway that is extensive and continues long enough to be unreasonable may amount to a public nuisance."); id. ("Any

still be committing a public nuisance. For example, a trashcan that is left in the middle of the road is a danger to the public, even if it is left there during pickup times. The Town is authorized to abate and punish public nuisances under Virginia Code §§ 15.2-900 and 48-5; and Subsection B makes clear that (by authorizing certain times where trashcans can be left on the curb) it is not authorizing a public nuisance.

Please let me know if you have any questions. It is a privilege to serve the Council.

Kind Regards,

Eric M. Lansing

unauthorized obstruction that unnecessarily impedes the lawful use of a public street is a public nuisance at common law"); *City of Virginia Beach v. Murphy*, 239 Va. 353, 355 (1990) (quoting *People v. Rubenfeld*, 254 N.Y. 245, 247, 172 N.E. 485, 486 (1930)) ("Public is the nuisance whereby 'a public right or privilege common to every person in the community is interrupted or interfered with," as by the obstruction of a public way.").

#### ORDINANCE OF THE TOWN OF AMHERST

AN ORDINANCE AMENDING THE CODE OF THE TOWN OF AMHERST, VIRGINIA, CHAPTER 14 (SOLID WASTE), ARTICLE IV (COLLECTION AND DISPOSAL), BY ENACTING § 14-25 THEREIN, TO PROHIBIT THE PLACEMENT OF WASTE RECEPTACLES IN THE PUBLIC RIGHT-OF-WAY, OTHER THAN AT DESIGNATED COLLECTION TIMES OR THE EVENING BEFOREHAND.

**WHEREAS**, §§ 15.2-1427 and 15.2-1433 of the Code of Virginia (1950) enable a local governing body to adopt, amend, and codify ordinances or portions thereof;

WHEREAS, § 7.01 of the Town Charter empowers the Town Council "to prevent the obstruction of . . . streets, alleys and highways . . . and to do all other things whatsoever adapted to make the streets and highways safe, convenient and attractive"; § 9.01(1) of the Town Charter empowers the Town Council to "prevent all things detrimental to the . . . safety, convenience and welfare of the inhabitants of the town"; and § 9.01(17) of the Town Charter empowers the Town Council to "pass and enforce all . . . ordinances which it may deem necessary for the good order and government of the town . . ., and to do such other things and pass such other laws as may be necessary or proper to carry into full effect all powers . . . [of the] town";

**WHEREAS**, the safety of the public, the good order of the Town, the convenience of the public right-of-way, and the prevention of obstruction to Town's streets, alleys, and highways, require the Town to make measures to prevent waste containers from being left in the public right-of-way;

WHEREAS,	the full te	xt of this	amendment	was	available for	or public	inspection	in t	he
Amherst Town Hall,	at 174 S. M	Iain Stree	et, Amherst, V	VA 2	4521; and				

**WHEREAS**, on \_\_\_\_\_\_\_, a public hearing was held on this matter, and all of those wishing to speak on this topic were heard;

NOW THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF AMHERST, that Chapter 14 (Solid Waste), Article II (Collection and Disposal) of the Amherst Town Code, be amended by enacting therein a newly created section, § 14-25, as follows:

#### **Chapter 14 - Solid Waste**

## **Article II - Collection and Disposal**

## Sec. 14-25. - Placement of waste container in public right-of-way prohibited

**A. Prohibited acts; penalties.** Except as provided in Subsection B, no person shall place any waste container in any public right-of-way (including any highway, road, street, alley, or sidewalk), or allow any such waste container to be placed in the public right-of-way in front of the property owned or occupied by that person.

- **B.** Collection times exempted. A person who has arranged for the pickup of a waste container may place such waste container at the curb in front of the dwelling or place of business, from after 6:00 p.m. of the day preceding the scheduled trash pick-up, until 6:00pm following the scheduled trash pick-up. But nothing in this Subsection shall be construed to authorize any individual to commit a public nuisance, or engage in activity otherwise prohibited by law.
- **C.** Removal of waste containers. Any person who violates Subsection A shall be deemed to have abandoned and forfeited the waste container to the Town. Town staff shall have the authority to remove any waste container left in the public right-of-way (except as exempted in Subsection B), and shall only return the waste container after payment of a \$50 return fee to the Town.
- **D.** Equitable relief. The Town shall have power to seek appropriate relief in equity for violation of Subsection A through an injunction to any court of competent jurisdiction, including the General District Court. Violation of any such order shall be punishable as contempt of court.
- **E.** "Waste container" defined. For purposes of this Section, "waste container" includes trash containers, recycling containers, and all other receptacles subject to § 14-21.

