



Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY

**P.O. Box 504
Clarks Summit, PA 18411
(570) 851-2804
www.hrg-inc.com**

MARCH 2020

**CHAPTER 94
WASTELOAD MANAGEMENT REPORT
FOR
CALENDAR YEAR 2019**

**MUNICIPAL AUTHORITY OF THE
TOWNSHIP OF WESTFALL
PIKE COUNTY, PENNSYLVANIA**

HRG Project No. 003054.0440, Phase 12

TABLE OF CONTENTS

	Executive Summary
SECTION 1	Chapter 94 Wasteload Management Report
SECTION 2	Attachments to Chapter 94 Wasteload Management Report
	Attachment A – Hydraulic Loading Graph and Data
	Attachment B – Condition of Existing Pump Station
	Attachment C – Sewage Sludge Management Inventory
	Attachment D – Flow Meter Calibration Report
	Attachment E – Service Area Map
	Attachment F – Constructed Sewer Extensions



EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

General Information

Westfall Township comprises approximately 31 square miles and is located in the eastern portion of Pike County, Pennsylvania. In February of 2002, Westfall Township took over the Delaware Valley Utilities, Inc. Wastewater Treatment Facility, located near the Inn at Hunts Landing (Best Western). The Westfall Township Act 537 Plan designates the Hunts Landing treatment facility as a regional wastewater treatment facility.

The existing wastewater facilities, formerly of the Delaware Valley Utilities, Inc., included a collection system with force mains and pump stations and a 95,000 gallons per day (gpd) Extended Aeration wastewater treatment facility with a discharge to the Delaware River. The existing system was regulated by the Public Utilities Commission prior to February 2002.

The Municipal Authority of the Township of Westfall (Authority) began planning for an upgrade of the facility to a 300,000 gpd Sequence Batch Reactor (SBR) system in May 2004 and the facility came on-line in October of 2005. Starting in 2006, planning activities occurred, due to the Katz Court Order in 2005, that expanded the existing facility to 0.820 million gallons a day (mgd); however, since the time of flow approvals, several significant events (Township Bankruptcy and the revision of the Katz Court Order) have occurred which has reduced the needed capacity to approximately 0.374 mgd. The permitting of the expansion to 0.820 mgd was approved by the Pennsylvania Department of Environmental Protection (DEP) and the Delaware River Basin Commission (DRBC), but was reduced to 0.374 mgd on September 21, 2011 with the DRBC Docket approval that established a projected flow of 0.374 mgd. In January of 2012 the DEP approved the projected flow of 0.374 mgd with the approval of the revised Act 537 Special Study.

The Authority owns the wastewater collection, conveyance, and treatment facilities located in Westfall Township (Township), Pike County, Pennsylvania. The Authority's public sanitary sewer system consists primarily of a force main conveyance system with five pump stations, with force mains ranging from 4" through 8" in diameter. In addition, there are numerous privately-owned pump stations that tie into the Authority's collection and conveyance system. A map of the Authority's sewer system is attached as Appendix A.

The Authority's SBR wastewater treatment plant (WWTP) operates under the NPDES Permit No. PA-0061611, that was most recently renewed on December 20, 2013, renewal submitted in June 2018, and the DRBC Docket No. 0-2002-023 CP-5, the DRBC docket renewal was submitted in December 2017. The WWTP utilizes an SBR process, which contains two reactors that alternate in receiving and treating wastewater. The SBR cycles; including anoxic fill, aerated react, settle, decant and idle; are automatically controlled by a programmable logic controller (PLC). Each reactor is equipped with a motive pump to mix and help aerate the reactor volume. Three blowers are installed and two of them are normally in operation for air supply to the reactors. Alum is fed into the SBR for the phosphorus removal process that also provides enhanced settling.

In 2018, there was 1 new EDU connected to the treatment and conveyance systems.

Total number of EDUs connected at the end of 2018 was 992 EDUs.

Hydraulic and Organic Loadings

Per the analyses completed in conjunction with this Report, no hydraulic or organic overloads are expected for the Authority's system for the next five years. There were no sewer overflows in 2019.

Industrial Wastes

No industrial wastes are presently discharged to the Westfall Township sewer system. Article IX of the Authority's Rules and Regulations governs the admission of industrial wastes into the sewer system. The most recent adoption of the Rules and Regulations was November 1, 2012.



CHAPTER 94

WASTELOAD MANAGEMENT REPORT



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2019

- Permittee is owner and/or operator of a POTW or other sewage treatment facility
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	Municipal Authority of the Township of Westfall	Permit No.:	PA0061611
Mailing Address:	155 Westfall Town Drive, P.O. Box 525	Effective Date:	September 1, 2019
City, State, Zip:	Matamoras, PA 18336	Expiration Date:	August 31, 2024
Contact Person:	A. William Schneider	Renewal Due Date:	March 4, 2024
Title:	Chairman	Municipality:	Westfall Township
Phone:	570.491.2488	County:	Pike County
Email:	wmaplant@verizon.net	Consultant Name:	Herbert, Rowland & Grubic, Inc.
CHAPTER 94 REPORT COMPONENTS			
<p>1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. <u>(25 Pa. Code § 94.12(a)(1))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for flows attached (Attachment A)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment A)</p> <p><input type="checkbox"/> Section 1 is not applicable (report is for a collection system).</p>			
<p>2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. <u>(25 Pa. Code § 94.12(a)(2))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for organic loads attached (Attachment A)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment A)</p> <p><input type="checkbox"/> Section 2 is not applicable (report is for a collection system).</p>			

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

The projected hydraulic and organic loadings for the next five years are included in this report as Attachment A. As is evident from the DEP Chapter 94 spreadsheet and graphs, no overloads are expected at the Municipal Authority of the Township of Westfall's (MATW) wastewater treatment plant.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment F**)
- List summarizing each extension or project attached (**Attachment**)
- Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

The Authority's wastewater collection, conveyance and treatment facilities are operated and maintained by Camo Pollution Control Inc. (Camo).

