

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



## GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of Natural Resources hereby issues a permit to:

Construction Permit ID: MOGC00876  
Title of Project: Branson Canyon Phase 4  
Owner: Branson Canyon Development, LLC  
Address: 9250 NW 145th Avenue Rd  
Morrison, FL 32668

The project will also include general site work appropriate to the scope and purpose of the project and will include all the necessary appurtenances to make a complete and usable collection system. The construction of this project will be in the vicinity of the county below and discharge to Receiving Permit ID below:

County: Taney                      Receiving Permit ID: MO0116041

for the construction of (described construction project):

Branson Canyon Phase 4 - Construction of a low pressure sewer system extension with approximately 400 lf of 3-inch SDR-21 PVC force main and 366 lf of 2-inch SDR-21 PVC force main with air-vacuum release valves to serve 15 rental homes with a total design average flow of 9,750 gpd. Each home is to have a duplex grinder pump station, maintained by the continuing authority.

Project is in the vicinity of ST Hwy P and Canyon Crossing in Hollister, Taney County and discharges to an existing 4-inch pressure sewer to be treated at Hollister WWTF, MO-0116041. Matt Jaspering, Missouri American Water Company Project Engineer, provided a continuing authority acceptance letter dated March 12, 2025. Kelly Burgess, Hollister Public Works Director, provided a WWTF acceptance form dated March 25, 2025.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department). As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

May 23, 2025  
Issue Date

  
\_\_\_\_\_  
John Hoke, Director  
Water Protection Program

May 22, 2027  
Expiration Date

## **APPLICABILITY**

1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earth flow equalization storage basins at lift stations and inline storage, which flows back into the lift station or collection system, are also included.
2. The Missouri Department of Natural Resources may require a site-specific sewer extension construction permit due to compliance and enforcement actions in accordance with 10 CSR 20-6.010(13)(C).
3. This permit does not apply to:
  - A. Earthen storage basins;
  - B. Exempt projects in accordance with 10 CSR 20-6.010(1)(B), 10 CSR 20-6.010(5)(B), and RSMo 644.051 unless requested by the applicant or required by enforcement.

## **PREREQUISITES:**

1. The Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).
2. Submit the Sewer Extension Construction Permit application at least sixty (60) days in advance of the start of construction in accordance with 10 CSR 20-6.010(5)(F).
3. Submit an electronic copy of the construction permit application and documents to [DNR.WPPEngineerSection@dnr.mo.gov](mailto:DNR.WPPEngineerSection@dnr.mo.gov) in accordance with 10 CSR 20-6.010(5)(G)3.
4. The plans and specifications, each signed, sealed, and dated by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.
5. The Design Certification form, Engineering Report, or Summary of Design, signed, sealed, and dated by a professional engineer registered in the State of Missouri, certifying the design of the system is in accordance with 10 CSR 20-6 and 10 CSR 20-8.
6. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the wastewater for treatment and indicating the permitted treatment facility has the available capacity.
7. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting responsibility for the operation and maintenance of these facilities.

## **PERMIT CONDITIONS:**

1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.
2. The construction must be in accordance with the final plans and specifications received by the Department. Revisions that affect capacity, flow, or system layout must be approved by the Department prior to construction.

**PERMIT CONDITIONS: (continued)**

3. If construction will incorporate minor changes from previously submitted plans and specifications (i.e., changes that do not affect the capacity, flow, or system layout), submit an electronic copy of the as-built plans and specifications in accordance with 10 CSR 20-8.110(11).
4. State and Federal Law does not permit bypassing of raw wastewater; therefore, the applicant must take steps to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's regional office per 10 CSR 20-7.015(9)(E) or through the Online Bypass/SSO Reporting service on the Missouri Gateway for Environmental Management (MoGEM) portal found at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>.

See <https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988> for more information.

5. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5).
  - A. There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply.
  - B. Lay sewers at least 50 feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
6. Position manholes so that the top access is at or above grade level.
7. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Applicants shall obtain land disturbance permits through the Department's ePermitting system, available online at <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting>.

See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance> for more information.

