



Permit-to-Install/Plan Approval Application

FOR AGENCY USE ONLY		
Date Received: / /	Application/Revenue ID:	Organization ID:
Document ID:	Place ID:	Check ID:
Check Date: / /	Check Number:	Check Amount:

1. Project Name: Wastewater Treatment Plant Improvements

2. Applicant (see note after signature)

Name:	Village of Covington				
Mailing Address:	1 South High Street				
City:	Covington	State:	Ohio	Zip:	45318
Contact Name:	Kyle Hinkelman				
Title:	Village Administrator				
Phone:	(937) 473-3420	Fax:	() -	E-mail :	Administrator@covington-oh.gov

3. Application/Plans Prepared by:

Name:	Poggemeyer Design Group				
Mailing Address:	1168 North Main St				
City:	Bowling Green	State:	Ohio	Zip:	43402
Contact Name:	Steve Wonderly				
Title:	Project Manager Leader				
Phone:	(567) 343-5898	Fax:	() -	E-mail :	swonderly@kleinfelder.com

4. Billing Address (if different than Applicant)

Name:					
Mailing Address:					
City:		State:		Zip:	
Contact Name:					
Title:					
Phone:	() -	Fax:	() -	E-mail :	

5. Future Owner (if different than Applicant)

Name:					
Mailing Address:					
City:		State:		Zip:	
Contact Name:					
Title:					
Phone:	() -	Fax:	() -	E-mail :	

6. Project Location			
Street Address or Location Description: 200 W Bridge St.			
County: Miami	Township: Newberry		
Municipality: Covington	Latitude: 40N 06' 58"	Longitude: 84W 21' 29"	
Method of Determination: NPDES Permit			

7. Brief Project Description: The project consists of the construction of several new facilities and treatment processes at the WWTP. New facilities will include two remote pump stations in the sanitary collection system to replace the existing siphons. At the WWTP there will be a new headworks, sequencing batch reactor, post aeration, ultraviolet disinfection, outfall sewer, sludge dewatering facilities and an administration building to include office space and a laboratory. The project will upgrade existing tankage for aerobic digestion. The existing wastewater treatment facilities that are abandoned will be demolished.

8. Will one or more acres be disturbed during construction of this project?		☒ Yes	☐ No
If Yes , enter the date the NOI for coverage under the construction storm water NPDES permit was submitted: 5/6/2022 and the date coverage was granted: / /			

9. Will wetlands be disturbed during construction of this project?		☐ Yes	☒ No
If Yes , enter the date the 401/404 permit application was submitted: / /			

10 a. Is this application part of a combined permit-to-install application? (for example air + water)		☐ Yes	☒ No
b. Has an application for a Class V injection well permit been submitted?		☐ Yes	☐ No ☒ N/A
If Yes , date submitted: / /			

11. Compliance Status			
a. Will this project connect to a collection/treatment system that has a NPDES permit?		☒ Yes	☐ No
If Yes , list federal and state permit numbers: OH 0020761 1PB00013			
b. Is this application filed in compliance with findings and orders, a consent decree, and/or NPDES permit schedule?		☐ Yes	☒ No
If Yes , effective date of the document containing the schedule: / /			

12. Compliance with 208 plan			
Does the project conform to the 208/201 plan for the area?		☐ Yes	☐ No ☒ N/A
If Yes , has the engineer submitted supporting documentation?		☐ Yes	☐ No

13. Designated Ohio, Wild, Scenic, & Recreational Rivers			
Is this project located within 1000 feet of a designated wild, scenic, and recreational river?		☒ Yes	☐ No
See http://watercraft.ohiodnr.gov/scenicriversmap for additional information			

14. Estimated Project Schedule:			
Beginning construction date: 1/1/2023 Ending construction date: 6/1/2024 Beginning operation date: 6/1/2024			

15. Project Cost:			
*Installation/Construction Cost: \$ 13,780,250		(Mark one):	☐ Actual ☐ Bid ☒ Estimate
Annual Operation/Maintenance Cost (if applicable - this project only): \$			
Are Water Pollution Control Loan Funds going to be used for this project?		☒ Yes	☐ No
If No , Funding Source:			
*This is costs of the treatment/dispersal/collection system that will serve the project			

16. Attachments

The following are included in this application package (check appropriate box(es) and indicate how many copies of each are provided):

☒ Detail Plans	☐ Management Plan
☐ Soil Evaluation Form	☒ Engineering Report
☐ Hydrogeologic Site Investigation Report	☒ Engineering Specifications
☐ Site Evaluation Form	☐ Sewer Authority Letter
☐ Other (describe):	☒ Antidegradation Addendum
☐ Narrative Plans	

17. Form B / C Submission (check all that apply):

- ☒ Sewer and Pump Station Construction – Form B1
- ☐ Onsite Sewage Treatment Systems – Form B2
- ☐ Wastewater Treatment Plants Less Than 100,000 GPD – Form B3
- ☒ Wastewater Treatment Plants Greater Than or Equal to 100,000 GPD and all Pond Systems – Form B4
- ☐ Industrial Direct Discharge Facility – Form B5
- ☐ Industrial Indirect Discharge Facility – Form B6
- ☐ Underground Storage Tank Remediation – Form B7
- ☐ Holding Tanks – Form B8
- ☐ Industrial Impoundment Ponds – Form B9
- ☐ Land Application Management Plan for Sludge or Waste other than Treated Sewage – Form C1
- ☐ Treated Sewage Land Application Management Plan – Form C2
- ☐ Sewage Holding Tank Management Plan – Form C3

18. Fee Calculations:

Permit-to-Install (maximum total fee \$15,100)

a. Application fee:	\$ 100.00
b. Plan review fee:	\$ 100.00
c. Plan review fee (installation/construction cost x .0065):	\$ 14,900
d. Total Fee (a + b + c):	\$ 15,100

Sludge Management Plan Approval*

- a. Application fee:
- b. Plan review fee:
- c. Total fee (a + b):

* No separate fee is needed for land application

19. Antidegradation

Is this project subject to the Antidegradation Rule (OAC 3745-1-05)? ☐ Yes ☒ No

If **Yes**, an antidegradation addendum must be submitted (Note: It applies even if an exclusion and/or waiver is met)

If **No**, check all that apply:

- ☐ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05 (B)1, i.e., onsite sewage treatment systems, sanitary sewer extensions, indirect discharger to POTW, etc.).
- ☒ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants.
- ☐ Narrative Plans (Examples: Land Application, General Plans, etc.)

20. Submittals:

To be considered complete, this application must include the following unless otherwise directed by Ohio EPA:

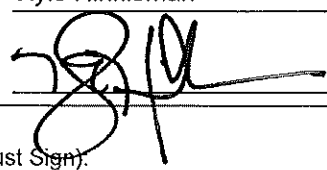
- ☒ Four copies of the detail plans including profile and plan views of all sewers (shown on the same sheet), existing (as applicable) and proposed pump station facilities, incorporating all of the details outlined in Section 20.1, 20.2 and 20.3 of *Recommended Standards for Wastewater Facilities*.
- ☒ Two copies of complete technical specifications.
- ☒ Two copies of the Permit-to-Install Application including Form A, pertinent B & C form(s), and the antidegradation addendum (if applicable)
- ☒ Fee check payable to "Treasurer, State of Ohio."