Standard preventative maintenance was completed by Camo on the treatment plant facilities, including changing oil, air filters, and greasing the motors on all blowers. The traveling bridge sand filter was greasted and the ultra violet lamps were replaced.

All other maintenance work on the collection system and at the WWTP was considered routine in nature.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

No SSOs, capacity-related bypassing, or surcharging occurred during 2019.

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number – 5)
- Discussion of condition of each pump station attached (**Attachment B**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
- c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

- Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
- Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment C**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

- Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

- Flow calibration report attached (**Attachment D**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

A. William Schneider

Name of Responsible Official

914-443-2664

Telephone No.

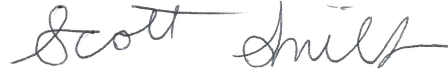

Signature

3-19-2020
Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Scott Smith



Name of Preparer

Signature

570.851.2804

03/24/2020

Telephone No.

Date



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT INSTRUCTIONS

This form has been developed to promote consistency in the development of annual municipal wasteload management reports ("Chapter 94 reports") required by 25 Pa. Code § 94.12. At least two copies of the complete report must be submitted to the appropriate regional office of the Department of Environmental Protection (DEP) by March 31.

Enter the calendar year that the report covers at the top of the form. Check the appropriate box to indicate whether the permittee is the owner/operator of a publicly owned treatment works (POTW) or other sewage treatment facility, or is the owner/operator of a sewage collection system that is tributary to a POTW owned/operated by a different entity.

General Information

Record the name of the permittee, the permittee's full mailing address, the permittee's contact person and this person's title, phone number and email address. Also record the permit number (NPDES or WQM), the effective date of permit coverage, the expiration date of permit coverage (if applicable), the date by which an application or NOI is due for reissuance (renewal) (if applicable), the municipality and county where the sewage treatment facility or collection system is located, and the name of the consultant (company name), if any, who assisted in the preparation of the form.

Chapter 94 Report Components

This section requests responses to 12 questions that, if applicable, must be addressed for a complete Chapter 94 report. Questions 1 – 9 and 12 come directly from the Chapter 94 regulations, i.e., 25 Pa. Code §§ 94.12(a)(1) – 94.12(a)(9) and 94.13(b). Some questions request that you check an appropriate box, attach the information requested, and specify the attachment number, while responses to other questions may be entered directly on the form.

For Questions 1 and 2, permittees may use DEP's Chapter 94 Spreadsheet to satisfy 25 Pa. Code §§ 94.12(a)(1) and 94.12(a)(2), respectively. DEP encourages use of the Chapter 94 Spreadsheet to provide consistency in the format and calculations associated with hydraulic and organic load evaluations (see www.depweb.state.pa.us/chapter94). If the Chapter 94 Spreadsheet was used, check the appropriate box(es) and attach printouts of the data and graphs to the Chapter 94 report. If this report is being used for a collection system only, these graphs are not needed.

For Question 6, if the permittee checks the box that there were capacity-related bypasses or SSOs during the report year, in general the box for existing hydraulic overload in Question 9 should be checked. If the permittee checks the box in Question 6 because surcharging occurred during the report year, in general the box for projected hydraulic overload in Question 9 should be checked.

For Question 8, if the permittee has an EPA-approved pretreatment program, attachment of an annual pretreatment report as required in an NPDES permit will satisfy the requirement for an industrial waste report.

For Question 10, if a permit requires a "Sewage Sludge Management" inventory, check the appropriate box if the inventory is attached to the Chapter 94 report.

For Question 11, if an NPDES permit (individual permit or, for satellite collection systems, PAG-06 General NPDES permit coverage) requires an Annual CSO (Status) report, attach the CSO report to the Chapter 94 report and check the appropriate box.

Certification

In accordance with 25 Pa. Code § 94.12(a), both the individual who prepared the report and (a responsible official of) the permittee must sign the report. The term "responsible official" for a municipality is a principal executive officer or ranking elected official.

Questions on the completion of Chapter 94 reports may be directed to DEP's Bureau of Point and Non-Point Source Management at (717) 787-8184 or to the appropriate DEP regional office (contact information available by visiting DEP's website, www.depweb.state.pa.us, and selecting Regional Resources).



ATTACHMENT A
HYDRAULIC LOADING GRAPH AND
DATA



**PADEP Chapter 94 Sprea
Sewage Treatment**

Reporting Year:

Facility Name:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity: MGD
 Upgrade Planned in Next 5 Years?
 Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: lbs BOD5/day
 Upgrade Planned in Next 5 Years?
 Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2015	2016	2017	2018	2019
January	0.068	0.0613	0.0691	0.0783	0.0646
February	0.0753	0.0651	0.0743	0.0783	0.0688
March	0.0804	0.0614	0.0724	0.0865	0.0721
April	0.0737	0.0695	0.0816	0.0824	0.0718
May	0.0848	0.0781	0.0816	0.086	0.0738
June	0.0826	0.0807	0.089	0.0905	0.0796
July	0.0871	0.0869	0.0906	0.093	0.0826
August	0.0814	0.0879	0.0875	0.0897	0.0788
September	0.0809	0.0795	0.084	0.0852	0.0778
October	0.0756	0.0794	0.0843	0.0725	0.0773
November	0.0682	0.0752	0.0739	0.0768	0.0713
December	0.065	0.0714	0.0722	0.068	0.0715

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2015	2016	2017	2018	2019
January	253	343	177	212	288
February	223	338	162	235	317
March	247	186	252	252	270
April	313	254	288	241	321
May	193	245	347	246	313
June	311	246	297	288	311
July	440	292	257	266	285
August	295	235	278	290	535
September	273	217	322	332	343
October	260	276	298	278	311
November	174	211	281	259	244
December	212	197	239	198	244