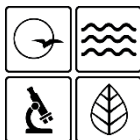
8. Entities applying for funding under 10 CSR 20-4, "Grants and Loans" will need to comply with those requirements in addition to the requirements of 10 CSR 20-8.

## **PERMIT CONDITIONS: (continued)**

9. The Department may require a United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) or a permit waiver for the activities described in this permit. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S., then a 404/401 is required. Fulfillment of these requirements is necessary before the permit is considered valid. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Operating Permits Section at 573-522-4502 for more information.

See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.

10. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then the applicant shall submit a full closure plan with a Facility Closure Request Form, [Form – MO 780-2512](#), to the Department's appropriate [regional office](#) for review and approval. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit. Closure shall not commence until the Department approves the submitted closure plan.
11. If this project is part of a project to resolve an enforcement action or is receiving funding from the Department, submit a [statement of work complete](#) following the completion of construction.
12. Applicants may submit, prior to the expiration date of this permit, a written request that additional time is needed in accordance with 10 CSR 20-6.010(5)(H)3.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
**APPLICATION FOR CONSTRUCTION PERMIT –  
SEWER EXTENSION**

**FOR DEPARTMENT USE ONLY**

APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

**NOTE ► Please Read the accompanying instructions before completing this form**

**1.0 APPLICATION INFORMATION** (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: \_\_\_\_\_ Project #: \_\_\_\_\_
- 1.2 Has the Department of Natural Resources approved the proposed project's engineering report\*?  
☐ YES Date of Approval: \_\_\_\_\_ ☒ NO ☐ N/A
- 1.3 Is a copy of the appropriate plans\* and specifications\* included with this application? ☒ YES ☐ NO  
If the project is using standard specifications, name of community: Missouri American Water Company
- 1.4 Is a summary of design\* included with this application? ☒ YES ☐ NO
- 1.5 Is the appropriate fee or JetPay confirmation included with this application? ☒ YES ☐ NO  
See Section 7.0

\* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

**2.0 PROJECT INFORMATION**

2.1 NAME OF PROJECT

Branson Canyon - Phase 4: Sewer Main Extensions

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
240 Foggy Bay Lane	Hollister	MO	65672	Taney

2.2 Legal Description: NE ¼, ¼, ¼, Sec. 1, T 21N, R 22W

2.3 Project Components (check all that apply):

- ☐ Gravity sewers ☐ Pumping stations ☒ Force mains ☐ Alternative sewer system ☐ Other (Describe below.)

2.4 PROJECT DESCRIPTION

We are seeking the approval from the State of Missouri for the construction of a Low-Pressure Sewer System to serve up to 45 proposed vacation rental homes. The proposed site is split between Section 36, Township 22 North, Range 22 West and Section 1, Township 21 North, Range 22 West, located within Taney County, Missouri. The site can be accessed by first following US 65-S south towards Hollister, MO and making consecutive right turns onto State Hwy 265 N and State Hwy P. The proposed system will connect to the Emerald Pointe Wastewater system, which is owned and operated by Missouri American Water Company (MAWC). MAWC will be responsible for the operation and maintenance of the proposed low-pressure sewer system once the system has been completed, inspected, and tested.

2.5 DESIGN INFORMATION

- A. Population or number of lots to be served by this extension: 293
- B. Estimated flow to be contributed by this extension: Design Average Flow: 29250 gpd Design Peak Hourly Flow: 3035 gph
- C. Industrial Wastes: Type: \_\_\_\_\_ Flow: \_\_\_\_\_ gpd
- D. Receiving Sewer: Size: 4 inches Capacity: \_\_\_\_\_ gpm
- E. Does this project (check all that apply):  
☒ Connect to an existing treatment plant ☐ Resolve enforcement issue ☐ Eliminate or consolidate an existing treatment plant
- F. Estimated number of onsite systems being removed: None
- G. Estimated costs associated with piping: \$ \_\_\_\_\_ Estimated costs associated with lift station(s): \$ 0