21. Signature of the Applicant: (see Ohio Administrative Code 3745-42-03)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that all the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are substantial penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Typed name: Kyle Hinkleman

Title: Village Administrator

Signature: 

Date: 4/18/20

NOTE (Who Must Sign):

The person signing as Applicant is not the applicant's engineer or architect or any other person submitting the Permit-to-Install Application on behalf of the owner. The Applicant should be owner of the facility, business, corporation, company, etc. or the legal responsible entity. It is not the engineer who prepared the plans.



Permit-to-Install/Plan Approval Application

Sanitary Sewers

FOR AGENCY USE ONLY

Application Number:

Date Received: / /

Applicant: Village of Covington

Facility Owner: Village of Covington

Ultimate owner (if different):

Application/Plans Prepared by: Poggemeyer Design Group

Project Name: Wastewater Treatment Plant Improvements

1. Project Description

a. Describe the location, size and current development of the area to be served. List street address, township, county, and include longitude and latitude coordinates in describing location. Village of Covington, 1 S High St. Covington, Ohio, Newberry Twp

b. What is the possibility that future sanitary sewer extensions will connect to the sanitary sewers which are the subject of this application? Likely

c. Are there any pump stations included as part of this sewer construction?

(If Yes, fill out attachment to Form B1)

☒ Yes ☐ No

d. Indicate type(s) of sewers proposed (check all that apply):

☒ Conventional gravity ☐ Small diameter gravity (w/septic tanks) ☐ Pressure (GP or STEP)
☐ Vacuum ☐ Siphon ☒ Force main (must include pump station)

2. Pipe Specifications

Please identify each type (as indicated in 1d above) and size of pipe included in this project.

Type	Pipe Size	Pipe Material	Material * Specification	Joint* Specification	Bedding** Classification	Minimum Slope	Pipe Length	Maximum Manhole Spacing
Gravity	24	PVC	ASTM F679	ASTM D3212	ASTM D2321	0.08	302 LF	160
Gravity	15	PVC	ASTM D3034	ASTM D3212	ASTM D2321	0.15	93 LF	48
Gravity	8	PVC	ASTM D3034	ASTM D3212	ASTM D2321	0.4	241 LF	180
Pressure	10	HDPE	AWWA C906	ASTM F2620	ASTM D2321	N/A	1113 LF	N/A
Pressure	8	PVC	ASTM D2241	ASTM 3139	ASTM D2321	N/A	1445 LF	N/A

* List ASTM, AWWA, or ANSI specification number. For any specification that does not appear on Ohio EPA's pipe specification list, the applicant shall submit the standard for approval with the Permit-to-Install.

** 100 percent to pass 3/4-1.0 inch sieve. ASTM C-12 (A, B, C), D-2321 (IA, IB, II, III), or other.

Ohio EPA Approvable Pipe Specification List: <http://www.epa.ohio.gov/dsw/pti/PipeSpecs.aspx>

3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow		Peak Hourly Flow	
Start-Up Flows (based on immediate area served)	.4	MGD	1.5	MGD
Design Flows (based on planned area served)	.75	MGD	2.5	MGD
Hydraulic Capacity of Sewer	2.5	MGD	2.5	MGD

Assumptions used to calculate above flows: (check all that apply)

	Start-Up	Design
☐ Residential Population at: _____ gal/home* _____ homes	_____	_____
☐ Residential Population at: _____ gal/cap/day _____ people	_____	_____
☐ Non-Residential Flows (for example commercial, industrial, etc.): _____ MGD	_____	_____
☒ Flow Measured at the Wastewater Treatment Plant		

*120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted

4. Receiving Wastewater Treatment Facility

a. What treatment facility will be receiving flow from these sewers?
Village of Covington

Present treatment facility average daily flow _____ .4 _____ MGD (based on _____ 4/2022 _____ (month/year) ADF)*

Proposed treatment facility average daily flow (based on present average daily flow plus all connections currently under construction or being designed) _____ 0.75 _____ MGD

Design average daily flow of the treatment facility _____ 0.75 _____ MGD (based on _____ 2017 _____ design year)

b. Does the treatment facility have adequate capacity to treat anticipated flows from existing sewers plus the proposed sewers based on the sewer's design capacity? ☒ Yes ☐ No
If **No**, on a separate sheet, please describe the steps being taken to ensure that the treatment facility has adequate capacity. Include specific work items and schedules as appropriate.

c. Is there intent to expand the treatment facility to treat additional flows? ☒ Yes ☐ No

*Note: Flow data to be no older than one calendar year from date of PTI submission

5. Sewer Design

a. Are the sewers deep enough to serve all adjacent basements?
(refer to GLUMRB, *Recommended Standards for Wastewater Facilities*, 2004, Section 33.2) ☒ Yes ☐ No
If **No**, please explain how the basements will be served:

b. Are sewers at a sufficient depth to prevent freezing? (GLUMRB Section 33.2) ☒ Yes ☐ No
If **No**, please explain how freezing will be prevented:

c. Where small sewers join larger ones, have the inverts of the larger sewers been lowered sufficiently to maintain the same energy gradient? (GLUMRB Section 33.6) ☐ Yes ☐ No ☒ N/A

d. Have provisions been made to protect sewers against displacement by erosion and impact at velocities over 15 fps? (GLUMRB Section 33.45) ☐ Yes ☐ No ☒ N/A

e. Are sewers with slopes greater than 20 percent secured with concrete anchors (or equal), spaced as required? (GLUMRB Section 33.46) ☐ Yes ☐ No ☒ N/A

f. Are there any overflows or bypasses upstream of the point of connection that may be impacted by the flows from the new sewer? ☐ Yes* ☒ No

g. Are there any sanitary overflows or bypasses or combined sewer overflows downstream of the point of connection? ☐ Yes* ☒ No

*(If **Yes** to f. or g., on a separate sheet provide a description of the exact location of any overflows or bypasses)

h. Is the force main designed to withstand water hammer pressures and associated cyclic reversal of stresses that are expected with the cycling of wastewater pump stations? (GLUMRB Section 49.4) ☒ Yes ☐ No ☐ N/A
If **No**, please explain:

6. Stream Protection			
a. Are there any stream crossings? (If Yes , fill out the stream evaluation addendum)	☒ Yes*	☐ No	
If Yes ,			
1. How many crossings are made? (GLUMRB Section 36.14)	Number of crossings: 1		
2. Are the crossings perpendicular to the stream? (GLUMRB Section 36.14)	☒ Yes	☐ No	
3. Are crossings to be made at previously disturbed areas?	☒ Yes	☐ No	
4. Is the streambed substrate composed primarily of solid rock, sand and gravel, or silt?	☒ Rock	☒ Sand/gravel	☐ Silt
5. In areas of steep slope or unstable soils, are the sewers located on more level, terraced areas?	☐ Yes	☐ No	☒ N/A
6. Are the sewers at a sufficient depth to protect the sewer line? (GLUMRB Section 36.11)	☒ Yes	☐ No	☐ N/A
b. Do any sewers run parallel to any streams?	☐ Yes*	☒ No	
If Yes ,			
1. Is there any woody vegetation along the stream banks?	☐ Yes	☐ No	
2. Are the sewers and construction easements located outside of the vegetated areas?	☐ Yes	☐ No	☐ N/A
3. In areas of steep slope or unstable soils, are the sewers located on more level, terraced areas?	☐ Yes	☐ No	☐ N/A
* If the response to either a. or b. is Yes , please provide the specific measures in the detail plans and specifications that will be used to ensure that damage to the stream corridor is minimized to the greatest extent possible and that the stream corridor is restored to original condition.			

