



FRANKLIN COUNTY

DEPARTMENT OF SANITARY ENGINEERING

Rate, Financial Planning, and Operational Assessment

Final Report / October 31, 2014





TABLE OF CONTENTS

01	Executive Summary
11	Introduction
12	Overview of Operational Assessment
17	Financial Planning and Rate Setting
32	Enterprise Issues
34	Alternative Service Delivery Options
36	Summary and Recommendations
	Appendix A: Financial Planning and Rate Model Schedules
	Appendix B: Service Area Maps

EXECUTIVE SUMMARY

The Franklin County Department of Sanitary Engineering (FCSE or the Department) provides drinking water and wastewater treatment services to approximately 4,000 water customers and 6,000 wastewater customers throughout Franklin County, Ohio (County).

Services are provided directly by FCSE via 4 wastewater treatment plants and 1 water treatment plant or through wholesale service by the City of Columbus (City). The Department has experienced growth typically by mandate from the Environmental Protection Agency (EPA) to provide service in various unincorporated areas of the County. This method of growth has led to a service area that is non-contiguous and presents logistical, engineering, and financial challenges. Raftelis Financial Consultants (RFC) was engaged by the Department to conduct a comprehensive rate, financial planning, and operational assessment study (Study) to provide Staff perspective and recommendations for addressing these structural challenges.

The scope of work for the Study included two major components that were performed concurrently. The first task was to assess the day-to-day operations of the Department, both administrative and field work. The objective was to determine if the Department is managing its duties and responsibilities effectively and efficiently. The second task was to develop a comprehensive rate and financial plan that provided the Department with a roadmap for managing the fiscal challenges they are facing. A financial model was developed that presents the current expenditures of the system and projects costs related to operation and maintenance (O&M), debt, debt service coverage, and capital needs into the future. The model was developed

with input from Department and County staff to ensure the results were an accurate representation of the current situation. Results of the model are used to develop the rate recommendations in this report.

Overview of Operational Assessment

RFC conducted an organizational and operations assessment of staffing and work practices, to ensure efficiency of ongoing operational performance, and in order to objectively examine the organizational and staffing requirements needed to meet the service levels and maintenance responsibilities of the FCSE. The objectives of the organizational and operations assessment were to:

1. Review the operations and staffing of the administration, engineering, water supply, water and wastewater treatment facilities and the water distribution and wastewater collection operations.
2. Assess current practices and policies for workforce staffing, deployment, and supervision. This included analysis of historical overtime use and other indicators to meet targeted levels of service.
3. Assess the structure of the organization and workforce allocation to identify opportunities to enhance service delivery.

RFC conducted interviews with FCSE staff from all departments, including operations, customer service and billing, engineering, and management. RFC also reviewed relevant documentation provided by FCSE and toured most of the facilities in the field. The findings from these activities were compiled and validated with the FCSE Director.

Current Organizational Condition

FCSE is challenged with a service area that is comprised of vastly separated satellite service areas which does not support operational efficiency due to physical separation. This physical reality works against economies of scale opportunities that would benefit an interconnected, regional service area. FCSE assets are distributed throughout the County with many service areas under FCSE's jurisdiction surrounded by areas serviced by the City. This discontinuous service area geography, coupled by aging infrastructure and treatment facilities, significantly impacts FCSE's ability to enhance efficiency.

The Department is staffed by a dedicated and competent workforce who are committed to providing high quality service with the available resources. The Director is actively engaged in strengthening the organization and works to ensure that staff are accountable for their responsibilities, remain productive, and meet performance standards and requirements while providing opportunities for career growth. This proactive staff management philosophy is demonstrated by recent low turnover rates within the organization.

FCSE currently has 22 budgeted full-time positions in three divisions. There were several vacancies in the organization with efforts to fill open positions underway during the time of this study. RFC believes, based on our experience operating facilities and working with clients throughout the industry, that the Department's current employees perform the tasks of running and maintaining a utility efficiently and effectively with available resources. From 2011 through 2013, the Department utilized approximately 2,000 hours of overtime annually in order to meet the requirements of the utility. These amounts suggest that the Department is not over-staffed, rather additional staff could be utilized to alleviate the burden on existing staff and allow a more pro-active approach to system operation and maintenance.

The success of this small organization to meet its responsibilities has largely been through its dedicated workforce. While there are marketplace limits to attracting top talent, FCSE has done an admirable job finding qualified professionals for the organization. FCSE will continue to be challenged by limitations of its ability to competitively compensate top talent. As a result, RFC strongly recommends that the County conduct a salary and compensation study to ensure that it can continue to attract and retain quality talent in a local utility marketplace dominated by the City.

Financial Planning and Rate Setting

When considered for a snapshot in time, the financial plan of every utility can be synthesized into an equation that balances system revenues with system expenditures. Each side of the equation has dozens of variables that affect its result and these are often co-dependent on other variables in the equation. This equation is difficult to solve for a single year and adding the impact of projecting it over time makes this task even more challenging. The financial plan for FCSE was developed from the ground up so that each of the component pieces was well understood and incorporated appropriately into the forecast. Each of the elements of the financial plan will be discussed in this report.

FORECAST OF CUSTOMER DEMAND

The majority of annual revenues that the Department generates are from user rates and charges that individual customers pay for the service they receive. These revenues are based on the quarterly base charges and volumetric rates assessed by FCSE. A thorough understanding of customer accounts and the amount of water consumed (and wastewater treated) is critical to projecting these revenues with confidence. RFC conducted a detailed examination of historical usage patterns and developed a forecast of consumption that considers additional service area growth with offsetting and continued declines in per capita consumption.

DEVELOPMENT OF REVENUE REQUIREMENTS

As an enterprise fund, the Department was established as a self-supporting component of the County's annual operations. The Department should set rates that generate annual revenues that are sufficient to meet the operating

and capital expenditures of the system. The financial plan is dependent on the appropriate identification of current and future expenses.

OPERATING COSTS

A primary function of the Department is to operate and maintain the system in order to provide safe and reliable access to clean drinking water and wastewater treatment to its customers. Operating costs include salaries for staff, materials and supplies for operating the plants, electricity and utilities, and wholesale purchases from the City. Over 56% of the annual operating needs are the cost of wholesale water and sewer service, which is charged by the City and based on contractual agreements.

Historical spending on operating and maintenance (O&M) costs was analyzed to identify escalation trends for various types of expenses. The Department understands the importance of efficiency and controlling its operating costs. Actual operating costs from 2011 through 2013 were held constant through strategic decision making and deferral of routine maintenance on some of the system's assets. Projecting costs throughout the financial forecast requires an assumption for inflation and a return

to industry standards of care for operating and maintaining the system.

It is anticipated that the City will increase its wholesale rates throughout the forecast at a rate higher than general inflation. The rate the County pays for this service is regulated by their contractual agreements, and the County has little to no control over what these rates will be. The City provided the Department with estimated increases for 2015 through 2017, which range from 3% to 4.5%. The forecast assumes annual increases in 2018 and 2019 based on historical trending data available from RFC's 2012 *Water and Wastewater Rate Survey*, which is conducted bi-annually with the American Water Works Association (AWWA) and used extensively by numerous utilities and other industry stakeholders for benchmarking purposes. The forecast of operating costs also includes incremental additions as a result of capital investment in the system (particularly extension of service to new areas). A summary of the current and forecast operating expenses is shown in Exhibit 1.

WHOLESALE AGREEMENTS

As noted above, the majority of FCSE's operating costs

EXHIBIT 1: PROJECTION OF OPERATING COSTS

	<u>CY 2014</u> <i>Budget</i>	<u>CY 2015</u> <i>Forecast</i>	<u>CY 2016</u> <i>Forecast</i>	<u>CY 2017</u> <i>Forecast</i>	<u>CY 2018</u> <i>Forecast</i>	<u>CY 2019</u> <i>Forecast</i>
Utility Revenue Requirements						
<u>Operating Expenses</u>						
Water						
Salaries and Benefits	\$ 335,759	\$ 381,388	\$ 387,109	\$ 392,915	\$ 398,809	\$ 404,791
Services and Fees	297,838	306,773	315,976	325,455	335,219	345,275
Office, Materials, and Supplies	117,118	120,632	124,250	127,978	131,817	135,772
Fixed Asset Maintenance	-	-	-	-	-	-
Healthcare	92,643	110,149	120,062	130,868	142,646	155,484
Wholesale Purchases	1,478,962	1,523,331	1,584,264	1,647,635	1,730,016	1,816,517
Additions due to CIP	-	-	86,040	137,371	163,162	189,727
<i>Subtotal: Water Operating Expenses</i>	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567
Sewer						
Salaries and Benefits	\$ 712,144	\$ 763,419	\$ 774,870	\$ 786,493	\$ 798,290	\$ 810,265
Services and Fees	726,833	748,638	771,097	794,230	818,057	842,599
Office, Materials, and Supplies	157,572	162,299	167,168	172,183	177,349	182,669
Fixed Asset Maintenance	121,100	124,733	128,475	132,329	136,299	140,388
Healthcare	244,783	275,982	300,820	327,894	357,404	389,571
Wholesale Purchases	2,182,205	2,247,671	2,348,816	2,466,257	2,589,570	2,719,049
Additions due to CIP	-	-	92,040	262,401	339,373	438,954
<i>Subtotal: Sewer Operating Expenses</i>	\$ 4,144,637	\$ 4,322,742	\$ 4,583,287	\$ 4,941,788	\$ 5,216,343	\$ 5,523,494
<i>Subtotal: Operating Expenses</i>	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061

relate to the cost of water and wastewater wholesale services provided by the City. The County has numerous contractual agreements with the City specifying wholesale water and wastewater service arrangements, service area parameters, conditions, and responsibilities. RFC reviewed the contracts focusing on the allocation and recovery of costs compared to generally accepted rate making procedures used throughout the United States. Our review was designed to provide observations and perspectives based on our experience developing wholesale rates or contract based rates for other utilities across the country. The following summarizes our primary observations and perspectives.

- The contracts lack a defined rate methodology supporting the calculation of wholesale or contract based rates. Since the contracts do not describe a specific rate methodology, it is not possible to evaluate whether or not rates assessed are reasonable and consistent with cost of service principles.
- The extent of the water and wastewater services provided to the County by the City vary depending on the specific agreement.
- Unless additional retail services are being provided, a typical wholesale rate should reflect the cost of providing treatment and transmission/conveyance services only. Costs associated with local distribution and collection should be excluded, as wholesale customers must operate and maintain their own distribution and collection systems. Costs associated with billing, collection, and customer service should be recovered proportionately on a per account basis and not related to

the volume of flow.

- Most of the contracts appear to have been in place for some time and have varying terms for expiration. It would be beneficial for the County to review any supplemental detail that can be provided describing, more specifically, the calculation basis of the rates and charges.

LONG-TERM DEBT AND CAPITAL IMPROVEMENT PLAN

FCSE developed a comprehensive 5-year capital improvement plan (CIP) that was presented in 2013 and estimated costs for 2014 through 2018. The projects identified in this plan are necessary for compliance with regulations, extensions of water and sewer service, and reinvesting in existing system assets. The total cost of the projects identified in this plan was \$111 million.

The projects identified in the CIP represent work that needs to be completed; however, investing over \$100 million in capital improvements across a five-year timeframe would place significant and immediate burden on the Department’s customers. As part of the Study, RFC worked with Department Staff to adjust the timing and cost estimates for the projects identified in the CIP. The schedule of capital improvements was distributed over a ten-year period to allow for a smoother build-up to that level of investment. This was achieved through deferring projects with any flexibility to be delayed, including waterline extensions to new neighborhoods throughout the County. The capital needs in Exhibit 2 show the results of the modified plan. By FY 2019, \$37.5 million of capital needs have been delayed beyond the 5-year window; these are primar-

EXHIBIT 2: AMENDED CAPITAL IMPROVEMENTS PLAN

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Improvements						
Regulatory	\$ -	\$ 3,522,000	\$ -	\$ -	\$ -	\$ -
Water Quality Partnership	-	3,400,000	-	-	-	-
Other Miscellaneous	<u>2,032,000</u>	<u>1,682,000</u>	<u>4,875,000</u>	<u>2,167,000</u>	<u>2,167,000</u>	<u>2,030,000</u>
<i>Subtotal: Water Capital Needs</i>	\$ 2,032,000	\$ 8,604,000	\$ 4,875,000	\$ 2,167,000	\$ 2,167,000	\$ 2,030,000
Sewer Capital Improvements						
Regulatory	\$ -	\$ 2,500,000	\$ 11,275,000	\$ 4,310,000	\$ 5,695,000	\$ -
Water Quality Partnership	1,800,000	3,150,000	4,790,000	-	-	3,380,000
Other Miscellaneous	<u>125,000</u>	<u>3,554,000</u>	<u>695,000</u>	<u>2,600,000</u>	<u>3,245,000</u>	<u>2,600,000</u>
<i>Subtotal: Sewer Capital Needs</i>	\$ 1,925,000	\$ 9,204,000	\$ 16,760,000	\$ 6,910,000	\$ 8,940,000	\$ 5,980,000
Total: Capital Needs	<u>\$ 3,957,000</u>	<u>\$ 17,808,000</u>	<u>\$ 21,635,000</u>	<u>\$ 9,077,000</u>	<u>\$ 11,107,000</u>	<u>\$ 8,010,000</u>

ily water extensions to new service areas.

Due to the significant investments that are required to build water and sewer systems, utilities frequently utilize long-term debt to finance their capital improvements. This allows a utility to leverage its revenue stream and for future customers to pay for the system that benefits them. FCSE has primarily participated in Ohio's state revolving fund program (SRF) through several agencies, which provide low interest rate borrowing.

Funding the FCSE's capital program is projected to be achieved by a mixture of long-term debt, annual revenues, and support from the County General Fund. SRF Loans are assumed to be the primary source of funding for the projects,

covering approximately 75% of the total need. Utilization of annual revenues, or cash on hand, to finance capital projects helps a utility maintain a financially stable percentage of equity in their system assets. One goal of the financial plan is to increase the level of cash-financed capital, so it has been assumed that approximately 8% of the total capital expenditures will be financed with annual revenue generated from rates. The County General Fund has pledged it will provide \$2.5 million annually for five years to support FCSE's capital program. This represents approximately 17% of the total capital need. Exhibit 3 presents the capital financing plan over the forecast period.

The significant capital investment and use of long-term debt to fund those investments will increase the Coun-

EXHIBIT 3: CAPITAL FINANCING SUMMARY

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Financing						
SRF Program Loans	\$ 2,000,000	\$ 6,922,000	\$ 4,309,250	\$ 1,601,250	\$ 1,601,250	\$ 1,522,500
Cash-Financed Capital	32,000	182,000	565,750	565,750	565,750	507,500
General Fund	-	1,500,000	-	-	-	-
<i>Subtotal: Water Capital Financing</i>	<u>\$ 2,032,000</u>	<u>\$ 8,604,000</u>	<u>\$ 4,875,000</u>	<u>\$ 2,167,000</u>	<u>\$ 2,167,000</u>	<u>\$ 2,030,000</u>
Sewer Capital Financing						
SRF Program Loans	\$ 1,800,000	\$ 6,355,000	\$ 14,315,000	\$ 4,310,000	\$ 5,695,000	\$ 3,380,000
Cash-Financed Capital	125,000	-	45,000	200,000	945,000	1,600,000
General Fund	-	2,850,000	2,400,000	2,400,000	2,300,000	1,000,000
<i>Subtotal: Sewer Capital Financing</i>	<u>\$ 1,925,000</u>	<u>\$ 9,205,000</u>	<u>\$ 16,760,000</u>	<u>\$ 6,910,000</u>	<u>\$ 8,940,000</u>	<u>\$ 5,980,000</u>
Total: Capital Financing	<u>\$ 3,957,000</u>	<u>\$ 17,809,000</u>	<u>\$ 21,635,000</u>	<u>\$ 9,077,000</u>	<u>\$ 11,107,000</u>	<u>\$ 8,010,000</u>

EXHIBIT 4: SUMMARY OF REVENUE REQUIREMENTS

	<u>CY 2014</u> <i>Projected</i>	<u>CY 2015</u> <i>Forecast</i>	<u>CY 2016</u> <i>Forecast</i>	<u>CY 2017</u> <i>Forecast</i>	<u>CY 2018</u> <i>Forecast</i>	<u>CY 2019</u> <i>Forecast</i>
Revenue Requirements						
<u>Operating Expenditures</u>						
Water O&M	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567
Sewer O&M	4,144,637	4,322,742	4,583,287	4,941,788	5,216,343	5,523,494
<i>Subtotal: Operating Expenditures</i>	<u>\$ 6,466,956</u>	<u>\$ 6,765,014</u>	<u>\$ 7,200,988</u>	<u>\$ 7,704,010</u>	<u>\$ 8,118,013</u>	<u>\$ 8,571,061</u>
<u>Non-Operating Expenditures</u>						
<i>Debt Service</i>						
Water	\$ 276,966	\$ 446,660	\$ 717,843	\$ 1,023,591	\$ 1,295,574	\$ 1,374,137
Sewer	778,298	873,812	1,169,009	1,660,054	2,256,905	2,565,632
<i>Rate Funded Capital & Transfers</i>						
Water	\$ 47,000	\$ 373,600	\$ 593,883	\$ 646,187	\$ 620,214	\$ 788,963
Sewer	125,000	(78,244)	(34,839)	454,438	1,348,143	2,529,569
<i>Subtotal: Non-Operating Expenditures</i>	<u>\$ 1,227,264</u>	<u>\$ 1,615,828</u>	<u>\$ 2,445,896</u>	<u>\$ 3,784,270</u>	<u>\$ 5,520,836</u>	<u>\$ 7,258,301</u>
Total: Revenue Requirements	<u>\$ 7,694,221</u>	<u>\$ 8,380,841</u>	<u>\$ 9,646,884</u>	<u>\$ 11,488,280</u>	<u>\$ 13,638,848</u>	<u>\$ 15,829,363</u>



ty's annual debt service requirements dramatically over the forecast period. The SRF loan repayment terms are assumed to have a twenty year amortization with interest rates ranging from 2% for the near-term projects up to 5% for projects beginning later in the forecast. Funding nearly \$54 million in projects through the SRF program by FY 2019 results in annual debt service requirements that are nearly four times the current level.

The operating, capital, and debt expenditures that have been forecast in the financial plan combine to determine the annual revenue requirements that the utility must recover in order to meet its annual cash obligations. As has been shown, the Department is facing pressures resulting in higher costs in both the operating and capital areas. Estimated increases in wholesale costs range from three to five percent annually; increases to other operating costs are four percent annually. Annual debt service requirements are projected to increase by nearly 275% from 2014 through 2019. The net result is total revenue requirements, which are forced to essentially double in five years. The summary of this forecast is presented in

Exhibit 4 on the previous page.

FINANCIAL PLAN

The financial planning process can be described as solving a time-dependent equation for total system revenues versus total system expenditures. Total system expenditures are based on the current assumptions for future operating and capital costs. The capital improvements plan and increase in wholesale rates drive the majority of the cost increases throughout the forecast. These cost drivers lead to the projection of costs that is included in this financial plan scenario.

Revenue for the system includes the estimated revenue from user rates and charges. The user charge revenue has been calculated based on projected customer demands (accounts and volumes) and a projection of rates. The rates have been set to meet the overall revenue requirements of the utilities. The majority of FCSE's revenue is generated from user rates and charges; however, other revenue sources do help fund the operation of the utility to a small degree.

EXHIBIT 5: FINANCIAL PLANNING SUMMARY

Revenues	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
User Charge Revenues						
Water	\$ 2,539,324	\$ 2,774,914	\$ 3,445,104	\$ 3,949,309	\$ 4,338,037	\$ 4,763,541
Sewer	<u>4,378,781</u>	<u>4,780,448</u>	<u>5,381,529</u>	<u>6,721,364</u>	<u>8,488,410</u>	<u>10,287,654</u>
<i>Subtotal: User Charge Revenues</i>	6,918,105	7,555,362	8,826,633	10,670,673	12,826,447	15,051,195
Miscellaneous Revenues	267,764	296,829	296,829	296,829	296,829	267,764
Surcharge Revenue	<u>-</u>	<u>528,651</u>	<u>523,422</u>	<u>520,778</u>	<u>515,573</u>	<u>510,404</u>
Total: Revenues	\$ 7,185,869	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,849	\$ 15,829,363
Revenue Requirements						
Operating Expenditures	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061
Non-Operating Expenditures						
Debt Service	\$ 1,055,264	\$ 1,320,472	\$ 1,886,852	\$ 2,683,645	\$ 3,552,479	\$ 3,939,769
Rate Funded Capital & Transfers	<u>172,000</u>	<u>295,356</u>	<u>559,044</u>	<u>1,100,625</u>	<u>1,968,357</u>	<u>3,318,532</u>
<i>Subtotal: Non-Operating Expenditures</i>	\$ 1,227,264	\$ 1,615,828	\$ 2,445,896	\$ 3,784,270	\$ 5,520,836	\$ 7,258,301
Total: Revenue Requirements	\$ 7,694,221	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,848	\$ 15,829,363
Surplus/(Deficit)	\$ (508,352)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0
<u>Annual Rate Increases</u>						
Water		10%	25%	15%	10%	10%
Sewer		10%	10%	25%	25%	20%

EXHIBIT 6: CUSTOMER BILL IMPACTS

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
<u>Typical Customer Bills (13 ccf)</u>						
Quarterly Water Bill:	\$ 126.89	\$ 139.64	\$ 174.59	\$ 200.84	\$ 221.03	\$ 243.18
Quarterly Sewer Bill:	156.16	171.78	189.07	236.34	295.54	354.74
Total Annual Water and Sewer Costs	\$ 1,032	\$ 1,135	\$ 1,326	\$ 1,594	\$ 1,882	\$ 2,178
Approximate Service Area MHI	<u>46,543</u>	<u>47,474</u>	<u>48,423</u>	<u>49,391</u>	<u>50,379</u>	<u>51,387</u>
Estimated % of MHI	2.22%	2.39%	2.74%	3.23%	3.74%	4.24%

FCSE owns, operates, and maintains water and sewer lines in various parts of the County which provide service to customers served and billed by the City of Columbus. Per existing agreements between FCSE and the City, FCSE has the right to charge these customers a surcharge for the maintenance cost of the lines. Based on the number of connections and estimated billable flow from these customers, it is believed that an additional \$530,000 can be generated from these customers (\$330,000 for water and \$200,000 for sewer). However, these charges are not currently being assessed. Dialogue between the County and City has occurred and this limitation is in the process of being resolved.

A summary of the financial plan is presented in Exhibit 5.

The rate increases that are required to meet the projected revenue requirements are also presented. As the revenue requirements are projected to nearly double by 2019, user rates and charges would also be required to double over the same time period in order to meet these obligations.

The financial plan and projected water and sewer rate increases over the next five years will have a significant impact to typical customer bills. The calculation of a total annual cost as a percentage of the service area median household income (MHI) is also shown in Exhibit 6. Throughout the water and sewer industry, the question of affordability metrics and limits for service is often tied to an EPA report that was released in 1997 and the Safe Drinking Water Act.

A metric of 4% of MHI as a combined threshold for affordability is often cited. As can be seen in Exhibit 6, under the financial plan presented in this report, typical bills for customers of FCSE would cross this threshold in the last year of the 5-year plan.

ALTERNATIVE STRATEGIES

RFC considered alternative scenarios with the goal of limiting annual rate increases to five percent throughout the forecast. The opportunities to reduce annual revenue requirements have already been accounted for under the baseline scenario. These alternatives consider alternative funding sources for the capital and operating needs.

The first alternative expands the capital funding support from the County's General Fund that was projected to be \$12.5 million in the baseline scenario. As discussed previously, the current revenues are not generating surpluses that can be used to fund capital, and the majority of the capital program needs to be financed through long-term debt. If the Department receives additional capital support from the County to fund the projects identified in the CIP, the immediate cost burden of revenue-financed projects and long-term impacts of additional debt service could be mitigated. The General Fund contribution would need to increase from \$12.5 million to \$67.94 million through FY 2019 to allow for 5% annual rate increases. The benefit of this alternative is that the Department continues to operate in a self-supporting manner with respect to its annual cash flow statement, which is the intent for enterprise funds.

A second alternative considers support from the General Fund in the form of an annual operating transfer in lieu of the direct capital project funding. Essentially the financial plan of the baseline scenario remains unchanged, but the General Fund would make annual operating transfers to the water and sewer funds to support their annual cash flow requirements. The Department would implement 5% annual rate increases and any revenue shortfall would be covered by the General Fund Transfer. Through 2019, the total support from the General Fund to the Water and Sewer Funds is \$9.98 million. However, there are significant capital needs in 2020 through 2024 whose cost and the additional debt service required to finance them increase the required annual transfer to \$4.9 million in 2020 and up to \$7.8 million annually in 2025 and beyond. This scenario presents a lower level of support from the General Fund in the near-term, but leads to a perpetual level of support that would be a much more significant impact

long-term. In addition, there may be accounting and legal issues for consideration in this scenario.

CUSTOMER ASSISTANCE PROGRAMS

The proposed annual costs of water and sewer suggest the consideration of affordability. Rate affordability is not merely an abstract concept. Charging rates that many customers cannot afford to pay will result in real costs to the utility. These costs are in addition to the social issues and potential public health risks created when a segment of the population cannot afford access to clean water. FCSE provides assistance to low-income customers through their Low Income Water & Sewer Discount Program. The program provides a 20% discount on water and sewer volumetric charges to customers meeting the income qualification criteria. The current program effectively serves as a lifeline rate to qualifying customers, which is sometimes identified specifically in the core rate structure. FCSE could consider expanding the level of discount to provide additional assistance combined with a more aggressive marketing campaign to increase program participation.

Enterprise Issues

The operational review and financial plan required that RFC examine and consider the specific details of how FCSE conducts its business now and into the future. The Study also allowed RFC to take a step back and consider a higher-level, more holistic review of the utility. Some of these observations that go beyond the financial planning equation and operational review are addressed in this section.

SERVICE AREA GEOGRAPHY

Economies of scale significantly improves the economics of utility service due to the high cost of capital infrastructure required to provide water and sewer service. FCSE provides water and sewer service to approximately 4,000 water customers and 6,000 wastewater customers located in the unincorporated areas of the County using roughly 1 MGD. Due to the expansiveness of the City and the surrounding smaller cities and towns, the unincorporated areas of the County are scattered throughout the area and not contiguous.

Related to other utilities in the region and industry, the FCSE would be considered small both from a number of customers as well as daily pumped/treated water perspec-

tive. In addition, the FCSE service areas exist in pockets surrounded by the incorporated areas of the County. These factors contribute to higher costs of service than would be anticipated under more typical operating environments. The high cost of pumping water and sewage prevents the Department from consolidating all of their treatment operations at a single location. As a result, many of their customers are serviced through wholesale arrangements with the City of Columbus.

The geography of the service area also makes meter reading difficult and time-consuming. The Department’s maintenance staff performs the meter reading on a quarterly basis. The process usually requires 2-3 weeks to complete and pulls the crews away from the maintenance tasks that are needed throughout the system.

CAPITAL NEEDS

The capital improvements plan that was developed by FCSE staff was based on regulatory requirements, partnerships to provide clean water and sewer treatment for households, and rehabilitation of existing system assets. RFC conducts a biennial national survey of nearly 300 water and sewer utilities to develop benchmarking for rates, operating statistics, and other metrics. A comparison of the County’s capital program with national statistics for small utilities is presented in Exhibit 7. On average, the County has much greater capital needs and a much smaller customer base to support those investments.

ALTERNATIVE SERVICE DELIVERY OPTIONS

FCSE is faced with a myriad of challenges including an atypical operating and maintenance environment, significant capital pressures, and a customer base with limited expectations for growth. The combined impact of these issues results in increases to customer rates and charges at a rate that may be untenable given the current level of rates and charges and existing customer base. RFC has considered and performed a conceptual, high-level review

of alternative service delivery options including privatization and various forms of regionalization. The potential options holding the most merit for more extensive review and evaluation is pursuing a regional solution with the City of Columbus.

FCSE provides utility service to approximately 4,000 water customers and 6,000 wastewater customers and currently generates annual revenue of approximately \$7 million. The neighboring City of Columbus utility provides service to approximately 275,000 accounts with an annual revenue of approximately \$450 million (water, sanitary, and storm water). Consolidation of FCSE with the City is a natural alternative given the proximity and scale of the City’s utility, coupled with the fact that most of FCSE’s customers receive their service through wholesale arrangement with the City effectively serving as a regional utility provider. Several reasons this alternative delivery option may hold merit include:

- The existing FCSE system is already connected to the City’s system in many service areas, with some FCSE service areas completely surrounded by City service areas.
- Given the magnitude of the City’s utility, addressing the capital and operational needs of FCSE could be accomplished with a smaller overall impact to annual cash flow (on a percentage basis) and limited impact on customers.
- Some of the capital requirements in the Department’s CIP may not be required if the City has other assets that could perform the same functions already in place.
- The City may provide more attractive financing options due its access to capital markets.

RFC understands there are legal and legislative constraints that require City customers to be part of the incorporated area, and this is a primary cause for some of the pockets of service areas. The feasibility of this alternative would rely on either the City changing its policy regarding annexation or FCSE customers changing their position on accepting annexation. Although this alternative service delivery model appears to be the most logical, it would likely

EXHIBIT 7: CIP COMPARISON

	WATER	WASTEWATER	TOTAL	MGD SOLD
SMALL UTILITY MEDIAN ANNUAL CAPITAL NEEDS	\$3.5M	\$5.0M	\$8.5M	8 MGD
FRANKLIN COUNTY AVERAGE (FY15 – FY23)	\$6.7M	~\$7.6M	\$14.3M	=1 MGD
% DIFFERENCE	+91%	+52%	+68%	-88%



involve a lengthy and in depth negotiation with the City to determine acceptable terms for both parties. Although significant and detailed evaluation and examination of both the quantitative and qualitative feasibility of this alternative would be required, it may provide the most economical platform to ensure continued, safe, and reliable services to customers at the lowest possible cost.

Summary & Recommendations

FCSE provides a critical service to customers that provides significant public health, economic, and environmental benefits. The Department is staffed by a dedicated and competent workforce who are committed to providing high quality service with the available resources. However, there are numerous structural issues impacting FCSE's ability to reduce the cost of providing water and wastewater utility services. The majority of FCSE's current operating costs are related to the provision of wholesale service based on contractual agreements. FCSE must absorb the additional costs of operating, maintaining, and capitalizing local distribution and collection infrastructure as well as treatment facilities serving limited numbers of accounts. FCSE has reduced economies of scale, its service area is expansive and non-contiguous, and it is facing over \$100 million in capital investment needs over the next 10 years. Revenues and rates will need to increase significant-

ly without substantial support from the General Fund.

The prospective increase in the cost of services highlights potential concerns of rate affordability. In the near-term, it would be beneficial for FCSE to engage local and state regulators and articulate its issues and concerns with particular emphasis on financial planning, rates, and customer affordability. A proactive and collaborative approach to address FCSE's challenges may foster additional understanding and support.

The structural challenges discussed above limit FCSE's strategic options. The most logical alternative meriting further consideration is a regional service delivery approach where the City's assumes ownership and operation of the County's utility system. Although significant and detailed evaluation and examination of both the quantitative and qualitative feasibility of this alternative would be required, it may provide the most economical platform to ensure continued, safe, and reliable services to customers at the lowest possible cost.

However, it is important to remember that without a change in the current approach for service delivery, FCSE will need to address its financial challenges, which requires a substantial increase in revenue. FCSE will maintain its responsibility to provide critical utility services that protect public health and the environment and support economic development.

INTRODUCTION

The Franklin County Department of Sanitary Engineering (FCSE or the Department) provides drinking water and wastewater treatment services to approximately 4,000 water customers and 6,000 wastewater customers throughout Franklin County, Ohio (County).

Services are provided directly by FCSE via 4 wastewater treatment plants and 1 water treatment plant or through wholesale service by the City of Columbus (City). The Department has experienced growth typically by mandate from the Environmental Protection Agency (EPA) to provide service in various unincorporated areas of the County. This method of growth has led to a service area that is non-contiguous and presents logistical, engineering, and financial challenges. Raftelis Financial Consultants (RFC) was engaged by the Department to conduct a comprehensive rate, financial planning, and operational assessment study (Study) to provide Staff perspective and recommendations for addressing these structural challenges.

The scope of work for the Study included two major components that were performed concurrently. The first task was to assess the day-to-day operations of the Department, both administrative and field work. The objective was to determine if the Department is managing its duties and responsibilities effectively and efficiently. The current level of staffing and structure of the organization was contemplated relative to industry standards for similar utilities. Also, the conditions, locations, and operations of the FCSE's physical assets were inspected and compared to industry standards. Both of these elements were reviewed to determine if the Department is providing adequate levels of service that is consistent between each of its service areas and meets or exceeds industry standards.

The second task was to develop a comprehensive rate and financial plan that provided the Department with a road-map for managing the fiscal challenges they are facing. A financial model was developed that presents the current expenditures of the system and projects costs related to operation and maintenance (O&M), debt, debt service coverage, and capital needs into the future. The model was developed with input from Department and County staff to ensure the results were an accurate representation of the current situation. Results of the model are used to develop the rate recommendations in this report.

At the beginning of this Study, the RFC team and FCSE Staff met with representative members of key stakeholders of the utility to learn their concerns and objectives related to the long-term vision of the FCSE. Meetings were held with each of the County Commissioners (or their appointed representative) to understand their issues, concerns, and objectives as well as the issues raised by their constituents. Representatives from several service areas were also included in additional meetings. Of primary concern to most stakeholders was the overall pressure on the water and sewer rates and how additional increases could be mitigated through deliberate planning and decision making. Throughout this report, comments will be made to address the specific items identified during these meetings.

OVERVIEW OF OPERATIONAL ASSESSMENT

RFC conducted an organizational and operations assessment of staffing and work practices to ensure efficiency of ongoing operational performance, and in order to objectively examine the organizational and staffing requirements needed to meet the service levels and maintenance responsibilities of the FCSE.

The objectives of the organization and operations assessment were to:

- Review the operations and staffing of the administration, engineering, water supply, water and wastewater treatment facilities and the water distribution and wastewater collection operations.
- Assess current practices and policies for workforce staffing, deployment, and supervision. This included analysis of historical overtime use and other indicators to meet targeted levels of service.
- Assess the structure of the organization and workforce allocation to identify opportunities to enhance service delivery.

RFC's approach to this assessment involved four phases of analysis:

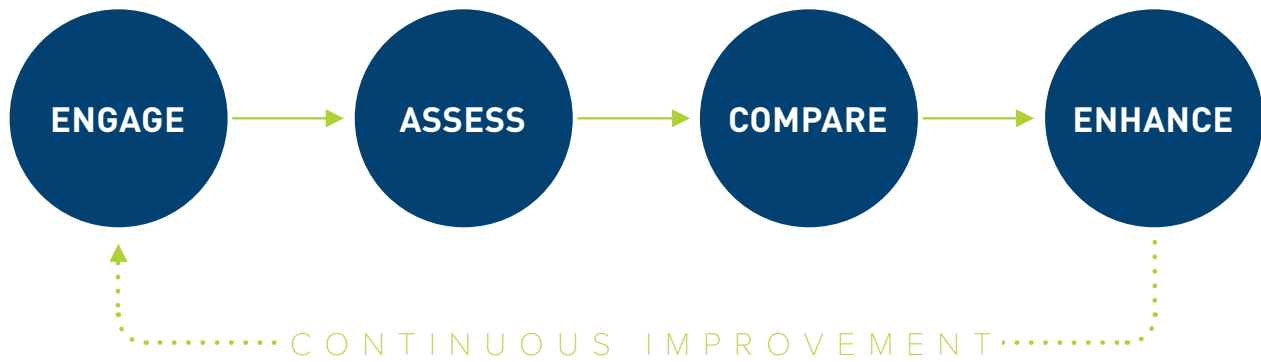
1. **ENGAGE** the organization to understand the organizational structure, culture, and employee and stakeholder perceptions of FCSE.
2. **ASSESS** operating procedures, roles and responsibilities, coordination and collaboration,

policies, technology, and processes used to meet the expanding requirements of FCSE's service area and regulatory environment.

3. **COMPARE** FCSE with other similar organizations on staffing considerations and practices.
4. **ENHANCE** FCSE's staffing and resource utilization to maximize effectiveness and efficiency of resources.

RFC conducted interviews with FCSE staff from all departments, including operations, customer service and billing, engineering, and management. RFC also reviewed relevant documentation provided by FCSE and toured most of the facilities in the field. The findings from these activities were compiled and validated with the FCSE Director.

FCSE is among a small number of utility service providers that offer water and wastewater services to rural areas where the water and sanitary sewer systems are not inter-connected, but are spread out over an expansive rural landscape. Relative comparisons are difficult to accomplish for these types of rural systems, and the situation



becomes more challenging since the majority of FCSE’s operating costs are for wholesale services. Therefore, the findings in this report related to current operations are based on information gleaned from other studies and RFC’s staff prior experience operating utility systems. The following presents the findings of the organization and operations assessment.

Current Organizational Condition

FCSE is challenged with a service area that is comprised of vastly separated satellite service areas which does not support operational efficiency due to physical separation. This physical reality works against economies of scale opportunities that could benefit an interconnected, regional service area (e.g, the areas served by the City which support opportunities for more efficient allocation of assets and services due to the physical layout of their interconnected utility system). FCSE utility assets are distributed throughout the County with many service areas that fall under FCSE’s jurisdiction surrounded by areas serviced by the City. This discontinuous service area geography, coupled with aging infrastructure and treatment facilities, significantly impacts FCSE’s ability to enhance efficiency. The challenges presented by the service area can be seen in Exhibit 9.

The Department is staffed by a dedicated and competent workforce who are committed to providing high quality service with the available resources. The Director is actively en-

gaged in strengthening the organization and works to ensure that staff are accountable for their responsibilities, remain productive, and meet performance standards and requirements while providing opportunities for career growth. This proactive staff management philosophy is demonstrated by recent low turnover rates within the organization.