Annual Avg	0.0769	0.0747	0.08	0.0823	0.0742
Max 3-Mo Avg	0.0848	0.0852	0.089	0.0911	0.0803
Max : Avg Ratio	1.10	1.14	1.11	1.11	1.08
Existing EDUs	958.0	969.0	980.5	992.0	993.0
Flow/EDU (GPD)	80.3	77.1	81.6	83.0	74.7
Flow/Capita (GPD)	22.9	22.0	23.3	23.7	21.3
Exist. Overload?	NO	NO	NO	NO	NO

Annual Avg	266	253	267	258	315
Max Mo Avg	440	343	347	332	535
Max : Avg Ratio	1.65	1.35	1.30	1.29	1.70
Existing EDUs	958	969	981	992	993
Load/EDU	0.278	0.261	0.272	0.260	0.317
Load/Capita	0.079	0.075	0.078	0.074	0.091
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2020	2021	2022	2023	2024
New EDUs	20.0	40.0	140.0	140.0	140.0
New EDU Flow	0.0016	0.0032	0.0111	0.0111	0.0111
Proj. Annual Avg	0.0792	0.0824	0.0935	0.1046	0.1157
Proj. Max 3-Mo Avg	0.0878	0.0914	0.1037	0.116	0.1283
Proj. Overload?	NO	NO	NO	NO	NO

Projected BOD5 Loads for Next Five Years (lbs/day)

	2020	2021	2022	2023	2024
New EDUs	20	40	140	140	140
New EDU Load	5.555	11.109	38.882	38.882	38.882
Proj. Annual Avg	277	289	327	366	405
Proj. Max Avg	405	421	478	534	591
Proj. Overload?	NO	NO	NO	NO	NO

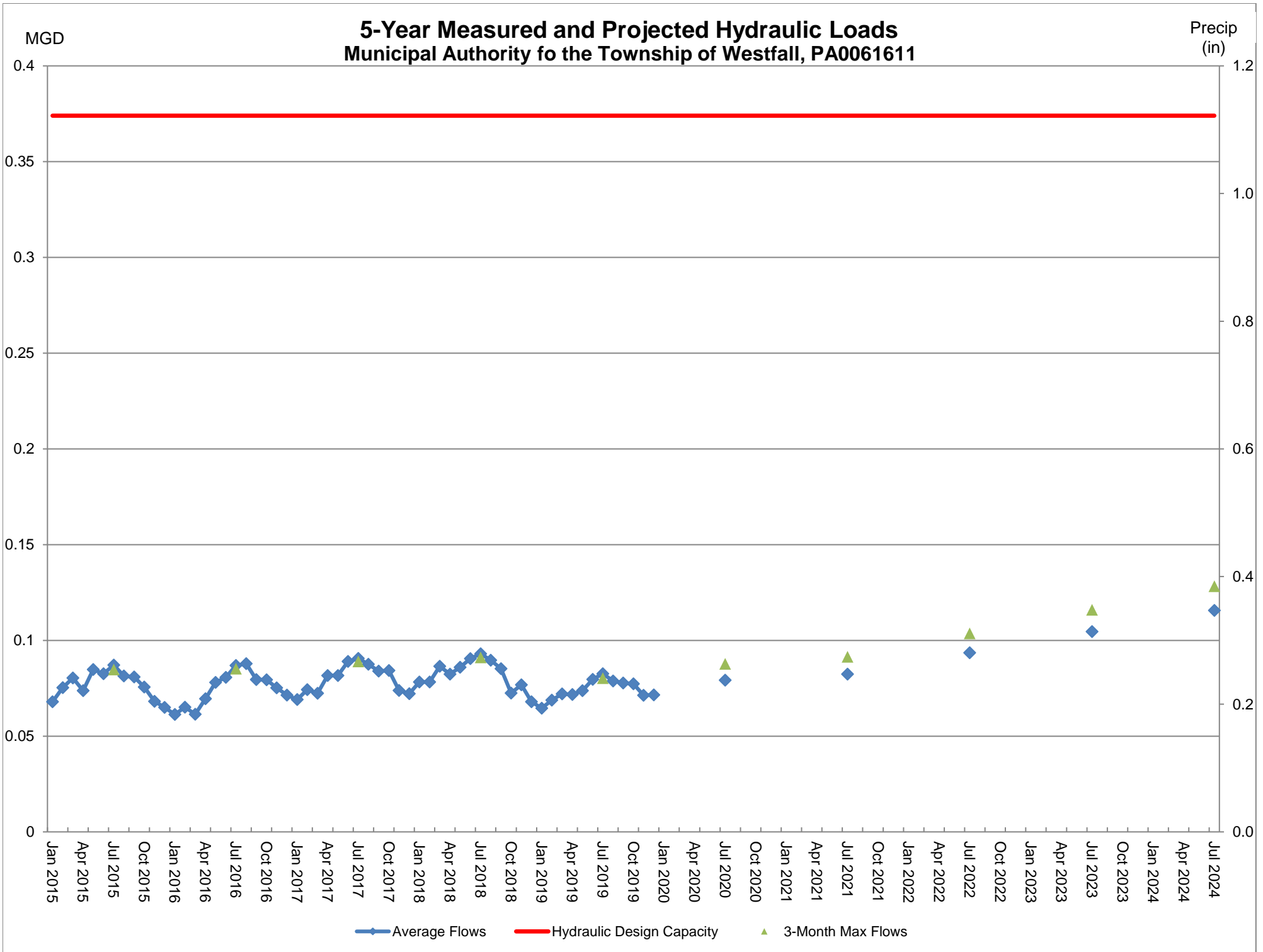
Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