7. Manhole Design	
a. Manhole type (precast cast-in-place, etc.):	Precast Concrete
b. Material specification (ASTM):	ASTM C 478
c. Joint specification (ASTM):	ASTM C 443
d. Are watertight frames and covers used wherever manhole tops may be flooded by street runoff or high water? (GLUMRB Section 34.6)	☒ Yes ☐ No ☐ N/A
If No , explain*:	
e. Are manholes provided at the upstream end of each line? (GLUMRB Section 34.1)	☒ Yes ☐ No
If No , explain*:	
f. Are manholes provided at all changes in size, grade, and alignment? (GLUMRB Section 34.1)	☒ Yes ☐ No
If No , explain*:	
g. Are manholes provided at all sewer intersections? (GLUMRB Section 34.1)	☒ Yes ☐ No
If No , explain*:	
h. Are drop manholes provided where the entrance sewer invert is 24 inches or more above the manhole invert? (GLUMRB Section 34.2)	☒ Yes ☐ No ☐ N/A
If No , explain*:	
i. Are inlet/outlet pipes connected with gasketed flexible watertight connections? (GLUMRB Section 34.6)	☒ Yes ☐ No
If No , explain*:	
* Attach any additional sheets necessary for explanations.	

8. Protection of Water Supplies	
a. Are there any physical connections between the sewer and a public or private potable water supply system (including all appurtenances)? (GLUMRB Section 38.1)	☐ Yes ☒ No
b. Are any existing public waterworks units (for example public supply wells, water treatment facilities, storage facilities) within 200 feet of the proposed sewer or any private wells within 50 feet of the proposed sewer? (GLUMRB Section 38.2)	☐ Yes ☒ No
If Yes , specify the plan sheets on which the sources are shown:	
If Yes , will sewers be encased or constructed of watertight pipe? ☐ Encased ☐ Watertight	
c. Are the sewers at least 10 feet horizontally separated from water lines? (GLUMRB Section 38.31)	☒ Yes ☐ No
If No , please specify the plan sheets where these conditions are not met & describe the measures taken to ensure protection of the water system:	
d. When crossing water mains, are the sewers at least 18 inches below water lines?	☒ Yes ☐ No
If No , please specify the plan sheets on which these conditions are not met and describe the measures taken to ensure protection of the water system:	

9. Installation and Testing

a. Installation Inspector:

Name: TBD

Firm: Poggemeyer Design Group

Street Address: 1168 North Main Street

Phone: (419) 352 - 7537

City: Bowling Green

State: Ohio

Zip: 43402

b. What type of sewer leakage test will be used? (GLUMRB 33.9)

☒ Hydrostatic ☒ Air

Page numbers in specifications for testing requirements of gravity and pressure sewers:

c. Is flexible pipe deflection testing specified? (GLUMRB 33.85)

☒ Yes ☐ No ☐ N/A

Page numbers in specifications for testing requirements of flexible pipe:

d. What type of manhole testing will be used? (GLUMRB Section 34.7)

Air

Page numbers in specifications for testing requirements of manholes:

10. Sewer Use Ordinance

A statement that "Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited" must be shown on the plans. Copies of the ordinances or regulations providing for the enforcement of this requirement must be on file with Ohio EPA.

a. An ordinance/regulation to this effect was adopted on: 10/15/2012 (date).

b. Enforcement of this ordinance/regulation is the responsibility of:

Name: Kyle Hinkelman

Title: Village Administrator

c. It is the opinion of the engineer submitting these plans that adequate enforcement of this ordinance/regulation is being properly carried out.

☒ Yes ☐ No ☐ Unknown

11. Authorities

a. Plans for the proposed installation of a county, village, or municipal sewer that is tributary to a sewage treatment plant with another political entity must be accompanied by written consent of both entities.

Is a written inter-municipal agreement attached?

☐ Yes ☐ No ☒ N/A

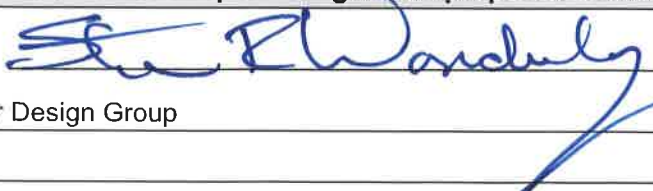
If **No**, state what form of consent is provided:

12. Submittals:

This application must include the following unless otherwise directed by Ohio EPA:

- ☒ Four copies of the detail plans including profile and plan views of all sewers (shown on the same sheet), existing (as applicable) and proposed pump station facilities, incorporating all of the details outlined in Section 20.1, 20.2 and 20.3 of *Recommended Standards for Wastewater Facilities*.
- ☒ Two copies of complete technical specifications.
- ☒ Two copies of the Application including Form A, pertinent B & C form(s), and antidegradation addendum (if applicable)

13. The foregoing data is a true statement of facts pertaining to this proposed sanitary sewer installation.

Date: 5 / 5 / 2012 Signed:  P.E.

Plans prepared by: Poggemeyer Design Group



Permit-to-Install/Plan Approval Application

Attachment: Sewer Pumping Stations

Wright St. Pump Station

1. Pump Stations – Description

a. How many pump stations are included in this project? 3

b. Type of pumps/pump station (check as many as apply):

- | | | | |
|--|---|---------------------------------------|--|
| ☒ Concrete | ☐ Metal | ☐ Fiberglass | ☐ Factory Built |
| ☐ Built In Place | ☒ Submersible | ☐ Suction Lift | ☐ Screw Pump |

c. Type of wastewater to be pumped:

- | | | | |
|--|--|-------------------------------------|--------------------------------------|
| ☒ Sanitary | ☐ Combined (sanitary/storm) | ☐ Commercial | ☐ Industrial* |
|--|--|-------------------------------------|--------------------------------------|

*Source of industrial waste: _____

d. Does the existing pump station and sewer downstream of the pump station have the capacity to handle design flow from the new sewer without creating or worsening (existing CSOs only) any overflows, bypasses or other operational problems downstream of the pump station discharge? ☒ Yes ☐ No

2. Flood Protection for Pump Stations

- a. Flood elevations (GLUMRB Section 41.1) 887 100-year, MSL 885 25-year, MSL
- b. Is the site subject to flooding? ☐ Yes ☒ No
- c. Is the pump station site accessible at all times? (GLUMRB Section 41.2) ☒ Yes ☐ No
- d. Is the site graded to lead surface drainage away from the station? ☒ Yes ☐ No
- e. Is the site protected to prevent vandalism and unauthorized entry? (GLUMRB Section 41.2) ☒ Yes ☐ No
- f. Distance to nearest residence: 100 feet
- g. Distance to nearest building: 100 feet