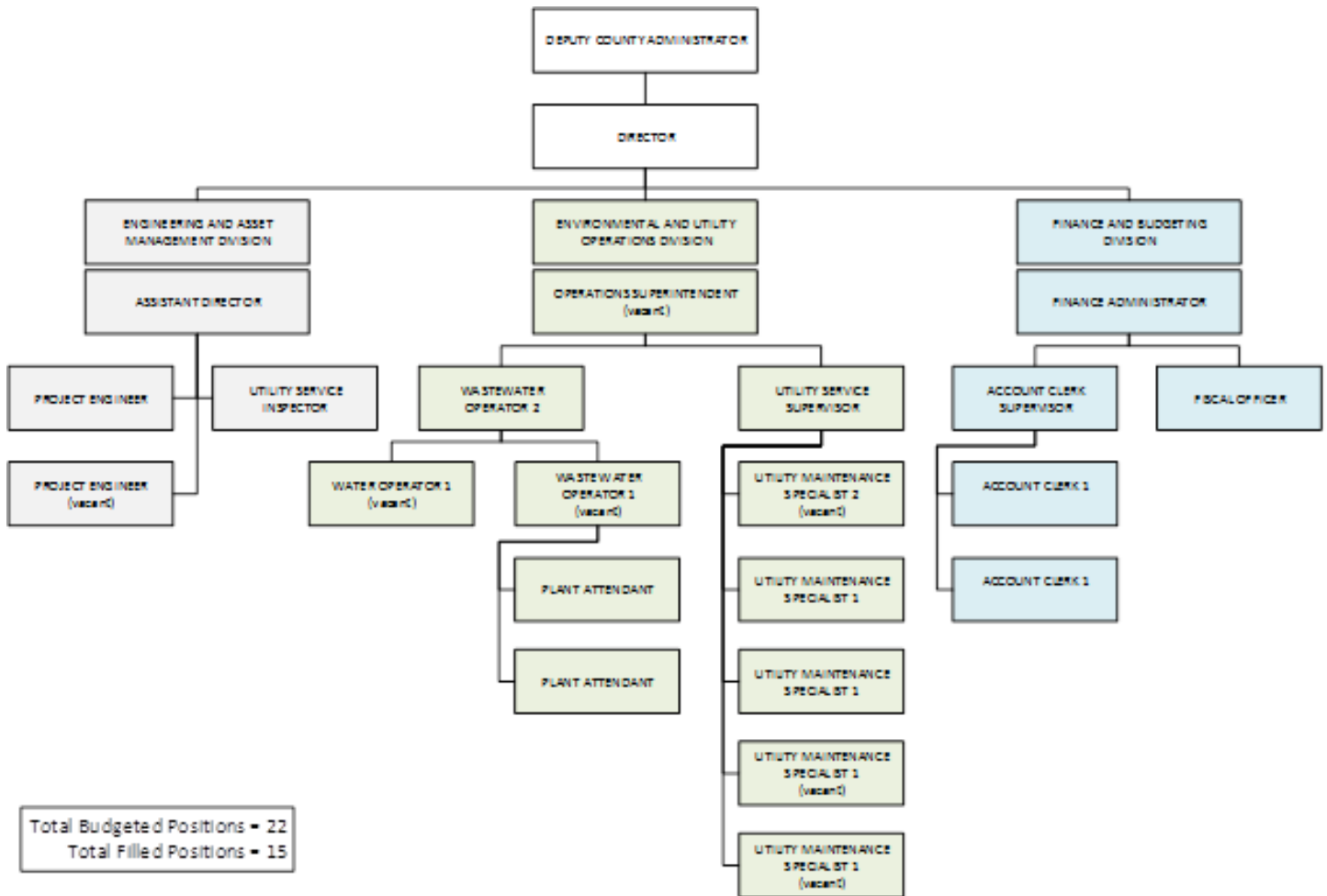
FCSE currently has 22 budgeted full-time positions in three divisions. Exhibit 8 presents the current FCSE organization. In addition to its full-time workforce, FCSE utilizes external contracted services primarily associated with capital improvement engineering services as well as a part-time consultant to assist in grant and loan application and management support activities and temporary employees to fill the critical Account Clerk 1 positions in customer service.

The current FCSE organization is comprised of three divisions under the Director, as follows:

Engineering and Asset Management – Responsible for planning, managing and implementing capital programs and providing technical services to the organization. A new Project Engineer position has been added this fiscal year to meet expanding capital program management needs.

Environmental and Utility Operation Division – Major mission is to meet the operational and maintenance needs of the service area including water and wastewater treatment facility O&M, water distribution system O&M, and wastewater collection system O&M. A new Water

EXHIBIT 8: CURRENT FCSE ORGANIZATION



Operator 1 position has been created this fiscal year, but is not filled.

Finance and Budgeting Division – Responsible for financial management, budgeting, collection of revenue and other customer service-related activities.

There were several vacancies in the organization with efforts to fill open positions underway during the time of this study. RFC believes, based on our experience operating facilities and working with clients throughout the industry, that the Department’s current employees perform the tasks of running and maintaining a utility efficiently and effectively with available resources. From 2011 through 2013, the Department utilized approximately 2,000 hours

of overtime annually in order to meet the requirements of the utility. These amounts suggest that the Department is not over-staffed, rather additional staff could be utilized to alleviate the burden on existing staff and allow a more pro-active approach to system operation and maintenance. The success of this small organization to meet its responsibilities has largely been through its dedicated workforce. While there are marketplace limits to attracting top talent, FCSE has done an admirable job finding qualified professionals for the organization. FCSE will continue to be challenged by limitations of its ability to competitively compensate top talent. As a result, RFC strongly recommends that the County conduct a salary and compensation study to ensure that it can continue to attract and retain quality talent in a local utility marketplace dominated by the City.

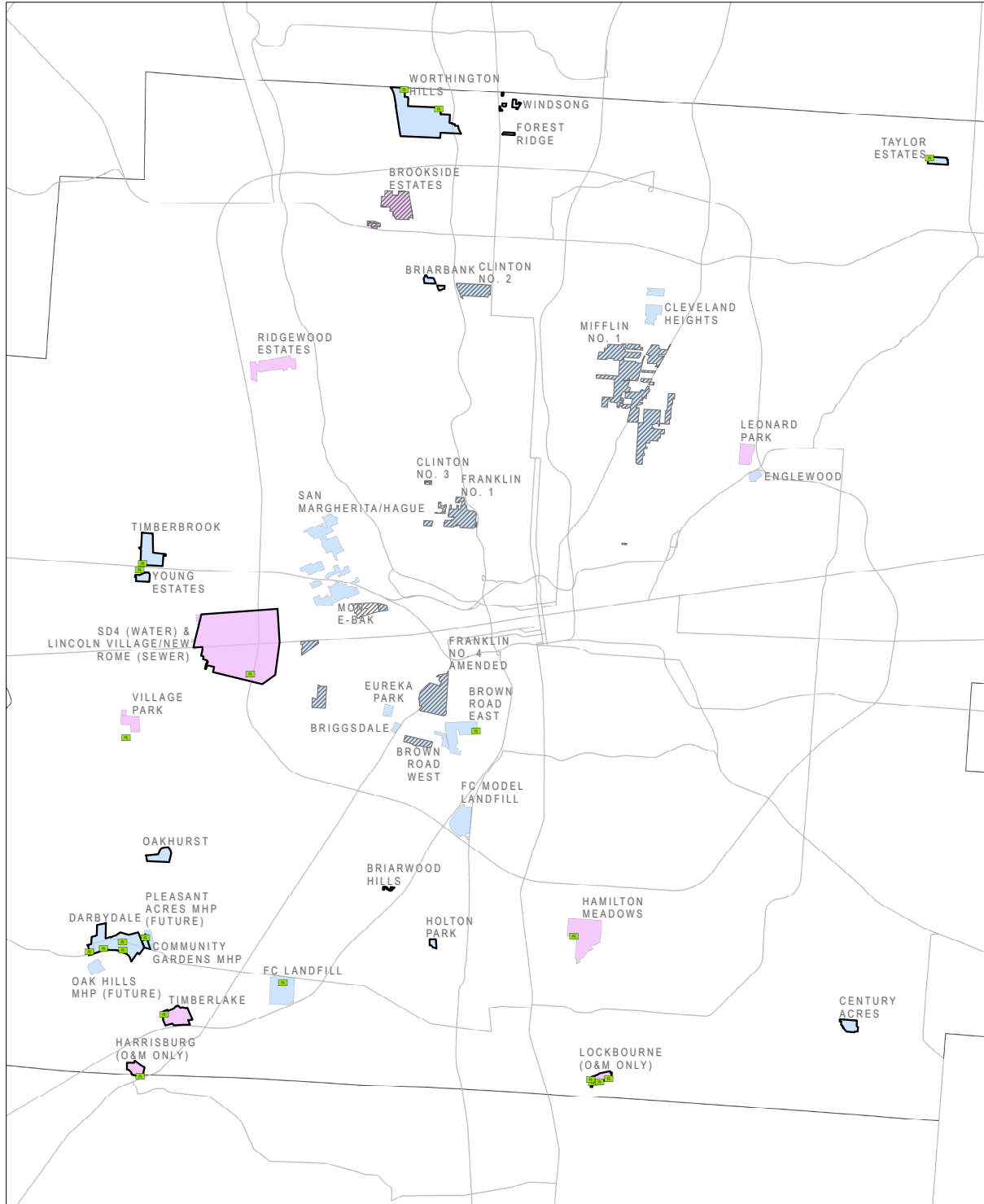


FCSE is blessed with a workforce comprised of people who individually and collectively have worked extremely hard to keep up with service level requirements and the challenges of an aging infrastructure. They are the front line in protecting public health and the wellbeing of the environment. FCSE staff are what make the organization successful and they need all the support the County can provide in order to continue meeting the service levels and demands of the system. Of special note are those individuals who commit to working long hours, during the day and night, on weekends and holidays, in the offices, in the streets and neighborhoods, under a variety of generally-difficult conditions, working below grade and in traffic, and who also must continually act as the Department's ambassadors to the public and customers.

EXHIBIT 9: FRANKLIN COUNTY DEPARTMENT OF SANITARY ENGINEERING SERVICE AREAS

Legend

- DirectBilledAreas
- Franklin County Service Areas**
- SERVICE**
- SEWER
- WATER AND SEWER
- City of Columbus Maintenance Area
- PUMPING STATIONS**
- EXISTING



FINANCIAL PLANNING AND RATE SETTING

When considered for a snapshot in time, the financial plan of every utility can be synthesized into an equation that balances system revenues with system expenditures.

Each side of the equation has dozens of variables that affect its result and these are often co-dependent on other variables in the equation. This equation is difficult to solve for a single year and adding the impact of projecting it over time makes this task even more challenging. The financial plan for FCSE was developed from the ground up so that each of the component pieces was well understood and incorporated appropriately into the forecast. Each of the elements of the financial plan will be discussed in this report.

Forecast of Customer Demand

The majority of annual revenues that the Department generates are from user rates and charges that individual customers pay for the service they receive. These revenues are based on the quarterly base charges and volumetric rates

assessed by FCSE. A thorough understanding of customer accounts and the amount of water consumed (and wastewater treated) is critical to projecting these revenues with confidence. While no one can predict future demands, historical data and the trends they reveal are used to inform projections of future usage.

As new service areas are added and existing service areas grow, the total number of accounts serviced by the FCSE has shown small levels of growth over the past four years. Despite the growth in the number of accounts, the total volume of water and wastewater billed over the same time period has decreased. Exhibit 10 presents the historical customer data. The compound annual growth rates for the water and sewer accounts are 0.7% and 0.3%, respectively. For water and sewer volumes, the compound annual rates of change are -4.6% and -3.9%, respectively.

EXHIBIT 10: HISTORICAL CUSTOMER DEMAND

	CY 2010 ACTUAL	CY 2011 ACTUAL	CY 2012 ACTUAL	CY 2013 ACTUAL
WATER ACCOUNTS	3,818	3,995	3,932	3,895
WATER CONSUMPTION (CCF)	396,825	372,571	334,571	344,057
SEWER ACCOUNTS	5,721	5,884	5,822	5,780
SEWER VOLUMES (CCF)	515,250	512,230	506,058	456,623

EXHIBIT 11: WATER BILL HISTOGRAM

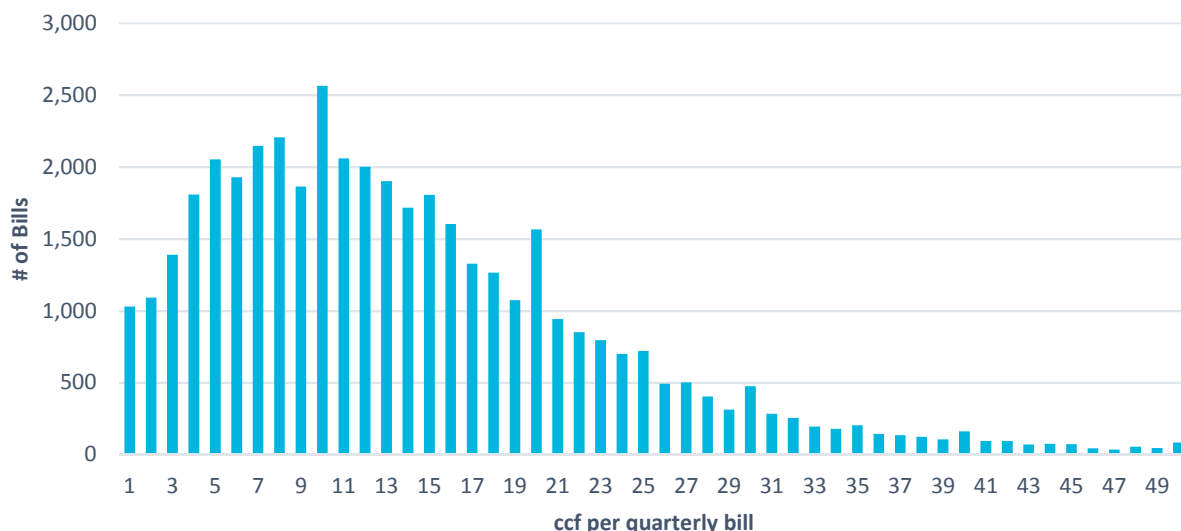
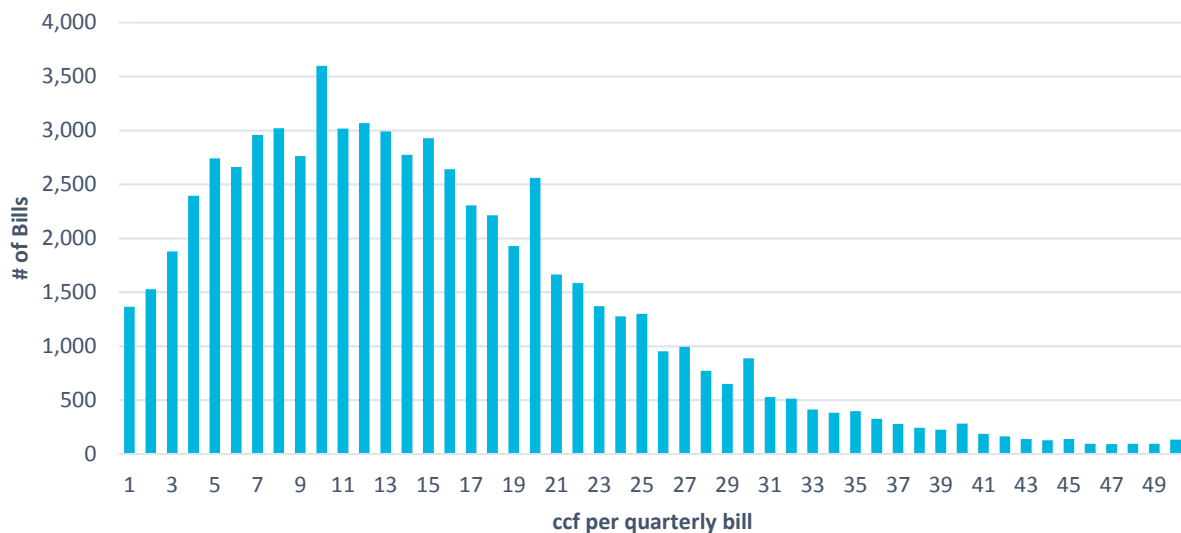


EXHIBIT 12: SEWER BILL HISTOGRAM



Declining per capita water consumption is a challenge facing most utilities across the country and is one that requires planning due to utilities' dependence on the revenue from volumetric rates. The reduction in billed volumes over the past four years demonstrates the levels by which FCSE customers have limited their water use. Additional insight into customer usage patterns is identified by preparing a histogram which shows the frequency of each billed volume amount (i.e. how many bills based on one hundred cubic feet (1 ccf), how many based on 2 ccf, etc.). Exhibit 11 and Exhibit 12 present the water and sewer bill histograms for all customer bills sent out between

2010 and 2013. The median quarterly water bill is based on water consumption of 12 ccf, or 8,976 gallons, and the median quarterly sewer bill is based on sewer volumes of 13 ccf (9,724 gallons). This level of usage is indicative of customers that do not use water resources for significant discretionary purposes.

The recent decline in billable volumes of water and sewer has resulted in a projection of customer demands that are inherently conservative. Based on our experience, and since FCSE median water consumption volumes are low compared to other utilities with more readily apparent

EXHIBIT 13: FORECAST CUSTOMER DEMAND

	CY 2014 ACTUAL	CY 2015 ACTUAL	CY 2016 ACTUAL	CY 2017 ACTUAL	CY 2018 ACTUAL	CY 2019 ACTUAL
WATER ACCOUNTS	3,895	3,895	3,895	3,895	3,915	3,935
WATER CONSUMPTION (CCF)	340,616	337,210	333,837	332,166	330,506	328,854
SEWER ACCOUNTS	5,780	5,780	5,955	5,973	6,077	6,182
SEWER VOLUMES (CCF)	452,055	447,534	456,608	455,641	459,007	462,279

discretionary consumption, it is probable that per capita usage will continue to decline but at a decelerating rate. Thus, for projecting customer consumption and flows over the forecast period, we have assumed a continued decline in per capita consumption but at a lower rate than the previous four years. Specifically, we have assumed an annual reduction of billed water and sewer volumes by 1% through 2016 and continued declines of 0.5% annually thereafter. These reductions are based on:

- The increased prevalence of high efficiency fixtures and appliances
- A more widespread adoption of the general water conservation ethos
- Impacts on weather patterns due to global climate change
- Increased sensitivity to the price of water

Additionally, as new service areas are added to the system and existing service areas expand, growth in the number of accounts served is also included in projections for future water demand. New sewer customers due to expanded service areas are projected to join the system in 2016 and continue through 2019. Additional water customers due to expanded service areas are not projected to join the system until 2020 through 2023. The projected number of customers and billed volumes are presented in Exhibit 13.

Development of Revenue Requirements

As an enterprise fund, the Department was established as a self-supporting component of the County's annual operations. The Department should set rates that generate annual revenues sufficient to meet the operating and capital expenditures of the system. The financial plan is dependent on the appropriate identification of current and future expenses.

OPERATING COSTS

A primary function of the Department is to operate and maintain the system in order to provide safe and reliable access to clean drinking water and wastewater treatment to its customers. Operating costs include salaries for staff, materials and supplies for operating the plants, electricity and utilities, and wholesale purchases from the City. Over 56% of the annual operating needs are the cost of wholesale water and sewer service, which is charged by the City and based on contractual agreements.

Historical spending on operating and maintenance (O&M) costs was analyzed to identify escalation trends for various types of expenses. The Department understands the importance of efficiency and controlling its operating costs. Actual operating costs from 2011 through 2013 were held constant through strategic decision making and deferral of routine maintenance on some of the system's assets. Projecting costs throughout the financial forecast requires an assumption for inflation and a return to industry standards of care for operating and maintaining the system.

Exhibit 14 presents the escalation rates that have been used to project operating costs for future years in the financial plan; the 2014 adopted budget serves as the baseline of costs. The escalation rates were reviewed and verified by FCSE and the County Office of Management and Budget (OMB) Staff. Healthcare costs are anticipated to increase at a rate greater than other categories. It is anticipated that the City will increase its wholesale rates throughout the forecast at a rate higher than general inflation. The rate the County pays for this service is regulated by their contractual agreements, and the County has little to no control over what these rates will be. The City provided the Department with estimated increases for 2015 through 2017, and the 5.0% estimated annual increases in 2018 and 2019 are based on historical trending data available from RFC's 2012 Water and

EXHIBIT 14: OPERATING COST ESCALATION FACTORS

	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
<u>O&M Budget</u>					
Salaries and Benefits	1.50%	1.50%	1.50%	1.50%	1.50%
Services and Fees	3.00%	3.00%	3.00%	3.00%	3.00%
Office, Materials, and Supplies	3.00%	3.00%	3.00%	3.00%	3.00%
Fixed Asset Maintenance	3.00%	3.00%	3.00%	3.00%	3.00%
Debt Service	0.00%	0.00%	0.00%	0.00%	0.00%
Interfund Transfer - Operations	0.00%	0.00%	0.00%	0.00%	0.00%
Interfund Transfer - Debt Service	0.00%	0.00%	0.00%	0.00%	0.00%
Healthcare	9.00%	9.00%	9.00%	9.00%	9.00%
Wholesale - Water Purchases	3.00%	4.00%	4.00%	5.00%	5.00%
Wholesale - Sewer Costs	3.00%	4.50%	5.00%	5.00%	5.00%

EXHIBIT 15: FORECAST OF OPERATING EXPENSES

	<u>CY 2014</u> <i>Budget</i>	<u>CY 2015</u> <i>Forecast</i>	<u>CY 2016</u> <i>Forecast</i>	<u>CY 2017</u> <i>Forecast</i>	<u>CY 2018</u> <i>Forecast</i>	<u>CY 2019</u> <i>Forecast</i>
Utility Revenue Requirements						
<u>Operating Expenses</u>						
<u>Water</u>						
Salaries and Benefits	\$ 335,759	\$ 381,388	\$ 387,109	\$ 392,915	\$ 398,809	\$ 404,791
Services and Fees	297,838	306,773	315,976	325,455	335,219	345,275
Office, Materials, and Supplies	117,118	120,632	124,250	127,978	131,817	135,772
Fixed Asset Maintenance	-	-	-	-	-	-
Healthcare	92,643	110,149	120,062	130,868	142,646	155,484
Wholesale Purchases	1,478,962	1,523,331	1,584,264	1,647,635	1,730,016	1,816,517
Additions due to CIP	-	-	86,040	137,371	163,162	189,727
<i>Subtotal: Water Operating Expenses</i>	<u>\$ 2,322,319</u>	<u>\$ 2,442,272</u>	<u>\$ 2,617,701</u>	<u>\$ 2,762,222</u>	<u>\$ 2,901,670</u>	<u>\$ 3,047,567</u>
<u>Sewer</u>						
Salaries and Benefits	\$ 712,144	\$ 763,419	\$ 774,870	\$ 786,493	\$ 798,290	\$ 810,265
Services and Fees	726,833	748,638	771,097	794,230	818,057	842,599
Office, Materials, and Supplies	157,572	162,299	167,168	172,183	177,349	182,669
Fixed Asset Maintenance	121,100	124,733	128,475	132,329	136,299	140,388
Healthcare	244,783	275,982	300,820	327,894	357,404	389,571
Wholesale Purchases	2,182,205	2,247,671	2,348,816	2,466,257	2,589,570	2,719,049
Additions due to CIP	-	-	92,040	262,401	339,373	438,954
<i>Subtotal: Sewer Operating Expenses</i>	<u>\$ 4,144,637</u>	<u>\$ 4,322,742</u>	<u>\$ 4,583,287</u>	<u>\$ 4,941,788</u>	<u>\$ 5,216,343</u>	<u>\$ 5,523,494</u>
<i>Subtotal: Operating Expenses</i>	<u>\$ 6,466,956</u>	<u>\$ 6,765,014</u>	<u>\$ 7,200,988</u>	<u>\$ 7,704,010</u>	<u>\$ 8,118,013</u>	<u>\$ 8,571,061</u>

Wastewater Rate Survey, which is conducted bi-annually with the American Water Works Association (AWWA) and used extensively by numerous utilities and other industry stakeholders for benchmarking purposes.

The forecast of operating costs also includes incremental additions as a result of capital investment in the system (particularly extension of service to new areas). Specifically, 1% of total annual capital investment is assumed as an incremental addition to the following year's operating budget. For example, a \$1,000 project in 2015 would add \$10 in operating costs to 2016. A summary of the current and forecast operating expenses is shown in Exhibit 15.

WHOLESALE AGREEMENTS

As noted above, the majority of FCSE's operating costs relate water and wastewater wholesale services provided by the City. The County has numerous contractual agreements with the City specifying wholesale water and wastewater service arrangements, service area parameters, conditions, and responsibilities. The County also maintains separate, non-owned agreements in service areas where FCSE provides operations and maintenance services only. RFC reviewed the contracts focusing on the allocation and recovery of costs compared to generally accepted rate making procedures used throughout the United States. Our review was designed to provide observations and per-

spectives based on our experience developing wholesale rates or contract based rates for other utilities across the country. The following summarizes these observations and perspectives.

- The contracts with the City specifically identify the services areas governed by the various agreements. In most cases, the geographic maps provided in the attached Appendix B highlight FCSE's fragmented, non-contiguous service area. There are numerous examples of individual lots receiving wholesale services surrounded by City retail customers.
- The contracts lack a defined rate methodology describing the calculation of wholesale or contract based rates. The applicable sections addressing the rate methodology reference only the rates established for customers outside of the City limits per the provisions of the Columbus City Codes, 1959, which may be changed from time to time. Since the contracts do not describe a specific rate methodology, it is not possible to evaluate whether or not rates assessed are reasonable and consistent with cost of service principles.
- Typically, wholesale rates or rates established for customers outside of the utility provider's corporate limits are calculated based on the utility approach to rate setting, which considers three primary cost components:
 1. An allocated share of direct costs for operation and maintenance of the assets used to provide service
 2. An allocated portion of the depreciation expense associated with these assets
 3. A rate of return applied to an allocated portion of the utility provider's investment in assets used to provide service
- The extent of the water and wastewater services provided to the County by the City vary depending on the specific agreement. In some cases, services appeared to be limited to a more traditional wholesale arrangement, where water is being provided and/or wastewater being collected through point(s) of connection that are master metered or estimated in aggregate based on billed water consumption. In other cases, it appears that additional services associated with customer service, billing and collection, and maintenance on local distribution/collection assets are also provided, with a mechanism to surcharge FCSE customers for these additional services.
- Based on the provisions in the contracts and review of the City's rates and charges effective January 1, 2014, it appears FCSE water customers are charged a rate that ranges from approximately 107% to 130% of the City's retail volumetric rate depending on location. Water customers that are not master metered pay approximately 130% of the fixed service charge, while master meter water customers pay an equivalency based on meter size. It appears that wastewater customers are charged a rate that is approximately 109% of the City's retail wastewater volumetric rate. The level of rates charged to water and wastewater contract customers in other communities outside of the City's corporate limits appear to be the same. It is our understanding that customers receiving additional services associated with customer service, billing and collection, and maintenance on local distribution/collection assets are assessed a surcharge to recover these costs, which is not identified in the published rate structure.
- Unless additional retail services are being provided, a typical wholesale rate should reflect the cost of providing treatment and transmission/conveyance services only. Costs associated with local distribution and collection should be excluded, as wholesale customers must operate and maintain their own distribution and collection systems. Costs associated with billing, collection, and customer service should be recovered proportionately on a per account basis and not related to the volume of flow. In some cases, it may be appropriate to recover the majority of a wholesale provider's water transmission/distribution and/or wastewater conveyance/collection costs due to the wholesale customer's location and/or other service characteristics. Capacity/peaking and/or flow strength can also be used as a basis for determining additional cost causation. There is insufficient information available to evaluate the methodology used to develop the contract rates charged to FCSE.
- The agreements provide a mechanism for the County to surcharge certain customers in various parts of the service area where the County owns, operates, and maintains water and sewer lines for customers serviced and billed by the City. It is our understanding that the County is not currently surcharging any of these customers for additional services.
- Some of the agreements reference a penalty in the event of a merger between the County and any adjacent Township. As of the effective date of such merger, the rates charged under the affected agreements shall become ten times the rates established per City Code.
- Most of the agreements include a clause giving the City the right to serve contract areas if annexed by the City.
- There are provisions in certain agreements allowing both the City and County to connect its service lines to

lines owned and installed by the other party for the purpose of providing service. While the agreements provide a mechanism to determine related adjustments for billing purposes, these provisions speak to the proximity and inter-relatedness of utility services within these areas and may increase the complexity of asset ownership and maintenance responsibilities.

In summary, most of the contracts appear to have been in place for some time and have varying terms for expiration. As noted previously, it is not possible to provide specific reactions to the reasonableness of the rates assessed, as there is insufficient information available in the contract agreements. It would be beneficial for the County to review any supplemental detail that can be provided describing, more specifically, the calculation basis of the rates and charges.

LONG-TERM DEBT AND CAPITAL IMPROVEMENT PLAN

FCSE developed a comprehensive 5-year capital improvement plan (CIP) that was presented in 2013 and estimated costs for 2014 through 2018. The projects identified in this plan are necessary for compliance with regulations, extensions of water and sewer service, and reinvesting in existing system assets. The total cost of the projects identified in this plan was \$111 million.

A role of every water and sewer utility is to be environmental stewards for the community's water resources. Compliance with federal and state regulations is an important step in achieving this objective. Over \$25 million in CIP projects are driven by regulatory requirements from the EPA and other agencies.

The Water Quality Partnership Program is a collection of County agencies that identifies areas of the County to which providing clean drinking water and sanitary sewer service is important for public health and other reasons. As identified in the CIP, the cost of these improvements and extensions is over \$60 million. The extension of water and sewer service to new areas typically costs several millions of dollars, but many of the areas identified have housing densities that result in connection by only dozens of customers at each location.

Portions of the FCSE system have been in service since the mid 1900's, and the condition of these assets has deteriorated significantly over time. Investment in existing system

infrastructure is critical to providing safe and reliable service to customers. Over \$8 million will be invested over the next five years to replace waterlines that have reached the end of their useful life (primarily in the SD4 service area). The Department also plans to invest in leak and infiltration detection and remediation, a water softening project, pump station improvements, and automated meter infrastructure (AMI). Currently, operations and maintenance staff perform quarterly meter reading duties, and the investment in AMI will allow more time for staff to keep the existing system in good working condition rather than reacting to problems on an emergency basis. Exhibit 16 shows the capital improvements plan as presented in the original 5-year plan.

The projects identified in the CIP represent work that needs to be completed; however, investing over \$100 million in capital improvements across a five-year timeframe would place significant and immediate burden on the Department's customers. As part of the Study, RFC worked with Department Staff to adjust the timing and cost estimates for the projects identified in the CIP. The schedule of capital improvements was distributed over a ten-year period to allow for a smoother build-up to that level of investment. This was achieved through deferring projects with any flexibility to be delayed, including waterline extensions to new neighborhoods throughout the County. The capital needs in Exhibit 17 show the results of the modified plan. By FY 2019, \$37.5 million of capital needs have been delayed beyond of the 5-year window; these are primarily water extensions to new service areas.

The waterline extension projects that have been delayed until FY 2020 are part of an agreement the County entered into to provide service to certain areas within the County. Although these are important projects, which provide numerous public health benefits, the costs of running new lines and connecting a new neighborhood is significant with estimates of \$40 million to be invested over four years. These new service areas are anticipated to add only 600-800 new accounts to the system. For a system the size of the County, with limited economies of scale, this represents a major capital investment, and the incremental revenue provided from the new customers may not economically justify the costs.

Due to the significant investments that are required to build water and sewer systems, utilities frequently utilize long-term debt to finance their capital improvements. This

allows a utility to leverage its revenue stream and for future customers to pay for the system that benefits them. FCSE has primarily participated in Ohio's state revolving fund program (SRF) through several agencies, which provide low interest rate borrowing. The agencies include the Ohio Water Development Authority and the Ohio Public Works Commission. Approximately 14% of the Department's current annual revenues are used to pay debt service on existing long-term obligations. Many of these obligations are for improvements to the system that have been made in the last 5 years.

Funding the FCSE's capital program, as it has been identified and amended, is projected to be achieved by a mixture of long-term debt, annual revenues, and support from the County General Fund. SRF Loans are assumed to be the primary source of funding for the projects, covering ap-

proximately 75% of the total need. Utilization of annual revenues, or cash funded capital, to finance capital projects helps a utility maintain a financially stable percentage of equity in their system assets. Presently, the annual cost of operations for FCSE is not producing any significant surpluses that can be used to finance a portion of the capital needs. Current levels of reserves are limited and not sufficient to provide any meaningful funding for the capital program. One goal of the financial plan is to increase the level of cash-financed capital, so it has been assumed that approximately 8% of the total capital expenditures will be financed with annual revenue generated from rates. This internal source of funding serves to both mitigate the amount of future leverage and provide sufficient debt service coverage. The County General Fund has pledged it will provide \$2.5 annually for five years to support FCSE's capital program. This represents approximately 17% of the

EXHIBIT 16: ORIGINAL CAPITAL IMPROVEMENTS PLAN

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Improvements						
Regulatory	\$ 3,522,000	\$ -	\$ -	\$ -	\$ -	\$ -
Water Quality Partnership	-	-	10,200,000	10,200,000	10,200,000	10,200,000
Other Miscellaneous	<u>6,190,000</u>	<u>2,167,000</u>	<u>2,167,000</u>	<u>2,167,000</u>	<u>2,167,000</u>	<u>2,030,000</u>
<i>Subtotal: Water Capital Needs</i>	\$ 9,712,000	\$ 2,167,000	\$ 12,367,000	\$ 12,367,000	\$ 12,367,000	\$ 12,230,000
Sewer Capital Improvements						
Regulatory	\$ 10,320,000	\$ 2,780,000	\$ 4,530,000	\$ 4,310,000	\$ 5,695,000	\$ -
Water Quality Partnership	4,390,000	-	4,790,000	-	3,380,000	-
Other Miscellaneous	<u>349,000</u>	<u>5,380,000</u>	<u>1,992,000</u>	<u>-</u>	<u>-</u>	<u>-</u>
<i>Subtotal: Sewer Capital Needs</i>	\$ 15,059,000	\$ 8,160,000	\$ 11,312,000	\$ 4,310,000	\$ 9,075,000	\$ -
Total: Capital Needs	<u>\$ 24,771,000</u>	<u>\$ 10,327,000</u>	<u>\$ 23,679,000</u>	<u>\$ 16,677,000</u>	<u>\$ 21,442,000</u>	<u>\$ 12,230,000</u>

EXHIBIT 17: AMENDED CAPITAL IMPROVEMENTS PLAN

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Improvements						
Regulatory	\$ -	\$ 3,522,000	\$ -	\$ -	\$ -	\$ -
Water Quality Partnership	-	3,400,000	-	-	-	-
Other Miscellaneous	<u>2,032,000</u>	<u>1,682,000</u>	<u>4,875,000</u>	<u>2,167,000</u>	<u>2,167,000</u>	<u>2,030,000</u>
<i>Subtotal: Water Capital Needs</i>	\$ 2,032,000	\$ 8,604,000	\$ 4,875,000	\$ 2,167,000	\$ 2,167,000	\$ 2,030,000
Sewer Capital Improvements						
Regulatory	\$ -	\$ 2,500,000	\$ 11,275,000	\$ 4,310,000	\$ 5,695,000	\$ -
Water Quality Partnership	1,800,000	3,150,000	4,790,000	-	-	3,380,000
Other Miscellaneous	<u>125,000</u>	<u>3,554,000</u>	<u>695,000</u>	<u>2,600,000</u>	<u>3,245,000</u>	<u>2,600,000</u>
<i>Subtotal: Sewer Capital Needs</i>	\$ 1,925,000	\$ 9,204,000	\$ 16,760,000	\$ 6,910,000	\$ 8,940,000	\$ 5,980,000
Total: Capital Needs	<u>\$ 3,957,000</u>	<u>\$ 17,808,000</u>	<u>\$ 21,635,000</u>	<u>\$ 9,077,000</u>	<u>\$ 11,107,000</u>	<u>\$ 8,010,000</u>

total capital need. Exhibit 18 presents the capital financing plan over the forecast period.

The significant capital investment and use of long-term debt to fund those investments will increase the County's annual debt service requirements dramatically over the forecast period. The SRF loan repayment terms are assumed to have a twenty year amortization with interest rates ranging from 2% for the near-term projects up to 5% for projects beginning later in the forecast. The expected increase in interest rates is based on an assumption there will be a directional increase in interest rates over the next decade since current rates are at or near historical lows. SRF loan repayment is assumed to begin with a half year's payment 180 days after the estimated completion date for each project and a full payment in the subsequent fiscal year. Funding nearly \$54 million in projects through the SRF program by FY 2019 results in annual debt service requirements that are nearly

four times the current levels. Exhibit 19 details the current and projected debt service requirements that would finance the capital improvements plan.