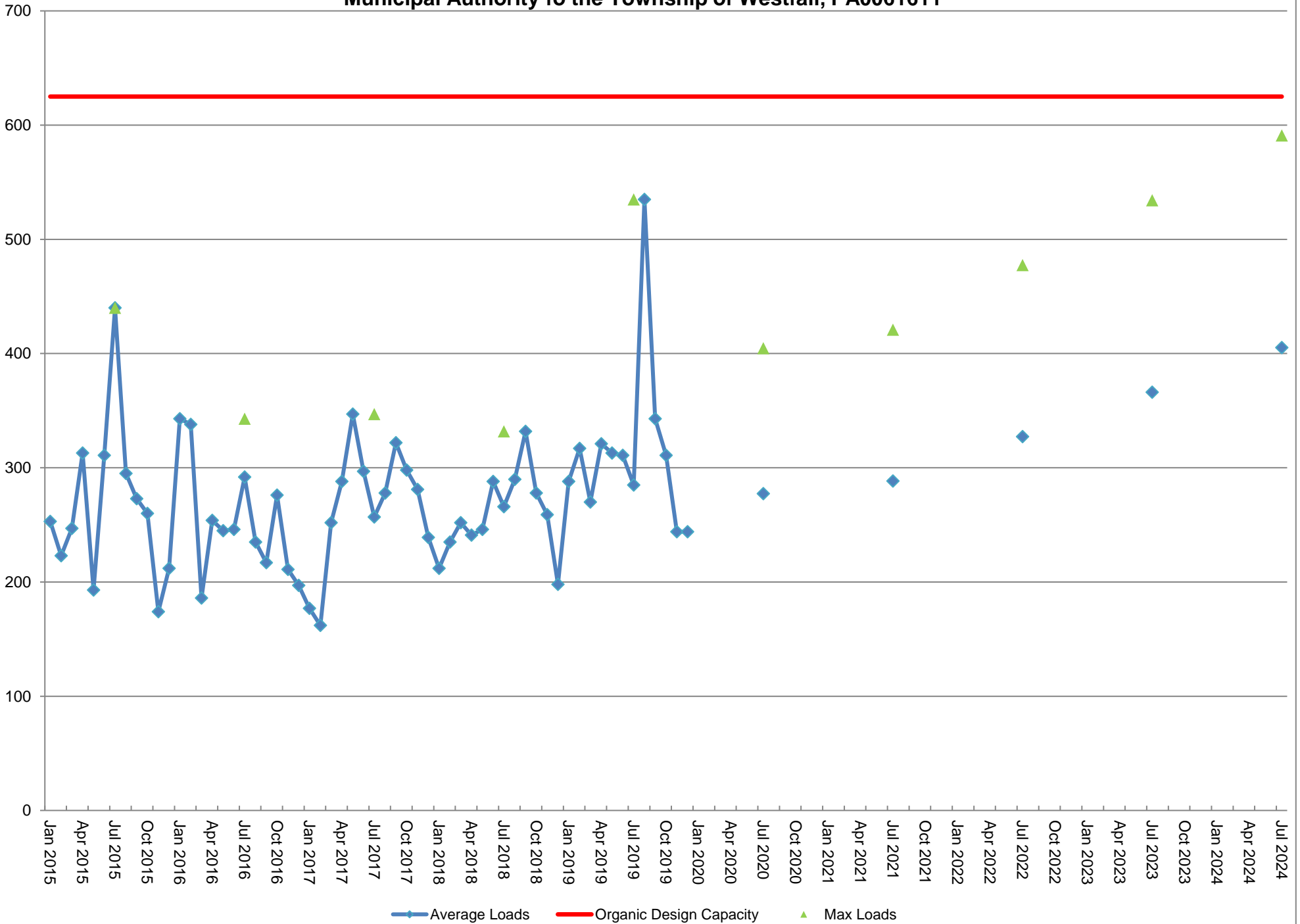
Month	2015	2016	2017	2018	2019
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

5-Year Measured and Projected Hydraulic Loads

Municipal Authority for the Township of Westfall, PA0061611



5-Year Measured and Projected Organic Loads Municipal Authority for the Township of Westfall, PA0061611





ATTACHMENT B
CONDITION OF PUMP STATIONS

Condition of Existing Pump Stations

During 2019, the Authority monitored and recorded wastewater flows conveyed through three of the six pump stations. Based on the flow metering results, the maximum monthly flows were determined. Table 1 displays the flow metering results for each of the five (5) pumping stations. The monitored pump stations operated within the design capacity during 2019 and are able to handle projected flows.

Westfall #1 Pump Station

The Westfall #1 Pump Station is located on Westfall Town Drive and conveys flow directly to the Authority's WWTP. The original pump station was decommissioned in 2012 and a newly constructed pump station was commissioned in April 2013. The new pump station has variable speed pumps with a design pumping rate of 250 to 840 gpm or 360,000 to 1,209,600 gpd. There was one direct connection to the Westfall #1 Pump Station in 2018. There are currently 747.5 EDUs directly connected to the pump station. There are 32 EDUs projected to connect to the direct service area of this station in 2019, respectively. Please note that all other Authority owned pump stations are tributary to this station so any EDUs connected to those stations will increase the flow through the Westfall #1 Pump Station.

Westfall #2 Pump Station

The Westfall #2 Pump Station is located along US Route 6/209 in the south branch collection system. The pump station was commissioned in the late 1980s/early 1990s and has a design pumping rate of 210 gpm or 302,400 gpd. Average Daily Flows are unavailable at the pump station due to lack of sewage metering at the station. There are currently 314 EDUs connected to the pump station. No EDUs are expected to be added to this pump station in 2020.