3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow		Peak Hourly Flow	
Start-Up Flows (based on immediate area served)	.4	MGD	1.5	MGD
Design Flows (based on planned area served)	.75	MGD	2.5	MGD
Hydraulic Capacity of Sewer	2.5	MGD	2.5	MGD
Assumptions used to calculate above flows: (check all that apply)	Start-Up		Design	
☐ Residential Population at: _____ * gal/home _____ homes				_____ homes
☐ Residential Population at: _____ gal/cap/day _____ people				_____ people
☐ Non-Residential Flows (for example commercial, industrial, etc.): _____ MGD				_____ MGD
☒ Flow Measurement at Wastewater Treatment Facility				

*120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted

4. Pump Specifications				
Include all pumps in the pump station (existing or proposed) when completing these tables.				
All Pumps	Pump 1	Pump 2	Pump 3	Pump 4
Existing or proposed	Proposed	Proposed		
Pump type	Submersible	Submersible		
Casing material	Cast Iron	Cast Iron		
Impeller type	Dual Vane	Dual Vane		
Motor type (variable or constant speed)	Variable	Variable		
Are high/premium efficiency motors specified?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Operating conditions				
Rate:	1050 gpm	1050 gpm	gpm	gpm
TDH:	52 ft	52 ft	ft	ft
Speed range	1750 rpm	1750 rpm	rpm	rpm
Dry Pit Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of suction openings (GLUMRB Section 42.33)	in	in	in	in
Diameter of discharge opening (GLUMRB Section 42.33)	in	in	in	in
Is the water seal unit air gapped? (OAC 3745-95)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own intake? (GLUMRB Section 42.36)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line check valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own suction line shutoff valve? (GLUMRB Section 42.51)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line shutoff valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Submersible Pumps Only ☐ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of discharge opening (GLUMRB Section 42.33)	6"	6"		
Can the pump be removed without dewatering the wet well? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the power cable provided with strain relief? (GLUMRB Section 44.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is a separate lifting chain/cable provided? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Screw Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Does the pump have its own wet well and slide gate?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Have provisions been provided for starting the pump when the wet well is frozen?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Dry Well Construction		☒ N/A (skip to Item 6)
a. Is the dry well completely separated from the wet well? (GLUMRB Section 42.21)	☐ Yes	☐ No
b. Is a sump pump provided for dewatering the dry well? (GLUMRB Section 42.37)	☐ Yes	☐ No
c. Is the sump pump discharge line air gapped above the high water alarm elevation?	☐ Yes	☐ No
d. Has the stairway/access ladder been provided with non-slip treads?	☐ Yes	☐ No
e. Has a rigidly fixed landing been provided every 10 vertical feet for factory built pump stations or every 12 vertical feet for built-in-place pump stations? (GLUMRB Section 42.232)	☐ Yes	☐ No
f. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.76)	☐ Yes	☐ No
g. Number of air changes per hour (GLUMRB Section 42.76): _____ at _____ cfm		
h. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside	☐ Outside
i. Is the dry well ventilation system separate from the wet well system? (GLUMRB Section 42.71)	☐ Yes	☐ No
j. Is automatic heating and dehumidification equipment provided for the protection of motors and control systems? (GLUMRB Section 42.74)	☐ Yes	☐ No
k. Are the lights, fan wheels, etc., designed for NEC Class I, Group D, Division 1 locations? (GLUMRB Section 42.35)	☐ Yes	☐ No

6. Wet Well Construction		☐ N/A (Skip to Item 7)
a. Is a separate or divided wet well provided? (GLUMRB Section 42.61)	☒ Divided	☐ Separate
b. Wet well effective volume (GLUMRB Section 42.62) Effective volume calculated between shutoff and first level on.	1128	gallons
c. Are inlets to the wet well provided below the minimum water surface to prevent turbulence and subsequent odors?	☒ Yes	☐ No
d. Is there a bypass or overflow from the wet well?	☐ Yes	☒ No
If Yes,		
i. What is the elevation of the overflow invert?		
ii. Is treatment of the bypass/overflow provided?	☐ Yes	☐ No
iii. Are there provisions for retaining waste on site?	☐ Yes	☐ No
e. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.75)	☒ Continuous	☐ Intermittent ☐ Portable
f. Number of air changes per hour (GLUMRB Section 42.75) _____ at _____ cfm		
g. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside	☐ Outside
h. Is all equipment located in the wet well suitable for use under corrosive conditions? (GLUMRB Section 42.35)	☒ Yes	☐ No

7. Pump Controls and Flow Measurement			
a. Wet Well Elevations			
Suction Line Invert	880.5	Pump No. 1 Start	883.5
Discharge Line Invert	899.5	Pump No. 2 Start	887
Bottom of Wet Well	879.5	Pump No. 3 Start	
Low Shut Off	881.5	High Water Alarm	887
b. Flow Measurement (indicate which type of flow measurement)			
☐ Indicating, totalizing, and recording device (design peak hourly flow > 1,200 gpm)		☒ Elapsed time meters (design peak hourly flow < 1,200 gpm)	

8. Protection of Water Supplies	
Is potable water provided at the pump station?	☐ Yes ☒ No
If Yes, is a minimum air gap of six inches, break tank, and booster pump provided? (GLUMRB Section 42.9)	☐ Yes ☐ No

9. Emergency Operations

a. Type of emergency pumping capability provided? (GLUMRB Section 47.2)

☐ Dual substations ☐ Portable generator ☒ Permanent generator ☐ Portable pump ☐ None*

*If None, please explain:

b. Regardless of type of emergency pumping capability provided, does the standby system have sufficient capacity to start up and maintain the total rated running capacity of the pump station? (GLUMRB Section 47.2)

☒ Yes ☐ No

c. Is the portable generator or portable pump used to provide stand-by operations at multiple locations? If **Yes**, how many? _____

☐ Yes ☐ No ☒ N/A

d. Is an electrical hookup for a portable generator provided? _____

☐ Yes ☐ No ☒ N/A

e. Is a hookup to the force main for portable pumps provided? (GLUMRB Section 47.2)

☒ Yes ☐ No

f. Does the owner/operator of the pump station have any portable pumps to use when needed? (GLUMRB Section 47.2)

☒ Yes ☐ No

g. What type of alarm is provided? (GLUMRB Section 46)

☒ Telemetered ☐ Audio visual, battery operated ☐ Other (please specify): _____



Permit-to-Install/Plan Approval Application

Bridge St PS

Attachment: Sewer Pumping Stations

1. Pump Stations – Description

a. How many pump stations are included in this project? 3

b. Type of pumps/pump station (check as many as apply):

- | | | | |
|--|---|---------------------------------------|--|
| ☒ Concrete | ☐ Metal | ☐ Fiberglass | ☐ Factory Built |
| ☐ Built In Place | ☒ Submersible | ☐ Suction Lift | ☐ Screw Pump |

c. Type of wastewater to be pumped:

- | | | | |
|--|--|-------------------------------------|--------------------------------------|
| ☒ Sanitary | ☐ Combined (sanitary/storm) | ☐ Commercial | ☐ Industrial* |
|--|--|-------------------------------------|--------------------------------------|

