Oklahoma Department of Environmental Quality
Water Quality Division | Phone: 405-702-8100
Construction Permitting Section
707 N. Robinson, OKC, OK 73102-6010
P.O. Box 1677, OKC, OK 73101-1677

Sanitary Sewer Extensions, Lift Stations, and Force Mains
Engineering Report Form

The _____ proposes the construction of a sanitary sewer extension(s), lift station(s), and/or force main(s) in the manner indicated by the information contained herein and by the plans, profiles, specifications, and other data attached hereto. The plans and specifications have been approved and signed by the proper city officials or owner and an application for a permit properly executed by the Mayor, Chairman of the Board or owner accompanies this report.

I. General Information

1. Name of Facility: _____

2. Facility Number: S- _____

	Yes	No
3. Is the facility under any legal enforcement?	☐	☐

If Yes, Case Number: _____

4. Legal Description: ___ /4, ___ /4, ___ /4, of Section _____, T- ____ - ____, R - ____ - ____, I. M. / C. M., _____ County

5. Population Served by System: _____ , Actual ☐; Estimated ☐

	Yes	No
6. The entity receiving, transporting, and treating the waste is the applicant?	☐	☐
If No, an application to receive, transport, and treat the wastewater is included? This application must be from the entity that will treat the wastewater	☐	☐
7. Technical specifications for the sanitary sewer extension(s), lift station(s), and/or force main(s) are provided?	☐	☐
If No, the most current City Ordinances or Standards are referred to?	☐	☐

If Yes, the Ordinances/Standards are included or on file with the DWSRF/Construction Permit Section, Water Quality Division, Oklahoma Department of Environmental Quality.

8. The area of the proposed development: _____ If area of development is 1 acre or more, has the developer/builder obtained a DEQ Storm Water Construction Permit?	☐	☐

Developers/builders are required to obtain a DEQ Storm Water Construction Permit for a construction site that will disturb one (1) acre or more in accordance with OPDES, 27A O.S. § 2-6-201 et seq.

	Yes	No
9. Proposed sewer line(s) is (are) located on the street side of the lots?	☐	☐

If Yes, the following reasons are given:

_____

II. Sanitary Sewer Line Extension Technical Information

1. A minimum of 30 inches of earth cover is provided?	☐	☐
If No, explain: _____		
2. Leakage tests are specified in accordance with OAC 252:656-5-5(b)?	☐	☐
3. Allowable leakage does not exceed 10 gallons per inch diameter per mile per day?	☐	☐
4. Deflection tests are specified for all flexible pipe in accordance with OAC 252:656-5-5(a)?	☐	☐
5. Bedding and backfill in accordance with OAC 252:656-5-3 are specified?	☐	☐
6. Portion(s) of the proposed sewer system will be at or below normal ground water level?	☐	☐
If yes, describe the portion(s): _____		
7. Design velocity(ies) of proposed line(s) at full or half full flow is(are) 2 ft/sec?	☐	☐
If no, explain: _____		
_____		
8. Are there any possible cross connections between the sanitary sewer and any public water supply?	☐	☐
9. A minimum of two (2) feet of vertical separation and ten (10) feet of horizontal separation between sewer line and potable waterlines is maintained?	☐	☐
If No, the special provisions of OAC 252:656-5-4(c)(3) are meet?	☐	☐
10. Are there any existing or proposed water wells within 50 feet of the sewer?	☐	☐
11. Are there any petroleum storage tanks within 50 feet of the sewer?	☐	☐
12. Are there any stream crossings?	☐	☐
If Yes, do the plans and/or specifications contain all the requirements of OAC 252:656-5-4(e)?	☐	☐

If no, explain: _____

_____

	Yes	No
13. Are there any aerial crossings?	☐	☐
If Yes, do the plans and/or specifications contain all the requirements of OAC 252:656-5-4(d)?	☐	☐

If no, explain: _____

_____

14. Sewer line materials:

	Diameter (inches)	Length (feet)	Material
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____

15. Detailed specifications list ASTM standards for all pipe, material, and construction methods in accordance with OAC 252:656-5-3(a)?	☐	☐

16. Estimated flow for each line: _____ , _____ , _____

17. Manholes:

a. Sewer invert elevations are shown to the nearest 0.01 feet?	☐	☐
b. Manholes are numbered and top of manhole rim elevation is shown to the nearest 0.1 feet?	☐	☐