## TOWN OF AMHERST

Office of the Town Attorney
P.O. Box 280 174 S. Main Street Amherst, VA 24521

Eric M. Lansing, Esq.
Deal & Lacheney P.C.
TOWN ATTORNEY
eric.lansing@amherstva1.us
PHONE: (888) 456-1547
FAX: (877) 457-1231



Mailing Address: 174 S. MAIN STREET P.O. BOX 280 AMHERST, VA 24521

FROM: Eric M. Lansing, Town Attorney

**TO:** Town Council of the Town of Amherst

**DATE:** March 1, 2022

**SUBJECT:** Change of name from IDA to EDA

Dear Mayor and Councilors:

Please find enclosed an ordinance amending Town Code §§ 2-140 and 2-141, to change the name of the Town of Amherst's industrial development authority to the "Economic Development Authority of the Town of Amherst, Virginia."

Note that the reference to "an industrial development authority" in § 2-140 is left intact, because this is the generic term for this type of authority under the Industrial Development and Revenue Bond Act. *See*, *e.g.*, Va. Code § 15.2-4901 ("authoriz[ing] the creation of industrial development authorities").

It is a privilege to serve the Council.

Kind Regards,

Eric\M.\I

60

#### ORDINANCE OF THE TOWN OF AMHERST

AN ORDINANCE AMENDING THE CODE OF THE TOWN OF AMHERST, VIRGINIA, CHAPTER 2 (ADMINISTRATION), ARTICLE IV (BOARDS, COMMISSIONS, AND AUTHORITIES), DIVISION 2 (INDUSTRIAL DEVELOPMENT AUTHORITY), TO PROVIDE THAT THE NAME OF THE INDUSTRIAL DEVELOPMENT AUTHORITY SHALL BE CHANGED TO THE ECONOMIC DEVELOPMENT AUTHORITY.

**WHEREAS**, §§ 15.2-1427 and 15.2-1433 of the Code of Virginia, 1950, as may be amended from time to time, enable a local governing body to adopt, amend, and codify ordinances or portions thereof;

**WHEREAS,** the Virginia Industrial Development and Revenue Bond Act (Va. Code §§ 15.2-4900 et seq.) allows for local governments to create industrial or economic development authorities;

**WHEREAS**, § 15.2-4903, Subsection C, of the Code of Virginia provides for the name of any industrial development authority to be changed to "Economic Development Authority";

**WHEREAS,** such a name change reflects developments in the economy of the Town of Amherst since the original establishment of the Industrial Development Authority;

**WHEREAS**, the full text of this amendment was available for public inspection in the Amherst Town Hall, at 174 S. Main Street, Amherst, VA 24521; and

**WHEREAS**, on \_\_\_\_\_\_\_\_, a public hearing was held on this matter, and all of those wishing to speak on this topic were heard;

NOW THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF AMHERST, that Chapter 2 (Administration), Article IV (Boards, Commissions, and Authorities), Division 2 (Industrial Development Authority) of the Amherst Town Code is hereby amended as follows:

## **DIVISION 2. - INDUSTRIAL ECONOMIC DEVELOPMENT AUTHORITY**

Sec. 2-140. - Created; powers, duties and obligations.

There is hereby created, pursuant to the provisions of the Industrial Development and Revenue Bond Act (Code of Virginia, Va. Code §§ 15.2-4900 et seq.), a political subdivision of the commonwealth Commonwealth, to be known as an industrial development authority, with such public and corporate powers, duties, and obligations as are set forth in the above-cited sections of the Code of Virginia.

## Sec. 2-141. - Name.

The name of the political subdivision of the commonwealth Commonwealth created by this dDivision, shall be heretofore known as the "Industrial Development Authority of the Town of Amherst, Virginia," is hereby renamed the "Economic Development Authority of the Town of Amherst, Virginia," pursuant to § 15.2-4903(C) of the Code of Virginia. Where the context establishes a reasonable distinction from the economic development authorities of other localities, the Authority may also be referred to as the Economic Development Authority.

# TOWN OF AMHERST, VIRGINIA WASTEWATER SERVICE AGREEMENT

This AGREEMENT is dated as of the 1<sup>st</sup> day of November in the year 2021 by and between the Town of Amherst, Virginia (hereinafter called TOWN) and Poplar Grove (hereinafter called CUSTOMER).

CUSTOMER desires to discharge wastewater to the wastewater collection system owned and operated by the TOWN in accordance with Wastewater Rules and Regulations established by the TOWN. TOWN desires to provide wastewater collection and treatment services to the CUSTOMER. This mutual AGREEMENT defines the specific terms and conditions under which the TOWN agrees to provide service and the CUSTOMER agrees to abide by while receiving wastewater service.