*Source of industrial waste: _____

d. Does the existing pump station and sewer downstream of the pump station have the capacity to handle design flow from the new sewer without creating or worsening (existing CSOs only) any overflows, bypasses or other operational problems downstream of the pump station discharge? ☒ Yes ☐ No

2. Flood Protection for Pump Stations

- a. Flood elevations (GLUMRB Section 41.1) 887 100-year, MSL 885 25-year, MSL
- b. Is the site subject to flooding? ☐ Yes ☒ No
- c. Is the pump station site accessible at all times? (GLUMRB Section 41.2) ☒ Yes ☐ No
- d. Is the site graded to lead surface drainage away from the station? ☒ Yes ☐ No
- e. Is the site protected to prevent vandalism and unauthorized entry? (GLUMRB Section 41.2) ☒ Yes ☐ No
- f. Distance to nearest residence: 100 feet
- g. Distance to nearest building: 100 feet

3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow		Peak Hourly Flow	
Start-Up Flows (based on immediate area served)	.4	MGD	1.5	MGD
Design Flows (based on planned area served)	.75	MGD	2.5	MGD
Hydraulic Capacity of Sewer	2.5	MGD	2.5	MGD
Assumptions used to calculate above flows: (check all that apply)		Start-Up	Design	
☐ Residential Population at: _____ *	gal/home	_____ homes	_____	homes
☐ Residential Population at: _____	gal/cap/day	_____ people	_____	people
☐ Non-Residential Flows (for example commercial, industrial, etc.): _____	MGD	_____	_____	MGD
☒ Computer Flow Modeling Results (attach explanation and data)				

*120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted

4. Pump Specifications				
Include all pumps in the pump station (existing or proposed) when completing these tables.				
All Pumps	Pump 1	Pump 2	Pump 3	Pump 4
Existing or proposed	Proposed	Proposed		
Pump type	Submersible	Submersible		
Casing material	Cast Iron	Cast Iron		
Impeller type	Dual Vane	Dual Vane		
Motor type (variable or constant speed)	Variable	Variable		
Are high/premium efficiency motors specified?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Operating conditions				
Rate:	700 gpm	700 gpm	gpm	gpm
TDH:	62 ft	62 ft	ft	ft
Speed range	1750 rpm	1750 rpm	rpm	rpm
Dry Pit Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of suction openings (GLUMRB Section 42.33)	in	in	in	in
Diameter of discharge opening (GLUMRB Section 42.33)	in	in	in	in
Is the water seal unit air gapped? (OAC 3745-95)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own intake? (GLUMRB Section 42.36)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line check valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own suction line shutoff valve? (GLUMRB Section 42.51)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line shutoff valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Submersible Pumps Only ☐ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of discharge opening (GLUMRB Section 42.33)	6"	6"	6"	6"
Can the pump be removed without dewatering the wet well? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the power cable provided with strain relief? (GLUMRB Section 44.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is a separate lifting chain/cable provided? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☒ Yes ☐ No
Screw Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Does the pump have its own wet well and slide gate?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Have provisions been provided for starting the pump when the wet well is frozen?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Dry Well Construction		☒ N/A (skip to Item 6)
a. Is the dry well completely separated from the wet well? (GLUMRB Section 42.21)	☐ Yes ☐ No	
b. Is a sump pump provided for dewatering the dry well? (GLUMRB Section 42.37)	☐ Yes ☐ No	
c. Is the sump pump discharge line air gapped above the high water alarm elevation?	☐ Yes ☐ No	
d. Has the stairway/access ladder been provided with non-slip treads?	☐ Yes ☐ No	
e. Has a rigidly fixed landing been provided every 10 vertical feet for factory built pump stations or every 12 vertical feet for built-in-place pump stations? (GLUMRB Section 42.232)	☐ Yes ☐ No	
f. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.76)	☐ Yes ☐ No	
g. Number of air changes per hour (GLUMRB Section 42.76): _____ at _____ cfm		
h. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside ☐ Outside	
i. Is the dry well ventilation system separate from the wet well system? (GLUMRB Section 42.71)	☐ Yes ☐ No	
j. Is automatic heating and dehumidification equipment provided for the protection of motors and control systems? (GLUMRB Section 42.74)	☐ Yes ☐ No	
k. Are the lights, fan wheels, etc., designed for NEC Class I, Group D, Division 1 locations? (GLUMRB Section 42.35)	☐ Yes ☐ No	

6. Wet Well Construction		☐ N/A (Skip to Item 7)
a. Is a separate or divided wet well provided? (GLUMRB Section 42.61)	☒ Divided ☐ Separate	
b. Wet well effective volume (GLUMRB Section 42.62) Effective volume calculated between shutoff and first level on.	_____ gallons	
c. Are inlets to the wet well provided below the minimum water surface to prevent turbulence and subsequent odors?	☒ Yes ☐ No	
d. Is there a bypass or overflow from the wet well?	☐ Yes ☒ No	
If Yes,		
i. What is the elevation of the overflow invert?	_____	
ii. Is treatment of the bypass/overflow provided?	☐ Yes ☐ No	
iii. Are there provisions for retaining waste on site?	☐ Yes ☐ No	
e. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.75)	☒ Continuous ☐ Intermittent ☐ Portable	
f. Number of air changes per hour (GLUMRB Section 42.75) _____ at _____ cfm		
g. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside ☐ Outside	
h. Is all equipment located in the wet well suitable for use under corrosive conditions? (GLUMRB Section 42.35)	☒ Yes ☐ No	

7. Pump Controls and Flow Measurement			
a. Wet Well Elevations			
Suction Line Invert	_____ 883.0	Pump No. 1 Start	_____ 886.0
Discharge Line Invert	_____ 903.50	Pump No. 2 Start	_____ 888.0
Bottom of Wet Well	_____ 882.0	Pump No. 3 Start	_____
Low Shut Off	_____ 884.0	High Water Alarm	_____ 888.18
b. Flow Measurement (indicate which type of flow measurement)			
☐ Indicating, totalizing, and recording device (design peak hourly flow > 1,200 gpm)		☒ Elapsed time meters (design peak hourly flow < 1,200 gpm)	

8. Protection of Water Supplies	
Is potable water provided at the pump station?	☐ Yes ☒ No
If Yes , is a minimum air gap of six inches, break tank, and booster pump provided? (GLUMRB Section 42.9)	☐ Yes ☐ No

9. Emergency Operations

a. Type of emergency pumping capability provided? (GLUMRB Section 47.2)

☐ Dual substations ☐ Portable generator ☒ Permanent generator ☐ Portable pump ☐ None*

*If None, please explain:

b. Regardless of type of emergency pumping capability provided, does the standby system have sufficient capacity to start up and maintain the total rated running capacity of the pump station? (GLUMRB Section 47.2)

☒ Yes ☐ No

c. Is the portable generator or portable pump used to provide stand-by operations at multiple locations? If **Yes**, how many? _____

☐ Yes ☐ No ☒ N/A

d. Is an electrical hookup for a portable generator provided? _____

☐ Yes ☐ No ☒ N/A

e. Is a hookup to the force main for portable pumps provided? (GLUMRB Section 47.2)