**3.0 PROJECT OWNER**

NAME

Branson Canyon Development, LLC-Robyn Thompson

TELEPHONE NUMBER WITH AREA CODE

203-910-7972

EMAIL ADDRESS

rbynthm@aol.com

ADDRESS

9250 NW 145th Avenue Rd

CITY

Morrison

STATE

FL

ZIP CODE

32668

CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED AGENT

LC014356414

**4.0 CONTINUING AUTHORITY:** A continuing authority is a company, business, entity, or person(s) that will be legally responsible for ensuring compliance with the permit requirements and provide continuous stable oversight of the permitted facility or activity. The Continuing authority should be a relatively permanent entity responsible for the ongoing operation, maintenance and modernization, when needed, of the permitted facility or activity. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit [Clean Water Commission Chapter 6](#). A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: [Missouri Secretary of State](#), unless the continuing authority is an individual(s), government entity, or otherwise not required to register with the SoS.

NAME Missouri American Water Company		TELEPHONE NUMBER WITH AREA CODE 1-866-430-0820	EMAIL ADDRESS
ADDRESS 727 Craig Rd	CITY St. Louis	STATE MO	ZIP CODE 63141
CHARTER NUMBER (SECRETARY OF STATE) 00001468			

4.1 Has appropriate continuing authority acceptance been provided as follows:

A letter from the continuing authority accepting responsibility for continued maintenance of the sewer (if the continuing authority is different than the original owner of the construction), or a properly executed "Continuing Authority and Receiving Wastewater Treatment Facility Acceptance" Form 780-2584. ☒ YES ☐ NO ☐ N/A

#### 5.0 ENGINEER

ENGINEER NAME / COMPANY NAME Todd M. Chandler, P.E. / Great River Engineering		TELEPHONE NUMBER WITH AREA CODE 417-886-7171	EMAIL ADDRESS tchandler@greatriv.com
ADDRESS 186 Payne Stewart Dr, Suite 151	CITY Branson	STATE MO	ZIP CODE 65616

#### 6.0 RECEIVING WASTEWATER TREATMENT FACILITY

NAME Hollister Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE 417-334-3330	EMAIL ADDRESS bdaniels@hollistermo.gov
MISSOURI STATE OPERATING PERMIT # MO-0116041		COUNTY Taney	REMAINING CAPACITY (GPD) 1,600,000

6.1 If different from the owner, has a letter been provided from the receiving treatment facility demonstrating that they agree to accept the expanded flow or has a properly executed Continuing Authority and Receiving Wastewater Treatment Facility Acceptance MO 780-2584 form been provided? ☒ YES ☐ NO ☐ N/A

6.2 A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application. ☒ YES ☐ NO ☐ N/A

6.3 If the receiving treatment plant or continuing authority is regulated by the Public Service Commission (PSC) for sewer activities, a Certificate of Convenience and Necessity has been received? ☐ Yes – Date: ☐ No ☒ N/A

#### OPTIONAL QUESTIONS REGARDING MILITARY SERVICE

Have you or an immediate family member ever served in the U.S. Armed Forces?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, would you like information about military-related services in Missouri?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

#### 7.0 Application Fee

<input type="checkbox"/> Check Number	<input type="checkbox"/> JetPay Confirmation Number
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**8.0 PROJECT OWNER:** I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROJECT OWNER SIGNATURE		
PRINTED NAME Robyn Thompson		DATE 4/24/2025
TITLE OR CORPORATE POSITION Owner	TELEPHONE NUMBER WITH AREA CODE 203-910-7972	EMAIL ADDRESS rbynthm@aol.com

Mail completed copy to:

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
PO BOX 176  
JEFFERSON CITY, MO 65102-0176

Submit completed electronic copy to:

Missouri Department of Natural Resources  
at [DNR.WPPEngineerSection@dnr.mo.gov](mailto:DNR.WPPEngineerSection@dnr.mo.gov)

**4.0 CONTINUING AUTHORITY:** A continuing authority is a company, business, entity, or person(s) that will be legally responsible for ensuring compliance with the permit requirements and provide continuous state oversight of the permitted facility or activity. The Continuing authority should be a relatively permanent entity responsible for the ongoing operation, maintenance and modernization when needed, of the permitted facility or activity. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit [Clean Water Commission Chapter 5](#). A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: [Missouri Secretary of State](#), unless the continuing authority is an individual(s), government entity, or otherwise not required to register with the SoS.