River's Edge Pump Station

The River's Edge Pump Station serves the River's Edge residential development. The pump station was commissioned in 2008 and had a design pumping rate of 60 gpm, or 86,400 gpd. In 2012, one pump at the station was replaced. Due to the old pump being discontinued, the new pump has a capacity of 98 gpm or 141,120 gpd. There were no EDUs connected to the River's Edge Pump Station in 2019. There are currently 208 EDUs connected to the pump station.

Rosetown Pump Station

The Rosetown Pump Station was designed to serve the Katz Rosetown Estate property. The pump station was constructed in 2007 and has a design pumping rate of 752.7 gpm or 1,083,888 gpd. The pump station has been offline since construction in 2007 due to lack of development in the pump station service area and will continue to be in-operational until the Katz property is developed. No EDUs were added to this pump station in 2019.

Katz Commercial Pump Station

The Katz Commercial Pump Station was designed to serve the Katz Commercial property. The pump station was constructed in 2011 and has variable speed pumps with a design pumping rate of 160 to 300 gpm or 230,400 to 432,000 gpd. The pump station has been offline since construction in 2011 due to lack

of development in the pump station service area and will continue to be in-operational until the Katz commercial property is developed. No EDUs are expected to be added to this pump station's service area in 2020.

Westfall Sr. Apartments Pump Station

The Westfall Senior Apartments Pump Station serves the Westfall Senior Apartment Building Complex. The pump station was commissioned in 2017, containing duplex 2 HP Hydromatic pumps with design pumping rate of 42 gpm, or 60,480 gpd. 11.5 EDUs were connected to the Pump Station in 2017. There are currently 11.5 EDUs connected to the pump station. It is anticipated that no EDUs will be added to the pump station's service area in 2020.

TABLE 1
MUNICIPAL AUTHORITY OF THE TOWNSHIP OF WESTFALL
2018 PUMP STATION AVERAGE MONTHLY FLOWS

MONTH	Westfall Pump Station #1 ⁽⁴⁾ (GPD)	Westfall Pump Station #2 ⁽¹⁾ (GPD)	River's Edge Pump Station (GPD)	Katz Pump Station ⁽²⁾ (GPD)	Rosetown Pump Station ⁽²⁾ (GPD)	Westfall Sr. Apartments Pump Station (GPD)
January		N/A		N/A	N/A	
February		N/A		N/A	N/A	
March		N/A		N/A	N/A	
April		N/A		N/A	N/A	
May		N/A		N/A	N/A	
June		N/A		N/A	N/A	
July		N/A		N/A	N/A	
August		N/A		N/A	N/A	
September		N/A		N/A	N/A	
October		N/A		N/A	N/A	
November		N/A		N/A	N/A	
December		N/A		N/A	N/A	
Average	79,944	N/A	7,272	N/A	N/A	5,617
Max Month	0	N/A	0	N/A	N/A	0
PROJ. 2019 MAX FLOWS	122,538	N/A	8,609	N/A	N/A	N/A
PS CAPACITY (GPD)	777,600	302,400	141,120	432,000	1,083,888	60,480

Note: 1. Hourly readings are not recorded at Westfall Pump Station #2
2. Katz and Rosetown Pump Station have been offline since their construction in 2011 and 2007, respectfully.
3. West Fall #1 went online on April 16, 2013.



ATTACHMENT C
SEWAGE SLUDGE MANAGEMENT
INVENTORY

MUNICIPAL AUTHORITY OF THE TOWNSHIP OF WESTFALL - 2019 CHAPTER 94 WASTELOAD MANAGEMENT REPORT
SEWAGE SLUDGE MANAGEMENT INVENTORY
LIQUID SEWAGE SLUDGE HAULED OFF-SITE

Month	Average Annual Flow (MGD)	Average Influent BOD ₅ (mg/L)	Average Effluent CBOD ₅ (mg/L)	MLSS (mg/L)	Liquid Sludge(Gal)	Average Total Solids (%)	Dry Tons
January	0.0646	288	3.0		38,000	3.0	4.75
February	0.0688	317	3.0		35,000	3.0	4.38
March	0.0721	270	3.1		44,200	3.0	5.53
April	0.0718	321	3.0		52,000	3.0	6.51
May	0.0738	313	3.0		79,000	3.0	9.88
June	0.0796	311	3.0		0	3.0	0.00
July	0.0826	285	3.0		40,000	3.0	5.00
August	0.0788	535	4.0		76,000	3.0	9.51
September	0.0778	343	3.0		0	3.0	0.00
October	0.0773	311	3.0		36,000	3.0	4.50
November	0.0713	244	3.0		85,000	3.0	10.63
December	0.0715	244	3.1		42,000	3.0	5.25
Total	-	-	-	-	527,200	-	65.953
Average	0.0742	315	3.1		-	3.0	-
Minimum	0.0646	244	3.0	0	-	3.0	-
Maximum	0.0826	535	4.0	0	-	3.0	-



ATTACHMENT D
FLOW METER CALIBRATION REPORT

PID CONTROLS
(973) 702-3354

CALIBRATION REPORT

CUSTOMER	Westfall MUA	INSTRUMENT	Ultrasonic Flow Meter
	Wastewater plant	MFGR.	E&H Prosonic FMU861
	Matamoras, PA	SERVICE	Effluent Flow
CAL. DATE	10-23-2019	RANGE	0 - 1 MGD
P.O. NO.	Verbal--Joe N.	CAL. BY	Paul Lindner

INPUT	DESIRED OUTPUT	AS FOUND	AS LEFT
Head of Water	Readouts MGD / GPM	In tolerance	In tolerance
3.6"	.033 / 23 GPM		.032 / 22 GPM
9.0"	.326 / 226 GPM		.324 / 224 GPM
Primary element is 45 deg. V-Notch weir			
Depth readings taken with standard yardstick as conditions permitted			
Plant at no-flow condition, pumps started to generate flow.			

