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:	MOGC00825
Title of Project:	Meeting Hall for Church of Jesus Christ
Owner:	The Church of Jesus Christ of Latter-day
Address:	50 East North Temple ST, COB-12 Saints Salt Lake City, UT 84150

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: Cape Girardeau Receiving Permit ID: MO0136328

for the construction of (described construction project):

Meeting Hall-Construction of approximately 1,250 lf of 8-inch SDR-35 PVC with approximately 8 manholes to serve a design average flow of 900 gpd (9 PE).

This project utilizes City of Cape Girardeau standard specification approved on March 4, 2016.

Project is in the vicinity of LaSalle Ave and Baldwin Farms Dr intersection in Cape Girardeau, Cape Girardeau County, and discharges to an existing system to be treated at the Cape Girardeau Municipal WWTF, MO0136328. Gary Files, Engineering Technician with Cape Girardeau, provided an acceptance letter dated November 1, 2024, and Jake Garrard, City Engineer, signed application.

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.

November 22, 2024
Issue Date

John Hoke, Director
Water Protection Program

November 21, 2026
Expiration Date

APPLICABILITY

1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earthen 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 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 $300	CHECK NO. 73166
DATE RECEIVED 11/7/24	

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: _____

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
Meeting Hall for the Church of Jesus Christ of Latter-Day Saints

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
4450 LaSalle Ave	Cape Girardeau	MO	63701	Cape

2.2 Legal Description: ¼, ¼, ¼, Sec. 04 , T 31 , R 13

2.3 Project Components (check all that apply):
☑ Gravity sewers ☐ Pumping stations ☐ Force mains ☐ Alternative sewer system ☐ Other (Describe below.)

2.4 PROJECT DESCRIPTION
A new meeting hall shall be constructed. As part of its operations, the sanitary sewer main shall be extended along LaSalle Ave. and a gravity sewer service line shall be extended to meet this new main. The additional sewer main is approximately 1250LF.

2.5 DESIGN INFORMATION

A. Population or number of lots to be served by this extension: 300 occupants in meeting hall and potential for future subdivision dev

B. Estimated flow to be contributed by this extension: Design Average Flow: gpd Design Peak Hourly Flow: gph

C. Industrial Wastes: Type: Flow: gpd

D. Receiving Sewer: Size: 12 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:

G: Estimated costs associated with piping: $ Estimated costs associated with lift station(s): $

3.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
The Church of Jesus Christ of Latter-Days Saints	385-315-0555	ScottDL@ChurchofJesusChrist.org

ADDRESS	CITY	STATE	ZIP CODE
50 East North Temple ST, COB-12	Salt Lake City	UT	84150

CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED AGENT

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	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
The City of Cape Girardeau Public Works Department	573-339-6351	cbrunke@cityofcapegirardeau.org

ADDRESS	CITY	STATE	ZIP CODE
2007 Southern Expressway	Cape Girardeau	MO	63703

CHARTER NUMBER (SECRETARY OF STATE)

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	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Koehler Engineering and Land Surveying	573-335-3026	ckoehler@engineering.com

ADDRESS	CITY	STATE	ZIP CODE
194 Coker Lane	Cape Girardeau	MO	63701

6.0 RECEIVING WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Cape Girardeau Transfer Station	573-339-6351	capepublicworks@cityofcape.org
MISSOURI STATE OPERATING PERMIT #	COUNTY	REMAINING CAPACITY (GPD)
0403104	Cape County	

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?	☐ Yes	☐ No
If yes, would you like information about military-related services in Missouri?	☐ Yes	☐ No

7.0 Application Fee

☑ Check Number 73166	☐ JetPay Confirmation Number

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: Jake Garrard

PRINTED NAME	DATE
Jake Garrard	11-1-24

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
City Engineer	573-339-6327	

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**

MO 780-1632 (10-22)

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"?	☐	☑
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?	☐	☑
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?	☐	☑
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?	☐	☑
33	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?	☐	☑
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?	☐	☑
35.	8.130(3)(G)	Does all potable water brought to pump stations comply with 8.140(7)(D)?	☐	☑
36.	8.130(6)	Is an alarm system provided with uninterrupted power?	☐	☑
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?	☐	☑
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?	☐	☑
39.	8.130(8)(A)	Is the force main velocity of ≥ 2 ft/s maintained?	☐	☑
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?	☐	☑

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?	☐	☑
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?	☐	☑
43.	8.130(4)(B)	Are there dual vacuum pumps capable of removing air from the suction lift pump?	☐	☑
44.	8.130(5)(A)	Are submersible pumps readily removable and replaceable without personnel entering, or disconnecting any pipe in the wet well?	☐	☑

13.0 SEWER EXTENSION CHECKLIST -- CERTIFICATION STATEMENT

For any questions answered "N/A" provide an explanation. Also provide any useful general comments regarding design for review engineer.

Q: 1) There is no equivalent existing system to estimate flow data from.
To estimate design peak flow, a unit flow rate of 3 gal/person/day (Crites and Tchobanoglous, 1998.) was used with a design population of 300 people. This yielded an average design flow of 900 GPD and a peak design flow of 3,672 GPD. The maximum capacity of the new line is 1,202,149 GPD, determined by the flattest pipe in the new line. Since the peak design flow is less than the capacity of the new line, this system has been deemed adequately sized.

Design Flow:
300 Occupancy * 3 gal/person/day = 900 Gallons Per Day (GPD) Average Daily Flow or 37.5GPH average Hourly Flow
Equivalent Population: 900 GPD / 3 G/P/D = 300 Persons or 0.3 thousand
Peak Factor:$(18+\sqrt{(0.3)}) / (4+\sqrt{(0.3)}) = 4.08$
Peak Hourly Flow: 153GPH

Missouri Professional Engineer's seal, signature and date:

STATE OF MISSOURI
10-31-24
CHRISTOPHER L. KOEHLER
NUMBER PE-2007774
PROFESSIONAL ENGINEER

RECEIVED
NOV 07 2024
Water Protection

Name: Christopher Koehler

Address: 194 Coker Lane

City: Cape Girardeau | State: Missouri | ZIP Code: 63701

Telephone Number with Area Code: 573-335-3026 | Email: ckoehler@koehlerengineering.com

MO 780-1632 (10-22)

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?	☐	☑
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems calculated?	☑	☐
3.	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	☑	☐
4.	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?	☑	☐
5.	8.120(3)(A)	Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?	☑	☐
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?	☑	☐
7.	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	☑	☐
8.	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	☑	☐
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?	☑	☐
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"?	☑	☐
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"?	☑	☐
12.	8.120(4)(E)	Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?	☑	☐
13.	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	☑	☐
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?	☑	☐
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?	☑	☐
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 ≥ 2 ft/s happen more than once per day?	☐	☑
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	☐	☑
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?	☐	☑
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?	☐	☑
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?	☐	☑
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 pumpt.	☐	☑
22.	8.125(5)(D)1.B.	Are multiple unit pump stations owned, operated and maintained by an approved continuing authority?	☐	☑
23.	8.125(5)(D)3.	Is there at least 70 gallons of storage in the grinder pump unit?	☐	☑
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?	☐	☑
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)?	☐	☑
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?	☐	☑
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 dedicatied to freeboard and ventillation?	☐	☑
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?	☐	☑