COMBINED REVENUE REQUIREMENTS

The operating, capital, and debt expenditures that have been forecast in the financial plan combine to determine the annual revenue requirements that the utility must recover in order to meet its annual cash obligations. As has been shown, the Department is facing pressures resulting in higher costs in both the operating and capital areas. Estimated increases in wholesale purchase costs (from the City) range from three to five percent annually; increases to other operating costs are approximately four percent annually. Annual debt service requirements are projected to increase by nearly 275% from 2014 through 2019. The net result is total revenue requirements that are forced to es-

EXHIBIT 18: CAPITAL FINANCING SUMMARY

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Financing						
SRF Program Loans	\$ 2,000,000	\$ 6,922,000	\$ 4,309,250	\$ 1,601,250	\$ 1,601,250	\$ 1,522,500
Cash-Financed Capital	32,000	182,000	565,750	565,750	565,750	507,500
General Fund	-	1,500,000	-	-	-	-
<i>Subtotal: Water Capital Financing</i>	<u>\$ 2,032,000</u>	<u>\$ 8,604,000</u>	<u>\$ 4,875,000</u>	<u>\$ 2,167,000</u>	<u>\$ 2,167,000</u>	<u>\$ 2,030,000</u>
Sewer Capital Financing						
SRF Program Loans	\$ 1,800,000	\$ 6,355,000	\$ 14,315,000	\$ 4,310,000	\$ 5,695,000	\$ 3,380,000
Cash-Financed Capital	125,000	-	45,000	200,000	945,000	1,600,000
General Fund	-	2,850,000	2,400,000	2,400,000	2,300,000	1,000,000
<i>Subtotal: Sewer Capital Financing</i>	<u>\$ 1,925,000</u>	<u>\$ 9,205,000</u>	<u>\$ 16,760,000</u>	<u>\$ 6,910,000</u>	<u>\$ 8,940,000</u>	<u>\$ 5,980,000</u>
Total: Capital Financing	<u>\$ 3,957,000</u>	<u>\$ 17,809,000</u>	<u>\$ 21,635,000</u>	<u>\$ 9,077,000</u>	<u>\$ 11,107,000</u>	<u>\$ 8,010,000</u>

EXHIBIT 19: CURRENT AND PROPOSED DEBT REQUIREMENTS

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Debt Service Requirements						
<u>Existing Indebtness</u>						
Water	\$ 267,793	\$ 326,159	\$ 378,319	\$ 378,319	\$ 354,323	\$ 325,258
Sewer	778,298	818,037	833,037	839,437	795,421	761,625
<i>Subtotal: Existing Indebtness</i>	<u>\$ 1,046,091</u>	<u>\$ 1,144,197</u>	<u>\$ 1,211,356</u>	<u>\$ 1,217,756</u>	<u>\$ 1,149,744</u>	<u>\$ 1,086,883</u>
<u>Proposed Indebtness</u>						
Water	\$ 9,174	\$ 120,500	\$ 339,524	\$ 645,272	\$ 941,251	\$ 1,048,880
Sewer	-	55,775	335,972	820,617	1,461,484	1,804,007
<i>Subtotal: Proposed Indebtness</i>	<u>\$ 9,174</u>	<u>\$ 176,275</u>	<u>\$ 675,496</u>	<u>\$ 1,465,889</u>	<u>\$ 2,402,734</u>	<u>\$ 2,852,886</u>
<i>Subtotal: Debt Service Requirements</i>	<u>\$ 1,055,264</u>	<u>\$ 1,320,472</u>	<u>\$ 1,886,852</u>	<u>\$ 2,683,645</u>	<u>\$ 3,552,479</u>	<u>\$ 3,939,769</u>

entially double in five years. The summary of this forecast is presented in Exhibit 20.

Miscellaneous Revenue Sources

The majority of FCSE's revenue is generated from user rates and charges; however, other revenue sources do help fund the operation of the utility to a small degree. These revenues are generated from miscellaneous utility charges for late payments, returned checks, turn on/off, etc. Additionally, the County receives payments from service areas that have recently been provided service to cover the debt service associated with the design portion of the projects.

FCSE owns, operates, and maintains water and sewer lines in various parts of the County which provide service to customers served and billed by the City of Columbus. Per existing agreements between FCSE and the City, FCSE has the right to charge these customers a surcharge for the maintenance cost of the lines. Based on the number of connections and estimated billable flow from these customers, it is believed that an additional \$530,000 can be generated from these customers (\$330,000 for water and \$200,000 for sewer). However, a portion of these charges are not currently being assessed. It is RFC's understanding that this is due to a lack of addresses for customers that fall in each of these maintenance areas. Dialogue between the County and City has occurred and this limitation is in the process of being resolved. This revenue has been included in the revenue estimations for future years, as it is presented in Exhibit 21.

EXHIBIT 20: SUMMARY OF REVENUE REQUIREMENTS

Revenue Requirements	CY 2014 <i>Projected</i>	CY 2015 <i>Forecast</i>	CY 2016 <i>Forecast</i>	CY 2017 <i>Forecast</i>	CY 2018 <i>Forecast</i>	CY 2019 <i>Forecast</i>
Operating Expenditures						
Water O&M	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567
Sewer O&M	4,144,637	4,322,742	4,583,287	4,941,788	5,216,343	5,523,494
Subtotal: Operating Expenditures	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061
Non-Operating Expenditures						
<i>Debt Service</i>						
Water	\$ 276,966	\$ 446,660	\$ 717,843	\$ 1,023,591	\$ 1,295,574	\$ 1,374,137
Sewer	778,298	873,812	1,169,009	1,660,054	2,256,905	2,565,632
<i>Rate Funded Capital & Transfers</i>						
Water	\$ 47,000	\$ 373,600	\$ 593,883	\$ 646,187	\$ 620,214	\$ 788,963
Sewer	125,000	(78,244)	(34,839)	454,438	1,348,143	2,529,569
Subtotal: Non-Operating Expenditures	\$ 1,227,264	\$ 1,615,828	\$ 2,445,896	\$ 3,784,270	\$ 5,520,836	\$ 7,258,301
Total: Revenue Requirements	\$ 7,694,221	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,848	\$ 15,829,363

EXHIBIT 21: MISCELLANEOUS REVENUE

Miscellaneous Revenues	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Miscellaneous Water Revenue						
Miscellaneous Revenues	\$ 100,149	\$ 100,149	\$ 100,149	\$ 100,149	\$ 100,149	\$ 100,149
Payment to offset debt - Leonard Park	29,065	58,131	58,131	58,131	58,131	29,065
Water Surcharge - Maintenance Areas	-	329,338	326,043	324,411	321,141	317,912
Subtotal: Miscellaneous Water Revenue	\$ 129,214	\$ 487,617	\$ 484,323	\$ 482,691	\$ 479,421	\$ 447,126
Sewer Miscellaneous Revenue						
Miscellaneous Revenues	\$ 138,550	\$ 138,550	\$ 138,550	\$ 138,550	\$ 138,550	\$ 138,550
Sewer Surcharge - Maintenance Areas	-	866,415	858,004	853,606	845,196	836,764
Subtotal: Sewer Miscellaneous Revenue	\$ 138,550	\$ 1,004,964	\$ 996,554	\$ 992,156	\$ 983,746	\$ 975,313
Total: Miscellaneous Revenue	\$ 267,764	\$ 1,492,582	\$ 1,480,877	\$ 1,474,847	\$ 1,463,166	\$ 1,422,439

Financial Plan

The financial planning process can be described as solving a time-dependent equation for total system revenues versus total system expenditures. Total system expenditures are based on the current assumptions for future operating and capital costs. The capital improvements plan and increase in wholesale rates drive the majority of the cost increases throughout the forecast. Projects identified by the EPA and other regulatory requirements have limited ability to be deferred or delayed. Providing service to new areas through the Water Quality Partnership program is an important component of FCSE's mission as County engineer. Reinvesting in existing system assets to ensure reliable, safe, and continued utility services cannot be overlooked. These cost drivers lead to the projection of costs

that is included in this financial plan scenario.

Revenue for the system includes the miscellaneous revenue that was identified in Exhibit 21 along with the estimated revenue from user rates and charges. The user charge revenue has been calculated based on projected customer demands (accounts and volumes) and a projection of rates. The rates have been set to meet the overall revenue requirements of the utilities. Ideally, since operating reserves are limited, we would recommend additional contributions to reserves to improve liquidity in the utility fund. However, due to the magnitude of the projected rate increases, a material increase in reserves seemed untenable. A summary of the financial plan is presented in Exhibit 22. The rate increases that are required to meet the projected

EXHIBIT 22: FINANCIAL PLANNING SUMMARY

Revenues	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
User Charge Revenues						
Water	\$ 2,539,324	\$ 2,774,914	\$ 3,445,104	\$ 3,949,309	\$ 4,338,037	\$ 4,763,541
Sewer	4,378,781	4,780,448	5,381,529	6,721,364	8,488,410	10,287,654
<i>Subtotal: User Charge Revenues</i>	6,918,105	7,555,362	8,826,633	10,670,673	12,826,447	15,051,195
Miscellaneous Revenues	267,764	296,829	296,829	296,829	296,829	267,764
Surcharge Revenue	-	528,651	523,422	520,778	515,573	510,404
Total: Revenues	\$ 7,185,869	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,849	\$ 15,829,363
Revenue Requirements						
Operating Expenditures	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061
Non-Operating Expenditures						
Debt Service	\$ 1,055,264	\$ 1,320,472	\$ 1,886,852	\$ 2,683,645	\$ 3,552,479	\$ 3,939,769
Rate Funded Capital & Transfers	172,000	295,356	559,044	1,100,625	1,968,357	3,318,532
<i>Subtotal: Non-Operating Expenditures</i>	\$ 1,227,264	\$ 1,615,828	\$ 2,445,896	\$ 3,784,270	\$ 5,520,836	\$ 7,258,301
Total: Revenue Requirements	\$ 7,694,221	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,848	\$ 15,829,363
Surplus/(Deficit)	\$ (508,352)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0
<u>Annual Rate Increases</u>						
Water		10%	25%	15%	10%	10%
Sewer		10%	10%	25%	25%	20%

EXHIBIT 23: CUSTOMER BILL IMPACTS

	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
<u>Typical Customer Bills (13 ccf)</u>						
Quarterly Water Bill:	\$ 126.89	\$ 139.64	\$ 174.59	\$ 200.84	\$ 221.03	\$ 243.18
Quarterly Sewer Bill:	156.16	171.78	189.07	236.34	295.54	354.74
Total Annual Water and Sewer Costs	\$ 1,032	\$ 1,135	\$ 1,326	\$ 1,594	\$ 1,882	\$ 2,178
Approximate Service Area MHI	46,543	47,474	48,423	49,391	50,379	51,387
Estimated % of MHI	2.22%	2.39%	2.74%	3.23%	3.74%	4.24%

revenue requirements are also presented. As the revenue requirements are projected to nearly double by 2019, user rates and charges would also be required to double over the same time period in order to meet these obligations.

The financial plan and projected water and sewer rate increases over the next five years will have a significant impact to customer bills. The estimated bills for a typical customer that uses 13 ccf per quarter are presented in Exhibit 23. The calculation of a total annual cost as a percentage of the service area median household income (MHI) is also shown in Exhibit 23. Throughout the water and sewer industry, the question of affordability metrics and limits for service is often tied to an EPA report that was released in 1997 to assist in combined sewer overflow consent order negotiations. A metric of 2% of MHI as a threshold for af-

fordability is often cited on the sewer side. Similarly, the Safe Drinking Water Act discusses the establishment of special assistance in communities where the average residential water bill exceeds 2.0%. Combined, these references suggest an affordability threshold of 4.0% of MHI for water and sewer service, which is frequently used as a water and sewer bill threshold. As can be seen in Exhibit 23, under the financial plan presented in this report, typical bills for customers of FCSE would cross this threshold in the last year of the 5-year plan.

The most common approach to determining customer affordability uses the service area MHI, as was shown in Exhibit 23. This approach has several shortcomings, the most significant is that 49% of the service area would be facing bills above the affordability threshold before the median

EXHIBIT 24: ANNUAL BILL AS PERCENT OF MHI BY SERVICE AREA

	CY 2014 <i>Current</i>	CY 2015 <i>Forecast</i>	CY 2016 <i>Forecast</i>	CY 2017 <i>Forecast</i>	CY 2018 <i>Forecast</i>	CY 2019 <i>Forecast</i>
Briarbank	1.05%	1.13%	1.29%	1.53%	1.77%	2.00%
Briarwood Hills	1.19%	1.28%	1.47%	1.73%	2.00%	2.27%
Briggsdale	3.22%	3.48%	3.98%	4.69%	5.43%	6.17%
Brookside Estates	1.14%	1.23%	1.41%	1.66%	1.92%	2.18%
Brown Road East	3.85%	4.15%	4.75%	5.60%	6.48%	7.35%
Century Acres	1.80%	1.94%	2.22%	2.62%	3.03%	3.44%
Cleveland Heights	1.88%	2.03%	2.32%	2.74%	3.17%	3.60%
Clinton No. 2	2.55%	2.75%	3.15%	3.71%	4.29%	4.87%
Community Gardens MHP	2.46%	2.65%	3.04%	3.58%	4.14%	4.70%
Darbydale	2.33%	2.52%	2.88%	3.39%	3.93%	4.46%
Englewood	2.72%	2.94%	3.36%	3.96%	4.59%	5.21%
Eureka Park	2.89%	3.12%	3.57%	4.21%	4.87%	5.53%
Forest Ridge	1.26%	1.36%	1.55%	1.83%	2.12%	2.40%
Franklin No 1	2.78%	3.00%	3.43%	4.05%	4.69%	5.32%
Franklin No 4 Amended	2.74%	2.96%	3.39%	3.99%	4.62%	5.25%
Hamilton Meadows	2.33%	2.51%	2.87%	3.38%	3.92%	4.45%
Harrisburg (Oandm Only)	1.71%	1.85%	2.12%	2.49%	2.89%	3.28%
Lockbourne (Oandm Only)	1.98%	2.13%	2.44%	2.88%	3.33%	3.78%
Mifflin No.1	3.89%	4.20%	4.81%	5.66%	6.56%	7.44%
Mon-E-Bak	2.57%	2.77%	3.18%	3.74%	4.34%	4.92%
Oak Hills MHP (Future)	1.65%	1.78%	2.04%	2.41%	2.79%	3.16%
Oakhurst	1.35%	1.45%	1.67%	1.96%	2.27%	2.58%
Ridgewood Estates	1.03%	1.11%	1.27%	1.50%	1.74%	1.97%
San Margherita/Hague	2.52%	2.72%	3.11%	3.67%	4.25%	4.82%
SD4 (W) and Lincoln Village/New Rome (S)	2.97%	3.21%	3.67%	4.33%	5.01%	5.69%
Timberbrook	1.65%	1.78%	2.03%	2.40%	2.78%	3.15%
Timberlake	1.75%	1.89%	2.16%	2.55%	2.95%	3.35%
Village Park	1.99%	2.15%	2.46%	2.90%	3.36%	3.81%
Windsong	1.95%	2.11%	2.41%	2.84%	3.29%	3.74%
Worthington Hills	0.85%	0.91%	1.05%	1.23%	1.43%	1.62%
Young Estates	1.46%	1.58%	1.80%	2.13%	2.46%	2.79%
Percent of Households >4%	0%	16%	16%	53%	69%	76%

shows this result. RFC considered the affordability of specific neighborhoods and regions within FCSE's service area to determine the more localized and specific impact. The County prepared a report that shows the demographic and income profile of the FCSE separated by individual service areas. These detailed and individualized results were used to calculate the approximate total service area MHI used in Exhibit 23 (a weighted-average calculation based on number of households).

Exhibit 24 shows the percentage of MHI that the same typical customer bill (13 ccf) would represent in each of the specific areas for which FCSE provides service. Based on the projected rates for 2015, there are already approximately 16% of households in our service area whose utility bills would exceed 4% of their MHI. By 2017, when Briggsdale and the SD4/Lincoln Village/New Rome service areas exceed this metric, the percentage of households jumps to approximately 53%. The total service area MHI used in Exhibit 22 is buoyed by a few higher income regions so that when the total crosses the 4% threshold in 2019, approximately 76% of the households in the service area would already be above the threshold. These more localized impacts are important to understanding the full impact of the proposed financial plan on the Department's customers.

Alternative Strategies

Through the deferral of certain capital projects, and the other strategies outlined above, the financial planning projections were reduced from what they otherwise would have been. These projected rate increases still present a significant burden to FCSE's rate payers, particularly in light of the rate increases that have occurred over the last 3 years. RFC considered alternative scenarios with the goal of limiting annual rate increases to five percent throughout the forecast. The opportunities to reduce annual revenue requirements have already been accounted for under the baseline scenario. These alternatives consider alternative funding sources for the capital and operating needs.

The first alternative expands the capital funding support from the County's General Fund that was projected to be \$12.5 million in the baseline scenario. As discussed previously, the current revenues are not generating surpluses that can be used to fund capital, and the majority of the capital program needs to be financed through long-term debt. This strategy limits the immediate impact to FCSE

but results in significantly higher annual debt service costs in the future, as was presented in Exhibit 20. If the Department receives additional capital support from the County to fund the projects identified in the CIP, the immediate cost burden of revenue-financed projects and long-term impacts of additional debt service could be mitigated. Exhibit 25 shows that the General Fund contribution would need to increase from \$12.5 million to \$67.94 million through FY 2019 to allow for 5% annual rate increases.

The assumed increases on the wholesale costs (which are the majority of the Department's current annual revenue requirements), and the additional debt service for the new SRF loans in this scenario still necessitate 5% annual rate increases throughout the forecast period, even with this significant contribution from the General Fund. The benefit of this alternative is that the Department continues to operate in a self-supporting manner with respect to its annual cash flow statement, which is the intent for enterprise funds.

A second alternative considers support from the General Fund in the form of an annual operating transfer in lieu of the direct capital project funding. Essentially the financial plan of the baseline scenario remains unchanged, but the General Fund would make annual operating transfers to the water and sewer funds to support their annual cash flow requirements. The Department would implement 5% annual rate increases and any revenue shortfall would be covered by the General Fund Transfer. Exhibit 26 presents the adjusted financial plan with this additional operating transfer.

Through 2019, the total support from the General Fund to the Water and Sewer Funds is \$9.98 million. However, there are significant capital needs in 2020 through 2024 whose cost and the additional debt service required to finance them increase the required annual transfer to \$4.9 million in 2020 and up to \$7.8 million annually in 2025 and beyond. This scenario presents a lower level of support from the General Fund in the near-term, but leads to a perpetual level of support that would be a much more significant impact long-term. In addition, there may be accounting and legal considerations that should be made for this scenario.

As an enterprise fund, the FCSE should generate revenues annually from its rates and charges that can support the cost of its operations. Under this scenario the Department would not meet this guideline. Debt service coverage is a critical

EXHIBIT 25: CIP FINANCING SUMMARY - ADDITIONAL GENERAL FUND SUPPORT

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Capital Financing						
SRF Program Loans	\$ -	\$ 3,400,000	\$ 220,000	\$ -	\$ -	\$ -
Cash-Financed Capital	32,000	204,000	155,000	-	-	30,000
General Fund	<u>2,000,000</u>	<u>5,000,000</u>	<u>4,500,000</u>	<u>2,250,000</u>	<u>2,250,000</u>	<u>2,000,000</u>
<i>Subtotal: Water Capital Financing</i>	\$ 2,032,000	\$ 8,604,000	\$ 4,875,000	\$ 2,250,000	\$ 2,250,000	\$ 2,030,000
Sewer Capital Financing						
SRF Program Loans	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash-Financed Capital	-	-	-	-	-	-
General Fund	<u>1,925,000</u>	<u>9,250,000</u>	<u>16,760,000</u>	<u>7,000,000</u>	<u>9,000,000</u>	<u>6,000,000</u>
<i>Subtotal: Sewer Capital Financing</i>	\$ 1,925,000	\$ 9,250,000	\$ 16,760,000	\$ 7,000,000	\$ 9,000,000	\$ 6,000,000
Total: Capital Financing	<u>\$ 3,957,000</u>	<u>\$ 17,854,000</u>	<u>\$ 21,635,000</u>	<u>\$ 9,250,000</u>	<u>\$ 11,250,000</u>	<u>\$ 8,030,000</u>

EXHIBIT 26: FINANCIAL PLAN SUMMARY – WITH GENERAL FUND OPERATING TRANSFER

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Revenues						
User Charge Revenues						
Water	\$ 2,539,324	\$ 2,649,848	\$ 2,763,931	\$ 2,895,159	\$ 3,035,453	\$ 3,183,997
Sewer	<u>4,378,781</u>	<u>4,565,466</u>	<u>4,905,799</u>	<u>5,150,160</u>	<u>5,457,586</u>	<u>5,782,501</u>
<i>Subtotal: User Charge Revenues</i>	6,918,105	7,215,313	7,669,729	8,045,319	8,493,039	8,966,498
Miscellaneous Revenues	267,764	296,829	296,829	296,829	296,829	267,764
Surcharge Revenue	-	528,651	523,422	520,778	516,537	512,344
General Fund Operating Transfer	<u>-</u>	<u>700,000</u>	<u>1,100,000</u>	<u>1,960,000</u>	<u>2,910,000</u>	<u>3,310,000</u>
Total: Revenues	\$ 7,185,869	\$ 8,740,793	\$ 9,589,980	\$ 10,822,926	\$ 12,216,406	\$ 13,056,606
Revenue Requirements						
Operating Expenditures	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061
Non-Operating Expenditures						
Debt Service	\$ 1,055,264	\$ 1,376,246	\$ 2,327,374	\$ 3,067,611	\$ 4,040,581	\$ 4,463,749
Rate Funded Capital & Transfers	<u>172,000</u>	<u>596,000</u>	<u>55,000</u>	<u>47,000</u>	<u>47,000</u>	<u>15,000</u>
<i>Subtotal: Non-Operating Expenditures</i>	\$ 1,227,264	\$ 1,972,246	\$ 2,382,374	\$ 3,114,611	\$ 4,087,581	\$ 4,478,749
Total: Revenue Requirements	<u>\$ 7,694,221</u>	<u>\$ 8,737,260</u>	<u>\$ 9,583,362</u>	<u>\$ 10,818,621</u>	<u>\$ 12,205,594</u>	<u>\$ 13,049,810</u>
Surplus/(Deficit)	\$ (508,352)	\$ 3,533	\$ 6,618	\$ 4,305	\$ 10,812	\$ 6,796
<u>Annual Rate Increases</u>						
Water		5%	5%	5%	5%	5%
Sewer		5%	5%	5%	5%	5%

component when considering issuing revenue bonds or seeking out a credit rating. The General Fund transfer would be used to meet annual debt service requirements, and the annual total debt service coverage ratio for the Department would drop to 0.25x assuming transfers from the General Fund are not used for the purpose of calculating coverage. Bond indentures, rating agencies, and many financial policies call for a 1.10 – 1.20x minimum for this metric. The Department’s debt profile is primarily SRF loans which do not appear to have legal covenants regarding coverage levels.

However, based on our experience, it is common for SRF loans to carry at least a minimum coverage requirement of 1.0x. Consistent reliance on transfers from other funds to make debt service payments would be viewed negatively from a credit perspective.

Meeting the annual revenue requirements of the utility is a zero-sum equation and shifting the burden away from FCSE would require a significant level of support from the County’s General Fund. The magnitude of this support,

even with 5% annual rate increases, demonstrates the pressures that are driving the financial plan.

Rate Structure Considerations

FCSE charges for water and sewer service quarterly with a commonly used rate structure throughout the industry. The rate structure includes a fixed quarterly charge and a variable component that is dependent upon the volume of water consumed. Significant rate increases were necessary in 2011 and 2012 to meet the operational requirements of the utility. As discussed in earlier sections of this report, utility costs are facing upward pressure from the capital program and operating cost increases, many of which are related to prospective increases in wholesale service from the City.

Utilities maintain a certain degree of flexibility when pricing services. Rates should reasonably reflect the cost of providing services, and a utility should not be arbitrary or capricious in how it allocates and recovers costs. This provides a utility an opportunity to align its rate structure with its most important pricing objectives. Certain pricing objectives, such as revenue stability, place more emphasis on fixed charges to mitigate revenue volatility. Other pricing objectives, such as conservation, place more emphasis on volumetric charges, which provide customers more control over their bill.

While most utilities use some combination of fixed and variable charges, in many cases, the level of the fixed component of the rate structure is higher for utilities, such as FCSE, which have limited economies of scale. The current level of the quarterly fixed charges provide FCSE with a more stable revenue stream that partially insulates its financial performance from variations in customer demand. The overwhelming majority of any utilities' costs are fixed regardless of the quantity of water sold, so maintaining revenue from fixed sources is consistent with the costs of doing business. FCSE must provide utility services 24 hours a day, seven days a week regardless of whether or not a customer uses a drop of water. If the County were to consider lowering the fixed charges, the variable charges would be forced higher to account for this lost revenue (the financial planning equation must balance). This represents a shift of revenue recovery from stable towards more volatile.

There are utilities that provide an allowance of water and



sewer volume consumption as part of their fixed charge; this is commonly referred to as a minimum charge. The benefit to this approach is that customers can use the first few units of service as part of the fixed portion of the bill. The drawback to this approach is that customers have less ability to control their overall bill by changing consumption patterns. Additionally, as with lowering the fixed charges, the revenue recovery target does not change, so other rates would be forced higher to generate the revenue lost from not billing all water and sewer sales.

The variable portion of FCSE's rate structure recovers revenue through a uniform rate for all volumes of usage and customer types; this is a common method of charging for volumetric usage. One alternative would be to develop rates specific to customer types (residential, commercial, etc.), which is commonly referred to as class-based rates. However, the County's customers are primarily residential in nature. The effort involved in developing class-based rates would not be maximally beneficial given this homogenous customer base. Tiered rates are also common throughout the industry and can be designed to charge more (or less) for each incremental unit of water consumption. These are primarily implemented to promote water conservation. The County does not have immediate water supply issues, and furthermore, the current quarterly median usage of 12 ccf suggests there are not many customers with regularly large bills due to discretionary water usage.



- Turn-on / turn-off costs
- Customer Conflict
- Increased administrative overhead

FCSE provides assistance to low-income customers through its Low Income Water & Sewer Discount Program. The program provides a 20% discount on water and sewer volumetric charges to customers meeting the income qualification criteria. The current program effectively serves as a lifeline rate to qualifying customers, which is sometimes identified specifically in the core rate structure. FCSE could consider expanding the level of discount to provide additional assistance combined with a more aggressive marketing campaign to increase program participation. However, FCSE would still need to recover the same amount of revenue which, at least in the short-term, would increase rates for all other customers.

These two facts are reasons that a tiered rate structure for the County would also provide limited benefit.

The existing uniform variable rate allows each customer to influence their bill through behavioral changes, charges large volume users proportionally to the demands they place on the system, and is simple for customers to understand. Based on the projected financial plan, FCSE is facing significant pressure to increase revenue, and there is no change in rate structure that will eliminate this issue. For the purpose of this Study, the financial plan has been developed with the anticipation that the current rate structure will remain in place throughout the forecast period.

Customer Assistance Programs

The proposed annual costs of water and sewer shown in Exhibit 14 suggest the consideration of affordability. Rate affordability is not merely an abstract concept. Charging rates that many customers cannot afford to pay will result in real costs to the utility. These costs are in addition to the social issues and potential public health risks created when a segment of the population cannot afford access to clean water. Potential risks the utility may incur include:

- Bill delinquency
- Costs for hiring outside collection firms
- Uncollectible receivables
- Revenue shortfalls

Additional programs that the County could consider exploring for implementation include crisis vouchers and emergency grants; a plumbing repair/rebate program; toilet replacement, low-flow shower head change outs, rain barrels; and school system conservation education programs. Many of the programs identified above are designed to improve the efficiency and use of water. It is a common misconception that low income correlates with low usage. The truth can be quite the opposite. It is often found that low income customers have higher than average usage due in part to leaky toilets, faucets and pipes, general substandard plumbing, and a lack of high efficiency fixtures. FCSE may want to consider focusing its efforts on affordability through these types of programs to address the potential root cause of higher utility bills. Based on our experience, if FCSE wishes to explore additional program options in more detail, it would be preferable to partner with a local non-profit organization for program administration.

The cost for extension of water and sewer lines to new service areas that have been identified in the capital improvements plan do not include the cost of connection for each household. These costs include the connection charges from FCSE, as well as the cost to construct and install the lateral pipes from the mains into the house. These can easily add up to thousands of dollars invested by each homeowner. FCSE could also explore a program to offer loans to customers to help offset the costs of the connection fees. However, this would require initial capital to seed the program until it becomes self-sustaining. Exploration of this concept was not part of the scope of this engagement.

ENTERPRISE ISSUES

The operational review and financial plan required that RFC examine and consider the specific details of how FCSE conducts its business now and into the future. The Study also allowed RFC to take a step back and consider a higher-level, more holistic review of the utility. Some of these observations that go beyond the financial planning equation are addressed in this section.

Service Area Geography

Economies of scale significantly improves the economics of utility service due to the high cost of capital infrastructure required to provide water and sewer service. When economies of scale are not available due to population size, a geographically compact and connected system can allow for cost efficient operations. FCSE provides water and sewer service to approximately 7,000 customers located in the unincorporated areas of the County using roughly 1 MGD. Due to the expansiveness of the City and the surrounding smaller cities and towns, the unincorporated areas of the County are scattered throughout the area and not contiguous.

Related to other utilities in the region and industry, the FCSE would be considered small both from a number of customers as well as daily pumped/treated water perspectives. In addition, the FCSE service areas exist in pockets

surrounded by the incorporated areas of the County. These factors contribute to higher costs of service than would be anticipated under more typical operating environments. The high cost of pumping water and sewage prevents the Department from consolidating all of their treatment operations at a single location. As a result, many of their customers are serviced through wholesale arrangements with the City of Columbus.

The geography of the service area also makes meter reading difficult and time-consuming. The Department's maintenance staff performs the meter reading on a quarterly basis. The process usually requires 2-3 weeks to complete and pulls the crews away from the maintenance tasks that are needed throughout the system. The capital improvements plan includes installation of automated meter reading which should greatly improve this process and free up maintenance



EXHIBIT 27: CIP COMPARISON

	WATER	WASTEWATER	TOTAL	MGD SOLD
SMALL UTILITY MEDIAN ANNUAL CAPITAL NEEDS	\$3.5M	\$5.0M	\$8.5M	8 MGD
FRANKLIN COUNTY AVERAGE (FY15 – FY23)	\$6.7M	~\$7.6M	\$14.3M	≈1 MGD
% DIFFERENCE	+91%	+52%	+68%	-88%

staff to focus on issues more central to their roles.

Capital Needs

The capital improvements plan that was developed by FCSE staff was based on regulatory requirements, partnerships to provide clean water and sewer treatment for households, and rehabilitation of existing system assets. RFC conducts a biennial national survey of nearly 300 water and sewer utilities to develop benchmarking for rates, operating statistics, and other metrics. A comparison of the County’s capital program with national statistics for small utilities is presented in Exhibit 27. On average, the County has much greater capital needs and a much smaller customer base to support those investments.

The magnitude of the capital program is a primary driver

of the need for increased revenue in the future. Some of the projects can be delayed, but these projects are required for FCSE to meet the requirements of its mission as defined in the Ohio Revised Code.

When the EPA identifies neighborhoods with risk for contaminated wells or with failing septic systems that need to be connected to a municipal system, FCSE is the utility typically tasked with performing this work. These locations are not necessarily in close proximity to existing FCSE customers or close to existing infrastructure, and the cost of building treatment facilities, running lines, and connecting the customers is frequently significant. Growth in accounts for a system with sufficient density typically has a positive economic effect, but if the cost of adding 150 accounts is \$10 million or more, the effect can easily be considerably negative economically.

A close-up photograph of a black faucet with water flowing out. The background is a blurred blue bokeh. A horizontal yellow bar is positioned above the title.

ALTERNATIVE SERVICE DELIVERY OPTIONS

FCSE is faced with a myriad of challenges including an atypical operating and maintenance environment, significant capital pressures, and a customer base with limited expectations for growth. The combined impact of these issues results in increases to customer rates and charges at a rate that may be untenable given the current level of rates and charges and existing customer base. RFC has considered and performed a conceptual, high-level review of alternative service delivery options. Any recommendation of these ideas would require further analysis and consideration by the Department.

Privatization has been a successful option for many utilities across the country. Private entities can be incentivized to keep the system in good condition while improving operational efficiencies, and rates are typically subject to review and approval by a state's public service commission to ensure fairness. However, there are several challenges when considering whether a private entity would be interested in assuming the FCSE assets and operations:

- The need for capital improvements to the existing system are not eliminated by the privatization
- The physical location and incongruence of the system would limit a private entities ability to create an efficient system
- The cost structure of a private entity would include an additional component for profit
- A private entity may have a higher cost of capital for financing improvements, if required by the service arrangement
- Responsibility for utility extensions in the future may require consideration and approval by local, regional, and state agencies
- A perceived loss of control and concern about future water resource adequacy and environmental protection

Based on these issues alone, it is doubtful that a private entity would be interested in assuming ownership of the entire system. Although unlikely, it may be conceivable that the County could privatize some of the isolated service areas and transfer ownership of the assets to a private entity. A small and continuous service area could present a more attractive investment for a private company if there was some perception of value. This might make sense from the Department's perspective if it decreased FCSE's geographic footprint. A more plausible option may be to identify certain portions of the system, and its assets, that may provide value to other municipal utility providers with capacity constraints. The scope of this engagement did not include analyzing specific service areas to determine the feasibility of this alternative.

FCSE provides utility service to approximately 4,000 water customers and 6,000 wastewater customers and currently generates annual revenue of approximately \$7 million. The neighboring City of Columbus utility provides service to approximately 275,000 accounts with an annual revenue

of approximately \$450 million (water, sanitary, and storm water). Consolidation of FCSE with the City is a natural alternative given the proximity and scale of the City's utility, coupled with the fact that most of FCSE's customers receive their service through wholesale arrangements with the City effectively serving as a regional utility provider. Several reasons this alternative delivery option may hold merit include:

- The existing FCSE system is already connected to the City's system in many service areas, with some FCSE service areas completely surrounded by City service areas.
- Given the magnitude of the City's utility, addressing the capital and operational needs of FCSE could be accomplished with a smaller overall impact to annual cash flow (on a percentage basis) and limited impact on customers.
- Some of the capital requirements in the Department's CIP may not be required if the City has other assets that could perform the same functions already in place.
- The City may provide more attractive financing options due to its access to capital markets.

RFC understands there are legal and legislative constraints that require City customers to be part of the incorporated area, and this is a primary cause for some of the pockets of service areas. The feasibility of this alternative would rely on either the City changing its policy regarding annexation or FCSE customers changing their position on accepting annexation. Although this alternative service delivery model appears to be the most logical, it would likely involve a lengthy and in depth negotiation with the City to determine acceptable terms for both parties. Although significant and detailed evaluation and examination of both the quantitative and qualitative feasibility of this alternative would be required, it may provide the most economical platform to ensure continued, safe, and reliable services to customers at the lowest possible cost.

In lieu of a complete acquisition of the County's water and sewer systems, FCSE could minimize its capital requirements by removing responsibility for providing service to new areas within the County. The CIP includes approximately \$64 million in anticipated service extension projects through 2023. If the responsibility for these projects could be transferred to another entity the Department would be able to minimize its future rate increases. The total cost is similar to the amount required from the General Fund to keep the annual rate increases to 5%; a similar result could be possible under this alternative.

SUMMARY AND RECOMMENDATIONS

FCSE provides a critical service to customers that provides significant public health, economic, and environmental benefits. The Department is staffed by a dedicated and competent workforce who are committed to providing high quality service with the available resources. However, there are numerous structural issues impacting FCSE's ability to reduce the cost of providing water and wastewater utility services.

The majority of FCSE's current operating costs are related to the provision of wholesale service based on contractual agreements. FCSE must absorb the additional costs of operating, maintaining, and capitalizing local distribution and collection infrastructure as well as treatment facilities serving limited numbers of accounts. FCSE has reduced economies of scale, its service area is expansion and non-contiguous, and it is facing over \$100 million in capital investment needs over the next 10 years. Revenues and rates will need to increase significantly without substantial support from the General Fund.

The prospective increase in the cost of services highlight potential concerns related to rate affordability. In the near-term, it would be beneficial for FCSE to engage local and state regulators and articulate its issues and concerns with particular emphasis on financial planning, rates, and customer affordability. A proactive and collaborative approach to address FCSE's challenges may foster additional

understanding and support.

The structural challenges discussed above limit FCSE's strategic options. The most logical alternative meriting further consideration is a regional service delivery approach where the City's assumes ownership and operation of the County's utility system. Although significant and detailed evaluation and examination of both the quantitative and qualitative feasibility of this alternative would be required, it may provide the most economical platform to ensure continued, safe, and reliable services to customers at the lowest possible cost.

However, it is important to remember that without a change in the current approach for service delivery, FCSE will need to address its financial challenges, which requires a substantial increase in revenue. FCSE will maintain its responsibility to provide critical utility services that protect public health and the environment and support economic development.