COMMENTS Prosonic reads .0xx MGD, Recorder reads GPM rate, GPDx1000 total
Recorder is Chessell 392. Pen travel and display correct over span.
Totalizer checked over 1 and 2 minute intervals, reads correctly.
Depth at weir for max. flow = 14.1"

CALIBRATION STANDARD

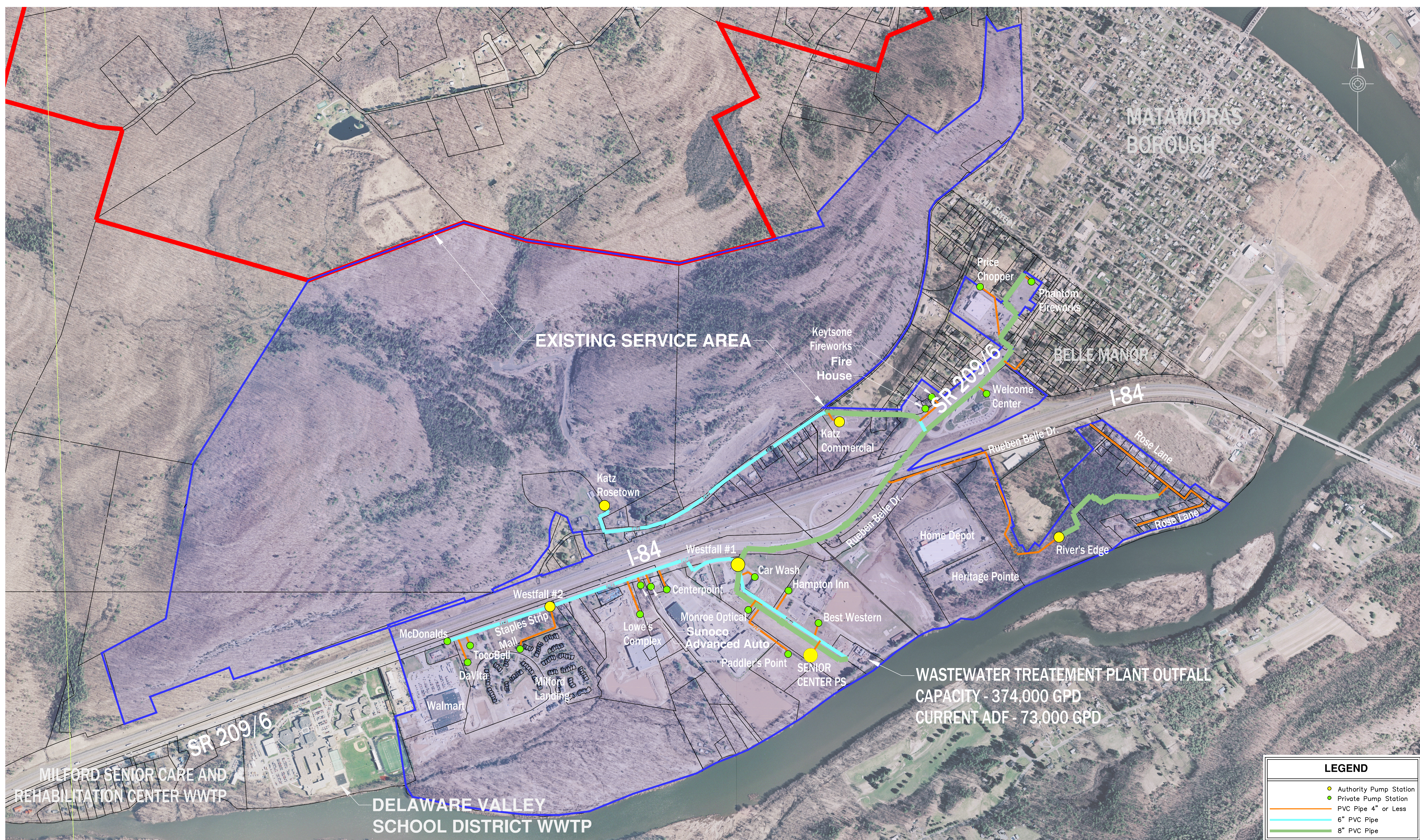
NIST Cert. Date

MFG./MODEL Extech CMM-15 Process Calibrator

8-2018



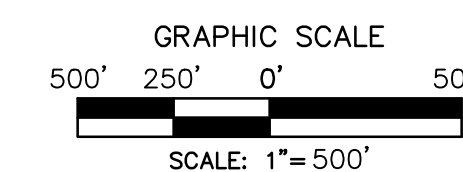
ATTACHMENT E
SERVICE AREA MAP



MUNICIPAL AUTHORITY OF WESTFALL