☒ Yes ☐ No

f. Does the owner/operator of the pump station have any portable pumps to use when needed? (GLUMRB Section 47.2)

☒ Yes ☐ No

g. What type of alarm is provided? (GLUMRB Section 46)

☒ Telemetered ☐ Audio visual, battery operated ☐ Other (please specify): _____



Permit-to-Install/Plan Approval Application

Plant Drain PS

Attachment: Sewer Pumping Stations

1. Pump Stations – Description

a. How many pump stations are included in this project? 3

b. Type of pumps/pump station (check as many as apply):

☒ Concrete	☐ Metal	☐ Fiberglass	☐ Factory Built
☐ Built In Place	☒ Submersible	☐ Suction Lift	☐ Screw Pump

c. Type of wastewater to be pumped:

☒ Sanitary	☐ Combined (sanitary/storm)	☐ Commercial	☐ Industrial*
--	--	-------------------------------------	--------------------------------------

*Source of industrial waste: _____

d. Does the existing pump station and sewer downstream of the pump station have the capacity to handle design flow from the new sewer without creating or worsening (existing CSOs only) any overflows, bypasses or other operational problems downstream of the pump station discharge? ☒ Yes ☐ No

2. Flood Protection for Pump Stations

a. Flood elevations (GLUMRB Section 41.1) 887 100-year, MSL 885 25-year, MSL

b. Is the site subject to flooding? ☐ Yes ☒ No

c. Is the pump station site accessible at all times? (GLUMRB Section 41.2) ☒ Yes ☐ No

d. Is the site graded to lead surface drainage away from the station? ☒ Yes ☐ No

e. Is the site protected to prevent vandalism and unauthorized entry? (GLUMRB Section 41.2) ☒ Yes ☐ No

f. Distance to nearest residence: >1000 feet

g. Distance to nearest building: 100 feet

3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow		Peak Hourly Flow	
Start-Up Flows (based on immediate area served)	N/A	MGD	N/A	MGD
Design Flows (based on planned area served)	0.82	MGD	0.82	MGD
Hydraulic Capacity of Sewer		MGD		MGD

Assumptions used to calculate above flows: (check all that apply)

	Start-Up	Design
☐ Residential Population at: * gal/home	homes	homes
☐ Residential Population at: gal/cap/day	people	people
☐ Non-Residential Flows (for example commercial, industrial, etc.):	MGD	MGD
☐ Computer Flow Modeling Results (attach explanation and data)		

*120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted

4. Pump Specifications				
Include all pumps in the pump station (existing or proposed) when completing these tables.				
All Pumps	Pump 1	Pump 2	Pump 3	Pump 4
Existing or proposed	Existing	Existing		
Pump type	Submersible	Submersible		
Casing material	Cast Iron	Cast Iron		
Impeller type	Dual Vane	Dual Vane		
Motor type (variable or constant speed)	Variable	Variable		
Are high/premium efficiency motors specified?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Operating conditions				
Rate:	570 gpm	570 gpm	gpm	gpm
TDH:	18 ft	18 ft	ft	ft
Speed range	1750 rpm	1750 rpm	rpm	rpm
Dry Pit Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of suction openings (GLUMRB Section 42.33)	in	in	in	in
Diameter of discharge opening (GLUMRB Section 42.33)	in	in	in	in
Is the water seal unit air gapped? (OAC 3745-95)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own intake? (GLUMRB Section 42.36)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line check valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own suction line shutoff valve? (GLUMRB Section 42.51)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Does the pump have its own discharge line shutoff valve? (GLUMRB Section 42.52)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Submersible Pumps Only ☐ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Will the pump pass a 3" sphere? (GLUMRB Section 42.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Diameter of discharge opening (GLUMRB Section 42.33)	6"	6"		
Can the pump be removed without dewatering the wet well? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is the power cable provided with strain relief? (GLUMRB Section 44.33)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Is a separate lifting chain/cable provided? (GLUMRB Section 44.2)	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Screw Pumps Only ☒ N/A	Pump 1	Pump 2	Pump 3	Pump 4
Does the pump have its own wet well and slide gate?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Have provisions been provided for starting the pump when the wet well is frozen?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

5. Dry Well Construction		☒ N/A (skip to Item 6)
a. Is the dry well completely separated from the wet well? (GLUMRB Section 42.21)	☐ Yes	☐ No
b. Is a sump pump provided for dewatering the dry well? (GLUMRB Section 42.37)	☐ Yes	☐ No
c. Is the sump pump discharge line air gapped above the high water alarm elevation?	☐ Yes	☐ No
d. Has the stairway/access ladder been provided with non-slip treads?	☐ Yes	☐ No
e. Has a rigidly fixed landing been provided every 10 vertical feet for factory built pump stations or every 12 vertical feet for built-in-place pump stations? (GLUMRB Section 42.232)	☐ Yes	☐ No
f. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.76)	☐ Yes	☐ No
g. Number of air changes per hour (GLUMRB Section 42.76): _____ at _____ cfm		
h. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside	☐ Outside
i. Is the dry well ventilation system separate from the wet well system? (GLUMRB Section 42.71)	☐ Yes	☐ No
j. Is automatic heating and dehumidification equipment provided for the protection of motors and control systems? (GLUMRB Section 42.74)	☐ Yes	☐ No
k. Are the lights, fan wheels, etc., designed for NEC Class I, Group D, Division 1 locations? (GLUMRB Section 42.35)	☐ Yes	☐ No

6. Wet Well Construction		☐ N/A (Skip to Item 7)
a. Is a separate or divided wet well provided? (GLUMRB Section 42.61)	☒ Divided	☐ Separate
b. Wet well effective volume (GLUMRB Section 42.62) Effective volume calculated between shutoff and first level on.	1128	gallons
c. Are inlets to the wet well provided below the minimum water surface to prevent turbulence and subsequent odors?	☒ Yes	☐ No
d. Is there a bypass or overflow from the wet well?	☐ Yes	☒ No
If Yes,		
i. What is the elevation of the overflow invert?		
ii. Is treatment of the bypass/overflow provided?	☐ Yes	☐ No
iii. Are there provisions for retaining waste on site?	☐ Yes	☐ No
e. What type of ventilation has been provided? (GLUMRB Sections 42.71 and 42.75)	☒ Continuous	☐ Intermittent ☐ Portable
f. Number of air changes per hour (GLUMRB Section 42.75) _____ at _____ cfm		
g. Where are the controls for the ventilation equipment located? (GLUMRB Section 42.73)	☐ Inside	☐ Outside
h. Is all equipment located in the wet well suitable for use under corrosive conditions? (GLUMRB Section 42.35)	☒ Yes	☐ No

7. Pump Controls and Flow Measurement			
a. Wet Well Elevations			
Suction Line Invert	869.5	Pump No. 1 Start	874.5
Discharge Line Invert	882.5	Pump No. 2 Start	876.5
Bottom of Wet Well	868.5	Pump No. 3 Start	
Low Shut Off	870.5	High Water Alarm	878
b. Flow Measurement (indicate which type of flow measurement)			
☐ Indicating, totalizing, and recording device (design peak hourly flow > 1,200 gpm)		☒ Elapsed time meters (design peak hourly flow < 1,200 gpm)	