NAME Missouri American Water Company		TELEPHONE NUMBER WITH AREA CODE 1-866-430-0820	EMAIL ADDRESS
ADDRESS 727 Craig Rd	CITY St. Louis	STATE MO	ZIP CODE 63141
CHAPTER NUMBER (SECRETARY OF STATE) 00061488			

**4.1** Has appropriate continuing authority acceptance been provided as follows:

A letter from the continuing authority accepting responsibility for continued maintenance of the sewer (if the continuing authority is different than the original owner of the construction), or a properly executed "Continuing Authority and Receiving Wastewater Treatment Facility Acceptance" Form 780-2584. ☒ YES ☐ NO ☐ N/A

**5.0 ENGINEER**

ENGINEER NAME / COMPANY NAME Todd M. Chandler, P.E. / Great River Engineering		TELEPHONE NUMBER WITH AREA CODE 417-336-7171	EMAIL ADDRESS tchandler@greatriv.com
ADDRESS 186 Payne Simard Dr, Suite 151	CITY Branson	STATE MO	ZIP CODE 65616

**6.0 RECEIVING WASTEWATER TREATMENT FACILITY**

NAME Hollister Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE 417-334-3330	EMAIL ADDRESS tdaniel@hollistermo.gov
RECEIVING FACILITY OPERATING PERMIT # MO-0116041	CITY Taney	STATE MO	DESIGN CAPACITY (GPD) 1,600,000

**6.1** If different from the owner, has a letter been provided from the receiving treatment facility demonstrating that they agree to accept the expanded flow or has a properly executed Continuing Authority and Receiving Wastewater Treatment Facility Acceptance MO 780-2584 form been provided? ☒ YES ☐ NO ☐ N/A

**6.2** A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application. ☒ YES ☐ NO ☐ N/A

**6.3** If the receiving treatment plant or continuing authority is regulated by the Public Service Commission (PSC) for sewer activities, a Certificate of Convenience and Necessity has been received? ☐ Yes - Date ☐ No ☒ N/A


**OPTIONAL QUESTIONS REGARDING MILITARY SERVICE**

Have you or an immediate family member ever served in the U.S. Armed Forces?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If yes, would you like information about military-related services in Missouri?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

**7.0 Application Fee**

<input type="checkbox"/> Check Number	<input type="checkbox"/> JetPay Confirmation Number
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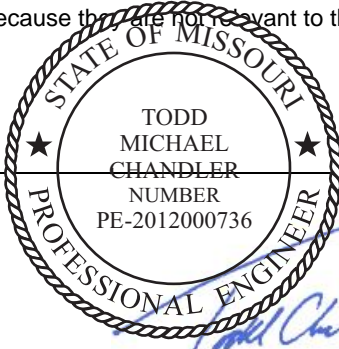
**8.0 PROJECT OWNER:** I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROJECT OWNER SIGNATURE 		DATE 3/29/2025
PRINTED NAME Robyn Thompson		TELEPHONE NUMBER WITH AREA CODE 203-610-7972
TITLE OR CORPORATE POSITION Owner		EMAIL ADDRESS rthomp@acsl.com

Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM PO BOX 178 JEFFERSON CITY, MO 65102-0178	Submit completed electronic copy to: Missouri Department of Natural Resources at <a href="mailto:DNR.WPPEngineerSection@dnr.mo.gov">DNR.WPPEngineerSection@dnr.mo.gov</a>
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9.0 SEWER EXTENSION CHECKLIST				
SEWER EXTENSION DESIGN CERTIFICATION: Answer all questions yes or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension.				
	REGULATION		YES	N/A
1.	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems calculated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.	8.120(3)(A)	Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	8.120(3) (A)1	Is all sewer pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9.	8.120(4)(A)	Are manholes located at the end of each line, at all changes in grade, size or alignment and at all intersections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.	8.120(4)(C)	Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, they are a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12.	8.120(4)(E)	Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13.	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14.	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system and no water pipes come in contact with a sewer manhole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.	8.120(5)(B)	Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST				
	REGULATION		YES	N/A
16.	8.125(5)(A)1.	Does the cleaning velocity of $\geq 2$ ft/s happen more than once per day?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19.	8.125(5)(B)2.	Are isolation valves located: upstream of major pipe intersections; both sides of stream, bridge and RR crossings; at terminal end of system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21.	8.125(5)(D)1.A .	Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence – 1 grinder pump.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22.	8.125(5)(D)1.B .	Are multiple unit pump stations owned, operated and maintained by an approved continuing authority?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23.	8.125(5)(D)3.	Is there at least 70 gallons of storage in the grinder pump unit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24.	8.125(5)(D)4.	Do grinder pump stations have shutoff valves, check valves and anti-siphon valves (where siphoning could occur) that are accessible from the ground surface?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25.	8.125(5)(D)7., 8.130(3)(B)2.	Are units serviceable and replaceable under wet conditions without electrical hazard and is electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26.	8.125(5)(D)8., 8.125(2)(F)6.	Are provisions in place to avoid interruption of service due to mechanical or power failure by providing standby power, storage capacity, or interconnection with another disposal system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
27.	8.125(6)(D)	In a STEP system is at least one septic tank (1,000 gallons or more) provided for each EDU with 20% of tank volume dedicated to freeboard and ventilation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>



11.0 PUMP STATION CHECKLIST				
	REGULATION		YES	N/A
29.	8.125(7)(C)	Is the minimum diameter sewer main pipe and service line of STEG sewer at least 4"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31.	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32.	8.130(3)(B)	If the design flow is 1,500 gpd or more, are there at least 2 pumps or pneumatic ejectors provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33.	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35.	8.130(3)(G)	Does all potable water brought to pump stations comply with 8.140(7)(D)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36.	8.130(6)	Is an alarm system provided with uninterrupted power?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37.	8.130(7)(A)	Is there 2 hours retention of the peak hourly flow for a design flow > 100,000 gpd or 4 hrs retention of the peak hourly flow for a design flow < 100,000 gpd?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38.	8.130(7)(B)	Are there independent utility substations provided for emergency power capable of starting and operating the pump station at its rated capacity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39.	8.130(8)(A)	Is the force main velocity of $\geq 2$ ft/s maintained?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40.	8.130	Are there complete operation instructions for the pumping stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12.0 SUCTION LIFT PUMP AND SUBMERSIBLE PUMP STATION CHECKLIST				
	REGULATION		YES	N/A
41.	8.130(4)	Are the suction lift pumps of the self priming or vacuum priming type?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42.	8.130(4)(A)	Is the combined total of dynamic suction lift at the "pump off" elevation and required net positive suction head at design operating conditions less than or equal to 22 feet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43.	8.130(4)(B)	Are there dual vacuum pumps capable of removing air from the suction lift pump?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44.	8.130(5)(A)	Are submersible pumps readily removable and replaceable without personnel entering, or disconnecting any pipe in the wet well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13.0 SEWER EXTENSION CHECKLIST -- CERTIFICATION STATEMENT				
<p>For any questions answered "N/A" provide an explanation. Also provide any useful general comments regarding design for review engineer.</p> <p>Section 9.0 - 8.110(3)(A) was answered "N/A" because the design flow is not based on actual flow data for an existing system  8.110(3)(B) was answered "N/A" because I&amp;I contributions were not included in any design calculations  8.110(4)(A), 8.110(4)(C), 8.110(4)(E), 8.110(4)(F) were answered "N/A" because no manholes are being proposed</p> <p>Section 10.0 - 8.125(5)(D)1.B was answered "N/A" because there are no multiple unit pump stations proposed for this project  8.125(6)(D) was answered "N/A" because there is no STEP system proposed for this project</p> <p>All items in Sections 11.0 and 12.0 were answered "N/A" because they are not relevant to the scope of this project</p>				
Missouri Professional Engineer's seal, signature and date:		 4/24/2025		
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