SANITARY SEWER SYSTEM SERVICE AREA

WESTFALL TOWNSHIP
PIKE COUNTY, PENNSYLVANIA



SCALE: 1" = 500'
JOB#: 003054.0434
DATE: MARCH 2019



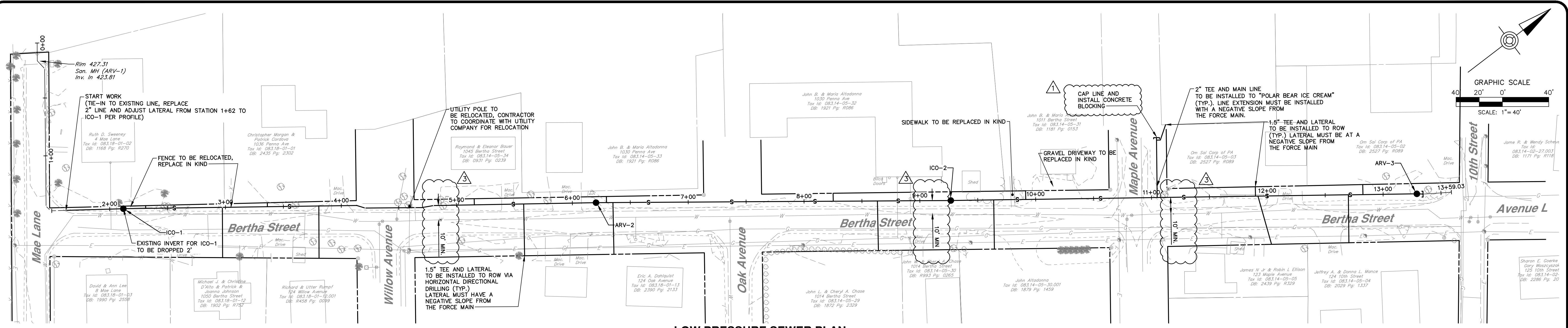
369 East Park Drive
Harrisburg, PA 17111
(717) 564-1121
Fax (717) 564-1158
hr@hr-inc.com
www.hr-inc.com

The name: P:\020\02054_0434\020\02054_0434\SYSTEM MAP.dwg Layer: 2426 Mar 22, 2019 11:50am swmth



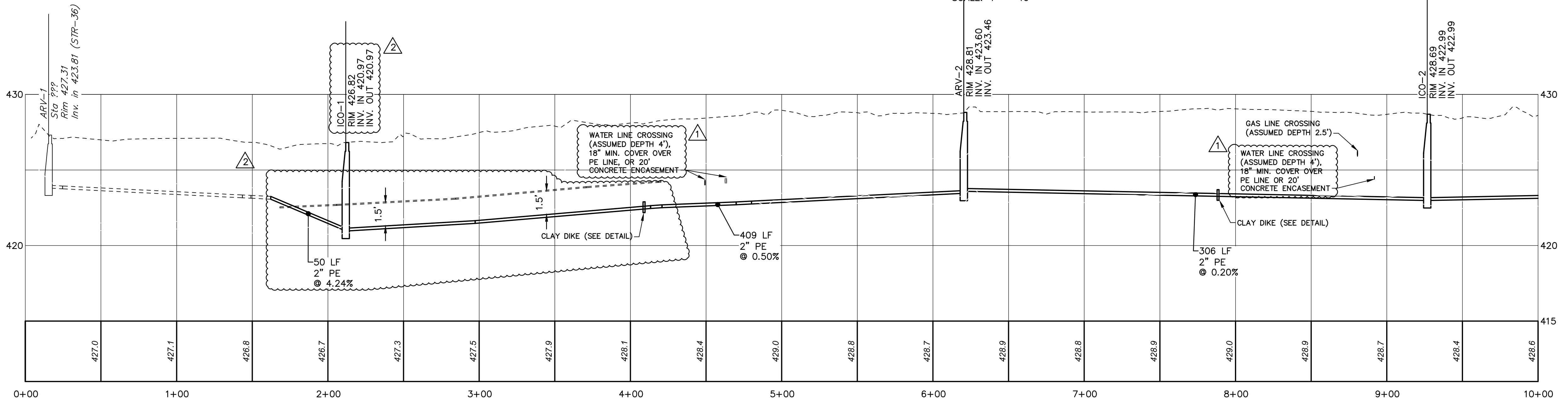
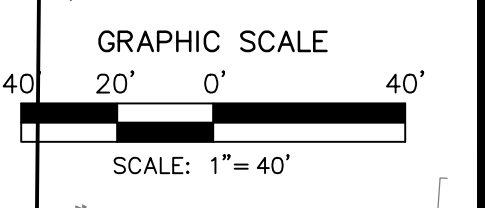
ATTACHMENT F