8. Protection of Water Supplies	
Is potable water provided at the pump station?	☐ Yes ☒ No
If Yes, is a minimum air gap of six inches, break tank, and booster pump provided? (GLUMRB Section 42.9)	☐ Yes ☐ No

9. Emergency Operations

a. Type of emergency pumping capability provided? (GLUMRB Section 47.2)

☐ Dual substations ☐ Portable generator ☒ Permanent generator ☐ Portable pump ☐ None*

*If None, please explain:

b. Regardless of type of emergency pumping capability provided, does the standby system have sufficient capacity to start up and maintain the total rated running capacity of the pump station? (GLUMRB Section 47.2)

☒ Yes ☐ No

c. Is the portable generator or portable pump used to provide stand-by operations at multiple locations? If **Yes**, how many? _____

☐ Yes ☐ No ☒ N/A

d. Is an electrical hookup for a portable generator provided? _____

☐ Yes ☐ No ☒ N/A

e. Is a hookup to the force main for portable pumps provided? (GLUMRB Section 47.2)

☒ Yes ☐ No

f. Does the owner/operator of the pump station have any portable pumps to use when needed? (GLUMRB Section 47.2)

☒ Yes ☐ No

g. What type of alarm is provided? (GLUMRB Section 46)

☒ Telemetered ☐ Audio visual, battery operated ☐ Other (please specify): _____



Permit-to-Install/Plan Approval Application

WWTPs Greater Than or Equal to 100,000 GPD and All Pond Systems

FOR AGENCY USE ONLY

Application Number:

Date Received: / /

Applicant: Village of Covington

Facility Owner: Village of Covington

Application/Plans Prepared by: Poggemeyer Design Group

Project Name: WWTP Improvements

This form has eight attachments. Complete only the attachments necessary. Check those included with this application.

☐ I. WWTP Pumping Stations ☒ II. Preliminary Treatment ☒ III. Biological Treatment ☐ IV. Settling
☐ V. Filtration ☒ VI. Disinfection ☒ VII. Sludge Treatment and Disposal ☐ VIII. Ponds

1. Plant Location

Receiving Stream: Stillwater River

2. Flood Protection

a. 100-Year Flood Elevation: 887 MSL b. 25-Year Flood Elevation: 885 MSL

3. Design Type and Loads

a. Design Period: 20 years b. Design Service Area Population: 2,708

c. Treatment Type: Sequencing Batch Reactor

4. Influent Loads

a. Minimum Flow: .266 MGD b. Average Flow: 0.400 MGD
c. Maximum Flow: 2.5 MGD d. Peak Hourly Flow: 2.5 MGD
e. Design BOD Load: 1145 lb/day f. Design SS Load: 1076 lb/day
g. Design Ammonia-Nitrogen Load: 156 lb/day
h. Others: _____

5. Effluent Loads and Concentration (30-day avg.)

	Summer				Winter			
a. CBOD ₅	10	mg/l	63	lb/day	10	mg/l	63	lb/day
b. Suspended Solids	12	mg/l	75	lb/day	12	mg/l	75	lb/day
c. Ammonia-Nitrogen	1	mg/l	6	lb/day	3.0	mg/l	6	lb/day
d. Fecal Coliform	126 /100 ml				N/A /100 ml			
e. Dissolved Oxygen (minimum)	6 mg/l				6 mg/l			
f. Residual Chlorine	N/A mg/l				N/A mg/l			
g. Others:								

6. Submittals:

This application must include the following unless otherwise directed by Ohio EPA:

- ☒ Four sets of detailed plans which include a site plan, vicinity map, schematic diagrams, hydraulic profiles, plan views, elevation views, municipality approval, and cross-sectional views necessary to evaluate the processes.
- ☒ Two copies of the Application including Form A, pertinent B & C form(s), and antidegradation addendum (if applicable)
- ☒ Either the design engineer's or Ohio EPA's basis of design attachments should be submitted with this application. The basis of design should include, at a minimum, dimensions, sizes, hydraulic and organic loading under average and critical flow conditions, etc.

7. The foregoing data is a true statement of facts pertaining to this proposed sanitary system installation.

Date: 5 / 4 / 2022 Signed:  P.E.

Plans prepared by: Poggemeyer Design Group



Permit-to-Install/Plan Approval Application

Attachment II: Preliminary Treatment

SCREENING AND GRINDING

1. Mechanical Bar Screen: ☐ N/A	New	Existing
a. Number of screens	1	0
b. Type	Centerflow Band	
c. Size (feet)	7.5	
d. Bar size (inches)	6mm perf plate	
e. Clear spacing between bars (inches)	6mm perf plate	
f. Drive unit (volts, phase, & HP)	480V 3ph .5HP	

2. Manual Bar Screen: ☐ N/A	New	Existing
a. Number of screens	1	
b. Size (feet)	3	
c. Bar size (inches)	1/4	
d. Clear spacing between bars (inches)	1/2	
e. Bar slope (degrees from vertical plane)	60	

3. Other Screening ☒ N/A	New	Existing
a. Number of screens		
b. Type		
c. Capacity (MGD)		
d. Size (inches)		

4. Comminutor: ☒ N/A	New	Existing
a. Number of comminutors		
b. Manufacture/Model Number		
c. Size (feet)		

5. Others: ☒ N/A ☐ New ☐ Existing
Describe:

GRIT REMOVAL

6. Grit Tank: ☒ N/A	New	Existing
a. Number of tanks		
b. Surface area dimensions (feet, each)		
c. Side water depth (feet, each)		
d. Flow velocity (feet per second)		

7. Grit Tank Aeration: ☒ N/A	New	Existing
a. Number of blowers		
b. Type (diffused air, mechanical surface aerator, etc)		
c. Capacity (CFM)	at psi	at psi

8. Grit Pumps: ☒ N/A	New	Existing
a. Number of pumps		
b. Type		
c. Capacity (gpm, each)		
d. TDH (feet)		
e. Speed (RPM)		
f. Motor HP		

9. Mechanical Grit Removal: ☐ N/A ☒ New ☐ Existing
Describe: The new vortex grit removal tank will be 7' in diameter. Influent flow will travel a minimum of 270 degrees around the tank at a maximum speed of 1 fps before being transferred to the Sequencing Batch Reactor. The removed grit is collected in a hopper

10. Grit Dewatering: ☐ N/A ☒ New ☐ Existing
Describe: The grit in the hopper is air lifted through a 4" grit discharge line with to the classifier below with lamella plates that create surface area for settling. Settled grit travels up a dewatering screw conveyor and discharged to dumpster

11. Grit Disposal: ☐ N/A ☒ New ☐ Existing
Describe: Dewatered grit will be disposed of in a container supplied by the Owner.

Flow Equalization

12. Flow Equalization ☒ N/A	New	Existing
a. Number of tanks		
b. Surface area dimensions (feet, each)		
c. Side water depth (feet, each)		
d. Capacity (gallons, each)		
e. Aeration and/or Mixing:		
i. Number of blowers		
ii. Type (diffused air, mechanical surface, etc.)		
iii. Capacity (CFM, each)		
f. Does a bypass or an overflow exist?	☐ Yes ☐ No	
If Yes , is treatment provided?	☐ Yes ☐ No	

13. Other Preliminary Treatment ☒ N/A	☐ New	☐ Existing
a. Describe:		
b. Design Criteria:		



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Attachment III: Biological Treatment

Note: A separate copy of this form should be used to describe each type of biological treatment proposed.