Appendix A:

**FINANCIAL PLANNING &
RATE MODEL SCHEDULES**

Franklin County Department of Sanitary Engineering

Comprehensive Financial Planning & Rate Model



Prepared By:



Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Model Inputs and Assumptions

Current Year		CY 2014					
		CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Escalation and Inflation Factors	O&M Code	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
<u>O&M Budget</u>							
Salaries and Benefits	51	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Services and Fees	52	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office, Materials, and Supplies	53	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fixed Asset Maintenance	54	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Debt Service	56	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interfund Transfer - Operations	57	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interfund Transfer - Debt Service	58	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Healthcare	60	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Wholesale - Water Purchases	61	5.00%	3.00%	4.00%	4.00%	5.00%	5.00%
Wholesale - Sewer Costs	62	5.00%	3.00%	4.50%	5.00%	5.00%	5.00%
<u>Misc. Revenue (Water & Sewer)</u>							
Reimbursements and Refunds		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Miscellaneous Revenues		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Miscellaneous Revenues		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<u>Billing Data</u>							
<u>Water Accounts</u>							
Worthington Hills		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
New Rome		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Oakhurst/Briarbank/Forest Ridge		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Lockbourne		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Cen, Tay, Brair, Hol, You, Wind		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Timberbrook		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Darbydale		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Timberlake		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Harrisburg		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
<u>Sewer Accounts</u>							
Worthington Hills		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
New Rome		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Oakhurst/Briarbank/Forest Ridge		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Lockbourne		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Cen, Tay, Brair, Hol, You, Wind		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Timberbrook		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Darbydale		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Timberlake		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
Harrisburg		0.00%	0.00%	0.00%	0.00%	0.50%	0.50%
<u>Water Usage</u>							
Worthington Hills		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
New Rome		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Oakhurst/Briarbank/Forest Ridge		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Lockbourne		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Cen, Tay, Brair, Hol, You, Wind		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Timberbrook		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Darbydale		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Timberlake		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Harrisburg		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
<u>Sewer Usage</u>							
Worthington Hills		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
New Rome		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Oakhurst/Briarbank/Forest Ridge		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Lockbourne		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Cen, Tay, Brair, Hol, You, Wind		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Timberbrook		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Darbydale		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Timberlake		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%
Harrisburg		-1.00%	-1.00%	-1.00%	-0.50%	-0.50%	-0.50%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Billing Data - Customers, Usage, and Revenue

	<u>CY 2010</u>	<u>CY 2011</u>	<u>CY 2012</u>	<u>CY 2013</u>	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected
Customer Billing Data										
<u>Water Accounts</u>										
Worthington Hills	-	-	-	-	-	-	-	-	-	-
Worthington Hills	-	-	-	-	-	-	-	-	-	-
Worthington Hills	-	-	-	-	-	-	-	-	-	-
4 New Rome	1,588	1,621	1,620	1,618	1,618	1,618	1,618	1,618	1,626	1,634
5 New Rome	1,598	1,585	1,592	1,577	1,577	1,577	1,577	1,577	1,585	1,593
6 New Rome	315	268	267	243	243	243	243	243	244	245
Oakhurst/Briarbank/Forest Ridge	-	-	-	-	-	-	-	-	-	-
Lockbourne	317	316	125	126	126	126	126	126	127	128
Cen, Tay,Brair, Hol,You,Wind	-	-	-	-	-	-	-	-	-	-
Timberbrook	-	-	-	-	-	-	-	-	-	-
Darbydale	-	-	-	-	-	-	-	-	-	-
Timberlake	-	192	192	192	192	192	192	192	193	194
Harrisburg	-	13	136	139	139	139	139	139	140	141
New Extension Customers										
New Annual Connections	-	-	-	-	-	-	-	-	-	-
Subtotal: New Extension Customers	-	-	-	-	-	-	-	-	-	-
Subtotal: Water Accounts	3,818	3,995	3,932	3,895	3,895	3,895	3,895	3,895	3,915	3,935
% Change		4.6%	-1.6%	-0.9%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
<u>Sewer Accounts</u>										
Worthington Hills	313	313	312	316	316	316	316	316	318	320
Worthington Hills	316	314	316	316	316	316	316	316	318	320
Worthington Hills	317	312	314	301	301	301	301	301	303	305
4 New Rome	1,588	1,621	1,620	1,618	1,618	1,618	1,618	1,618	1,626	1,634
5 New Rome	1,598	1,585	1,592	1,577	1,577	1,577	1,577	1,577	1,585	1,593
6 New Rome	315	268	267	243	243	243	243	243	244	245
Oakhurst/Briarbank/Forest Ridge	172	171	172	170	170	170	170	170	171	172
Lockbourne	317	316	125	126	126	126	126	126	127	128
Cen, Tay,Brair, Hol,You,Wind	239	239	237	240	240	240	240	240	241	242
Timberbrook	278	274	275	272	272	272	272	272	273	274
Darbydale	268	266	264	270	270	270	270	270	271	272
Timberlake	-	192	192	192	192	192	192	192	193	194
Harrisburg	-	13	136	139	139	139	139	139	140	141
New Extension Customers										
New Annual Connections	-	-	-	-	-	-	175	18	74	75
Subtotal: New Extension Customers	-	-	-	-	-	-	175	193	267	342
Subtotal: Sewer Accounts	5,721	5,884	5,822	5,780	5,780	5,780	5,955	5,973	6,077	6,182
% Change		2.8%	-1.1%	-0.7%	0.0%	0.0%	3.0%	0.3%	1.7%	1.7%
<u>Water Consumption</u>										
Worthington Hills	-	-	-	-	-	-	-	-	-	-
Worthington Hills	-	-	-	-	-	-	-	-	-	-
Worthington Hills	-	-	-	-	-	-	-	-	-	-
New Rome	116,905	112,962	105,248	101,580	100,564	99,558	98,562	98,069	97,579	97,091
New Rome	133,932	107,363	102,795	96,583	95,617	94,661	93,714	93,245	92,779	92,315
New Rome	116,544	121,352	101,741	96,898	95,929	94,970	94,020	93,550	93,082	92,617
Oakhurst/Briarbank/Forest Ridge	-	-	-	-	-	-	-	-	-	-
Lockbourne	29,444	30,845	5,755	8,164	8,082	8,001	7,921	7,881	7,842	7,803
Cen, Tay,Brair, Hol,You,Wind	-	-	-	-	-	-	-	-	-	-
Timberbrook	-	-	-	-	-	-	-	-	-	-
Darbydale	-	-	-	-	-	-	-	-	-	-
Timberlake	-	-	14,520	32,267	31,945	31,626	31,310	31,153	30,997	30,842
Harrisburg	-	49	4,512	8,565	8,479	8,394	8,310	8,268	8,227	8,186
New Extension Customers	-	-	-	-	-	-	-	-	-	-
Subtotal: Water Consumption	396,825	372,571	334,571	344,057	340,616	337,210	333,837	332,166	330,506	328,854
% Change		-6.1%	-10.2%	2.8%	-1.0%	-1.0%	-1.0%	-0.5%	-0.5%	-0.5%
Estimated Consumption per Acct (ccf/yr)	104	93	85	88	87	87	86	85	84	84
% Change		-10.3%	-8.8%	3.8%	-1.0%	-1.0%	-1.0%	-0.5%	-1.0%	-1.0%
<u>Sewer Consumption</u>										
Worthington Hills	31,422	30,746	31,624	29,869	29,570	29,274	28,981	28,836	28,692	28,549
Worthington Hills	26,555	23,215	22,771	24,611	24,364	24,120	23,879	23,760	23,641	23,523
Worthington Hills	25,855	25,426	66,687	24,321	24,078	23,837	23,599	23,481	23,364	23,247
New Rome	116,611	124,331	104,588	101,580	100,564	99,558	98,562	98,069	97,579	97,091
New Rome	121,593	101,321	99,389	96,583	95,617	94,661	93,714	93,245	92,779	92,315
New Rome	107,164	116,467	107,104	96,898	95,929	94,970	94,020	93,550	93,082	92,617
Oakhurst/Briarbank/Forest Ridge	1,531	1,659	1,722	13,276	13,144	13,013	12,883	12,819	12,755	12,691
Lockbourne	28,505	29,336	5,098	8,164	8,082	8,001	7,921	7,881	7,842	7,803
Cen, Tay,Brair, Hol,You,Wind	18,712	18,922	17,195	15,078	14,927	14,778	14,630	14,557	14,484	14,412
Timberbrook	21,160	20,350	17,345	21,237	21,024	20,814	20,606	20,503	20,400	20,298
Darbydale	16,142	20,020	16,524	16,441	16,277	16,114	15,953	15,873	15,794	15,715
Timberlake	-	-	10,574	-	-	-	-	-	-	-
Harrisburg	-	437	5,437	8,565	8,479	8,394	8,310	8,268	8,227	8,186
New Extension Customers	-	-	-	-	-	-	13,550	14,799	20,368	25,832
Subtotal: Sewer Consumption	515,250	512,230	506,058	456,623	452,055	447,534	456,608	455,641	459,007	462,279
% Change		-0.6%	-1.2%	-9.8%	-1.0%	-1.0%	2.0%	-0.2%	0.7%	0.7%
Estimated Consumption per Acct (ccf/yr)	90	87	87	79	78	77	77	76	76	75
% Change		-3.3%	-0.2%	-9.1%	-1.0%	-1.0%	-1.0%	-0.5%	-1.0%	-1.0%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Operations & Maintenance Budget

	<u>CY 2014</u> Budget	<u>CY 2015</u> Projected	<u>CY 2016</u> Projected	<u>CY 2017</u> Projected	<u>CY 2018</u> Projected	<u>CY 2019</u> Projected
Operating Budget						
<u>Water Fund</u>						
Salaries and Benefits	\$ 335,759	\$ 381,388	\$ 387,109	\$ 392,915	\$ 398,809	\$ 404,791
Services and Fees	297,838	306,773	315,976	325,455	335,219	345,275
Office, Materials, and Supplies	117,118	120,632	124,250	127,978	131,817	135,772
Fixed Asset Maintenance	-	-	-	-	-	-
Healthcare	92,643	110,149	120,062	130,868	142,646	155,484
Wholesale Purchases	1,478,962	1,523,331	1,584,264	1,647,635	1,730,016	1,816,517
Interfund Transfer - Operations	15,000	15,000	15,000	15,000	15,000	15,000
Interfund Transfer - Debt Service	75,847	75,847	75,847	75,847	75,847	75,847
Subtotal: Water Fund	\$ 2,413,166	\$ 2,533,119	\$ 2,622,508	\$ 2,715,698	\$ 2,829,354	\$ 2,948,687
<u>Sewer Fund</u>						
Salaries and Benefits	\$ 712,144	\$ 763,419	\$ 774,870	\$ 786,493	\$ 798,290	\$ 810,265
Services and Fees	726,833	748,638	771,097	794,230	818,057	842,599
Office, Materials, and Supplies	157,572	162,299	167,168	172,183	177,349	182,669
Fixed Asset Maintenance	121,100	124,733	128,475	132,329	136,299	140,388
Healthcare	244,783	275,982	300,820	327,894	357,404	389,571
Wholesale Purchases	2,182,205	2,247,671	2,348,816	2,466,257	2,589,570	2,719,049
Interfund Transfer - Operations	-	-	-	-	-	-
Interfund Transfer - Debt Service	53,124	53,124	53,124	53,124	53,124	53,124
Subtotal: Sewer Fund	\$ 4,197,761	\$ 4,375,866	\$ 4,544,371	\$ 4,732,510	\$ 4,930,093	\$ 5,137,664
Total: Operating Budget	#####	#####	#####	#####	#####	#####

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Capital Improvements Plan (CIP)

Capital Improvement Projects	Driver	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
<u>Water CIP</u>								
AMR / AMI		\$ -	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -
Timberlake WTP Softening		-	-	-	1,118,000	-	-	-
SD4 Water Valve Replacement	EPA	-	-	3,522,000	-	-	-	-
Timberlake Water Main Piggling		-	-	-	220,000	-	-	-
2014 Waterline Replacement		-	-	-	-	-	-	-
2015 Waterline Replacement		-	-	-	2,135,000	-	-	-
2016 Waterline Replacement		-	-	-	-	2,135,000	-	-
2017 Waterline Replacement		-	-	-	-	-	2,135,000	-
2018 Waterline Replacement		-	-	-	-	-	-	2,030,000
Leonard Park	FCPH	3,401,000	-	-	-	-	-	-
Broad Street Waterline Relocation		490,000	-	-	-	-	-	-
Broad Street Waterline Relocation		-	2,000,000	-	-	-	-	-
Woodlawn / Beacon Hill Waterline		150,000	-	-	-	-	-	-
Timberlake Elevated Tank Replacement		-	-	-	1,370,000	-	-	-
2014 Systemwide Leak Detection		-	32,000	-	-	-	-	-
2015 Systemwide Leak Detection		-	-	32,000	-	-	-	-
2016 Systemwide Leak Detection		-	-	-	32,000	-	-	-
2017 Systemwide Leak Detection		-	-	-	-	32,000	-	-
2018 Systemwide Leak Detection		-	-	-	-	-	32,000	-
Waterline Extensions Preliminary Study		-	-	150,000	-	-	-	-
Waterline Extensions Group 1	FCPH	-	-	-	-	-	-	-
Waterline Extensions Group 2	FCPH	-	-	-	-	-	-	-
Waterline Extensions Group 3	FCPH	-	-	-	-	-	-	-
Waterline Extensions Group 4	FCPH	-	-	-	-	-	-	-
Placeholder for future Costs		-	-	-	-	-	-	-
Mon E Bak Waterline Extension	FCPH	-	-	3,400,000	-	-	-	-
Subtotal: Water CIP		\$ 4,041,000	\$ 2,032,000	\$ 8,604,000	\$ 4,875,000	\$ 2,167,000	\$ 2,167,000	\$ 2,030,000
<u>Sewer CIP</u>								
Darbydale WWTP Improvements	EPA	\$ -	\$ -	\$ -	\$ 6,745,000	\$ -	\$ -	\$ -
Oakhurst WWTP Filter Replacement		270,000	-	-	-	-	-	-
Eureka Park Sanitary Sewer	FCPH	-	1,800,000	-	-	-	-	-
Mon E Bak Sanitary Sewer	FCPH	-	-	630,000	-	-	-	-
Brown Road East Sanitary Sewer	FCPH	-	-	2,520,000	-	-	-	-
Timberlake Sewer Corrosion Abatement		-	-	-	-	-	-	-
Oakhurst WWTP Improvements	EPA	-	-	-	2,780,000	-	-	-
CMOM / SSES	EPA	-	-	1,750,000	-	-	-	-
CMOM / SSES	EPA	-	-	-	1,750,000	-	-	-
Darby Watershed Utilities Study		-	125,000	-	-	-	-	-
Pleasant Acres MHP		-	-	1,500,000	-	-	-	-
Cherrydale Pump Station Improvements		-	-	349,000	-	-	-	-
Century Acres WWTP Improvements		-	-	1,705,000	-	-	-	-
Timberbrook Pump Station Improvements		-	-	-	695,000	-	-	-
Village Park Pump Station Improvements		-	-	-	-	-	645,000	-
Young Estates Pump Station Improvements		-	-	-	-	-	-	-
Oak Hills MHP	EPA	-	-	750,000	-	-	-	-
Kanawha / Rosslyn Sanitary Sewer	FCPH	-	-	-	4,790,000	-	-	-
Stimmel Sanitary Sewer	EPA	-	-	-	-	4,310,000	-	-
Hague Sanitary Sewer	EPA	-	-	-	-	-	5,695,000	-
Ferris Sanitary Sewer	FCPH	-	-	-	-	-	-	3,380,000
General Sanitary I/I Rehabilitation		-	-	-	-	2,600,000	2,600,000	2,600,000
Placeholder for future Costs		-	-	-	-	-	-	-
Subtotal: Sewer CIP		\$ 270,000	\$ 1,925,000	\$ 9,204,000	\$ 16,760,000	\$ 6,910,000	\$ 8,940,000	\$ 5,980,000
Total: Capital Improvements Plan		\$ 4,311,000	\$ 3,957,000	\$ 17,808,000	\$ 21,635,000	\$ 9,077,000	\$ 11,107,000	\$ 8,010,000

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 CIP Funding Sources and Capital Project Fund Balances

	<u>CY 2013</u>	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Capital Project Fund Balances							
<u>Water Capital Projects Fund</u>							
Beginning Balance	\$ 79,029	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437
Sources of Funds							
General Obligation Debt	-	-	-	-	-	-	-
SRF Loans	150,000	2,000,000	6,922,000	4,309,250	1,601,250	1,601,250	1,522,500
Grants	-	-	-	-	-	-	-
Cash-Financing (PayGo)	-	32,000	182,000	565,750	565,750	565,750	507,500
General Fund	-	-	1,500,000	-	-	-	-
Uses of Funds							
Capital Projects	(4,041,000)	(2,032,000)	(8,604,000)	(4,875,000)	(2,167,000)	(2,167,000)	(2,030,000)
Issuance Costs							
Ending Balance	\$ (3,811,971)	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437	\$ 173,437
<u>Sewer Capital Projects Fund</u>							
Beginning Balance	\$ 73,091	\$ 441,346	\$ 441,346	\$ 442,346	\$ 442,346	\$ 442,346	\$ 442,346
Sources of Funds							
General Obligation Debt	-	-	-	-	-	-	-
SRF Loans	-	1,800,000	6,355,000	14,315,000	4,310,000	5,695,000	3,380,000
Grants	-	-	-	-	-	-	-
Cash-Financing (PayGo)	-	125,000	-	45,000	200,000	945,000	1,600,000
General Fund	-	-	2,850,000	2,400,000	2,400,000	2,300,000	1,000,000
Uses of Funds							
Capital Projects	(270,000)	(1,925,000)	(9,204,000)	(16,760,000)	(6,910,000)	(8,940,000)	(5,980,000)
Issuance Costs							
Ending Balance	\$ (196,909)	\$ 441,346	\$ 442,346	\$ 442,346	\$ 442,346	\$ 442,346	\$ 442,346

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Future Debt Service Calculation

Proposed SRF Loans (Project Specific)	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
<u>Water Projects</u>							
AMR / AMI	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Timberlake WTP Softening	-	-	-	-	35,165	70,330	70,330
SD4 Water Valve Replacement	-	-	-	107,697	215,394	215,394	215,394
Timberlake Water Main Piggings	-	-	-	-	6,727	13,454	13,454
2014 Waterline Replacement	-	-	-	-	-	-	-
2015 Waterline Replacement	-	-	-	-	-	97,927	97,927
2016 Waterline Replacement	-	-	-	-	-	-	107,629
2017 Waterline Replacement	-	-	-	-	-	-	-
2018 Waterline Replacement	-	-	-	-	-	-	-
Leonard Park	-	-	-	-	-	-	-
Broad Street Waterline Relocation	-	-	-	-	-	-	-
Broad Street Waterline Relocation	-	-	111,327	222,653	222,653	222,653	222,653
Woodlawn / Beacon Hill Waterline	-	9,174	9,174	9,174	9,174	9,174	9,174
Timberlake Elevated Tank Replacement	-	-	-	-	41,892	83,785	83,785
2014 Systemwide Leak Detection	-	-	-	-	-	-	-
2015 Systemwide Leak Detection	-	-	-	-	-	-	-
2016 Systemwide Leak Detection	-	-	-	-	-	-	-
2017 Systemwide Leak Detection	-	-	-	-	-	-	-
2018 Systemwide Leak Detection	-	-	-	-	-	-	-
Waterline Extensions Preliminary Study	-	-	-	-	-	-	-
Waterline Extensions Group 1	-	-	-	-	-	-	-
Waterline Extensions Group 2	-	-	-	-	-	-	-
Waterline Extensions Group 3	-	-	-	-	-	-	-
Waterline Extensions Group 4	-	-	-	-	-	-	-
Placeholder for future Costs	-	-	-	-	-	-	-
Mon E Bak Waterline Extension	-	-	-	-	114,267	228,533	228,533
Total: Proposed Water SRF Payments	\$ -	\$ 9,174	\$ 120,500	\$ 339,524	\$ 645,272	\$ 941,251	\$ 1,048,880
<u>Sewer Projects</u>							
Darbydale WWTP Improvements	\$ -	\$ -	\$ -	\$ -	212,122	424,244	424,244
Oakhurst WWTP Filter Replacement	-	-	-	-	-	-	-
Eureka Park Sanitary Sewer	-	-	55,775	111,550	111,550	111,550	111,550
Mon E Bak Sanitary Sewer	-	-	-	39,324	39,324	39,324	39,324
Brown Road East Sanitary Sewer	-	-	-	78,617	157,234	157,234	157,234
Timberlake Sewer Corrosion Abatement	-	-	-	-	-	-	-
Oakhurst WWTP Improvements	-	-	-	-	87,424	174,847	174,847
CMOM / SSES	-	-	-	-	-	-	-
CMOM / SSES	-	-	-	-	-	-	-
Darby Watershed Utilities Study	-	-	-	-	-	-	-
Pleasant Acres MHP	-	-	-	47,030	94,059	94,059	94,059
Cherrydale Pump Station Improvements	-	-	-	-	-	-	-
Century Acres WWTP Improvements	-	-	-	59,452	118,905	118,905	118,905
Timberbrook Pump Station Improvements	-	-	-	-	-	-	-
Village Park Pump Station Improvements	-	-	-	-	-	-	-
Young Estates Pump Station Improvements	-	-	-	-	-	-	-
Oak Hills MHP	-	-	-	-	-	-	-
General Sanitary I/I Rehabilitation	-	-	-	-	-	-	-
Kanawha / Rosslyn Sanitary Sewer	-	-	-	-	-	341,321	341,321
Stimmel Sanitary Sewer	-	-	-	-	-	-	342,523
Hague Sanitary Sewer	-	-	-	-	-	-	-
Ferris Sanitary Sewer	-	-	-	-	-	-	-
Placeholder for future Costs	-	-	-	-	-	-	-
Total: Proposed Sewer SRF Payments	\$ -	\$ -	\$ 55,775	\$ 335,972	\$ 820,617	\$ 1,461,484	\$ 1,804,007
Total Proposed SRF Payments	\$ -	\$ 9,174	\$ 176,275	\$ 675,496	\$ 1,465,889	\$ 2,402,734	\$ 2,852,886

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Debt

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Existing Indebtedness						
<u>Water Debt Service</u>						
State Revolving Fund (SRF) Loans						
Village Park and Young Estates Water (OWDA)	\$ 23,996	\$ 23,996	\$ 23,996	\$ 23,996	\$ -	\$ -
Lincoln Village and New Rome Water (OPWC)	58,402	58,402	-	-	-	-
Timberlake Water Treatment (OWDA)	107,607	107,607	107,607	107,607	107,607	107,607
Timberlake Water Treatment, Supplement (OWDA)	8,283	8,283	8,283	8,283	8,283	8,283
West Broad Street Waterlines (SIB)	-	29,301	58,602	58,602	58,602	58,602
Leonard Park Water, Design (WSRLA)	29,065	58,131	58,131	58,131	58,131	29,065
Leonard Park Water, OPWC	-	-	81,260	81,260	81,260	81,260
Harrisburg Water (OWDA)	40,440	40,440	40,440	40,440	40,440	40,440
Subtotal: State Revolving Fund (SRF) Loans	\$ 267,793	\$ 326,159	\$ 378,319	\$ 378,319	\$ 354,323	\$ 325,258
<u>Sewer Debt Service</u>						
General Obligation						
Series 2010-2 Sanitary Sewer Improvements	\$ 35,601	\$ 55,601	\$ 70,601	\$ 77,001	\$ 81,151	\$ 82,701
Subtotal: General Obligation	\$ 35,601	\$ 55,601	\$ 70,601	\$ 77,001	\$ 81,151	\$ 82,701
State Revolving Fund (SRF) Loans						
Village Park and Young Estate Sewer (OWDA)	\$ 48,166	\$ 48,166	\$ 48,166	\$ 48,166	\$ -	\$ -
Emmit/Mix Avenue Sewer (OPWC)	32,206	32,206	32,206	32,206	32,206	32,206
Darbydale Wastewater (OPWC)	94,127	94,127	94,127	94,127	94,127	94,127
Water Quality Partnership (OPWC)	185,553	185,553	185,553	185,553	185,553	185,553
Darbydale Sewer (OWDA)	83,955	83,955	83,955	83,955	83,955	83,955
Timberlake Wastewater (OWDA)	66,509	66,509	66,509	66,509	66,509	66,509
Timberlake Wastewater, Supplement (OWDA)	34,468	34,468	34,468	34,468	34,468	34,468
Eureka Park Sewer Extension (OPWC)	23,114	23,114	23,114	23,114	23,114	23,114
Pleasant Acres MHP (OWDA)	35,346	35,346	35,346	35,346	35,346	-
Oakhurst Knolls WWTP Filter Replacement	-	19,739	19,739	19,739	19,739	19,739
Mon-E-Bak OWDA Loan (OWDA)	139,252	139,252	139,252	139,252	139,252	139,252
Subtotal: State Revolving Fund (SRF) Loans	\$ 742,697	\$ 762,436	\$ 762,436	\$ 762,436	\$ 714,270	\$ 678,924
Total Existing Debt	\$ 1,046,091	\$ 1,144,197	\$ 1,211,356	\$ 1,217,756	\$ 1,149,744	\$ 1,086,883
Water	\$ 267,793	\$ 326,159	\$ 378,319	\$ 378,319	\$ 354,323	\$ 325,258
Sewer	778,298	818,037	833,037	839,437	795,421	761,625
Proposed Debt						
<u>Water</u>						
General Obligation						
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water SRF Loans						
	\$ 9,174	\$ 120,500	\$ 339,524	\$ 645,272	\$ 941,251	\$ 1,048,880
<u>Sewer</u>						
General Obligation						
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer SRF Loans						
	\$ -	\$ 55,775	\$ 335,972	\$ 820,617	\$ 1,461,484	\$ 1,804,007
Total Proposed Debt	\$ 9,174	\$ 176,275	\$ 675,496	\$ 1,465,889	\$ 2,402,734	\$ 2,852,886
Water	9,174	120,500	339,524	645,272	941,251	1,048,880
Sewer	-	55,775	335,972	820,617	1,461,484	1,804,007

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Revenue Proof

	<u>CY 2014</u> Projected	<u>CY 2015</u> Projected	<u>CY 2016</u> Projected	<u>CY 2017</u> Projected	<u>CY 2018</u> Projected	<u>CY 2019</u> Projected
Water and Sewer Revenue						
User Charge Revenue						
<u>Water User Charge Revenue</u>						
Fixed Charge	\$ 747,684	\$ 822,468	\$ 1,028,124	\$ 1,182,366	\$ 1,307,297	\$ 1,445,404
Volumetric Charge (Per CCF)	\$ 1,791,640	\$ 1,952,446	\$ 2,416,980	\$ 2,766,943	\$ 3,030,740	\$ 3,318,137
Subtotal: Water User Charge Revenue	\$ 2,539,324	\$ 2,774,914	\$ 3,445,104	\$ 3,949,309	\$ 4,338,037	\$ 4,763,541
<u>Sewer User Charge Revenue</u>						
Fixed Charge	\$ 1,078,779	\$ 1,186,750	\$ 1,345,115	\$ 1,686,536	\$ 2,144,938	\$ 2,618,448
Volumetric Charge (Per CCF)	\$ 3,300,002	\$ 3,593,698	\$ 4,036,414	\$ 5,034,828	\$ 6,343,472	\$ 7,669,206
Subtotal: Sewer User Charge Revenue	\$ 4,378,781	\$ 4,780,448	\$ 5,381,529	\$ 6,721,364	\$ 8,488,410	\$ 10,287,654
Subtotal: User Charge Revenue	\$ 6,918,105	\$ 7,555,362	\$ 8,826,633	\$ 10,670,673	\$ 12,826,447	\$ 15,051,195
Misc. Revenue						
<u>Water</u>						
Reimbursements and Refunds	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044
Miscellaneous Revenues	5,693	5,693	5,693	5,693	5,693	5,693
Other Miscellaneous Revenues	90,412	90,412	90,412	90,412	90,412	90,412
Payment to offset debt - Leonard Park Design	29,065	58,131	58,131	58,131	58,131	29,065
Water Surcharge - Maintenance Areas	Yes	-	329,338	324,411	321,141	317,912
Transfer from General Fund	No	-	-	-	-	-
Subtotal: Water	\$ 129,214	\$ 487,617	\$ 484,323	\$ 482,691	\$ 479,421	\$ 447,126
<u>Sewer</u>						
Reimbursements and Refunds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Revenues	2,931	2,931	2,931	2,931	2,931	2,931
Other Miscellaneous Revenues	135,619	135,619	135,619	135,619	135,619	135,619
Sewer Surcharge - Maintenance Areas	Yes	-	199,313	196,366	194,432	192,492
Transfer from General Fund	No	-	-	-	-	-
Subtotal: Sewer	\$ 138,550	\$ 337,862	\$ 335,928	\$ 334,916	\$ 332,981	\$ 331,041
Subtotal: Water and Sewer Revenue	\$ 7,185,869	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,849	\$ 15,829,363

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Revenue Requirements

	<u>CY 2014</u> Budget	<u>CY 2015</u> Forecast	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast
Utility Revenue Requirements						
<u>Operating Expenses</u>						
Water						
Salaries and Benefits	\$ 335,759	\$ 381,388	\$ 387,109	\$ 392,915	\$ 398,809	\$ 404,791
Services and Fees	297,838	306,773	315,976	325,455	335,219	345,275
Office, Materials, and Supplies	117,118	120,632	124,250	127,978	131,817	135,772
Fixed Asset Maintenance	-	-	-	-	-	-
Healthcare	92,643	110,149	120,062	130,868	142,646	155,484
Wholesale Purchases	1,478,962	1,523,331	1,584,264	1,647,635	1,730,016	1,816,517
Additions due to CIP	-	-	86,040	137,371	163,162	189,727
Subtotal: Water Operating Expenses	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567
Sewer						
Salaries and Benefits	\$ 712,144	\$ 763,419	\$ 774,870	\$ 786,493	\$ 798,290	\$ 810,265
Services and Fees	726,833	748,638	771,097	794,230	818,057	842,599
Office, Materials, and Supplies	157,572	162,299	167,168	172,183	177,349	182,669
Fixed Asset Maintenance	121,100	124,733	128,475	132,329	136,299	140,388
Healthcare	244,783	275,982	300,820	327,894	357,404	389,571
Wholesale Purchases	2,182,205	2,247,671	2,348,816	2,466,257	2,589,570	2,719,049
Additions due to CIP	-	-	92,040	262,401	339,373	438,954
Subtotal: Sewer Operating Expenses	\$ 4,144,637	\$ 4,322,742	\$ 4,583,287	\$ 4,941,788	\$ 5,216,343	\$ 5,523,494
Subtotal: Operating Expenses	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061
<u>Debt Service Requirements</u>						
Existing Indebtness						
Water						
General Obligation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Specific Obligation / Revenue Bonds	267,793	326,159	378,319	378,319	354,323	325,258
Sewer						
General Obligation	\$ 35,601	\$ 55,601	\$ 70,601	\$ 77,001	\$ 81,151	\$ 82,701
Specific Obligation / Revenue Bonds	742,697	762,436	762,436	762,436	714,270	678,924
Subtotal: Existing Indebtness	\$ 1,046,091	\$ 1,144,197	\$ 1,211,356	\$ 1,217,756	\$ 1,149,744	\$ 1,086,883
Proposed Indebtness						
Water						
General Obligation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF Loans	9,174	120,500	339,524	645,272	941,251	1,048,880
Sewer						
General Obligation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF Loans	-	55,775	335,972	820,617	1,461,484	1,804,007
Subtotal: Proposed Indebtness	\$ 9,174	\$ 176,275	\$ 675,496	\$ 1,465,889	\$ 2,402,734	\$ 2,852,886
Subtotal: Debt Service Requirements	\$ 1,055,264	\$ 1,320,472	\$ 1,886,852	\$ 2,683,645	\$ 3,552,479	\$ 3,939,769
<u>Other Expenditures</u>						
Rate Funded Capital (PAYGO)						
Water	\$ 32,000	\$ 182,000	\$ 565,750	\$ 565,750	\$ 565,750	\$ 507,500
Sewer	125,000	-	45,000	200,000	945,000	1,600,000
Interfund Transfers						
Water	15,000	191,600	28,133	80,437	54,464	281,463
Sewer	-	(78,244)	(79,839)	254,438	403,143	929,569
Subtotal: Other Expenditures	\$ 172,000	\$ 295,356	\$ 559,044	\$ 1,100,625	\$ 1,968,357	\$ 3,318,532
Total: Revenue Requirements	\$ 7,694,221	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,848	\$ 15,829,363
% Change	6.20%	8.92%	15.11%	19.09%	18.72%	16.06%
Total Water Revenue Requirements	2,646,286	3,262,531	3,929,427	4,432,000	4,817,457	5,210,667
Total Sewer Revenue Requirements	5,047,935	5,118,310	5,717,457	7,056,280	8,821,391	10,618,695
	56.61%					15.5%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Revenue Requirements

	<u>CY 2014</u> Budget	<u>CY 2015</u> Forecast	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast
Analysis of Revenue Requirements						
<u>Cost Increases - Change from 2014</u>		\$ 686,621	\$ 1,952,664	\$ 3,794,059	\$ 5,944,628	\$ 8,135,142
Operating Costs						
Wholesale Purchases	\$	109,835	\$ 271,913	\$ 452,725	\$ 658,419	\$ 874,399
CIP Additions		-	178,080	399,772	502,536	628,682
Other Operating Costs		188,222	284,039	384,557	490,102	601,025
Subtotal: Overall Operating Costs	\$	298,057	\$ 734,032	\$ 1,237,054	\$ 1,651,057	\$ 2,104,105
% of Total Increase		43.41%	37.59%	32.61%	27.77%	25.86%
Debt Service						
Existing Indebtedness	\$	98,106	\$ 165,265	\$ 171,665	\$ 103,653	\$ 40,792
Proposed Indebtedness		167,101	666,322	1,456,715	2,393,561	2,843,713
Subtotal: Debt Service	\$	265,207	\$ 831,588	\$ 1,628,380	\$ 2,497,214	\$ 2,884,505
% of Total Increase		38.62%	42.59%	42.92%	42.01%	35.46%
Rate Funded Capital		25,000	453,750	608,750	1,353,750	1,950,500
% of Total Increase		3.64%	23.24%	16.04%	22.77%	23.98%
Total: Cost Increases - Change from 2014	\$	686,621	\$ 1,952,664	\$ 3,794,059	\$ 5,944,628	\$ 8,135,142
Cumulative % Change		8.92%	25.38%	49.31%	77.26%	105.73%
Annual Percentage Change						
<u>Overall Revenue Requirements</u>		8.92%	15.11%	19.09%	18.72%	16.06%
Wholesale Purchases		3.00%	4.30%	4.60%	5.00%	5.00%
CIP Additions		0.00%	0.00%	124.49%	25.71%	25.10%
Other Operating Costs		6.71%	3.20%	3.25%	3.31%	3.37%
Debt Service		25.13%	42.89%	42.23%	32.38%	10.90%
Other Expenditures		71.72%	89.28%	96.88%	78.84%	68.59%
<u>Water Revenue Requirements</u>		23.29%	20.44%	12.79%	8.70%	8.16%
Wholesale Purchases		3.00%	4.00%	4.00%	5.00%	5.00%
CIP Additions		0.00%	0.00%	59.66%	18.77%	16.28%
Other Operating Costs		8.96%	3.10%	3.15%	3.20%	3.26%
Debt Service		61.27%	60.71%	42.59%	26.57%	6.06%
Other Expenditures		694.89%	58.96%	8.81%	-4.02%	27.21%
<u>Sewer Revenue Requirements</u>		1.39%	11.71%	23.42%	25.01%	20.37%
Wholesale Purchases		3.00%	4.50%	5.00%	5.00%	5.00%
CIP Additions		0.00%	0.00%	185.09%	29.33%	29.34%
Other Operating Costs		5.74%	3.25%	3.30%	3.36%	3.41%
Debt Service		12.27%	33.78%	42.01%	35.95%	13.68%
Other Expenditures		-162.60%	-55.47%	-1404.39%	196.66%	87.63%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Water Revenue Sufficiency

	<u>CY 2014</u> Projected	<u>CY 2015</u> Forecast	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast
Water Revenue						
<u>User Charge Revenue</u>						
Fixed Charge	\$ 747,684	\$ 822,468	\$ 1,028,124	\$ 1,182,366	\$ 1,307,297	\$ 1,445,404
Volumetric Charge (Per CCF)	1,791,640	1,952,446	2,416,980	2,766,943	3,030,740	3,318,137
Subtotal: User Charge Revenue	\$ 2,539,324	\$ 2,774,914	\$ 3,445,104	\$ 3,949,309	\$ 4,338,037	\$ 4,763,541
<u>Misc. Operating Revenue</u>						
Reimbursements and Refunds	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044	\$ 4,044
Miscellaneous Revenues	5,693	5,693	5,693	5,693	5,693	5,693
Other Miscellaneous Revenues	119,477	148,543	148,543	148,543	148,543	119,477
Surcharge Revenue	-	329,338	326,043	324,411	321,141	317,912
Operating Transfer From General Fund	-	-	-	-	-	-
Subtotal: Misc. Operating Revenue	\$ 129,214	\$ 487,617	\$ 484,323	\$ 482,691	\$ 479,421	\$ 447,126
Total: Water Revenue	\$ 2,668,539	\$ 3,262,531	\$ 3,929,427	\$ 4,432,000	\$ 4,817,458	\$ 5,210,667
Water Expenditures						
<u>Operating Costs</u>						
Salaries and Benefits	\$ 335,759	\$ 381,388	\$ 387,109	\$ 392,915	\$ 398,809	\$ 404,791
Services and Fees	297,838	306,773	315,976	325,455	335,219	345,275
Office, Materials, and Supplies	117,118	120,632	124,250	127,978	131,817	135,772
Fixed Asset Maintenance	-	-	-	-	-	-
Healthcare	92,643	110,149	120,062	130,868	142,646	155,484
Wholesale Purchases	1,478,962	1,523,331	1,584,264	1,647,635	1,730,016	1,816,517
Additions due to CIP	-	-	86,040	137,371	163,162	189,727
Subtotal: Operating Costs	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567
<u>Debt Service and Capital Expenditures</u>						
Existing Debt Service	\$ 267,793	\$ 326,159	\$ 378,319	\$ 378,319	\$ 354,323	\$ 325,258
Proposed Debt Service	9,174	120,500	339,524	645,272	941,251	1,048,880
Rate-Funded Capital (PAYGO) & Transfers	47,000	373,600	593,883	646,187	620,214	788,963
Subtotal: Debt Service and Capital Expenditures	\$ 323,966	\$ 820,260	\$ 1,311,726	\$ 1,669,778	\$ 1,915,788	\$ 2,163,100
Total: Water Expenditures	\$ 2,646,286	\$ 3,262,531	\$ 3,929,427	\$ 4,432,000	\$ 4,817,457	\$ 5,210,667
Water Surplus / (Deficit)	\$ 22,253	\$ 0	\$ 0	\$ (0)	\$ 0	\$ 0

Proposed Rate Increases

Water

Across-the-Board Increase for Sufficiency

	0.00%	10.10%	25.10%	15.10%	10.10%	10.10%
Fixed Charge Manual Override		10.00%	25.00%	15.00%	10.00%	10.00%
Variable Charge Manual Override		10.00%	25.00%	15.00%	10.00%	10.00%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Sewer Revenue Sufficiency

	<u>FY 2014</u> Projected	<u>FY 2015</u> Forecast	<u>FY 2016</u> Forecast	<u>FY 2017</u> Forecast	<u>FY 2018</u> Forecast	<u>FY 2019</u> Forecast
Sewer Revenue						
<u>User Charge Revenue</u>						
Fixed Charge	\$ 1,078,779	\$ 1,186,750	\$ 1,345,115	\$ 1,686,536	\$ 2,144,938	\$ 2,618,448
Volumetric Charge (Per CCF)	3,300,002	3,593,698	4,036,414	5,034,828	6,343,472	7,669,206
Subtotal: User Charge Revenue	\$ 4,378,781	\$ 4,780,448	\$ 5,381,529	\$ 6,721,364	\$ 8,488,410	\$ 10,287,654
<u>Misc. Operating Revenue</u>						
Reimbursements and Refunds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Revenues	2,931	2,931	2,931	2,931	2,931	2,931
Other Miscellaneous Revenues	135,619	135,619	135,619	135,619	135,619	135,619
Surcharge Revenue	-	199,313	197,378	196,366	194,432	192,492
Operating Transfer From General Fund	-	-	-	-	-	-
Subtotal: Misc. Operating Revenue	\$ 138,550	\$ 337,862	\$ 335,928	\$ 334,916	\$ 332,981	\$ 331,041
Total: Sewer Revenue	\$ 4,517,330	\$ 5,118,310	\$ 5,717,457	\$ 7,056,280	\$ 8,821,391	\$ 10,618,696
Sewer Expenditures						
<u>Operating Costs</u>						
Salaries and Benefits	\$ 712,144	\$ 763,419	\$ 774,870	\$ 786,493	\$ 798,290	\$ 810,265
Services and Fees	726,833	748,638	771,097	794,230	818,057	842,599
Office, Materials, and Supplies	157,572	162,299	167,168	172,183	177,349	182,669
Fixed Asset Maintenance	121,100	124,733	128,475	132,329	136,299	140,388
Healthcare	244,783	275,982	300,820	327,894	357,404	389,571
Wholesale Purchases	2,182,205	2,247,671	2,348,816	2,466,257	2,589,570	2,719,049
Additions due to CIP	-	-	92,040	262,401	339,373	438,954
Subtotal: Operating Costs	\$ 4,144,637	\$ 4,322,742	\$ 4,583,287	\$ 4,941,788	\$ 5,216,343	\$ 5,523,494
<u>Debt Service and Capital Expenditures</u>						
Existing Debt Service	\$ 778,298	\$ 818,037	\$ 833,037	\$ 839,437	\$ 795,421	\$ 761,625
Proposed Debt Service	-	55,775	335,972	820,617	1,461,484	1,804,007
Rate-Funded Capital (PAYGO) & Transfers	125,000	(78,244)	(34,839)	454,438	1,348,143	2,529,569
Subtotal: Debt Service and Capital Expenditures	\$ 903,298	\$ 795,568	\$ 1,134,170	\$ 2,114,492	\$ 3,605,048	\$ 5,095,201
Total: Sewer Expenditures	\$ 5,047,935	\$ 5,118,310	\$ 5,717,457	\$ 7,056,280	\$ 8,821,391	\$ 10,618,695
Sewer Surplus / (Deficit)	\$ (530,605)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0

