

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Brandon O. Williams Development Company, LLC
Jackson Ridge Estates Phase 7
Hillcrest Drive
Jackson, MO 63755

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

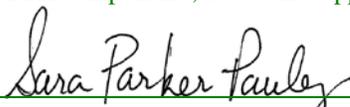
Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

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.

A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

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

October 10, 2014
Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

October 9, 2016
Expiration Date


Director, Water Protection Program

CONSTRUCTION PERMIT

COLLECTION SYSTEM:

This project consists of the installation and construction of approximately 3,516 linear feet (lf) of 8-inch (8") polyvinyl chloride (PVC) Standard Dimension Ratio (SDR)-35 gravity sewer lines with approximately 17 manholes and all the necessary appurtenances to make a complete and usable wastewater collection system to serve a 34 lot subdivision with an estimated population equivalent of 122 and an estimated design average flow of 12,240 gallons per day. The project will also include general site work appropriate to the scope and purpose of the project.

These activities will be in the vicinity of Hillcrest Drive in Jackson, Cape Girardeau County and discharge to an existing sewer system to be treated at the Jackson Wastewater Treatment Facility, Missouri State Operating Permit No. MO-0022853. Mr. Kent Peetz, Director of Wastewater Utilities with the City of Jackson provided an acceptance letter dated September 16, 2014.

PERMIT CONDITIONS:

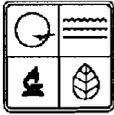
1. All construction shall be in accordance with the plans and specifications submitted by Bowen Engineering and Surveying on September 19, 2014 and signed and sealed by Mr. Cary G. Harbison, P.E. on July 22, 2014.
2. The Department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(8).
3. State and Federal Law does not permit bypassing of raw wastewater, therefore steps must be taken 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 Southeast Regional Office per 10 CSR 20-7.015(9)(E)2.
4. This Construction Permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans".
5. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or

come in contact with any part of a sewer manhole.”

- A. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.
 - B. Sewer mains shall be laid at least ten feet (10') horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a ten foot (10') separation, the Department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.
 - C. Manholes should be located at least ten feet (10') horizontally from any existing or proposed water main.
 - D. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one (1) of the following methods must be specified:
 - 1) The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
 - 2) Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet (10') on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the Department for use in water main construction.
6. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one (1) acre or more 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. Land disturbance permits may only be obtained by means of the Department's ePermitting system available online at www.dnr.mo.gov/env/wpp/epermit/help.htm.

- See www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.
7. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See www.dnr.mo.gov/env/wpp/401/ for more information.
 8. In accordance with 10 CSR 20-6.010(6)(B), submit the enclosed form Application for Letter of Authorization – Sewer Extension to the Department following completion of construction. Submit an electronic copy of the as-builts with this form.
 9. Upon completion of construction, the City of Jackson will become the continuing authority for operation, maintenance, and modernization of these facilities.

Leasue Meyers, EI
Engineering Section
leasue.meyers@dnr.mo.gov



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

RECEIVED

SEP 19 2014

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$ 300.00	CHECK NO. 5952
DATE RECEIVED 9-19-14 T.S.	

WATER PROTECTION PROGRAM

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

1.4 Is a summary of design* included with this application? YES NO

1.5 Is the appropriate fee included with this application? (See instructions for appropriate fee.) YES NO

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

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT
 Jackson Ridge Estates Phase 7

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
Hillcrest Drive	Jackson	MO	63755	Cape Girardeau

2.2 Legal Description: ¼, USPS ¼, 221 ¼, Sec. , T 31 N , R 12 E

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

2.4 PROJECT DESCRIPTION
 Install 17 sanitary manholes and 3,516 L.F. of 8" PVC SDR35 sewer pipe complete with service lines to serve a 34 lot subdivision addition.

2.5 DESIGN INFORMATION

A. Population or number of lots to be served by this extension: 34 lots x 360gpd/lot = 12,240 gpd

B. Estimated flow to be contributed by this extension: Design Average Flow: ^^^^^ gpd Design Peak Hourly Flow: 2,040 gph

C. Industrial Wastes: Type: N/A Flow: N/A gpd

D. Receiving Sewer: Size: 8" inches Capacity: 330 gpm

3.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS	
Brandon O. Williams Development Company, LLC	(573) 335-3134	bowconstruction@aol.com	
ADDRESS	CITY	STATE	ZIP CODE
2985 Boutin Drive	Cape Girardeau	MO	63701

4.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS	
City of Jackson	(573) 243-2300	jsanders@jacksonmo.org	
ADDRESS	CITY	STATE	ZIP CODE
101 Court Street	Jackson	MO	63755

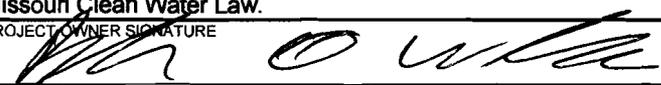
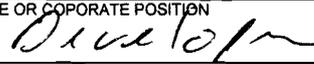
4.1 A letter from the continuing authority, if different than the owner, is included with this application. YES NO N/A

