

*Sanitary Sewer Evaluation Study  
Schedule*

---

Village of Riverlea, Ohio

August 2009

## 1.0 AUTHORITY

Authority for the Village of Riverlea to take the appropriate and necessary steps to maintain the sanitary sewers and related works within the Village is provided by Ohio Revised Code Sections 715.40 and 717.01.

## 2.0 SSES PROJECT SCOPE

This section describes the scope of work that is represented by the schedule provided in Appendix B for conformance with the Director's Findings and Orders to the Village of Riverlea, signed and dated February 11, 2009.

The proposed schedule is based on completion of the SSES in not more than five years in accordance with Paragraph 2a of the Orders, and includes all existing public sanitary sewers within the Corporation limits of the Village, with the exception of the City of Worthington trunk sewer, as depicted on the map provided in Appendix A.

- 2.1 **Mapping.** Using Franklin County Auditor's mapping as base mapping, and sanitary sewer utility mapping provided by the Village, a sanitary sewer base map will be prepared in AutoCad format. Manholes will be numbered. Sewer lengths and slopes will be taken from existing mapping provided by the Village and the City of Columbus. A detailed field survey will not be performed to determine pipe inverts at each manhole.
- 2.2 **Records Review.** Existing records, complaint history, reports, system mapping, flow monitoring, and other data provided by the Village will be reviewed. Village staff and officials knowledgeable of the system and problems will be interviewed. Operation of the existing pump station will also be observed and discussed.
- 2.3 **Cleaning and Televising.** The sewers will be thoroughly cleaned and televised. Televising will be done in PACP format and in accordance with the National Association of Sewer Service Companies' "*Recommended Specifications for Sewer Collection System Rehabilitation*" (latest edition). Records of all internal inspections will be furnished on DVD accompanied by summary diagrams with logs.
- 2.4 **Manhole Inspections.** Each sanitary sewer manhole that is accessible will be inspected. Inspections will be recorded on formatted worksheets. Inspection data will cover physical condition and evidence of inflow/infiltration (I/I). Entry into manholes will not be performed.
- 2.5 **Flow Monitoring.** The Village sanitary sewer system can be divided into three distinct sub-areas. Three flow monitors and one rain gauge will be furnished, installed, and calibrated. It is anticipated that the flow monitors will be located at the downstream end of each sub-area utilizing an existing manhole on Riverglen Drive between Falmouth and Westchester Courts, an existing manhole located at the south end of Olentangy Boulevard, and an existing manhole located south of the intersection of Melbourne Place and Dover Court (see Appendix A). Prior to installation, each site will be inspected to determine alternate locations if the proposed locations are not suitable for flow monitor installation. These monitors will be maintained for a period of four to six months beginning in the spring to capture dry- and wet-weather flows. Flow monitors will be programmed to collect data on a 5-minute interval.

Two groundwater gauges will be installed in the sewer collection system to document the groundwater level on a weekly basis concurrent with weekly downloading of flow monitor data.

- 2.6 Flow Evaluation and Report.** Following completion of flow monitoring, the collected data from each of the three sub-areas represented by the flow monitors will be evaluated. Per capita wastewater flows will be calculated for each sub-area and compared to the acceptable limits set forth in the 1991 US EPA Handbook entitled “*Sewer System Infrastructure Analysis and Rehabilitation.*” If both the dry weather and wet weather flows from any of the sub-areas fall below these limits, then no further SSES work will be performed in that sub-area. The remaining SSES tasks outlined below will be focused on those sub-areas that exceed the limits set forth in the 1991 Handbook.
- 2.7 Smoke Testing.** The sanitary sewers within the remaining target sub-areas will be smoke tested to further isolate and identify sources of I/I. Data will be recorded on formatted worksheets. Smoke testing will be performed in midsummer to early fall to maximize the results of this task.
- 2.8 Dye Testing.** Dye testing of storm sewers, pavements, downspouts, and lawns in the vicinity of sanitary sewers and manholes will be performed in select areas based on the smoke testing results to further identify sources of I/I. Dye testing will be performed with a television camera in the sewer to document confirmed I/I sources.





### **3.0 FINAL REPORT**

The final report will identify sources and quantities of clear water infiltration and inflow found during the field study along with any structural and hydraulic deficiencies found. Feasible, cost effective solutions for remediation will be presented. Projects will be prioritized based on severity, overall effectiveness for I/I removal, and expected funding availability.

Mapping will be provided that shows the location, size, and capacity of all sewers, manholes, and the pumping station located within the study area. Appendices will include the manhole inspection and smoke testing field records, and the flow monitoring, rain gauge, and ground water data. Television inspection DVDs with the accompanying diagrams and logs will also be included.



**LEGEND**

-  SUBAREA NO.1
-  SUBAREA NO.2
-  SUBAREA NO.3
-  CITY OF WORTHINGTON TRUNK SEWER (NOT PART OF SSES)

**VILLAGE OF RIVERLEA**  
**SANITARY SEWER MAP**  
**APPENDIX A**



**SCALE: 1" = 200'**  
**AUGUST 2009**

VILLAGE OF RIVERLEA - 5 YEAR SSES SCHEDULE  
AUGUST 2009

TASK	2009												2010												2011												2012												2013											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1-SYSTEM MAPPING																																																												
2-RECORDS REVIEW																																																												
3-CLEANING AND TELEVISIONING																																																												
4-MANHOLE INSPECTIONS																																																												
5-FLOW MONITORING																																																												
6-FLOW EVAL. AND REPORT																																																												
7-SMOKE TESTING																																																												
8-DYE TESTING																																																												
9-FINAL REPORT																																																												
10-OEPA REVIEW																																																												