Proposed Rate Increases

Sewer

Rate Increase for Sufficiency

	12.12%	10.00%	10.07%	25.00%	25.05%	20.03%
Fixed Charge (Override)		10.00%	10.00%	25.00%	25.00%	20.00%
Variable Charge (Override)		10.00%	10.00%	25.00%	25.00%	20.00%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Combined Revenue Sufficiency and Debt Coverage

	<u>FY 2014</u> Projected	<u>FY 2015</u> Forecast	<u>FY 2016</u> Forecast	<u>FY 2017</u> Forecast	<u>FY 2018</u> Forecast	<u>FY 2019</u> Forecast
Combined Water and Sewer						
Total Revenues	\$ 7,185,869	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,849	\$ 15,829,363
Less: General Fund Transfer	-	-	-	-	-	-
Less: Operating Expenses	(6,466,956)	(6,765,014)	(7,200,988)	(7,704,010)	(8,118,013)	(8,571,061)
Net: Revenues Available For Debt Service	\$ 718,913	\$ 1,615,828	\$ 2,445,896	\$ 3,784,270	\$ 5,520,836	\$ 7,258,302
Total Debt Service	(1,055,264)	(1,320,472)	(1,886,852)	(2,683,645)	(3,552,479)	(3,939,769)
Net Revenues for Other Expenditures	\$ (336,352)	\$ 295,356	\$ 559,044	\$ 1,100,625	\$ 1,968,357	\$ 3,318,532
Other Expenditures (Primarily PayGo)	(172,000)	(295,356)	(559,044)	(1,100,625)	(1,968,357)	(3,318,532)
Total: Surplus/Deficit	\$ (508,352)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0
Debt Service Coverage Ratio	0.68	1.22	1.30	1.41	1.55	1.84

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Water and Sewer Rate Summary

	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Water Rates	Current	Projected	Projected	Projected	Projected	Projected
<u>All Customers</u>						
Fixed Charge (Quarterly)	\$ 47.99	\$ 52.79	\$ 65.99	\$ 75.89	\$ 83.48	\$ 91.83
Variable Charge (Quarterly) (Per CCF)	5.26	5.79	7.24	8.33	9.17	10.09
<u>Proposed Annual Rate Increases</u>						
Fixed Charge (Quarterly)		10.00%	25.00%	15.00%	10.00%	10.00%
Variable Charge (Quarterly) (Per CCF)		10.00%	25.00%	15.00%	10.00%	10.00%
Sewer Rates						
<u>All Customers</u>						
Fixed Charge (Quarterly)	\$ 46.66	\$ 51.33	\$ 56.47	\$ 70.59	\$ 88.24	\$ 105.89
Variable Charge (Quarterly) (Per CCF)	7.30	8.03	8.84	11.05	13.82	16.59
<u>Annual Rate Increases</u>						
Fixed Charge (Quarterly)		10.00%	10.00%	25.00%	25.00%	20.00%
Variable Charge (Quarterly) (Per CCF)		10.00%	10.00%	25.00%	25.00%	20.00%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Reserve Fund Balances

	<u>CY 2014</u> Actual	<u>CY 2015</u> Projected	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast
Water Fund Balance						
<u>Beginning Fund Balance</u>	\$ 451,223	\$ 382,629	\$ 468,382	\$ 390,668	\$ 365,258	\$ 313,875
Sources of Funds						
Budgeted Contributions		176,600	13,133	65,437	39,464	266,463
Annual Surplus/(Deficit)	\$ 22,253	\$ 0	\$ 0	\$ (0)	\$ 0	\$ 0
Uses of Funds						
Transfer (to)/From General/Operating Fund	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)
Transfer to Debt Service Fund	(75,847)	(75,847)	(75,847)	(75,847)	(75,847)	(75,847)
Transfer (to)/From Capital Project Fund	-	-	-	-	-	-
Ending Water Fund Balance	\$ 382,629	\$ 468,382	\$ 390,668	\$ 365,258	\$ 313,875	\$ 489,491
Days Cash on Hand	60	70	54	48	39	59
Cash on Hand Target (120 days)	\$ 763,502	\$ 802,939	\$ 860,614	\$ 908,128	\$ 953,974	\$ 1,001,940
Sewer Fund Balance						
<u>Beginning Fund Balance</u>	\$ 1,134,345	\$ 550,616	\$ 419,249	\$ 286,286	\$ 487,600	\$ 837,620
Sources of Funds						
Budgeted Contributions	-	(78,244)	(79,839)	254,438	403,143	929,569
Annual Surplus/(Deficit)	\$ (530,605)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0
Uses of Funds						
Transfer (to)/From General/Operating Fund	-	-	-	-	-	-
Transfer to Debt Service Fund	(53,124)	(53,124)	(53,124)	(53,124)	(53,124)	(53,124)
Transfer (to)/From Capital Project Fund	-	-	-	-	-	-
Ending Sewer Fund Balance	\$ 550,616	\$ 419,249	\$ 286,286	\$ 487,600	\$ 837,620	\$ 1,714,065
Days Cash on Hand	48	35	23	36	59	113
Cash on Hand Target (120 days)	\$ 1,362,620	\$ 1,421,175	\$ 1,506,834	\$ 1,624,697	\$ 1,714,962	\$ 1,815,943
Combined Fund Balance						
<u>Beginning Fund Balance</u>	\$ 1,585,568	\$ 933,245	\$ 887,631	\$ 676,954	\$ 852,858	\$ 1,151,495
Sources of Funds						
Budgeted Contributions	\$ -	\$ 98,356	\$ (66,706)	\$ 319,875	\$ 442,607	\$ 1,196,032
Annual Surplus/(Deficit)	(508,352)	0	(0)	0	0	0
Uses of Funds						
Transfer (to)/From General/Operating Fund	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)
Transfer to Debt Service Fund	(128,971)	(128,971)	(128,971)	(128,971)	(128,971)	(128,971)
Transfer (to)/From Capital Project Fund	-	-	-	-	-	-
Ending Fund Balance	\$ 933,245	\$ 887,631	\$ 676,954	\$ 852,858	\$ 1,151,495	\$ 2,203,557
Cash on Hand Requirement	\$ 2,126,123	\$ 2,224,114	\$ 2,367,448	\$ 2,532,825	\$ 2,668,936	\$ 2,817,883
Deficit to Target	\$ (1,192,877)	\$ (1,336,483)	\$ (1,690,494)	\$ (1,679,967)	\$ (1,517,441)	\$ (614,326)

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Customer Impacts

<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
Actual	Forecast	Forecast	Forecast	Forecast	Forecast

Bill Impacts and Comparison

Combined Water & Sewer Bills - Quarterly

<u>ccf</u>												
9	\$	207.69	\$	228.50	\$	267.18	\$	320.90	\$	378.63	\$	437.84
13		257.93		283.78		331.50		398.42		470.59		544.56
24		396.09		435.80		508.38		611.60		723.48		838.04
60		848.25		933.32		1,087.26		1,309.28		1,551.12		1,798.52
120		1,601.85		1,762.52		2,052.06		2,472.08		2,930.52		3,399.32

Typical Water Bills - Quarterly

<u>ccf</u>												
9	\$	95.33	\$	104.90	\$	131.15	\$	150.86	\$	166.01	\$	182.64
13		116.37		128.06		160.11		184.18		202.69		223.00
Difference	\$	-	\$	11.69	\$	32.05	\$	24.07	\$	18.51	\$	20.31
% Difference		0.0%		10.0%		25.0%		15.0%		10.0%		10.0%
24		174.23		191.75		239.75		275.81		303.56		333.99
60		363.59		400.19		500.39		575.69		633.68		697.23
120		679.19		747.59		934.79		1,075.49		1,183.88		1,302.63

Typical Sewer Bills - Quarterly

<u>ccf</u>												
9	\$	112.36	\$	123.60	\$	136.03	\$	170.04	\$	212.62	\$	255.20
13		141.56		155.72		171.39		214.24		267.90		321.56
24		221.86		244.05		268.63		335.79		419.92		504.05
60		484.66		533.13		586.87		733.59		917.44		1,101.29
120		922.66		1,014.93		1,117.27		1,396.59		1,746.64		2,096.69

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Customer Impacts

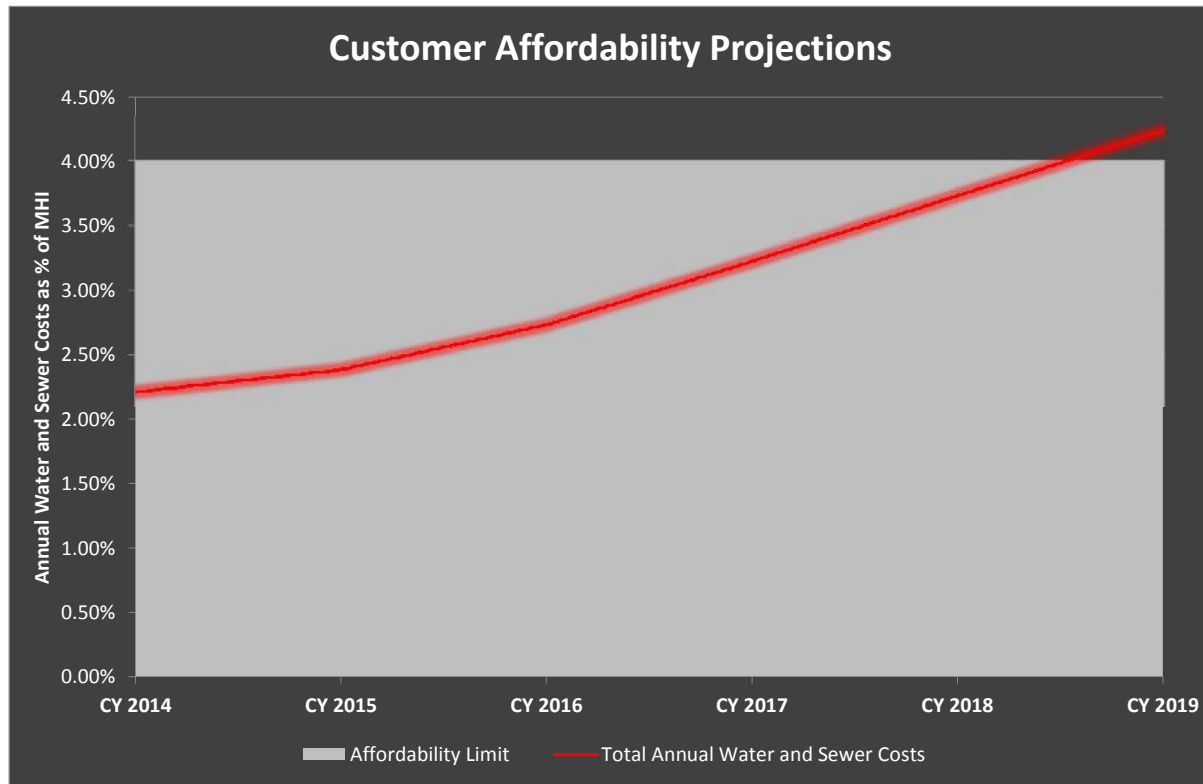
	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>	<u>CY 2019</u>
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast

Customer Affordability Analysis

Per EPA 1997 Financial Capability Assessment, one metric used for determining the affordability of sewer service is when the residential exceeds 2% of MHI. As a proxy for residential share, we will assume that 15 ccf per quarter is a typical sewer bill.

<u>Franklin County MHI</u>	\$ 50,700					
Unincorporated Service Area Adjustment	90%				\$ 50,379.21	
Estimated Unincorporated Service Area MHI	\$ 46,543	\$ 47,474	\$ 48,423	\$ 49,391	\$ 50,379	\$ 51,387
Affordability Limit	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Affordability Limit	\$ 1,862	\$ 1,899	\$ 1,937	\$ 1,976	\$ 2,015	\$ 2,055
	2.0%					

<u>Annual Costs</u>						
Water Bills (13 ccf)	\$ 465.48	\$ 512.24	\$ 640.44	\$ 736.72	\$ 810.76	\$ 892.00
Sewer Bills (13 ccf)	566.24	622.88	685.56	856.96	1,071.60	1,286.24
Total Annual Water and Sewer Costs	\$ 1,031.72	\$ 1,135.12	\$ 1,326.00	\$ 1,593.68	\$ 1,882.36	\$ 2,178.24
% of MHI	2.22%	2.39%	2.74%	3.23%	3.74%	4.24%



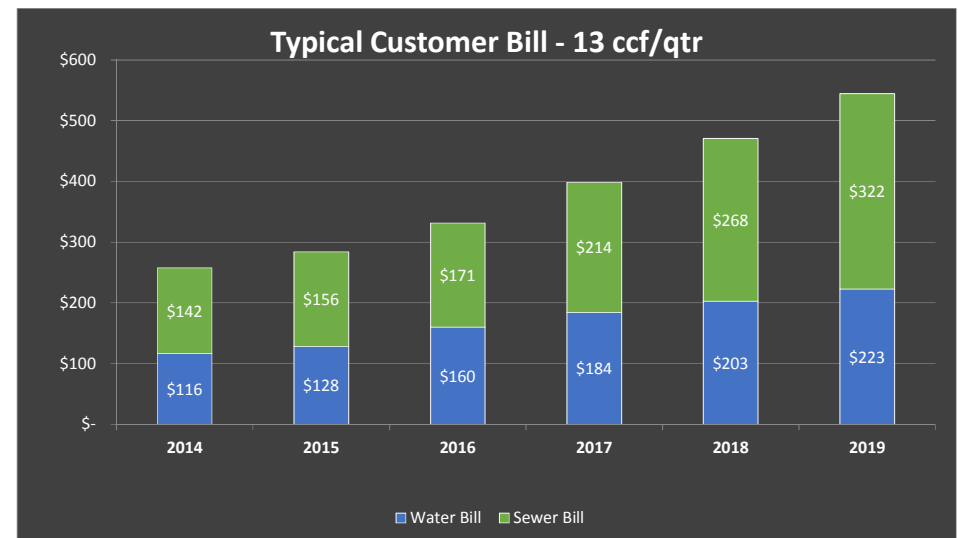
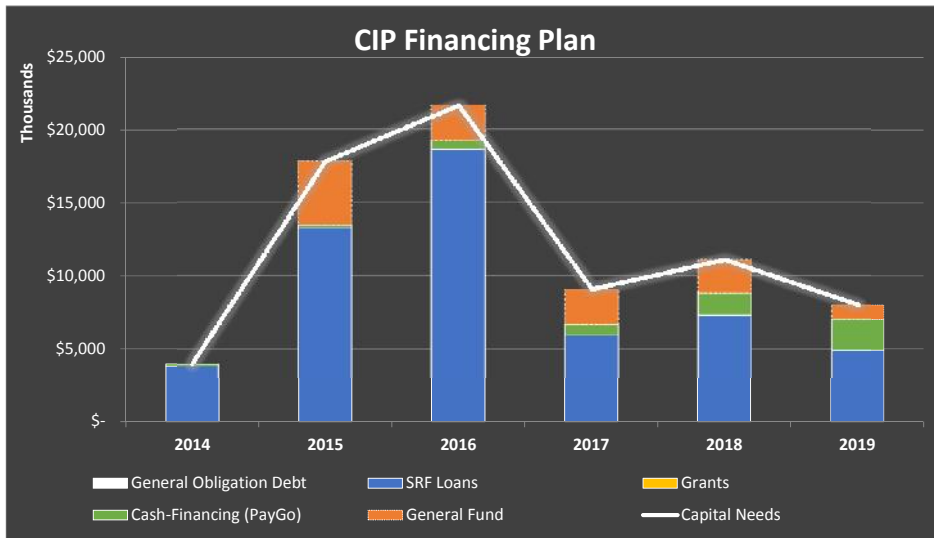
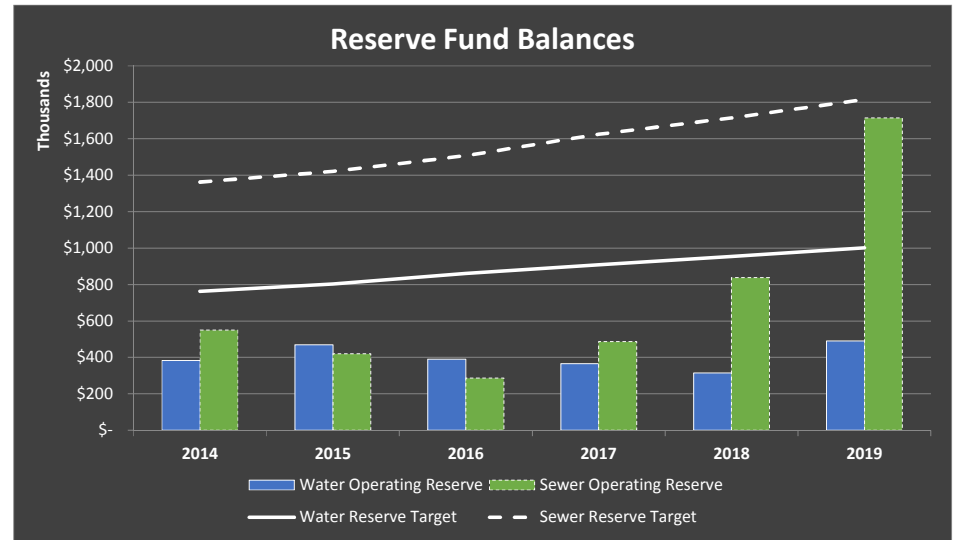
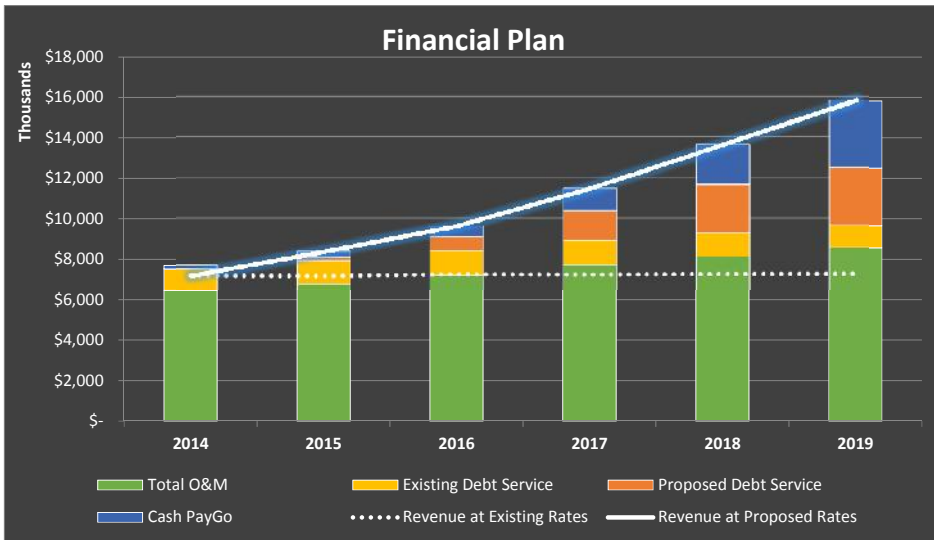
Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Customer Impacts

	<u>CY 2014</u> Actual	<u>CY 2015</u> Forecast	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast
Annual Costs as Percent of Median Household Income - By Service Area						
<u>Franklin County Service Areas</u>						
Briarbank	1.05%	1.13%	1.29%	1.53%	1.77%	2.00%
Briarwood Hills	1.19%	1.28%	1.47%	1.73%	2.00%	2.27%
Briggsdale	3.22%	3.48%	3.98%	4.69%	5.43%	6.17%
Brookside Estates	1.14%	1.23%	1.41%	1.66%	1.92%	2.18%
Brown Road East	3.85%	4.15%	4.75%	5.60%	6.48%	7.35%
Brown Road West	-	-	-	-	-	-
Century Acres	1.80%	1.94%	2.22%	2.62%	3.03%	3.44%
Cleveland Heights	1.88%	2.03%	2.32%	2.74%	3.17%	3.60%
Clinton No. 2	2.55%	2.75%	3.15%	3.71%	4.29%	4.87%
Clinton No. 3	-	-	-	-	-	-
Community Gardens MHP	2.46%	2.65%	3.04%	3.58%	4.14%	4.70%
Darbydale	2.33%	2.52%	2.88%	3.39%	3.93%	4.46%
Englewood	2.72%	2.94%	3.36%	3.96%	4.59%	5.21%
Eureka Park	2.89%	3.12%	3.57%	4.21%	4.87%	5.53%
FC Landfill	-	-	-	-	-	-
FC Model Landfill	-	-	-	-	-	-
Forest Ridge	1.26%	1.36%	1.55%	1.83%	2.12%	2.40%
Franklin No 1	2.78%	3.00%	3.43%	4.05%	4.69%	5.32%
Franklin No 4 Amended	2.74%	2.96%	3.39%	3.99%	4.62%	5.25%
Hamilton Meadows	2.33%	2.51%	2.87%	3.38%	3.92%	4.45%
Harrisburg (Oandm Only)	1.71%	1.85%	2.12%	2.49%	2.89%	3.28%
Holton Park	-	-	-	-	-	-
Lockbourne (Oandm Only)	1.98%	2.13%	2.44%	2.88%	3.33%	3.78%
Miflin No.1	3.89%	4.20%	4.81%	5.66%	6.56%	7.44%
Mon-E-Bak	2.57%	2.77%	3.18%	3.74%	4.34%	4.92%
Oak Hills MHP (Future)	1.65%	1.78%	2.04%	2.41%	2.79%	3.16%
Oakhurst	1.35%	1.45%	1.67%	1.96%	2.27%	2.58%
Pleasant Acres MHP (Future)	-	-	-	-	-	-
Ridgewood Estates	1.03%	1.11%	1.27%	1.50%	1.74%	1.97%
San Margherita/Hague	2.52%	2.72%	3.11%	3.67%	4.25%	4.82%
SD4 (W) and Lincoln Village/New Rome (S)	2.97%	3.21%	3.67%	4.33%	5.01%	5.69%
Taylor Estates	-	-	-	-	-	-
Timberbrook	1.65%	1.78%	2.03%	2.40%	2.78%	3.15%
Timberlake	1.75%	1.89%	2.16%	2.55%	2.95%	3.35%
Village Park	1.99%	2.15%	2.46%	2.90%	3.36%	3.81%
Windsong	1.95%	2.11%	2.41%	2.84%	3.29%	3.74%
Worthington Hills	0.85%	0.91%	1.05%	1.23%	1.43%	1.62%
Young Estates	1.46%	1.58%	1.80%	2.13%	2.46%	2.79%
Weighted Median Household Income	2.20%	2.38%	2.72%	3.21%	3.72%	4.22%
Number of Households > 4%	-	2,243	2,243	7,325	9,492	10,388
% of Total	0.00%	16.33%	16.33%	53.32%	69.09%	75.62%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Key Results

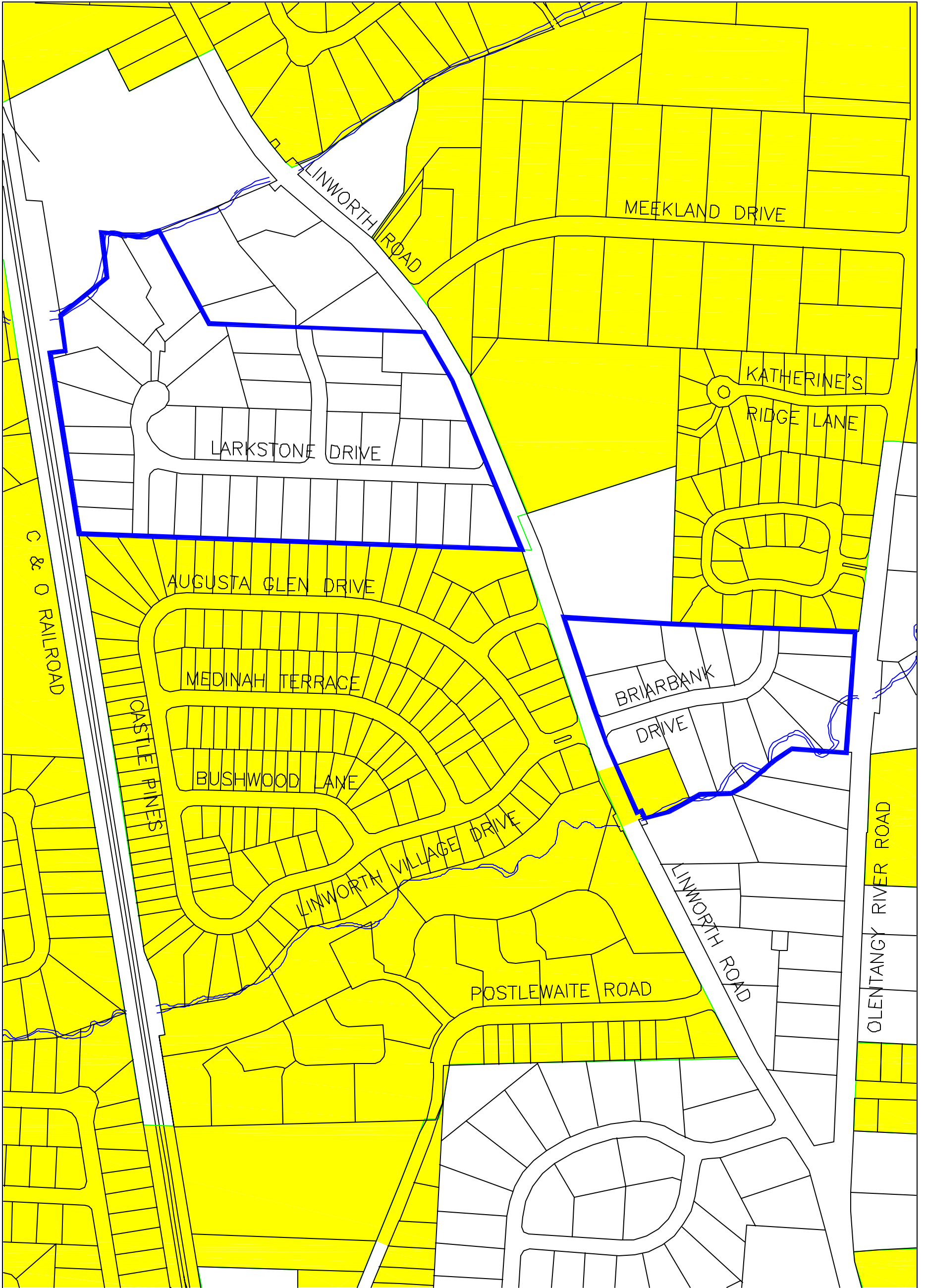
	<u>CY 2014</u> Projected	<u>CY 2015</u> Forecast	<u>CY 2016</u> Forecast	<u>CY 2017</u> Forecast	<u>CY 2018</u> Forecast	<u>CY 2019</u> Forecast	
Revenues							
<u>User Charge Revenues</u>							
Water							
Fixed Charges	\$ 747,684	\$ 822,468	\$ 1,028,124	\$ 1,182,366	\$ 1,307,297	\$ 1,445,404	
Volumetric Charges	1,791,640	1,952,446	2,416,980	2,766,943	3,030,740	3,318,137	
Sewer							
Fixed Charges	\$ 1,078,779	\$ 1,186,750	\$ 1,345,115	\$ 1,686,536	\$ 2,144,938	\$ 2,618,448	
Volumetric Charges	3,300,002	3,593,698	4,036,414	5,034,828	6,343,472	7,669,206	
Subtotal: User Charge Revenues	\$ 6,918,105	\$ 7,555,362	\$ 8,826,633	\$ 10,670,673	\$ 12,826,447	\$ 15,051,195	
Miscellaneous Revenues	\$ 267,764	\$ 296,829	\$ 296,829	\$ 296,829	\$ 296,829	\$ 267,764	
Surcharge Revenue	-	528,651	523,422	520,778	515,573	510,404	
Total: Revenues	\$ 7,185,869	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,849	\$ 15,829,363	
Revenue Requirements							
<u>Operating Expenditures</u>							
Water O&M							
	\$ 2,322,319	\$ 2,442,272	\$ 2,617,701	\$ 2,762,222	\$ 2,901,670	\$ 3,047,567	
Sewer O&M							
	4,144,637	4,322,742	4,583,287	4,941,788	5,216,343	5,523,494	
Subtotal: Operating Expenditures	\$ 6,466,956	\$ 6,765,014	\$ 7,200,988	\$ 7,704,010	\$ 8,118,013	\$ 8,571,061	
<u>Non-Operating Expenditures</u>							
Debt Service							
Water							
	\$ 276,966	\$ 446,660	\$ 717,843	\$ 1,023,591	\$ 1,295,574	\$ 1,374,137	
Sewer							
	778,298	873,812	1,169,009	1,660,054	2,256,905	2,565,632	
Rate Funded Capital & Transfers							
Water							
	\$ 47,000	\$ 373,600	\$ 593,883	\$ 646,187	\$ 620,214	\$ 788,963	
Sewer							
	125,000	(78,244)	(34,839)	454,438	1,348,143	2,529,569	
Subtotal: Non-Operating Expenditures	\$ 1,227,264	\$ 1,615,828	\$ 2,445,896	\$ 3,784,270	\$ 5,520,836	\$ 7,258,301	
Total: Revenue Requirements	\$ 7,694,221	\$ 8,380,841	\$ 9,646,884	\$ 11,488,280	\$ 13,638,848	\$ 15,829,363	
Surplus/(Deficit)	\$ (508,352)	\$ 0	\$ (0)	\$ 0	\$ 0	\$ 0	
<u>Operating Fund Balances</u>							
Water							
Beginning Balance	\$ 451,223	\$ 382,629	\$ 468,382	\$ 390,668	\$ 365,258	\$ 313,875	
Ending Balance	\$ 382,629	\$ 468,382	\$ 390,668	\$ 365,258	\$ 313,875	\$ 489,491	
Sewer							
Beginning Balance	\$ 1,134,345	\$ 550,616	\$ 419,249	\$ 286,286	\$ 487,600	\$ 837,620	
Ending Balance	\$ 550,616	\$ 419,249	\$ 286,286	\$ 487,600	\$ 837,620	\$ 1,714,065	
Projected Rates							
Water							
Fixed Charge	\$ 47.99	\$ 52.79	\$ 65.99	\$ 75.89	\$ 83.48	\$ 91.83	
Variable Charge	\$ 5.26	\$ 5.79	\$ 7.24	\$ 8.33	\$ 9.17	\$ 10.09	
Sewer							
Fixed Charge	\$ 46.66	\$ 51.33	\$ 56.47	\$ 70.59	\$ 88.24	\$ 105.89	
Variable Charge	\$ 7.30	\$ 8.03	\$ 8.84	\$ 11.05	\$ 13.82	\$ 16.59	
<u>Annual Rate Increases</u>							
Water							
Fixed		10.0%	25.0%	15.0%	10.0%	10.0%	
Variable		10.0%	25.0%	15.0%	10.0%	10.0%	
Sewer							
Fixed		10.0%	10.0%	25.0%	25.0%	20.0%	
Variable		10.0%	10.0%	25.0%	25.0%	20.0%	
<u>Typical Customer Bills (13 ccf)</u>							
Quarterly Water Bill:	13	\$ 116.37	\$ 128.06	\$ 160.11	\$ 184.18	\$ 202.69	\$ 223.00
Quarterly Sewer Bill:	13	\$ 141.56	\$ 155.72	\$ 171.39	\$ 214.24	\$ 267.90	\$ 321.56
Total Annual Water and Sewer Costs		\$ 1,031.72	\$ 1,135.12	\$ 1,326.00	\$ 1,593.68	\$ 1,882.36	\$ 2,178.24
Estimated % of MHI		2.22%	2.39%	2.74%	3.23%	3.74%	4.24%

Franklin County Department of Sanitary Engineering
 Comprehensive Financial Planning & Rate Model
 Financial Planning Dashboard




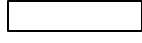


Proposed Rate Increases	2014	2015	2016	2017	2018	2019
Water Fixed Charge	0.00%	10.00%	25.00%	15.00%	10.00%	10.00%
Water Variable Charge	0.00%	10.00%	25.00%	15.00%	10.00%	10.00%
Sewer Fixed Charge	0.00%	10.00%	10.00%	25.00%	25.00%	20.00%
Sewer Variable Charge	0.00%	10.00%	10.00%	25.00%	25.00%	20.00%

Appendix B:
SERVICE AREA MAPS



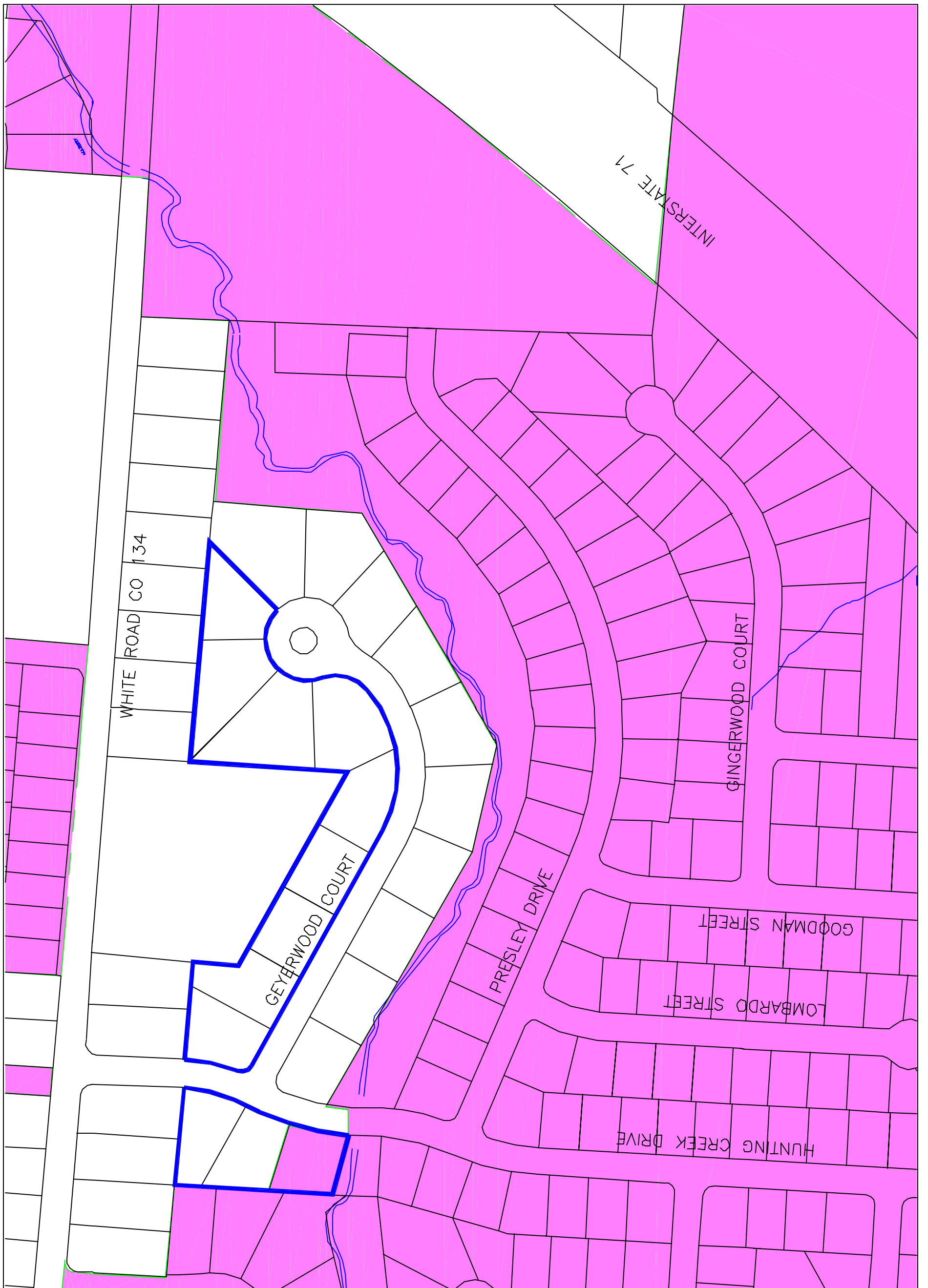
NO SCALE

-  SERVICE BOUNDARY
-  CORP. LINE
-  COLUMBUS
-  FRANKLIN COUNTY

BRIARBANK SUBDIVISION

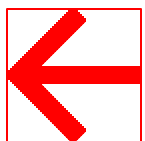
Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003