If no explain: _____

_____

c. Manholes have a minimum 48 - inch inside diameter?	☐	☐
d. Manhole bases are a minimum of eight (8) inches thick and extend at least 4 inches beyond the manhole wall?	☐	☐
e. The strength of the concrete material used to construct manholes is 3000 psi or greater?	☐	☐
f. Precast reinforced concrete manholes conform to ASTM C-478?	☐	☐
g. Inlet and outlet lines are joined to the manhole with a water tight connection that allows for differential settlement of the pipe and the manhole to take place in accordance with OAC 252:656-5-4(g)(4)?	☐	☐
h. Are there brick or concrete block manholes?	☐	☐

* Brick or concrete block manholes will not be approved in accordance with OAC 252:656-5-3(f)

	Yes	No
18. Receiving line:		
a. Size of receiving line: _____		
b. Hydraulic capacity of receiving line: _____		
c. Current peak flow in receiving line: _____		
19. Six inch sewer line(s) is(are) proposed?	☐	☐
If yes, explain: _____		
20. The proposed sewer line(s) is (are) located upstream of an existing or proposed lift station?	☐	☐
If yes, the following information is required:		
a. Location of existing or proposed lift station(s): _____		
b. Lift station design capacity: _____		
c. Existing flow at lift station: _____		
d. Records indicate that the lift station has experienced bypasses caused by inadequate capacity?	☐	☐
If Yes, have plans and specifications been submitted for the suitable improvements to be made to the lift station?	☐	☐

III. Lift Station and Force Main Technical Information

A. Lift Station:	Yes	No
1. Design capacity of proposed lift station(s): _____ , _____		
2. Number of pumps in the proposed lift station(s): _____ , _____		
3. Emergency operation:		
One of the following must be provided:		
a. Telemetry and a standby generator (automatically startup and operation in the event of a power failure) are provided?	☐	☐
b. Four hours of storage above the alarm level, telemetry, and a portable pump or generator is provided?	☐	☐
c. Twenty-four (24) hours of storage above the alarm level with an audio/visual alarm system is provided?	☐	☐

	Yes	No
4. Pump specifications:		
a. Pump Number: _____ , _____ , _____		
b. Type of pump: _____ , _____ , _____		
c. Pump capacity: _____ , _____ , _____		
d. TDH head: _____ , _____ , _____		
e. Diameter of Suction Line: _____ , _____ , _____		
5. Pumps can be removed with out dewatering or manually disconnecting any piping in the well?	☐	☐
6. Pumps are capable of passing a three (3) inch sphere?	☐	☐
7. Pumps are closed coupled or submersible?	☐	☐
8. Electrical equipment and controls located in enclosed areas meets National Electrical Code for hazardous conditions?	☐	☐
9. Pumps automatically alternate?	☐	☐
10. Pumps, motors, and other mechanical and electrical equipment can be easily removed without entering the wet well?	☐	☐
11. Shut-off valves are located on discharge lines of each pump between the pump and the valve?	☐	☐
12. Check valves are located on discharge lines of each pump?	☐	☐
13. Valving is located in a separate pit?	☐	☐
14. A vent is provided?	☐	☐
15. Wet well floor has a minimum slope of 1 to 1 to the pump inlets?	☐	☐
16. Flood elevation: 25 year _____ ft. and 100 year _____ ft.		

B. Force Main:	Yes	No
1. Diameter of force main(s): _____ , _____ ,_____		
2. Length of force main(s): _____ , _____ , _____		
3. Force main material: _____ , _____ , _____		
4. Calculated velocity in force main (ft/sec): _____ , _____ , _____		
5. Leakage tests on the force main are specified?	☐	☐
6. Air relief valves are positioned at the high points in the force main?	☐	☐

	Yes	No
7. Force main reaction blocking is provided?	☐	☐
8. Force main terminates in the receiving manhole not more than 2 feet above flow line?	☐	☐

Professional Engineer's Certification:

I certify that, to the best of my knowledge, all the information provided in this engineering report form is correct and no significant information necessary for a proper evaluation of the project has been omitted:

Signature of Professional Engineer: _____ Date: _____ , 20 ___

Name of Professional Engineer: _____

State of Oklahoma Professional Engineer No: _____

Phone No. : (_____) _____

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