1. Biological Treatment - General Information			
a. Biological Treatment Type	☐ Secondary	☐ Advanced	
b. Flow Type	☒ Continuous	☐ Batch	☐ Complete Mix ☐ Plug
		New	Existing
c. Process type		SBR	
d. Number of tanks		2	
e. Surface area dimensions (feet, each)		4,218	
f. Side water depth or height (feet, each)		18	
g. Detention time (hrs & mins @ ADDF)		32	
h. Others:			

2. Aeration and/or Mixing: ☐ N/A	New	Existing
a. Number of blowers	3	
b. Type (diffused air, mechanical surface, etc.)	Diffused Air	
c. Capacity (each)	790 CFM @ 8.4 PSI	CFM @ PSI
d. Oxygen supplied (lb oxygen/lb BOD ₅)	1.2	
(lb oxygen/lb TKN)	4.6	
e. MLSS (design)	5,138	
f. F/M ratio	0.0372	
g. Organic loading (lb BOD ₅ /1000 cu ft)	9.1	
h. RAS flow (% at ADDF)		
i. WAS flow (% at ADDF)	2	
j. Others:		

3. Trickling Filters ☐ N/A	New	Existing
a. Media type		Rock
b. Media nominal size (in ³)	in x in x in	in x in x in
c. Media volume (ft ³)		
d. Media surface area (ft ² /ft ³)		
e. Distributor type (rotary, fixed, etc.)		
f. Recirculation rate (MGD @ ADDF)		
g. Others:		

4. Other Biological Treatment ☐ N/A ☐ New ☐ Existing
a. Describe:
b. Design Criteria:



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Attachment VI: Disinfection – Chlorination/Dechlorination, Ultraviolet, Others

1. Chlorine Tank	☒ N/A	New	Existing
a. Number of tanks			
b. Capacity (gallons, each)			
c. Surface area dimensions (feet, each)			
d. Side water depth (feet)			
e. Detention time (hrs & min, total @ PHF)			

2. Chlorine Feeder	☒ N/A	New	Existing
a. Number of feeders			
b. Type (tablets, gas,...)			
c. Dosing rate (mg/l @ PHF)			
d. Others:			

3. Dechlorination Tank	☒ N/A	New	Existing
a. Number of tanks			
b. Capacity (gallons, each)			
c. Surface area dimensions (feet, each)			
d. Side water depth (feet)			
e. Detention time (hrs & min, total @ PHF)			

4. Dechlorination Feeder	☒ N/A	New	Existing
a. Number of feeders			
b. Compound used			
c. Dosing rate (mg/l @ PHF)			
d. Others:			

5. Ultraviolet Channel/Tank	☐ N/A	New	Existing
a. Number of channels		1	
b. Type (horizontal or vertical)		Horizontal	
c. Capacity (mgd, each)		5	
d. Surface area dimensions (ft, each)		30	
e. Side water depth (ft, each)		2.91	
f. Detention time (hrs & min, total @ PHF)			

6. Ultraviolet Equipment	☐ N/A	New	Existing
a. Number of modules (per channel/tank)		6	
b. Number of lamps (per module)		8	
c. Ultraviolet transmittance		254 NM at 65 %	NM at %
d. Others:			

7. Other Disinfection	☐ N/A	☐ New	☐ Existing
a. Describe:			
b. Design Criteria:			



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Attachment VII: Sludge Treatment and Disposal

Sludge Thickening, Stabilization, Conditioning, Dewatering, Reduction, Disposal and Storage

1. Sludge Thickening	☒ N/A	New	Existing
a. Thickening type			
b. Number of thickeners			
c. Surface area dimensions (feet, each)			
d. Side water depth or height (feet, each)			
e. Detention time (hrs & min, total)			
f. Surface overflow rate (gpd/ft ²)			
g. Solid surface loading			
h. Thickened sludge concentration (%)			
i. Others:			
j. If air flotation is the thickening process:			
i. Air-to-solids ratio			
ii. Air pressure			
iii. Tank operating pressure			
iv. Recycling ratio (%)			
v. Others:			
vi. Will air flotation thickening be aided by polymer addition?		☐ Yes	☐ No
k. If centrifugal thickening is the thickening process:			
i. Centrifuge type			
ii. Number			
iii. Rate			
iv. Others:			
v. Will centrifugal thickening be aided by polymer addition?		☐ Yes	☐ No

2. Sludge Stabilization	☐ N/A	New	New
a. Number of sludge stabilization tanks		2	1
b. Surface area dimensions (feet, each)		1200	800
c. Retention time (hrs & min, total)			
d. Side water depth (feet, each)		12	12
e. If aerobic digestion is the stabilization process:			
i. Number of aerators		30	10
ii. Type		Fine Bubble	
iii. Oxygen supplied (with largest blower out of service)		420 CFM at 8.4 PSI	420 CFM at 8.4 PSI
		lb oxygen/day	lb oxygen/day
iv. Others:			

2. Sludge Stabilization (cont.)	New	Existing
f. If anaerobic digestion is the stabilization process:		
i. Solids loading (lb vss/cu ft/day)		
ii. Solid retention time (hours & minutes)		
Influent Solids Content (% dry basis)		
Effluent Solids Content (% dry basis)		
iii. Digester cover type		
iv. Digestion temperature		
v. Sludge heating type		
vi. Sludge heating rate (BTU/hr)		
vii. Sludge mixing type		
viii. Number of withdrawal levels		
ix. Sludge withdrawal pipe size		
x. Gas withdrawal pipe size		
xi. Others:		

3. Other Sludge Stabilization ☒ N/A ☐ Yes ☐ No
a. Describe:
b. Design Criteria:

4. Sludge Dewatering ☐ N/A ☒ Yes ☐ No
a. Describe: Volute Screw Press
b. Design Criteria: 100 - 200 lbs/hr of 1.5% - 3% aerobically digested sludge

5. Sludge Reduction ☐ N/A ☐ Yes ☐ No
a. Describe:
b. Design criteria:

6. Sludge Disposal ☐ N/A	New	Existing
a. Sludge dry solids content (%)	20	
b. Method of disposal	Landfill	
c. Estimated sludge production (tons of dry solids/year)	65	

7. Sludge Storage Tanks ☒ N/A	New	Existing
a. Location		
b. Number		
c. Surface area dimensions (feet, each)		
d. Storage time (days, total)		
e. Side water depth (feet, each)		
f. Sludge removal method		
g. Will mixing be provided?	☐ Yes ☐ No	
If Yes ,		
Mixing type:		
Describe:		
h. Will aeration be employed?	☐ Yes ☐ No	
If Yes ,		
Number of blowers:		
Type:		
Capacity:		
i. Will chemicals be used to control odors?	☐ Yes ☐ No	
If Yes ,		
Chemical type:		
Describe:		

8. Sludge Management Plan	
Has plan been approved?	☐ Yes ☐ No
If Yes , date of approval:	____ / ____ / ____ If No , date to be submitted: ____ / ____ / ____