EXHIBIT 1



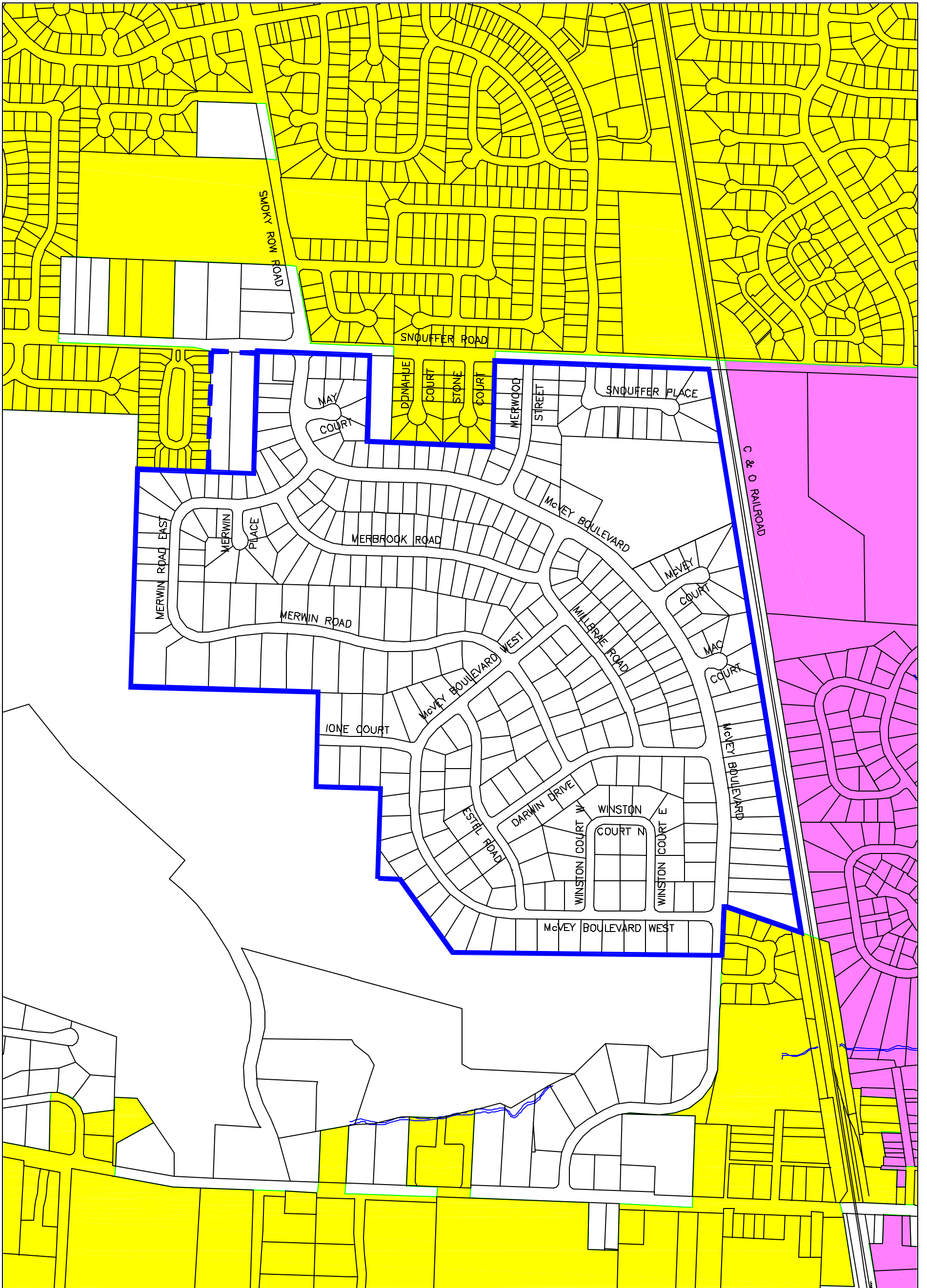
BRIARWOOD HILLS SUBDIVISION

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003



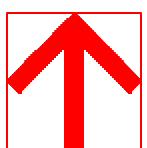
NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- GROVE CITY
- FRANKLIN COUNTY






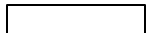


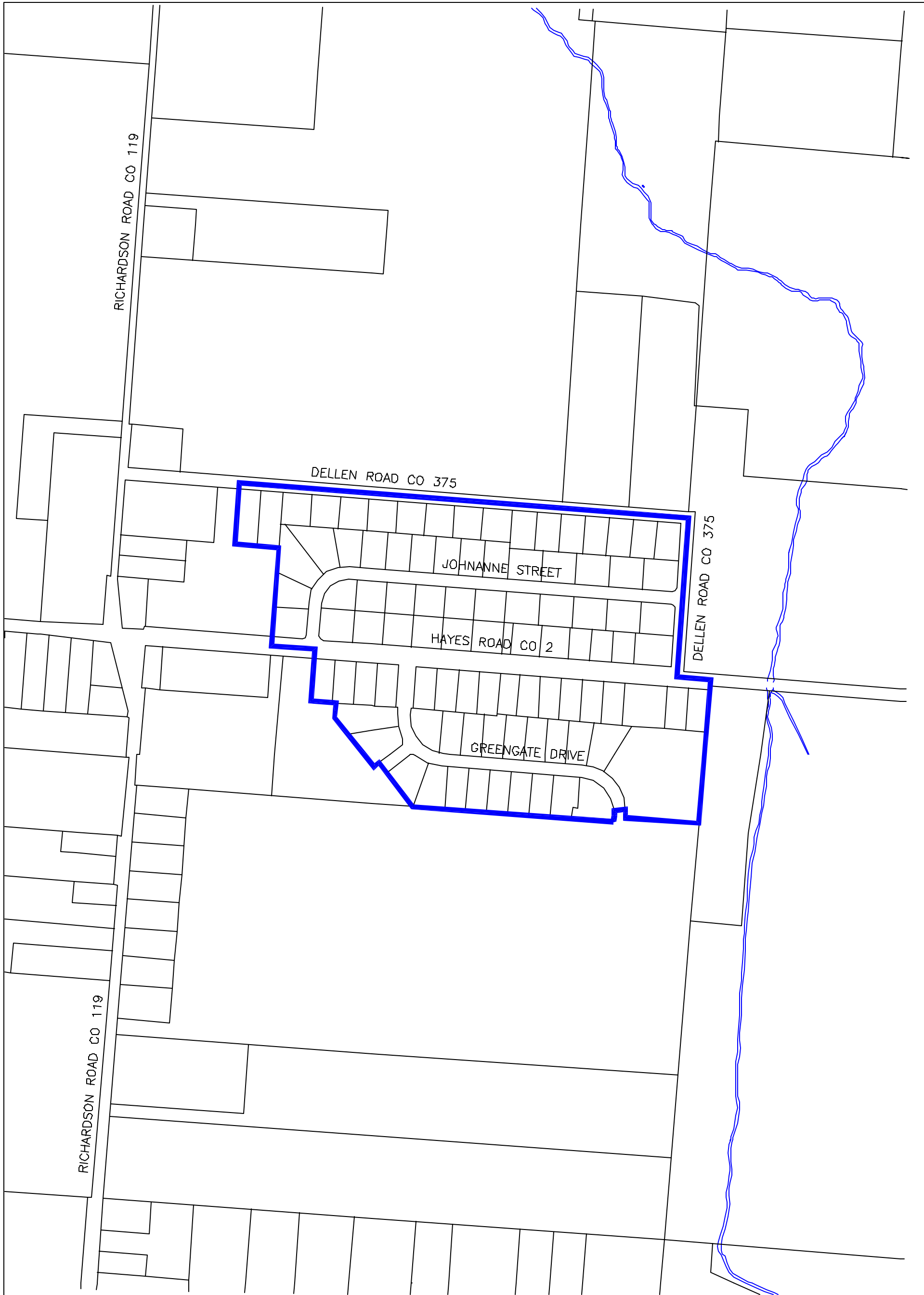
BROOKSIDE ESTATES SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



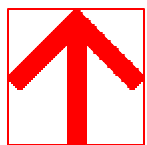
NO SCALE

-  SERVICE BOUNDARY / MAINTENANCE AREA
-  ADDED TO SERVICE BOUNDARY ABOUT 1980
-  CORP. LINE
-  COLUMBUS
-  WORTHINGTON
-  FRANKLIN COUNTY



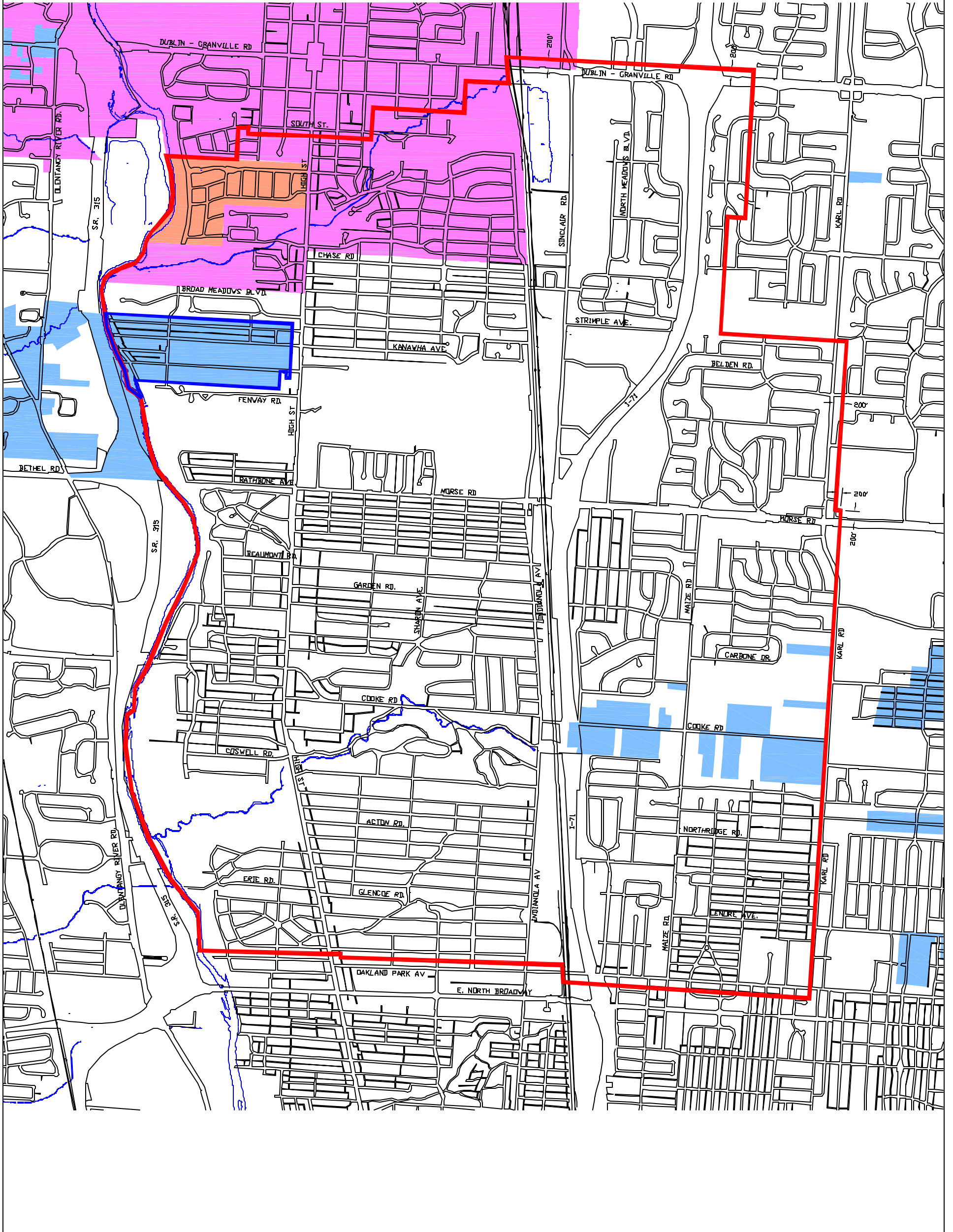
CENTURY ACRES SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

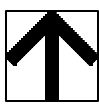
- SERVICE BOUNDARY
- - - CORP. LINE
- FRANKLIN COUNTY



SEWER DISTRICT CLINTON NO. 2

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 FROM 1949 REDRAWN SEWER DISTRICT
CLINTON NO 2 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-171, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



0 1000

— DISTRICT BOUNDARY

COLUMBUS

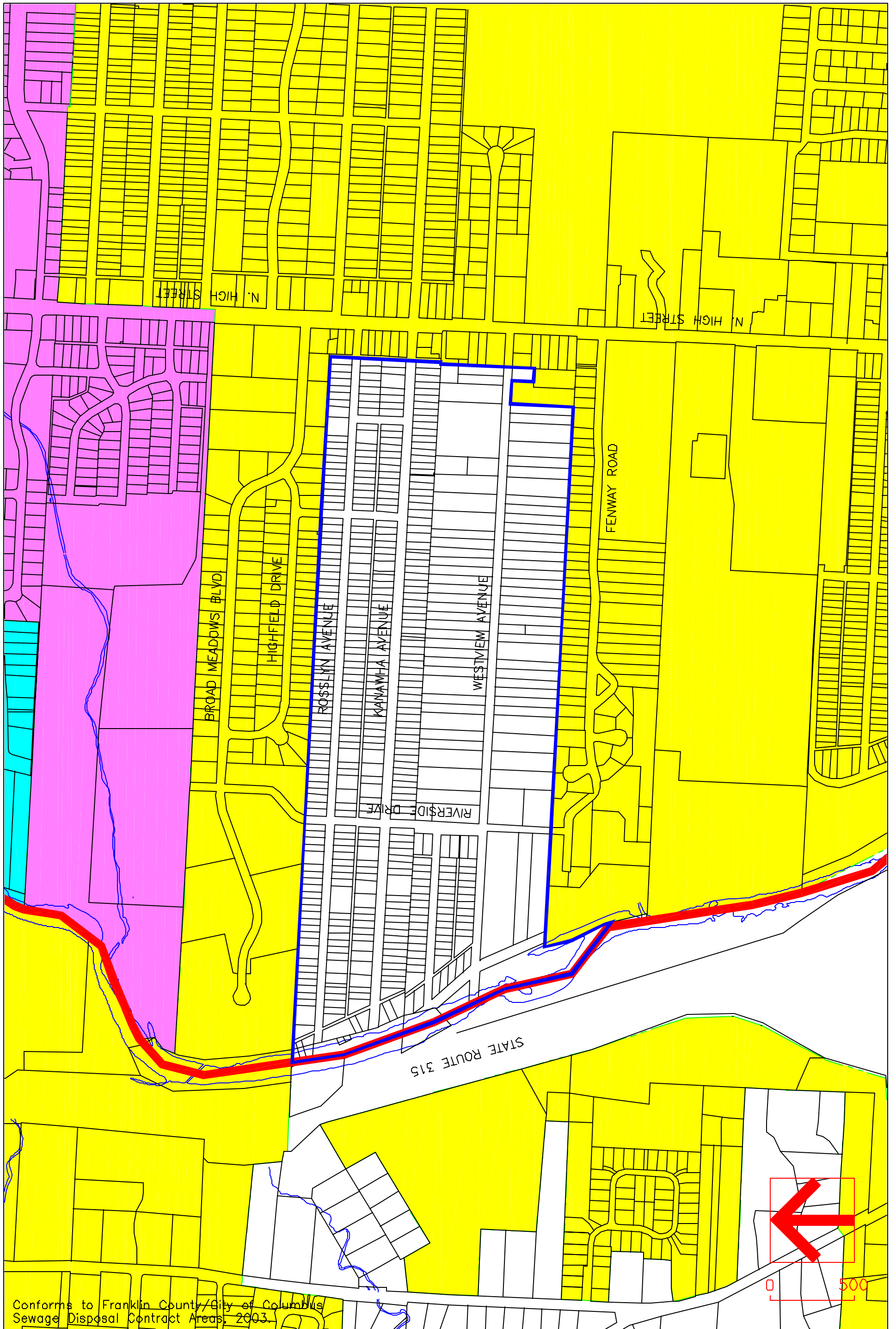
1981 MAINTENANCE CONTRACT AREA
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBIT 0A FOR DETAIL

FRANKLIN COUNTY

RIVERLEA

WORTHINGTON



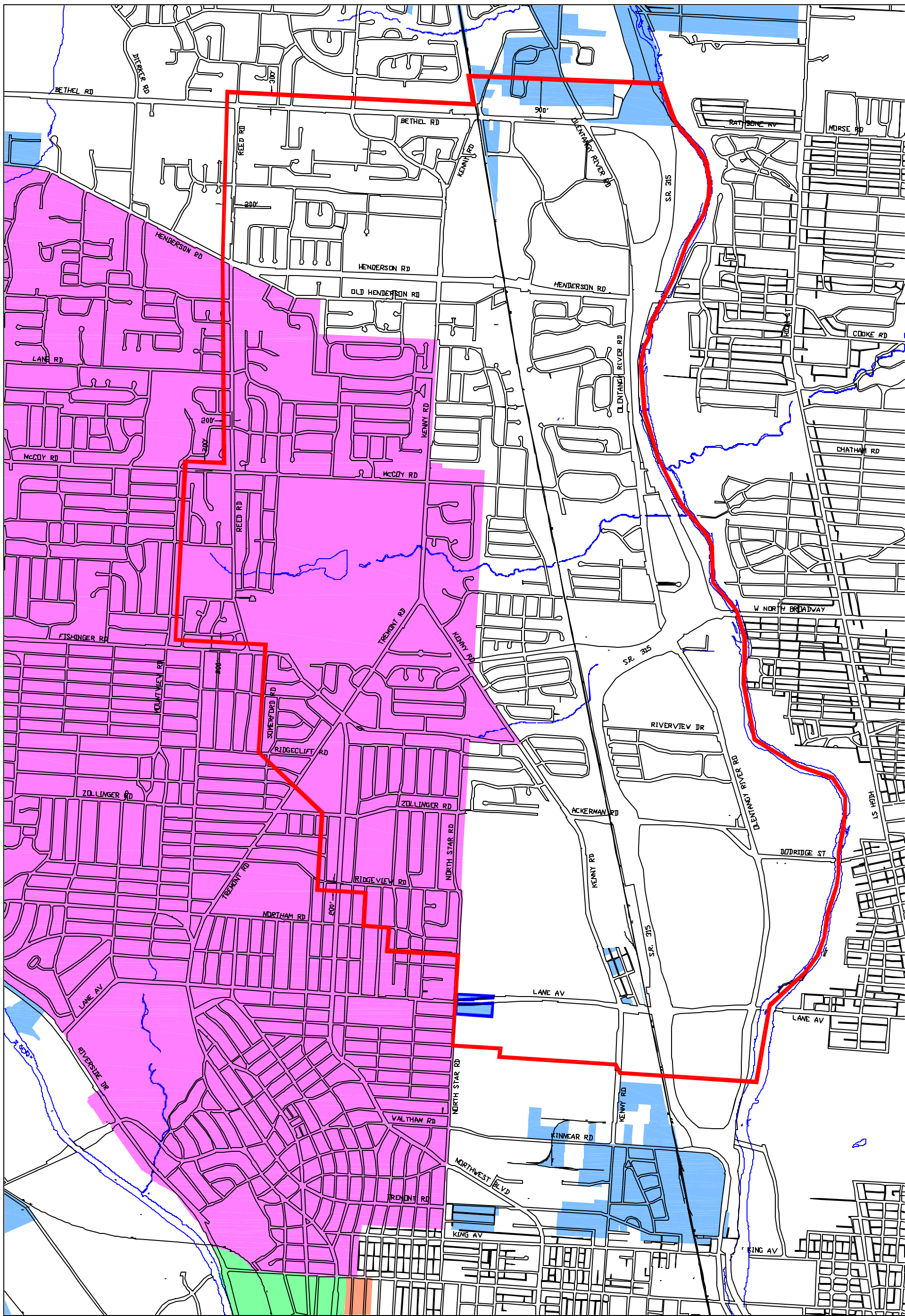


Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003.

**SEWER DISTRICT
CLINTON NO. 2**

- CONTRACT & MAINTENANCE BOUNDARY
- FRANKLIN COUNTY
- COLUMBUS

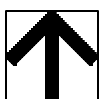
- DISTRICT BOUNDARY
- WORTHINGTON
- RIVERLEA



SEWER DISTRICT CLINTON NO. 3

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

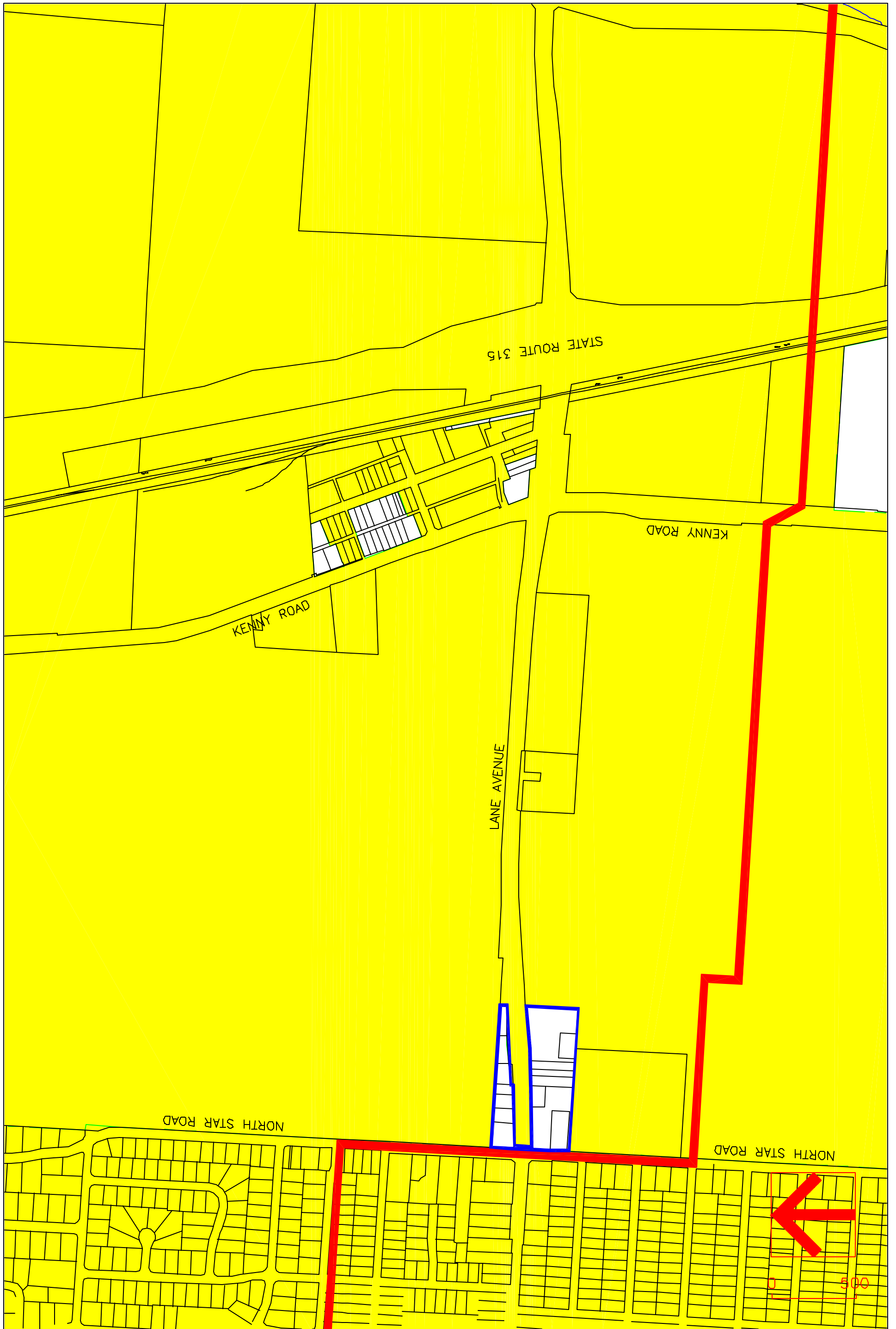
MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 FROM 1949 REDRAWN SEWER DISTRICT
CLINTON NO. 3 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-188, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



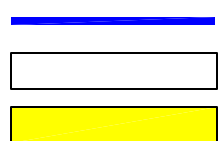
0 1000

- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY
- UPPER ARLINGTON
- MARBLE CLIFF
- GRANDVIEW
- COUNTY SEWERS MAINTAINED BY OTHERS
SEE EXHIBIT 6A FOR DETAIL





SEWER DISTRICT
CLINTON NO. 3

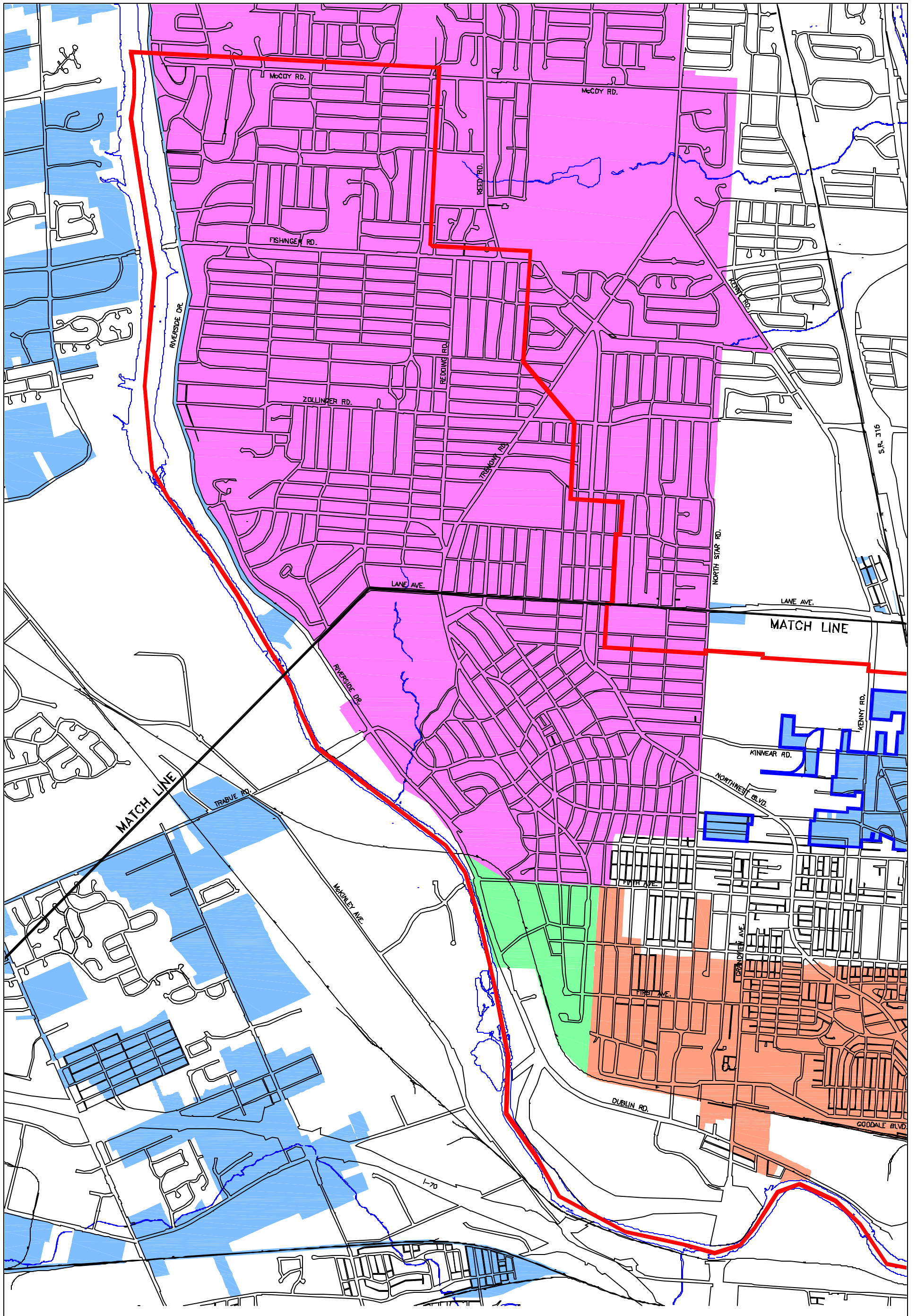


CONTRACT BOUNDARY
FRANKLIN COUNTY
COLUMBUS



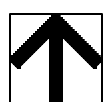
DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



SEWER DISTRICT FRANKLIN NO. 1

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

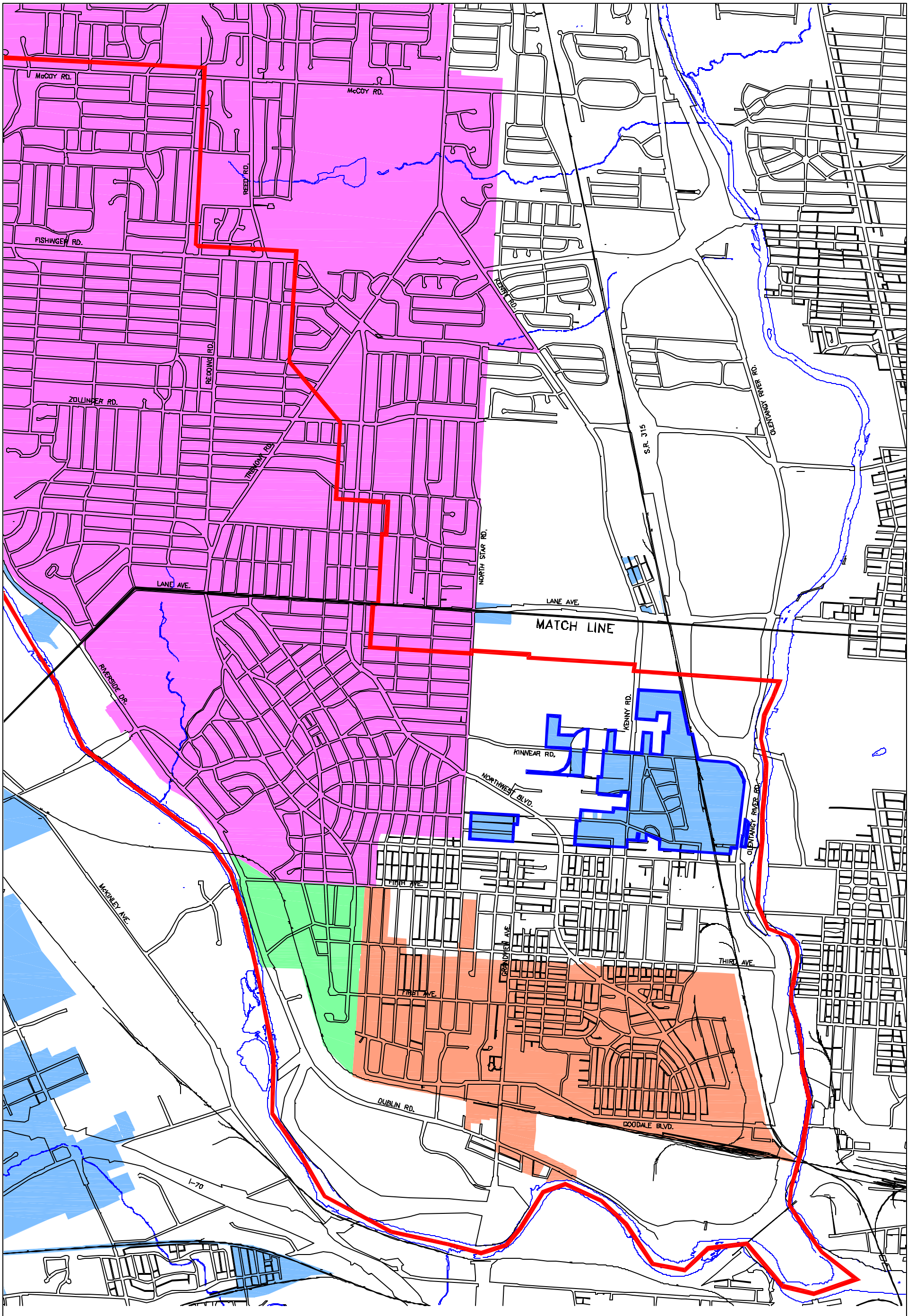


0 1000

- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY
- GRANDVIEW

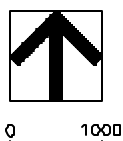
- UPPER ARLINGTON
- MARBLE CLIFF
- 1881 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBIT BA FOR DETAIL





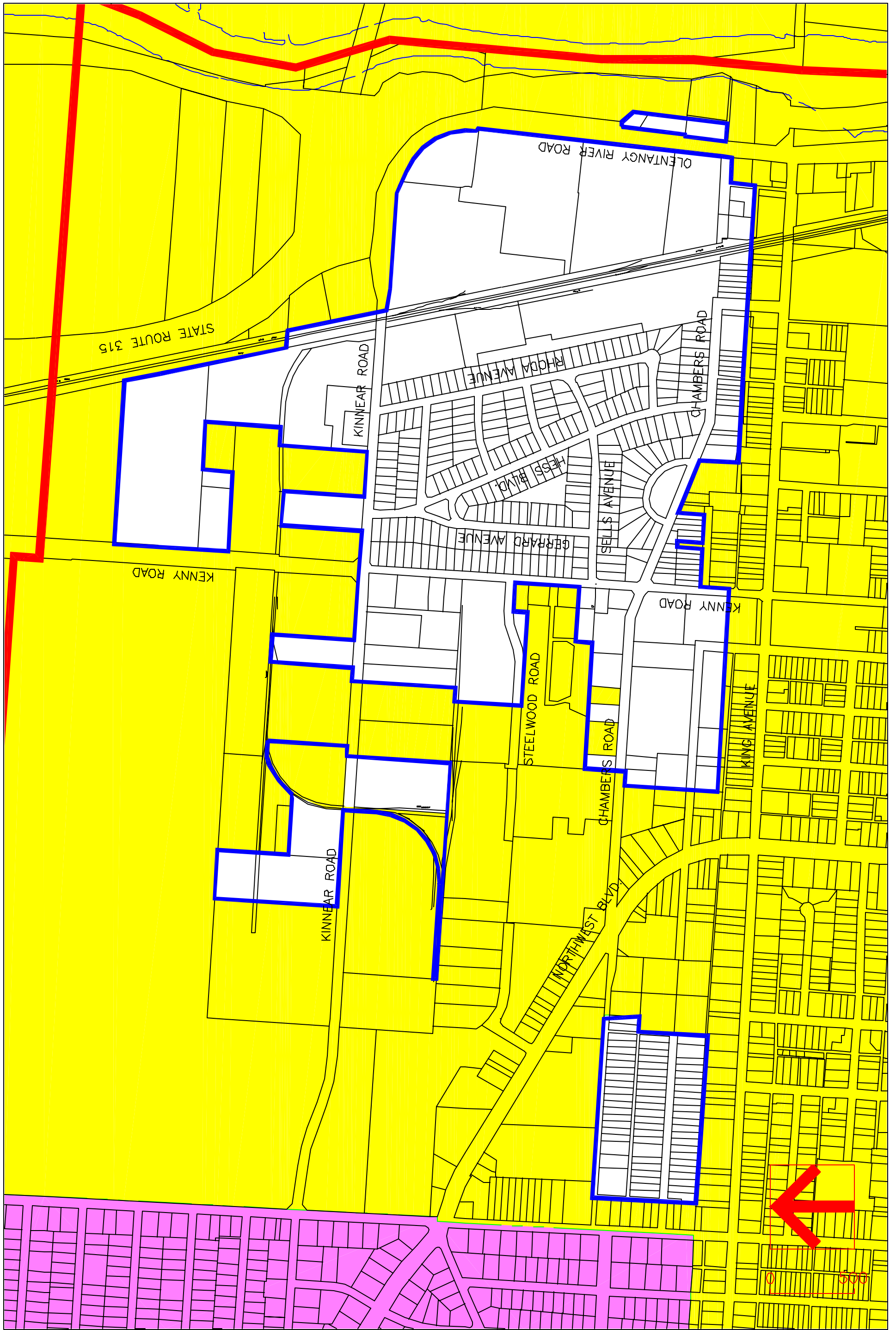
SEWER DISTRICT FRANKLIN NO. 1

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY
- GRANDVIEW

- UPPER ARLINGTON
- MARBLE CLIFF
- 1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBIT 8A FOR DETAIL



SEWER DISTRICT
FRANKLIN NO. 1



CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS

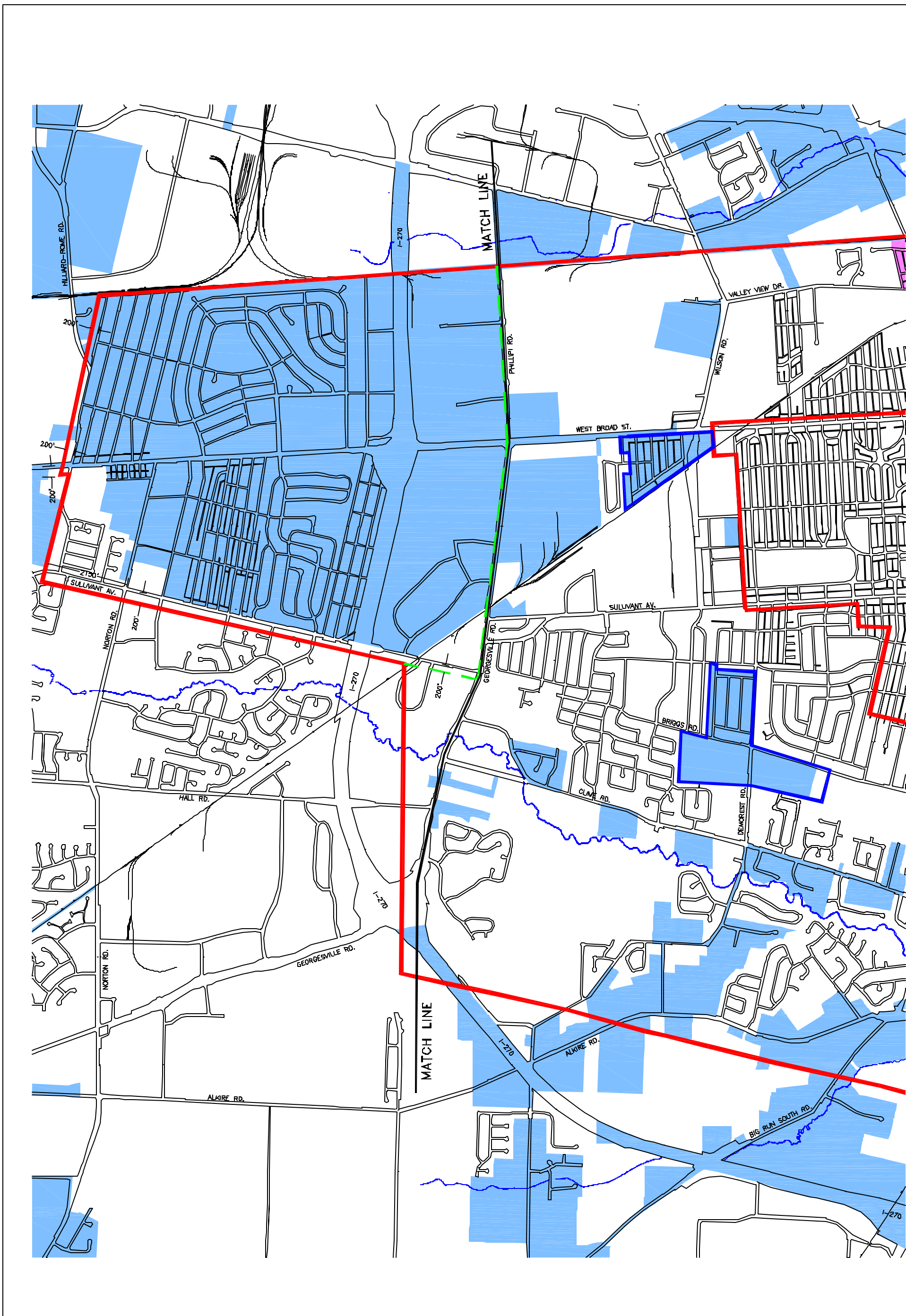


DISTRICT BOUNDARY
UPPER ARLINGTON

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

3
3

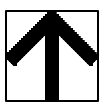
EXHIBIT 8A



SEWER DISTRICT FRANKLIN NO. 4 AMENDED

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
FRANKLIN NO. 4 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-174 & C-185, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