5.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS	
Cary G. Harbison / Bowen Engineering & Surveying	(573) 339-5900	caryharbison@bowenengsurv.com	
ADDRESS	CITY	STATE	ZIP CODE
2121 Megan Drive	Cape Girardeau	MO	63701

6.0 RECEIVING WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
City of Jackson Wastewater Utilities	(573) 243-2300	kpeetz@jacksonmo.org

MISSOURI STATE OPERATING PERMIT # MO-0022853		REMAINING CAPACITY (GPD) 600,000 GPD	
6.1 Has the receiving treatment facility agreed to accept the additional wastewater flow? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
6.2 A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A			
7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law.			
PROJECT OWNER SIGNATURE 			
PRINTED NAME Brandon Williams		DATE 9-10-14	
TITLE OR CORPORATE POSITION 		TELEPHONE NUMBER WITH AREA CODE (573) 335-3134	E-MAIL ADDRESS bowconstruction@aol.com
Mail completed copy to:		MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176	

HOLD TO LIGHT TO VIEW WATERMARK IN PAPER HEAT SENSITIVE RED IMAGE DISAPPEARS WITH HEAT DETECTION CIRCLE REVEALS A LOCK WHEN TESTED

5952 NP

BRANDON O. WILLIAMS DEVELOPMENT, LLC

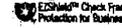
2985 BOUTIN DR.
CAPE GIRARDEAU, MO 63701
(573) 335-3382



FIRST MISSOURI STATE BANK

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80-1921-815



9-14-17
\$ 300⁰⁰/₁₀₀

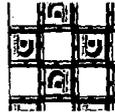
DOLLARS

Security features. Details on back.

PAY TO THE ORDER OF

MOONRA

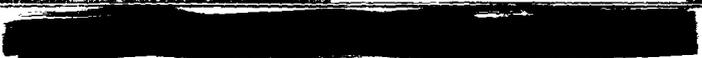
Three Hundred ⁰⁰/₁₀₀



[Handwritten Signature]

AUTHORIZED SIGNATURE

MEMO



Received 9-19-14

RECEIVED

SEP 19 2014



City of Jackson

WATER PROTECTION PROGRAM

September 15, 2014

Mr. Refaat Mefrakis
Missouri Department of Natural Resources
Water Protection Program
PO Box 176
Jefferson City, MO 65102-0176

RE: Sewer Extension Permit Application for Jackson Ridge Estates Phase 7

Dear Mr. Mefrakis,

Enclosed please find one set of complete improvement plans for the subdivision noted above along with the water permit application. Please review this information at your earliest possible convenience for issuance of a permit. A digital copy of the plans and application are also included.

Water plans and the associated permit application have been sent to the Public Drinking Water Program.

The City of Jackson will provide general construction inspection to oversee the installation of the improvements in this subdivision as per all required regulations, and upon completion and approval, will own, operate, and maintain these facilities.

If you have questions, please call me at 243-2300 ext. 29.

Respectfully,

A handwritten signature in cursive script that reads "Janet Sanders".

Janet Sanders
Building & Planning Superintendent



City of Jackson

RECEIVED

SEP 19 2014

WATER PROTECTION PROGRAM

September 16, 2014

Rafaat Mefrakis.
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102-0176

RE: Jackson Ridge Estates Phase 7 Sewer Extension

Brandon O. Williams Development Company, LLC, has applied to the City of Jackson for a sewer extension to serve a residential development as outlined in the Application for Construction Permit – Sewer Extension prepared by Bowen Engineering. The City of Jackson Wastewater Treatment Facility has the capacity to serve this facility. The City of Jackson will inspect and test this sewer extension prior to accepting it to ensure it meets the requirements of the City Code of Ordinances and the City of Jackson Standard Construction Specifications for Sanitary Sewerage Facilities that are at least as restrictive as the MDNR Code of State Regulations 10CSR20.

1. The current loading rates to the Jackson Wastewater Treatment Facility are 1.9 MGD hydraulic flow at 6.95 lb BOD₅/1000 ft³. The facility is permitted for 2.4 MGD average daily flow, and the design organic loading rate is 15 lb BOD₅/1000 ft³. Leaving the current excess capacity at 0.5 MGD hydraulic flow and 8.05 lb BOD₅/1000 ft³.
2. This sewer extension will add 34 lots to a residential subdivision that currently includes 99 residential single family lots. The total flow from the subdivision to the existing 8-inch sewer is estimated to be 140 gpm. The 8-inch sewer, even at minimum slope of 0.4% is capable of carrying 320 gpm and is therefore not overloaded. The 8-inch sewer flows into 15", 21", 24", and 36" interceptors, none of which are known to have any capacity issues.
3. This proposed sewer extension will be financed by the developer and will not affect the wastewater user rates paid by customers of the City of Jackson.

If you have any questions or require additional information, please contact me at 573-243-4290 or kpeetz@jacksonmo.org.

Sincerely,

A handwritten signature in black ink that reads "Kent A. Peetz". The signature is written in a cursive style with a large, stylized 'K' and 'P'.

Kent A. Peetz, P.E.
Director of Wastewater Utilities
City of Jackson

p.c: Janet Sanders, Building and Planning Superintendent