TOWN and CUSTOMER, in consideration of the mutual covenants hereinafter set forth, agree as follows:

#### Article 1. Rules and Regulations

- 1.1 The provisions of this AGREEMENT are intended to supplement and not supersede the current Wastewater Rules and Regulations in effect throughout the duration of this AGREEMENT.
- 1.2 CUSTOMER will bear all costs associated with this project, including but not limited to system design and construction.
- 1.3 CUSTOMER will obtain all necessary easements for the project and all easements will be dedicated to the TOWN for operation and maintenance of the collection system.

#### Article 2. Discharge Volume and Rate

2.1 CUSTOMER shall discharge wastewater to the public sewer system at the following flow rates:

Average Daily Flow: 24,000 gallons per day
 Maximum Daily Flow: 60,000 gallons per day

Deviations in the Average Daily Flow rate are anticipated and will not exceed the above set limits.

- 2.2 CUSTOMER intends to discharge all flows into INT-0069-MH based on details shown on the Wastewater Collection System – July 1, 2017 Town of Amherst, Virginia Existing Sewer System Map.
- 2.3 CUSTOMER shall notify the TOWN when additional connections are made to the wastewater collection system.
- 2.4 If additional connections to the system or demand increase the average flow

Commented [EL1]: Is this referring to Poplar Grove Golf Community Owners Association, Inc.? I think spelling out the full legal name of the corporation would be helpful.

Commented [SM2]: As this is turned over to individual owners, how do we define that the customer is those owners? Won't there by individual properties on this line, or just the association?

Commented [SC3]: New connections to be approved by the Town, pay the connection cost, and have billing set up with Town and ACSA. New connections will be approved so long as there is capacity within the agreement to serve the use. from the CUSTOMER to a value of 110% of the Average Daily Flow for three (3) consecutive months, the TOWN and CUSTOMER will begin planning for necessary improvements to TOWN wastewater collection and treatment services.

25 TOWN does not guarantee future capacity above the quantities detailed in this AGREEMENT. Any discharge volume above the quantities detailed in this AGREEMENT may require improvements to the TOWN collection system and/or treatment plant.

## Article 3.

Discharge Strength

CUSTOMER shall discharge wastewater from residential or commercial sources to the public sewer system. No pre-treatment will be required outside of required grease traps for certain commercial connections.

#### Article 4.

- The TOWN will bill the CUSTOMER at their published Utility Rates. 4.1
- 4.2 Water for the CUSTOMER'S property is provided by the Amherst County Service Authority (ACSA). ACSA agrees to provide a copy of the CUSTOMER'S monthly water bill to the TOWN to calculate gallons of wastewater sent to the TOWN.

#### Article 5. **Duration and Transferability**

- This AGREEMENT is entered into by the parties named above and may be 5.1 transferred by CUSTOMER to any other party upon sale of the property. The CUSTOMER shall notify the TOWN upon intent to transfer the AGREEMENT.
- 5.2 This AGREEMENT is entered into for an initial period of 1 year from the date hereof and shall renew itself annually hereafter unless, at least 120 days prior to any such renewal, written notice is given by either party to the other of their intention to terminate this AGREEMENT on the next renewal date.
  - If the CUSTOMER has not begun construction on the collection 1) system 1 year from the date of this AGREEMENT, the TOWN and CUSTOMER must renew this AGREEMENT at that time. At that annual renewal, the CUSTOMER shall notify the TOWN of the intended schedule for construction of the collection system. The CUSTOMER may decide to cancel this AGREEMENT at that time if the system will not be constructed.
- 5.3 Notwithstanding anything herein to the contrary, the TOWN reserves the right to modify the terms of this AGREEMENT as may be required by any state or federal agency or department regulation(s).

Commented [SC4]: Costs of additional capacity needed at WWTP will be borne by Poplar Grove if their treatment needs increase past the agreed upon amounts.

Commented [SC5]: Requirements for pretreatment will be based upon the ordnance standards in effect at the time. It is impossible to say there will never be a requirement to pretreat when we don't know what DEQ will require in the future.

Commented [EL6]: ACSA isn't a signatory on this agreement, so we can't really say what they agree to or what they will provide.

I would delete the second sentence of § 4.2, and revise the first sentence to read as follows:

"TOWN is not responsible for the provision of water to CUSTOMER. TOWN and CUSTOMER anticipate that Water for the CUSTOMER's property will be provided by the Amherst County Service Authority (ACSA), at rates arranged between ACSA and CUSTOMER.'

Commented [SC7R6]: Agreed. I have emailed ACSA to discuss a separate agreement to get billing information from them

Commented [SM8R6]: Looking like this will be meter reading by the Town, but will resolve after ACSA meeting

IN WITNESS WHEREOF, TOWN and CUSTOMER have signed this AGREEMENT in duplicate. One counterpart each has been delivered to TOWN and CUSTOMER.

This AGREEMENT will be effective on	, 20
TOWN: Town of Amherst, VA	CUSTOMER:
Ву	Ву
Title	Title
Attest	Attest
Address for giving notices	Address for giving notices