**CONSTRUCTED AND APPROVED
EXTENSIONS**



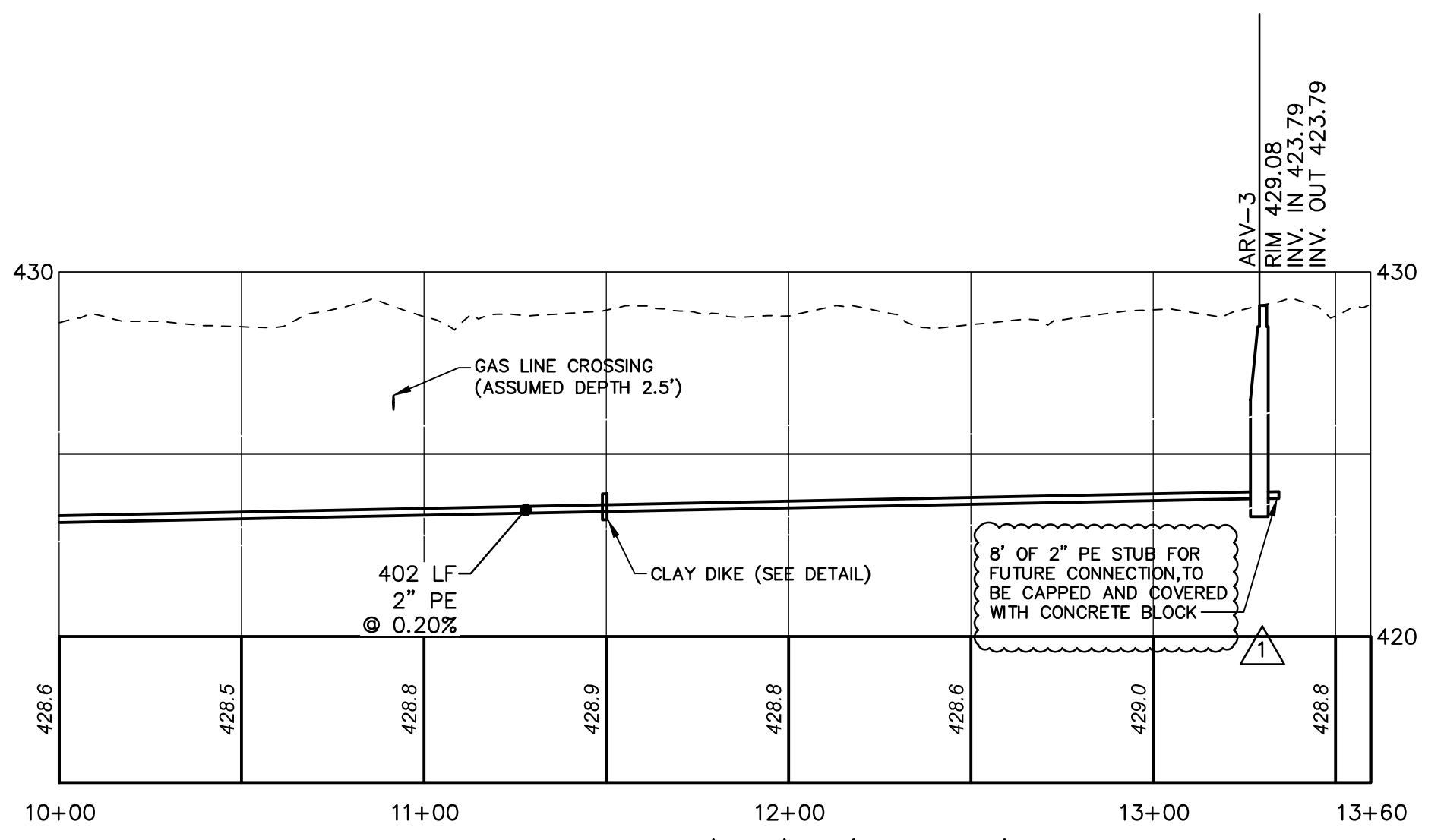
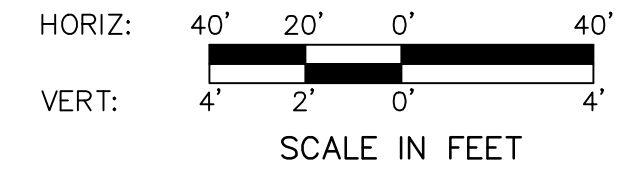
LOW PRESSURE SEWER PLAN

SCALE: 1" = 40'

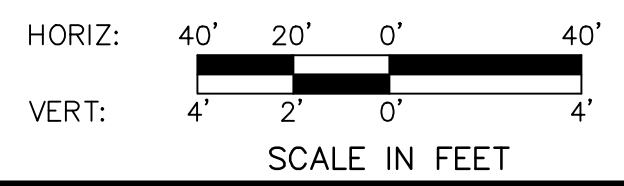


- NOTES:
- ALL SANITARY LATERALS THAT CROSS BERTHA STREET ARE TO BE INSTALLED USING HORIZONTAL DIRECTIONAL DRILLING. OPEN CUT IS NOT ALLOWED ACROSS BERTHA STREET.
 - LOW PRESSURE SEWER TO BE INSTALLED WITHOUT CREATING INTERMEDIATE HIGH POINTS OTHER THAN THOSE SHOWN IN THE PROFILE.

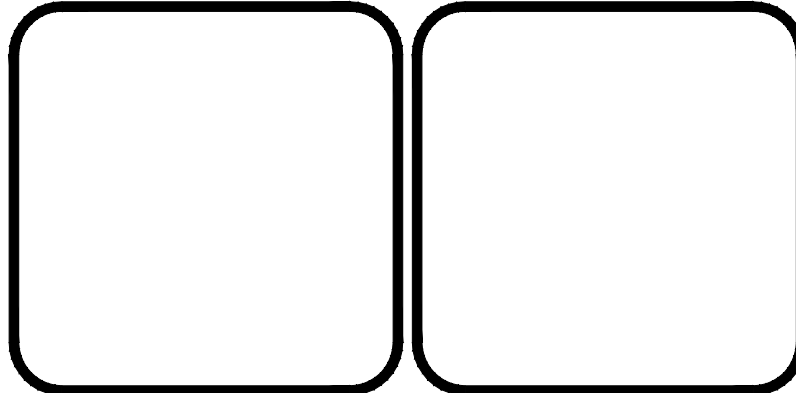
PROFILE
 HORIZ. SCALE: 1" = 40'
 VERT. SCALE: 1" = 4'



PROFILE
 HORIZ. SCALE: 1" = 40'
 VERT. SCALE: 1" = 4'



NO.	REVISION	DATE	BY
3	FIELD ORDER #2	03/14/2019	SJS
2	COMMENTS FROM PRE-CONSTRUCTION CONFERENCE	01/16/2019	SJS
1	ADDENDUM #1	11/06/2018	SJS



HRG
 Herbert, Rowland & Grubic, Inc.
 Engineering & Related Services
 AN EMPLOYEE-OWNED COMPANY

P.O. Box 504
 Clarks Summit, PA 18411
 (570) 851-2804
 eFax (717) 564-1158
 hrg@hrg-inc.com
 www.hrg-inc.com

THE MUNICIPAL AUTHORITY
 OF THE TOWNSHIP OF WESTFALL
 155 WESTFALL TOWN DRIVE
 MATAMORAS, PENNSYLVANIA 18336

UTILITY PLAN
 FOR
MAE LANE SEWER EXTENSION PHASE 2

WESTFALL TOWNSHIP PIKE COUNTY PENNSYLVANIA

PROJ. MGR. - MWS
 DESIGN - SJS
 CADD - SJS
 CHECKED - MWS
 SCALE - AS SHOWN
 DATE - 2018.10.17

DRAWING NO.
UT-1
 SHEET NO.
03 OF 06
 PROJECT R003054.0442