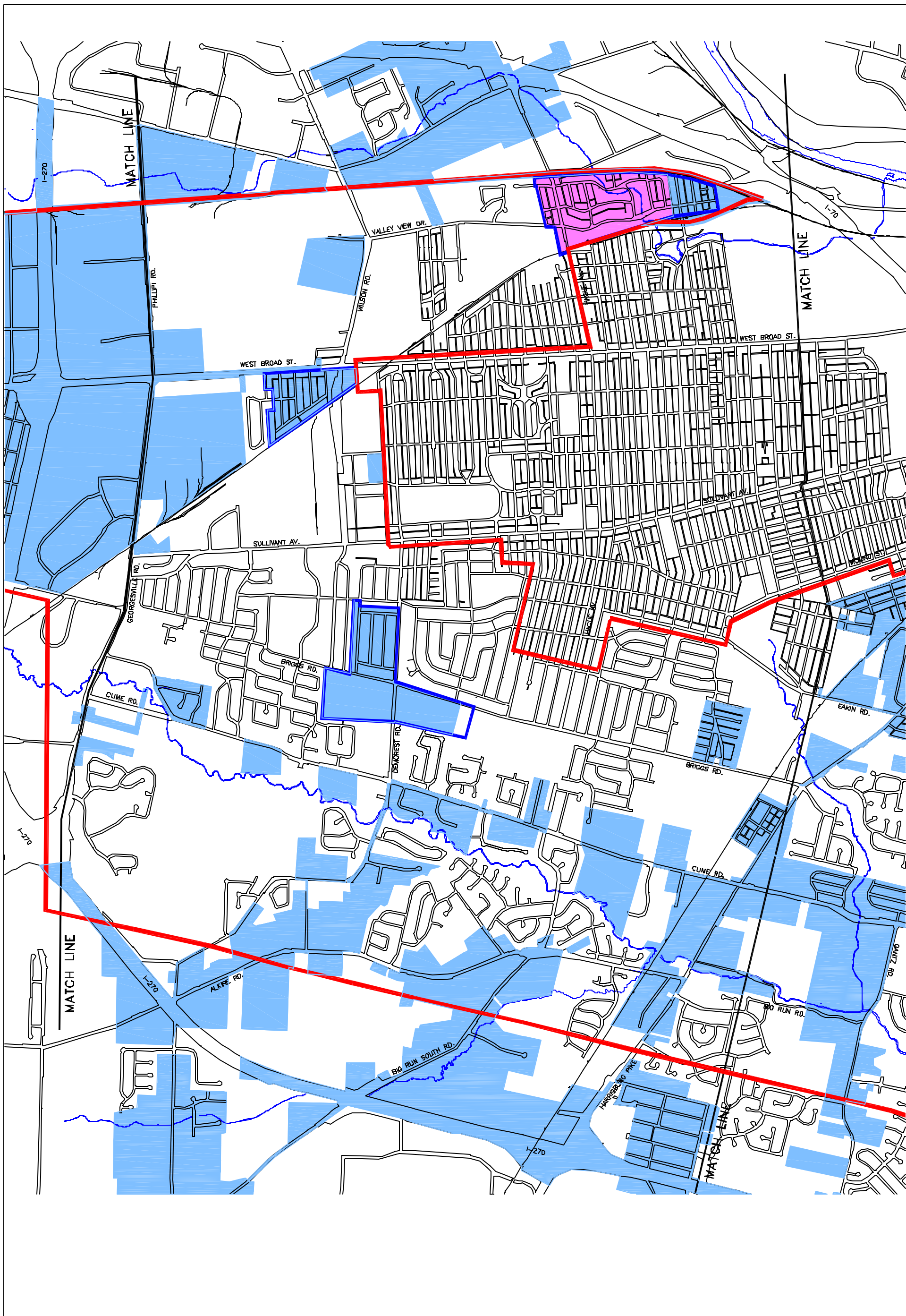
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- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY
- - - NEW ROME & LINCOLN VILLAGE

VALLEYVIEW

1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBITS 9A, 9B, 9C, 9D & 9E FOR DETAILS

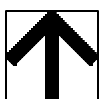




SEWER DISTRICT FRANKLIN NO. 4 AMENDED

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

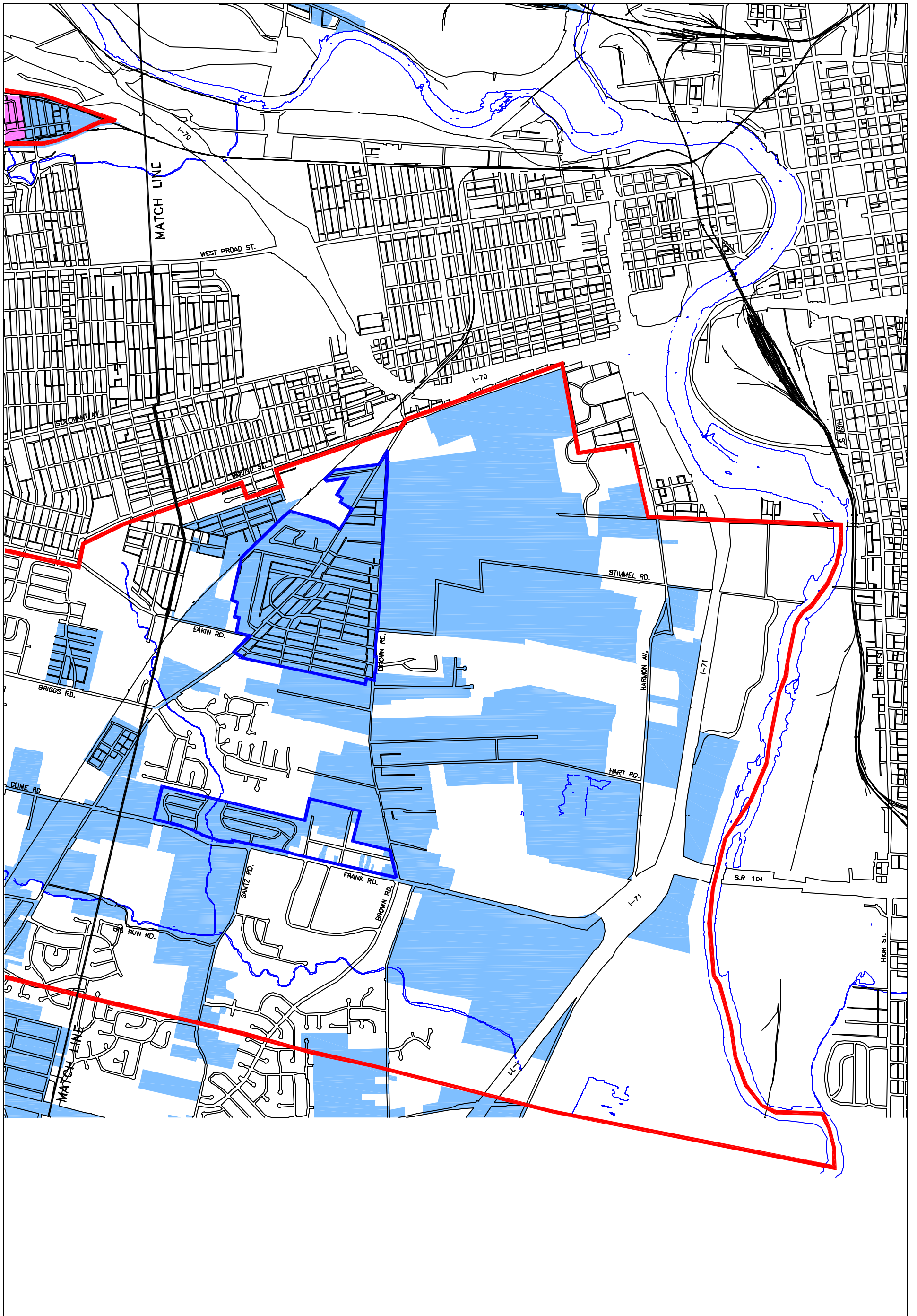
MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
FRANKLIN NO. 4 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-174 & C-185, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998



0 1000

- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY

- VALLEYVIEW
- 1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBITS BA, BB, BC, BD & BE FOR DETAILS



SEWER DISTRICT FRANKLIN NO. 4 AMENDED

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

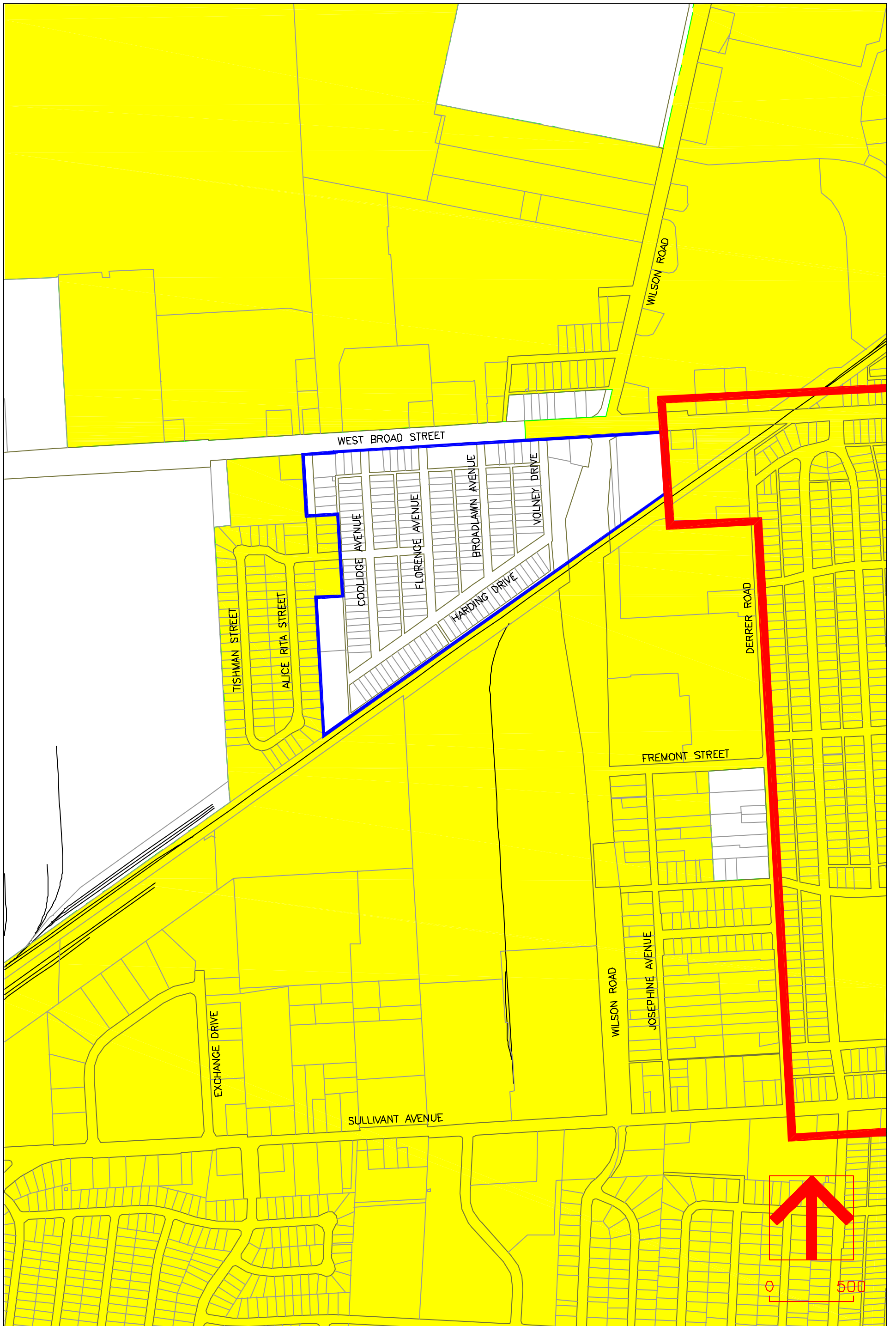
MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
FRANKLIN NO. 4 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-174 & C-185, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



0 1000

- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY

- VALLEYVIEW
- 1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBITS 9A, 9B, 9C, 9D & 9E FOR DETAILS



SEWER DISTRICT
FRANKLIN NO. 4 AMENDED



CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS

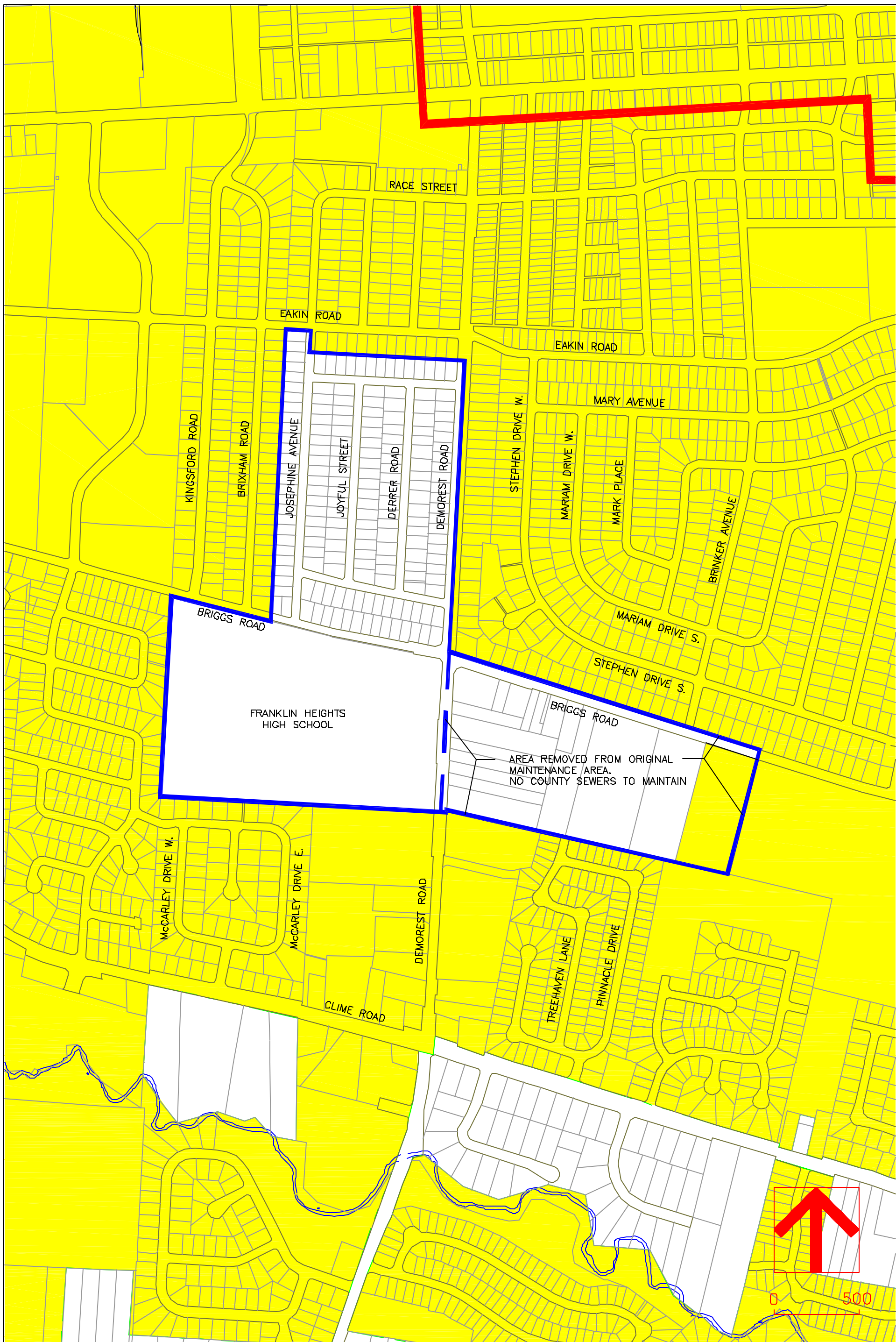


DISTRICT BOUNDARY

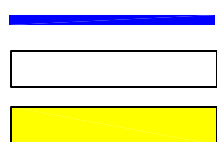
Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



EXHIBIT 9A



SEWER DISTRICT
FRANKLIN NO. 4 AMENDED



CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS

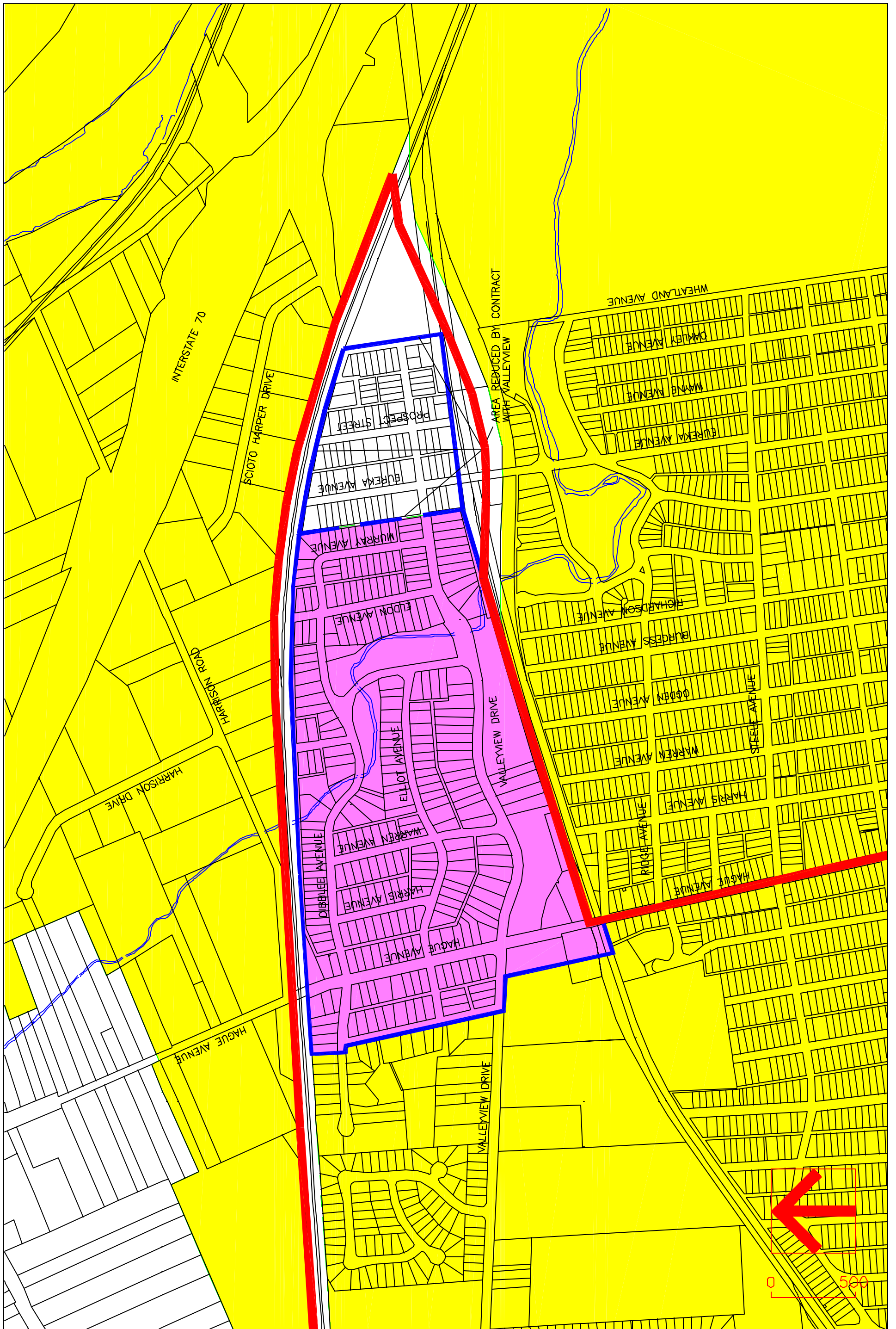


DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



EXHIBIT 9B



SEWER DISTRICT
FRANKLIN NO. 4 AMENDED



CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS

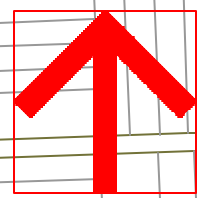
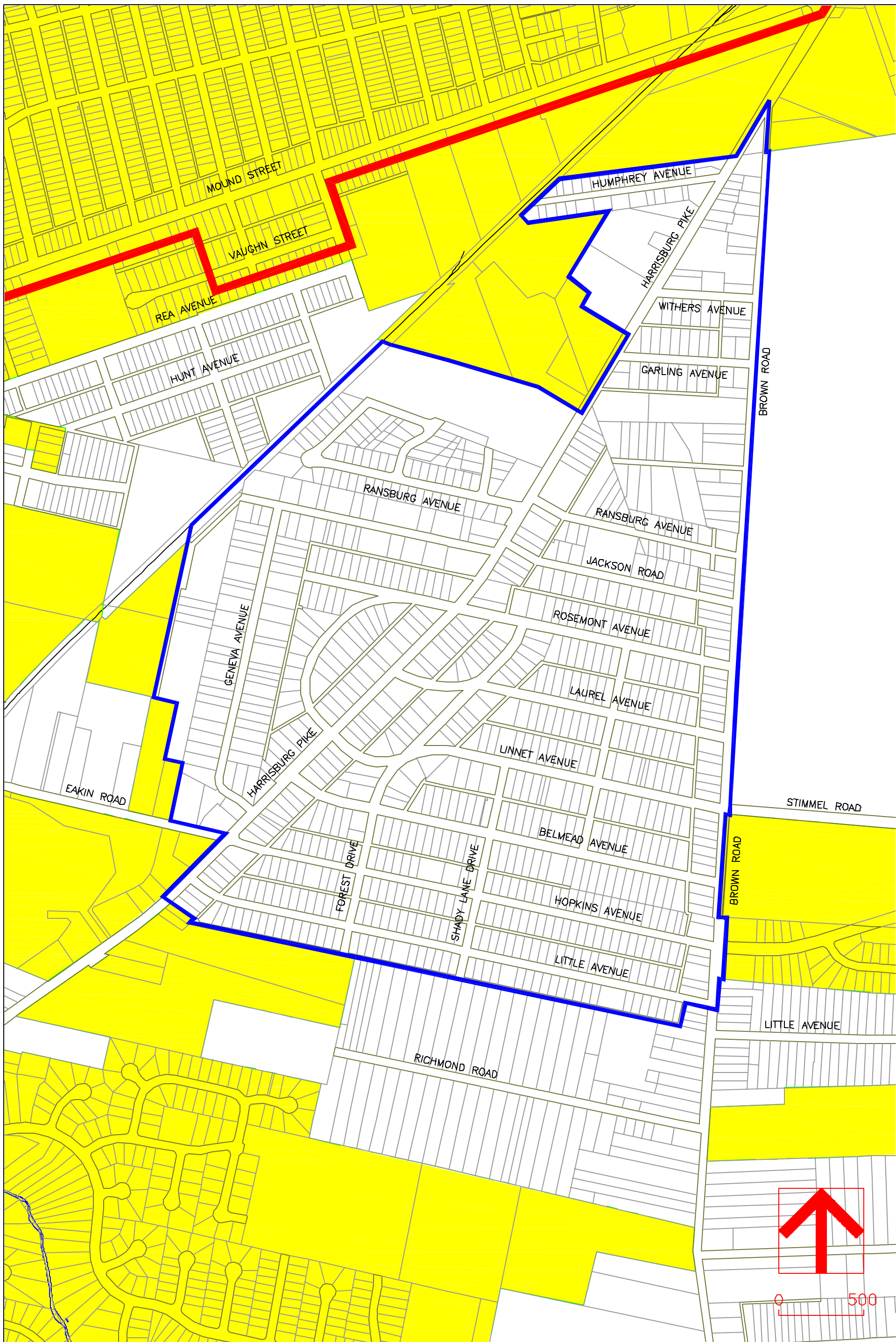


DISTRICT BOUNDARY
VALLEYVIEW

6
8

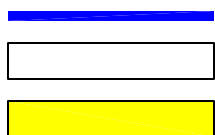
Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003

EXHIBIT 9C



0 500

SEWER DISTRICT
FRANKLIN NO. 4 AMENDED

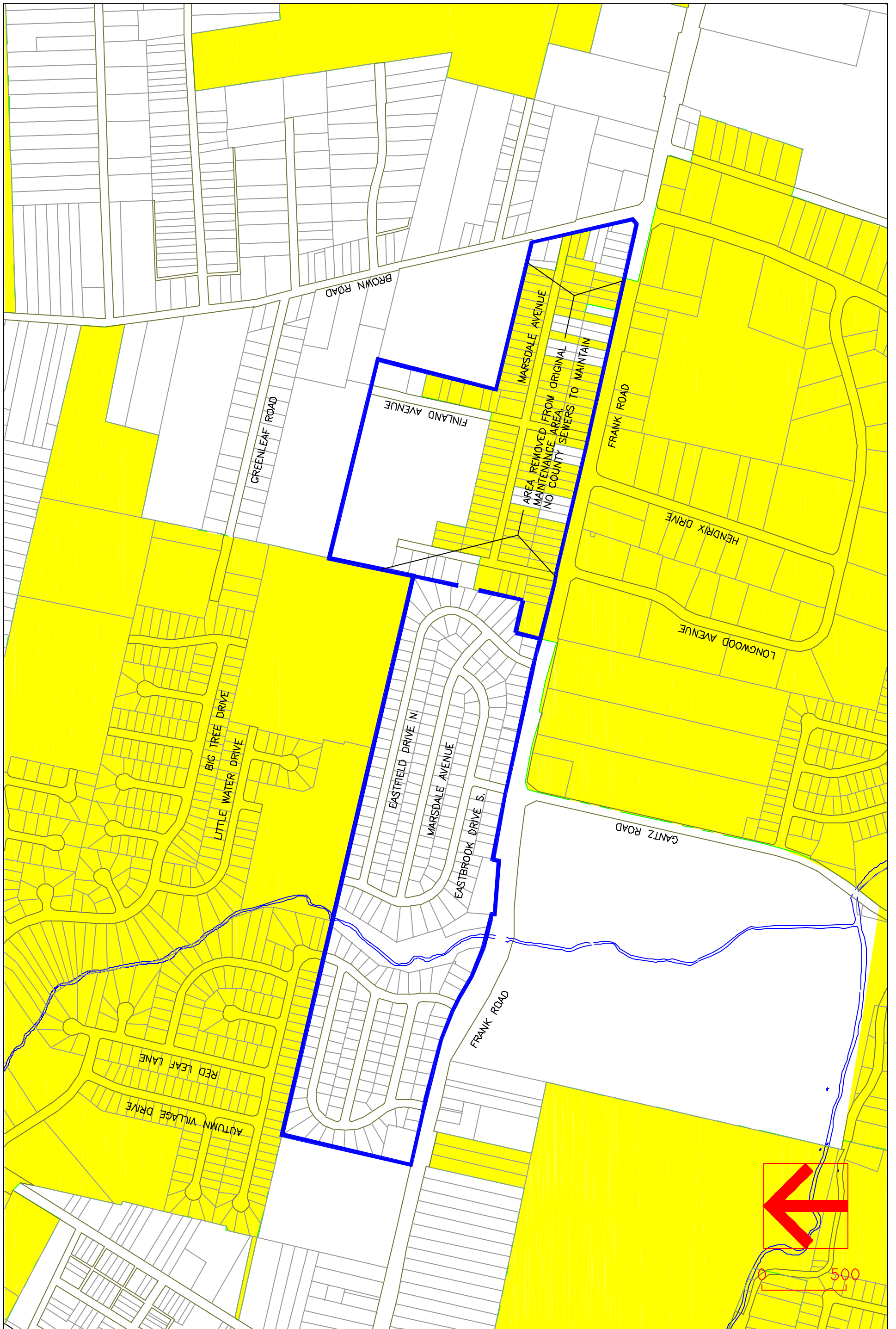


CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS



DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



AREA REMOVED FROM ORIGINAL
MAINTENANCE AREA
NO COUNTY SEWERS TO MAINTAIN

SEWER DISTRICT
FRANKLIN NO. 4 AMENDED



CONTRACT & MAINTENANCE BOUNDARY
FRANKLIN COUNTY
COLUMBUS

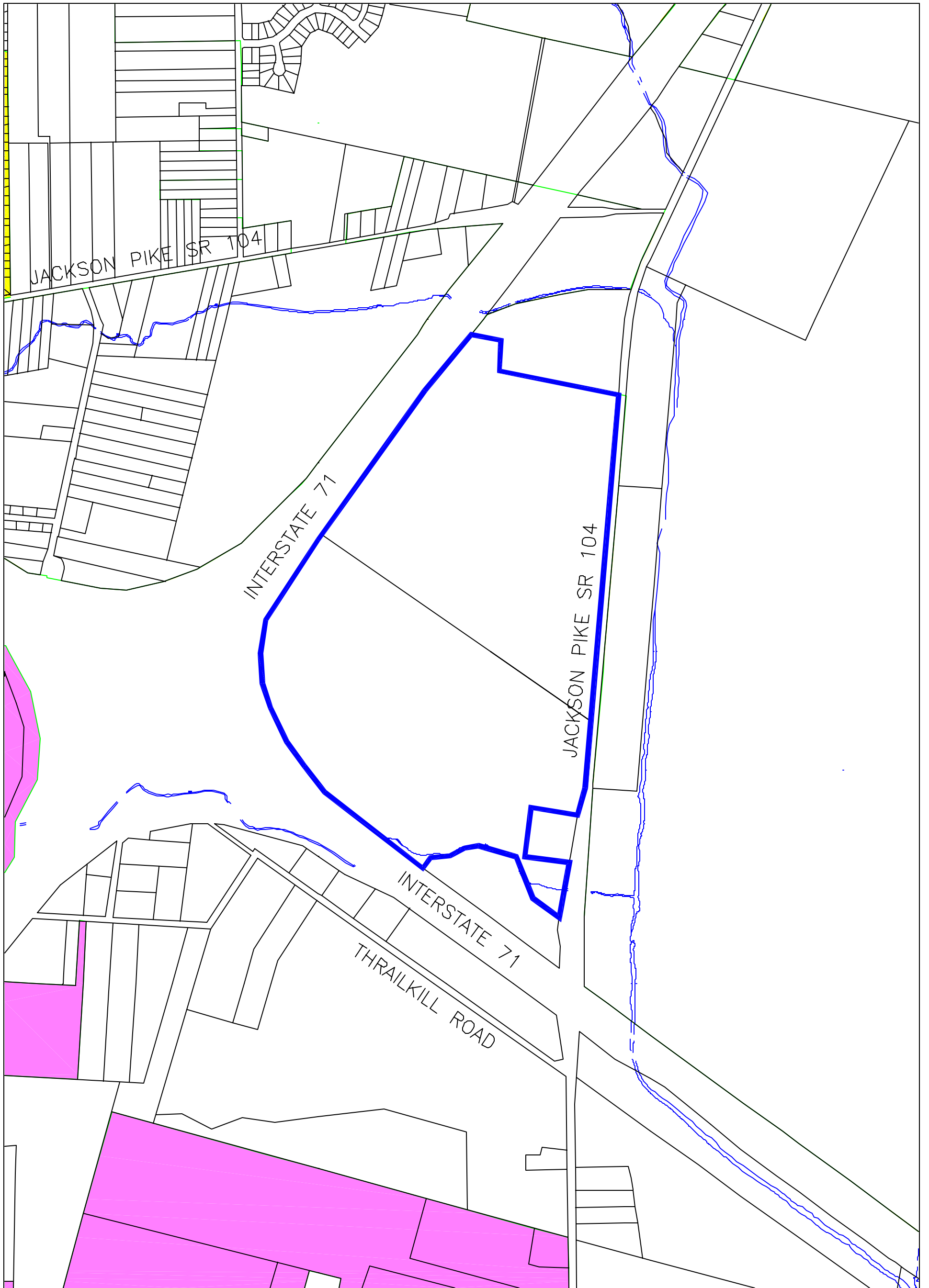


DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

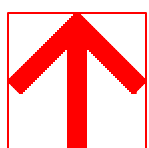


EXHIBIT 9E



FRANKLIN COUNTY MODEL LANDFILL

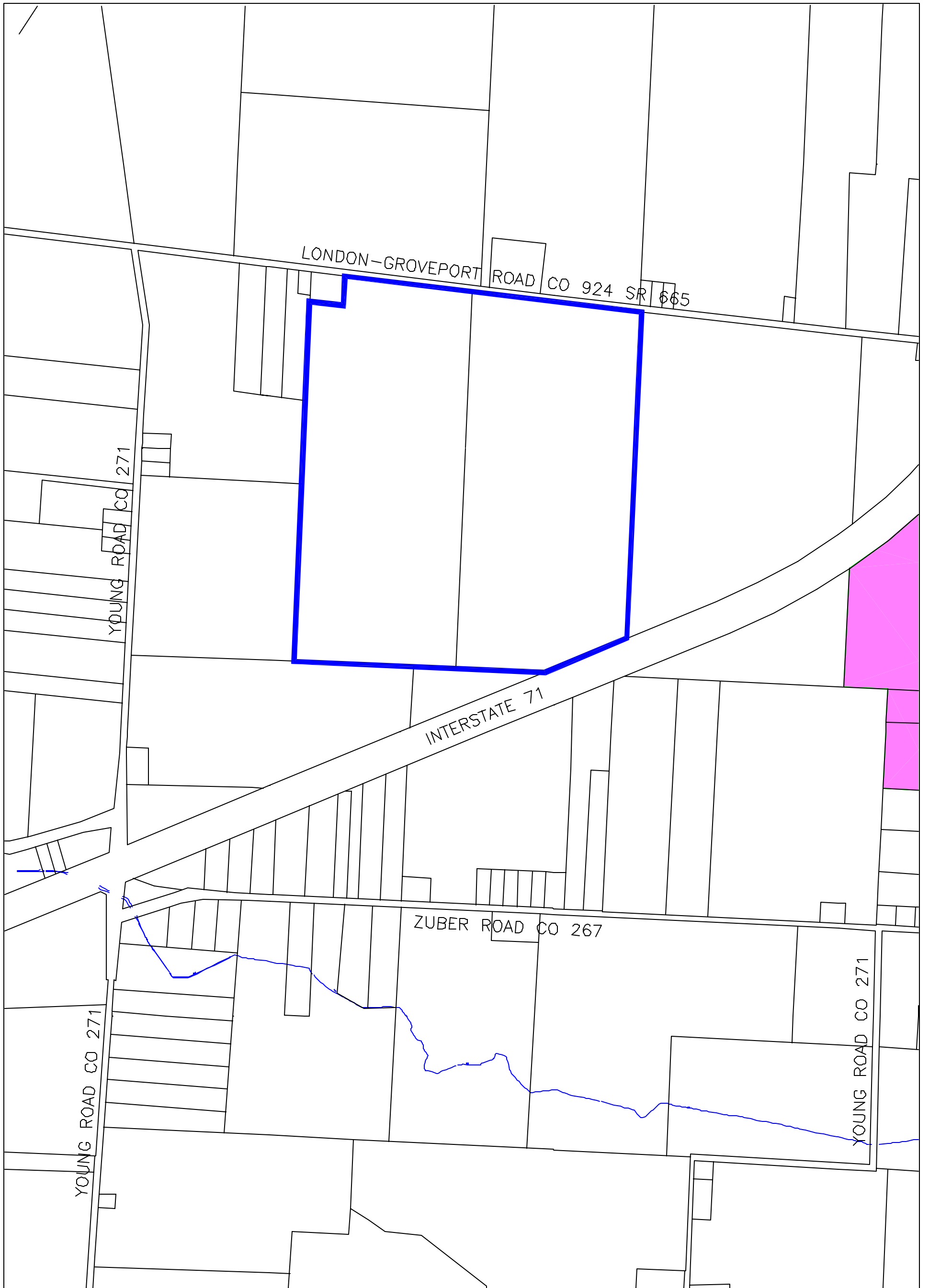
NOTE: THIS AREA IS CONSIDERED A SINGLE SERVICE AREA.



NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- COLUMBUS
- GROVE CITY
- FRANKLIN COUNTY

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003




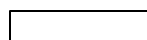


FRANKLIN COUNTY LANDFILL

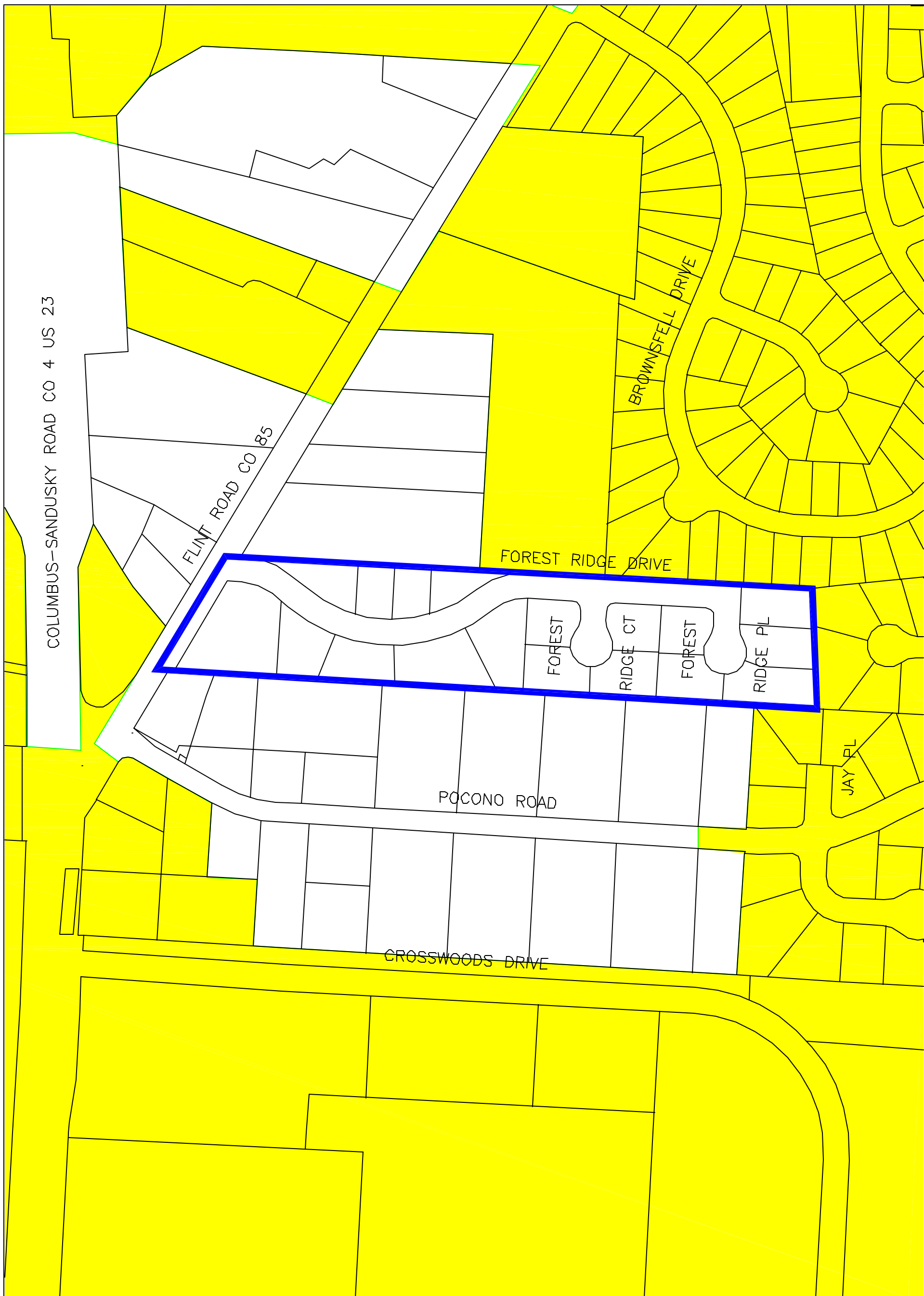
NOTE: THIS AREA IS CONSIDERED A SINGLE SERVICE AREA.



NO SCALE

-  SERVICE BOUNDARY
-  CORP. LINE
-  GROVE CITY
-  FRANKLIN COUNTY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003



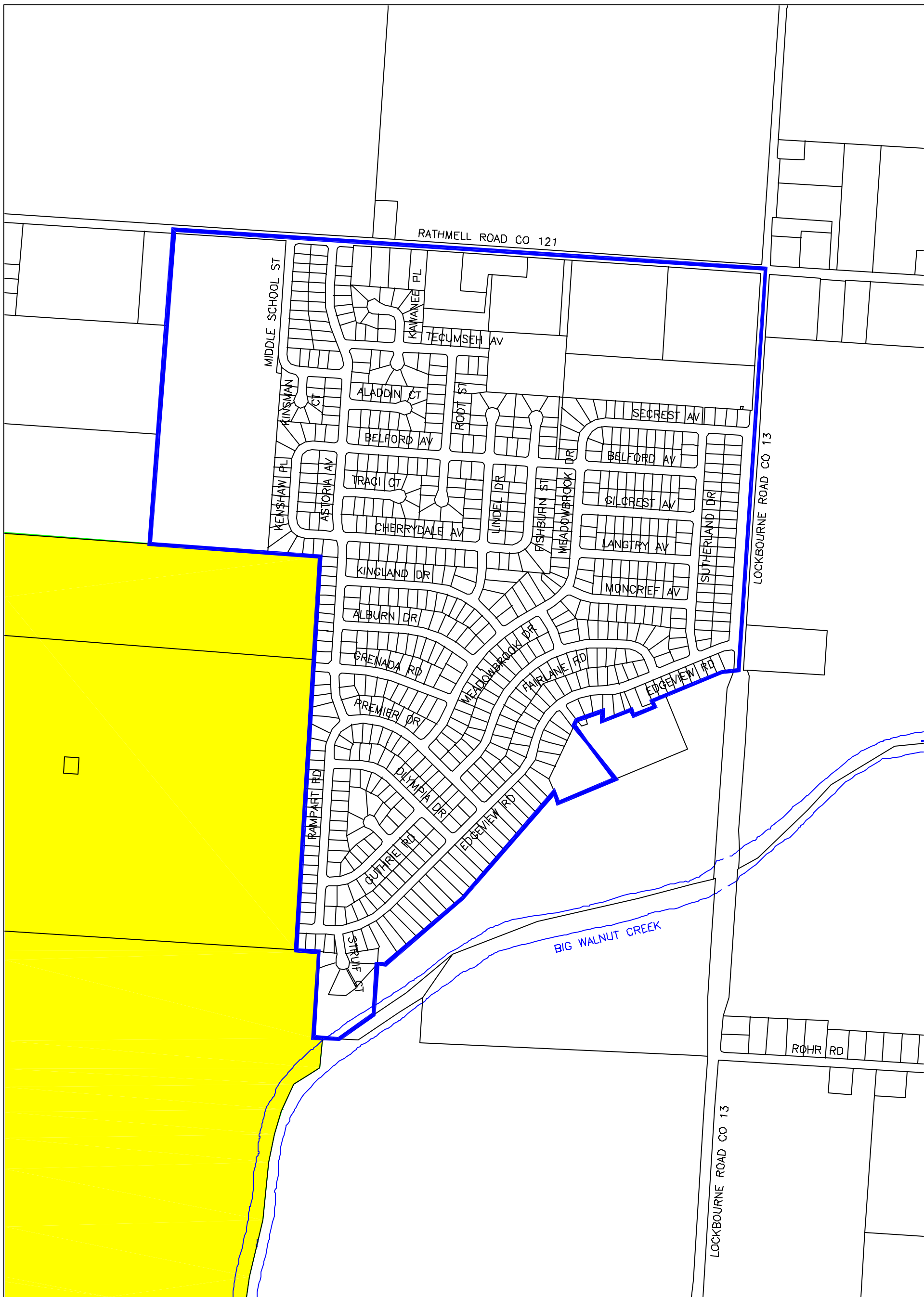
FOREST RIDGE SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- COLUMBUS
- FRANKLIN COUNTY



HAMILTON MEADOWS SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



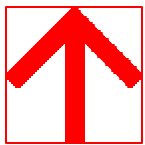
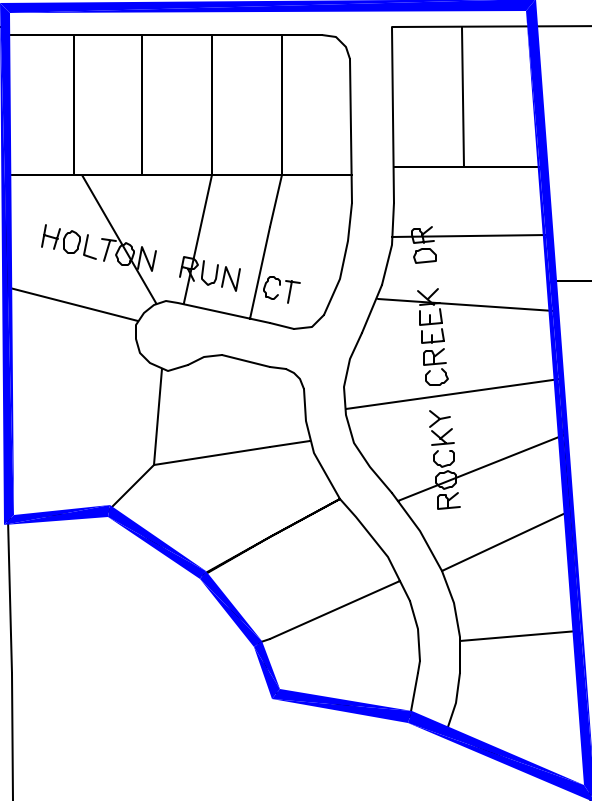
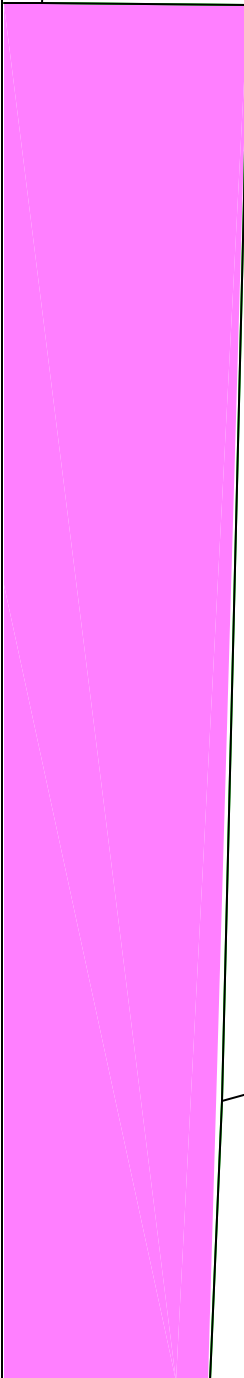
NO SCALE

- SERVICE BOUNDARY
- CORP. LINE
- COLUMBUS
- FRANKLIN COUNTY




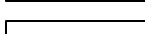
HOLTON ROAD

HOLTON RUN CT

ROCKY CREEK DR

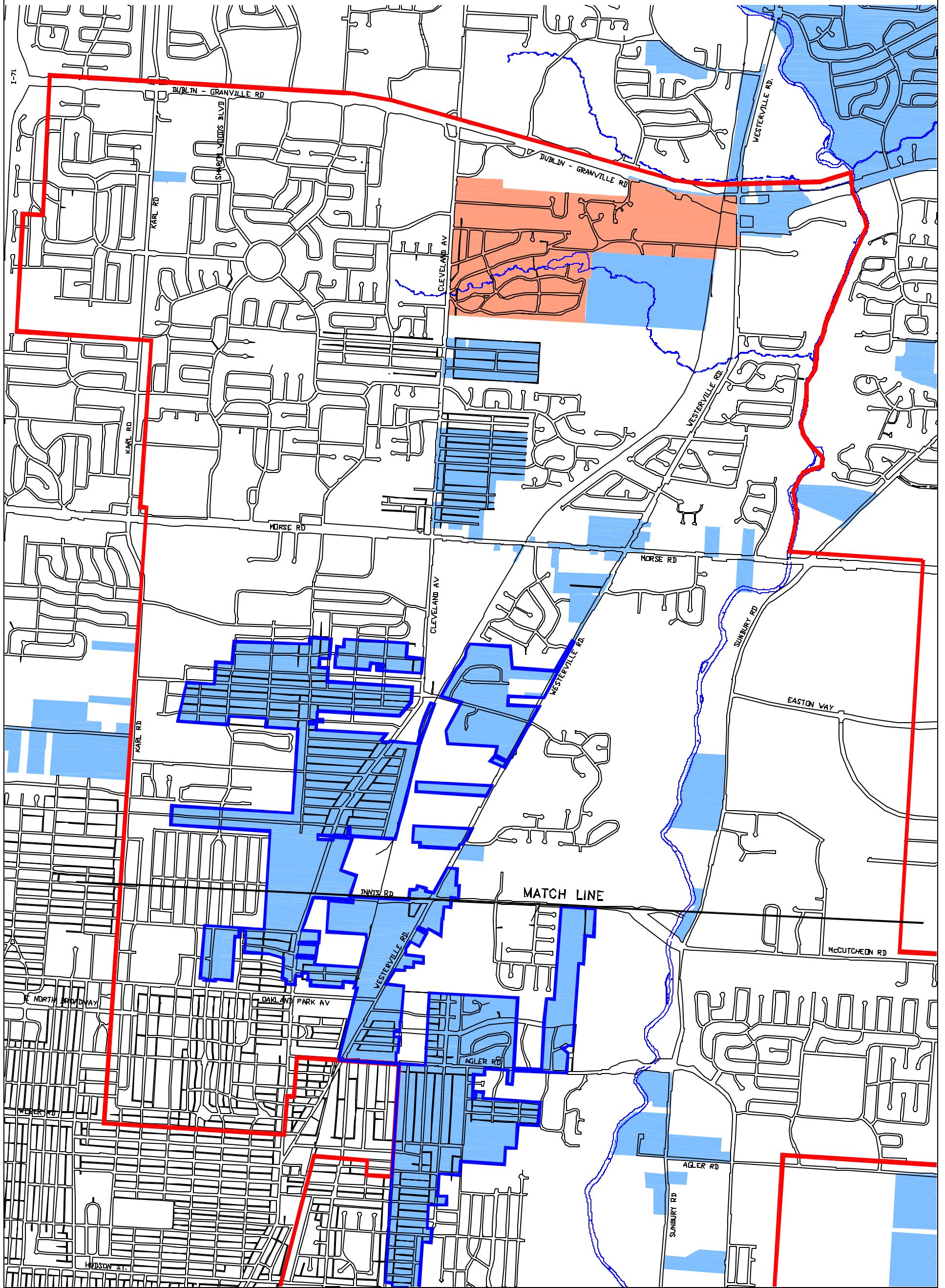


NO SCALE

-  SERVICE BOUNDARY
-  CORP. LINE
-  GROVE CITY
-  FRANKLIN COUNTY

HOLTON PARK SUBDIVISION

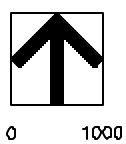
Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



SEWER DISTRICT MIFFLIN NO. 1

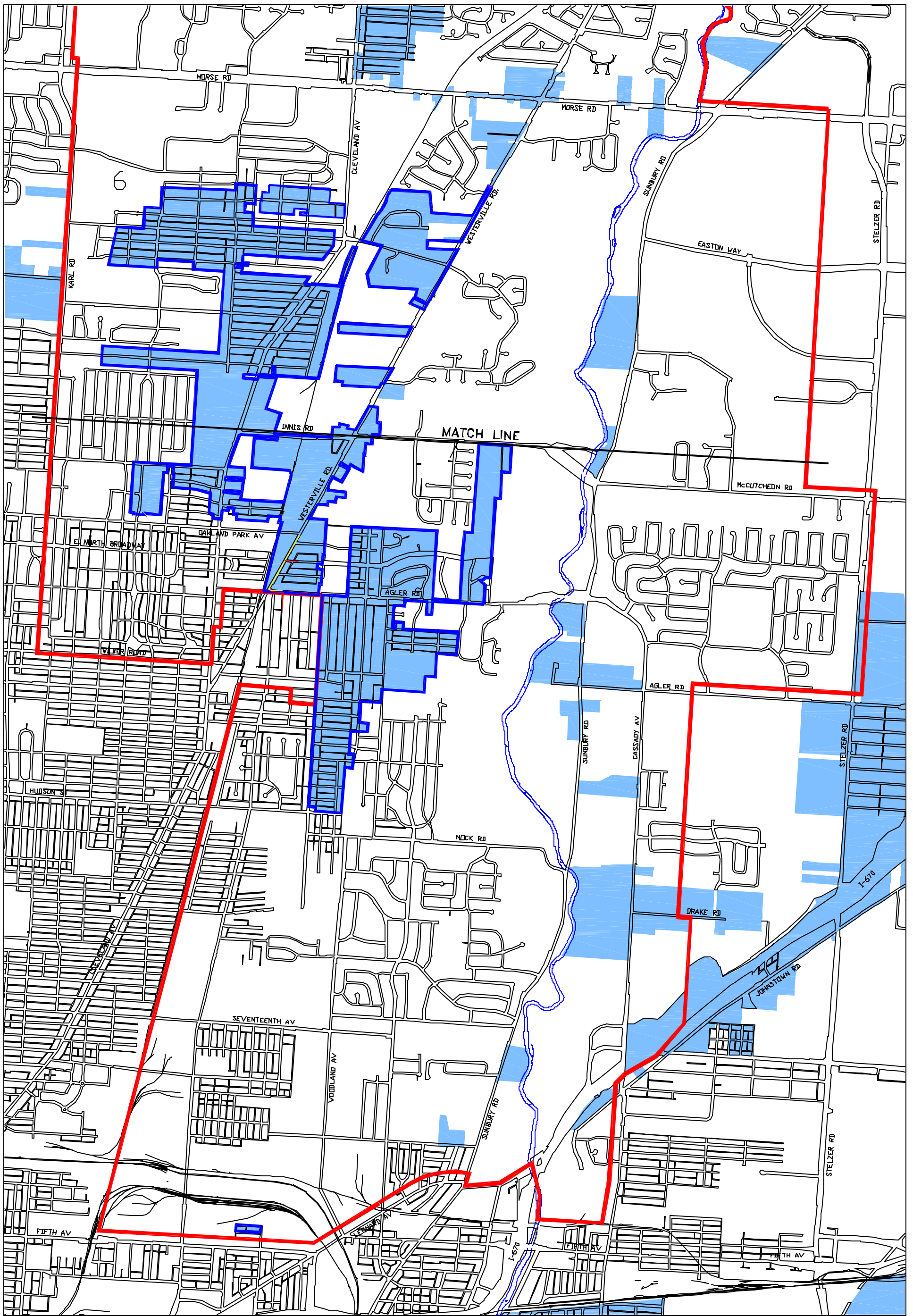
Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
MIFFLIN NO. 1 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-179, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



- DISTRICT BOUNDARY
- 1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBITS 15A, 15B, 15C, 15D, 15E & 15F FOR DETAILS
- COLUMBUS
- FRANKLIN COUNTY
- MINERVA PARK

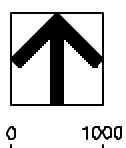




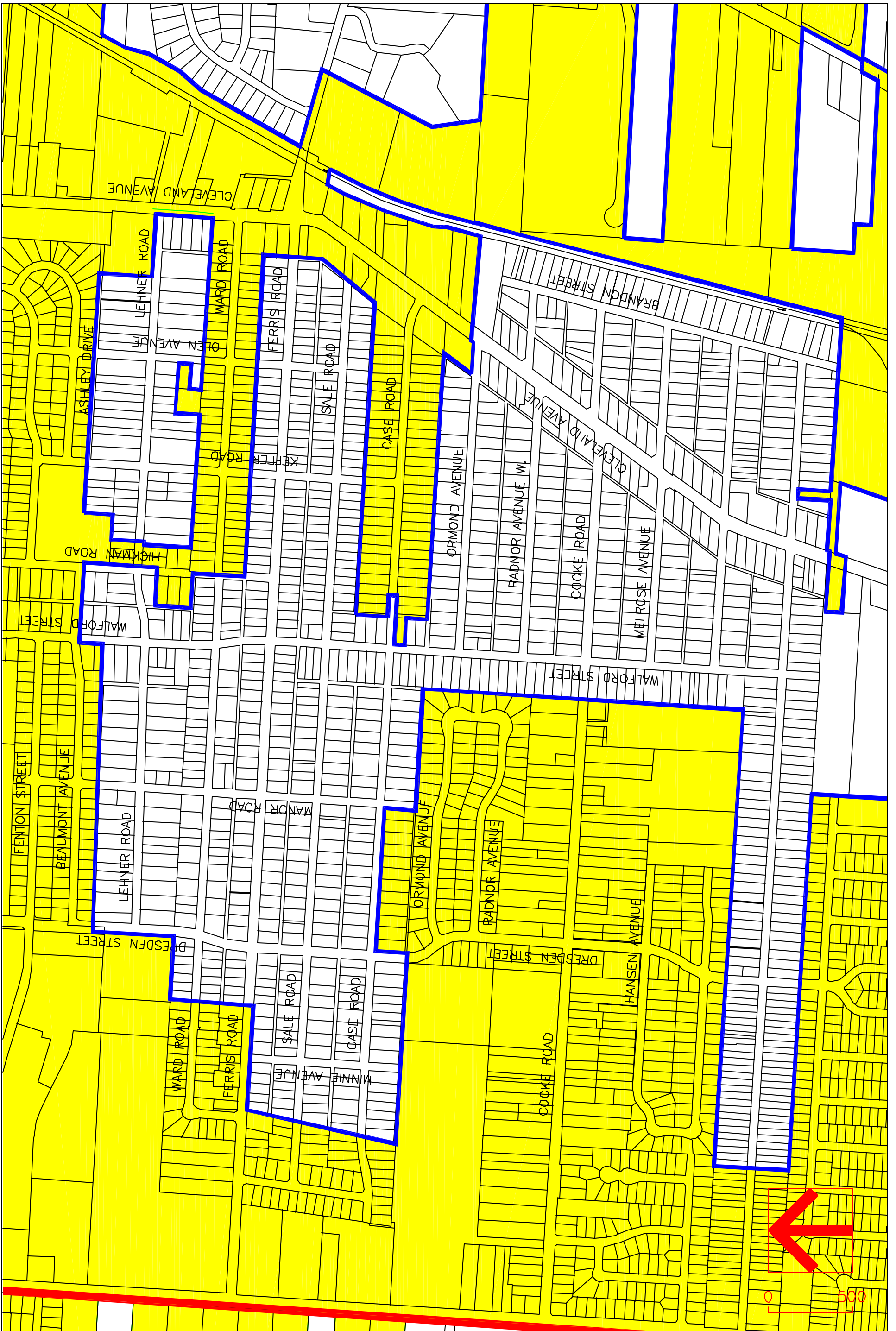
SEWER DISTRICT MIFFLIN NO. 1

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

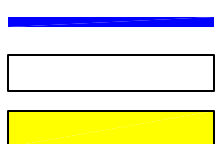
MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
MIFFLIN NO. 1 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-175, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998



- DISTRICT BOUNDARY
- 1981 MAINTENANCE CONTRACT AREAS
COUNTY SEWERS MAINTAINED BY CITY OF COLUMBUS
SEE EXHIBITS 15A, 15B, 15C, 15D, 15E & 15F FOR DETAILS
- COLUMBUS
- FRANKLIN COUNTY
- MINERVA PARK



**SEWER DISTRICT
MIFFLIN NO. 1**

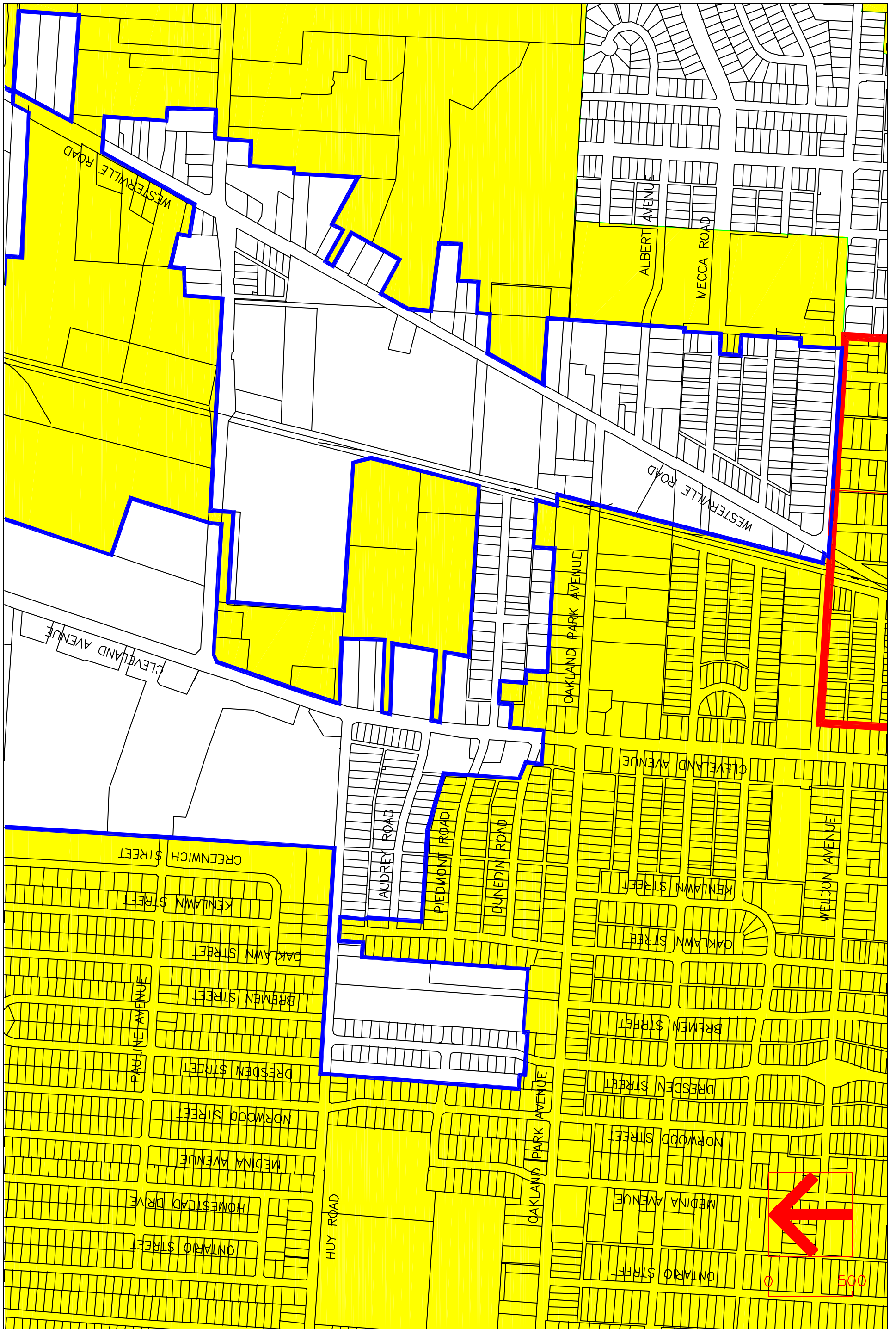


CONTRACT & MAINTENANCE AREA
FRANKLIN COUNTY
COLUMBUS

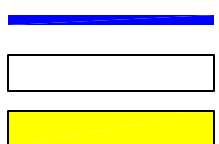


DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



**SEWER DISTRICT
MIFFLIN NO. 1**

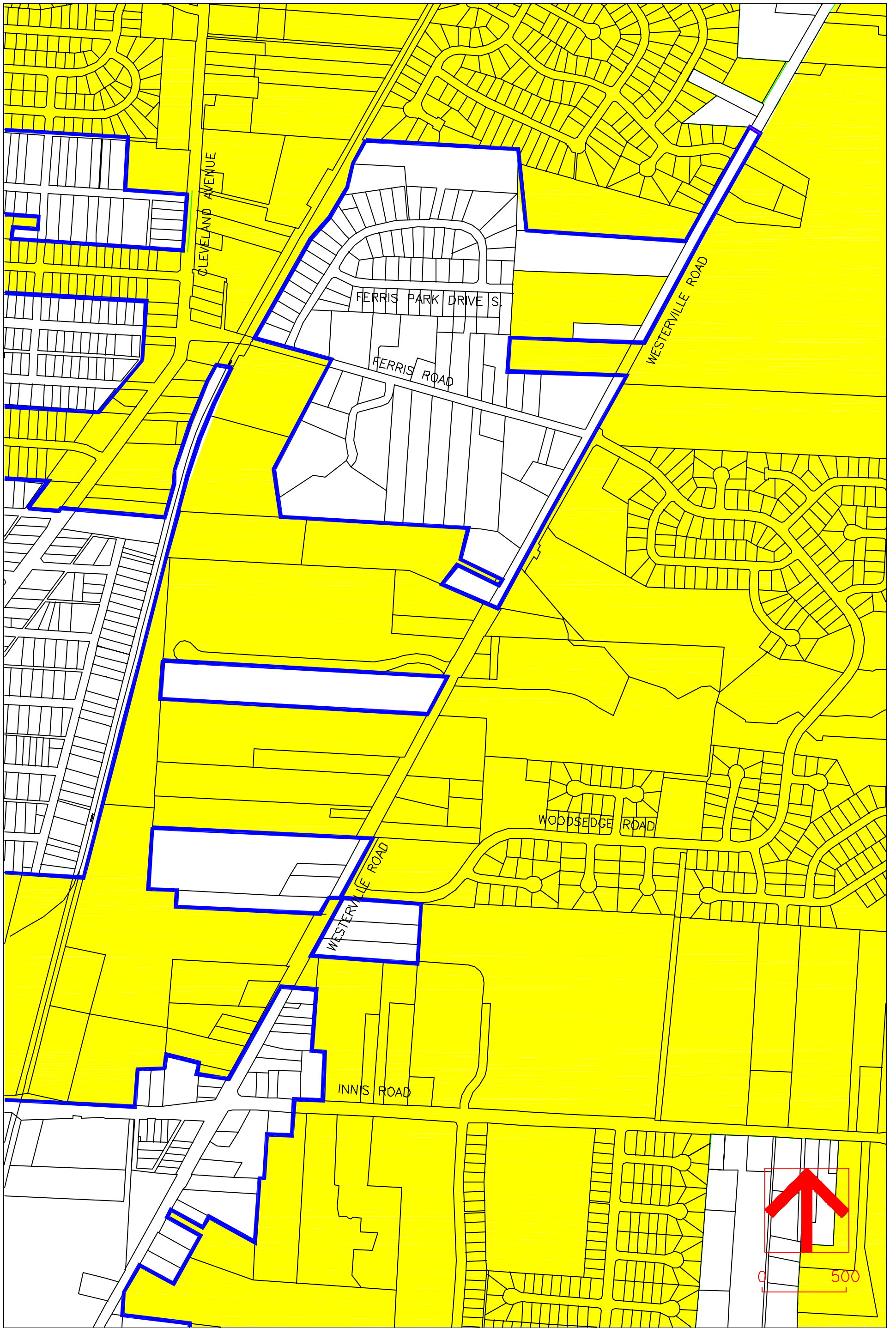


CONTRACT & MAINTENANCE AREA
FRANKLIN COUNTY
COLUMBUS



DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



**SEWER DISTRICT
MIFFLIN NO. 1**

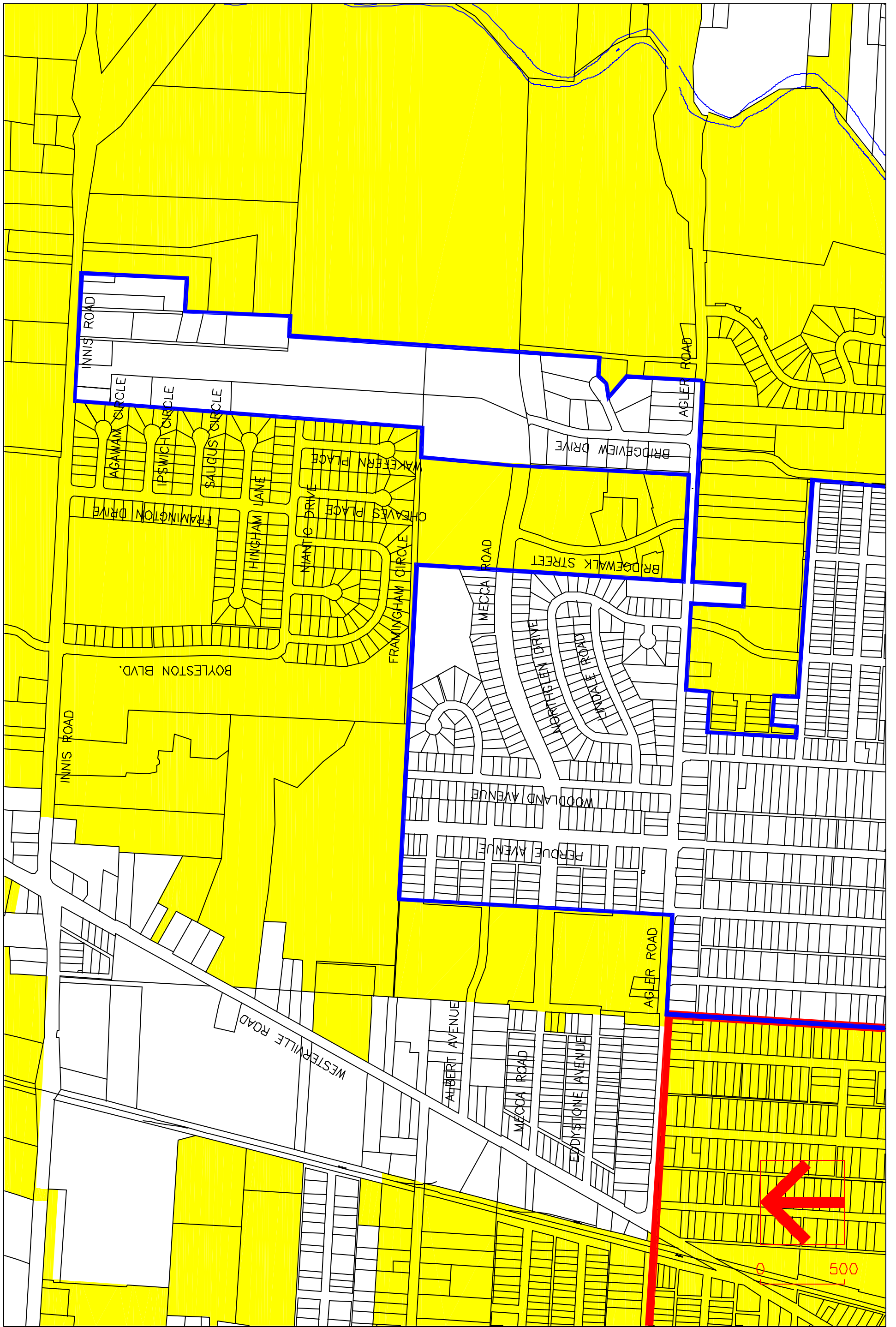


CONTRACT & MAINTENANCE AREA
FRANKLIN COUNTY
COLUMBUS

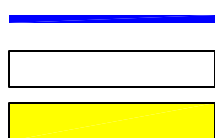


DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



**SEWER DISTRICT
MIFFLIN NO. 1**

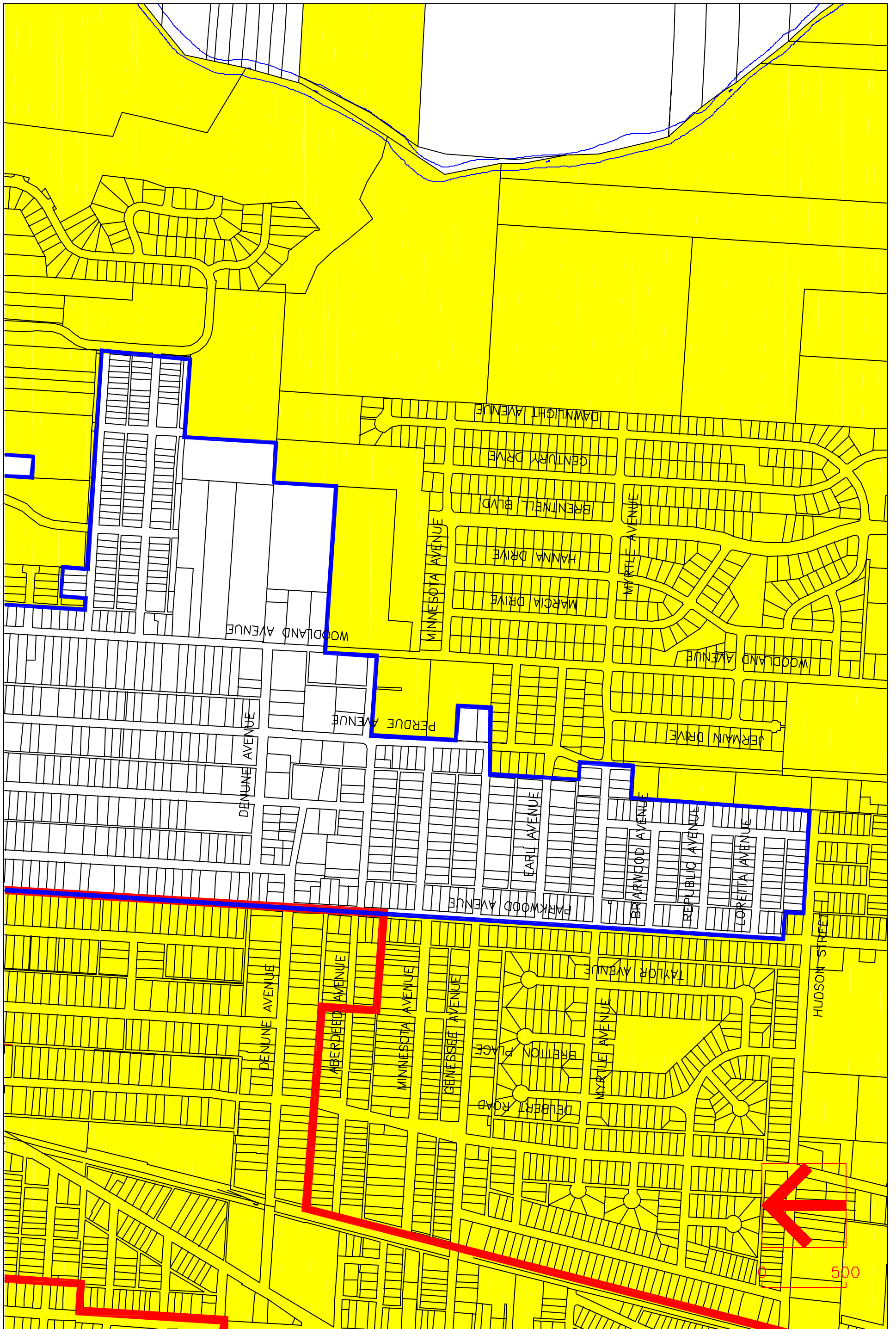


CONTRACT & MAINTENANCE AREA
FRANKLIN COUNTY
COLUMBUS



DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



**SEWER DISTRICT
MIFFLIN NO. 1**

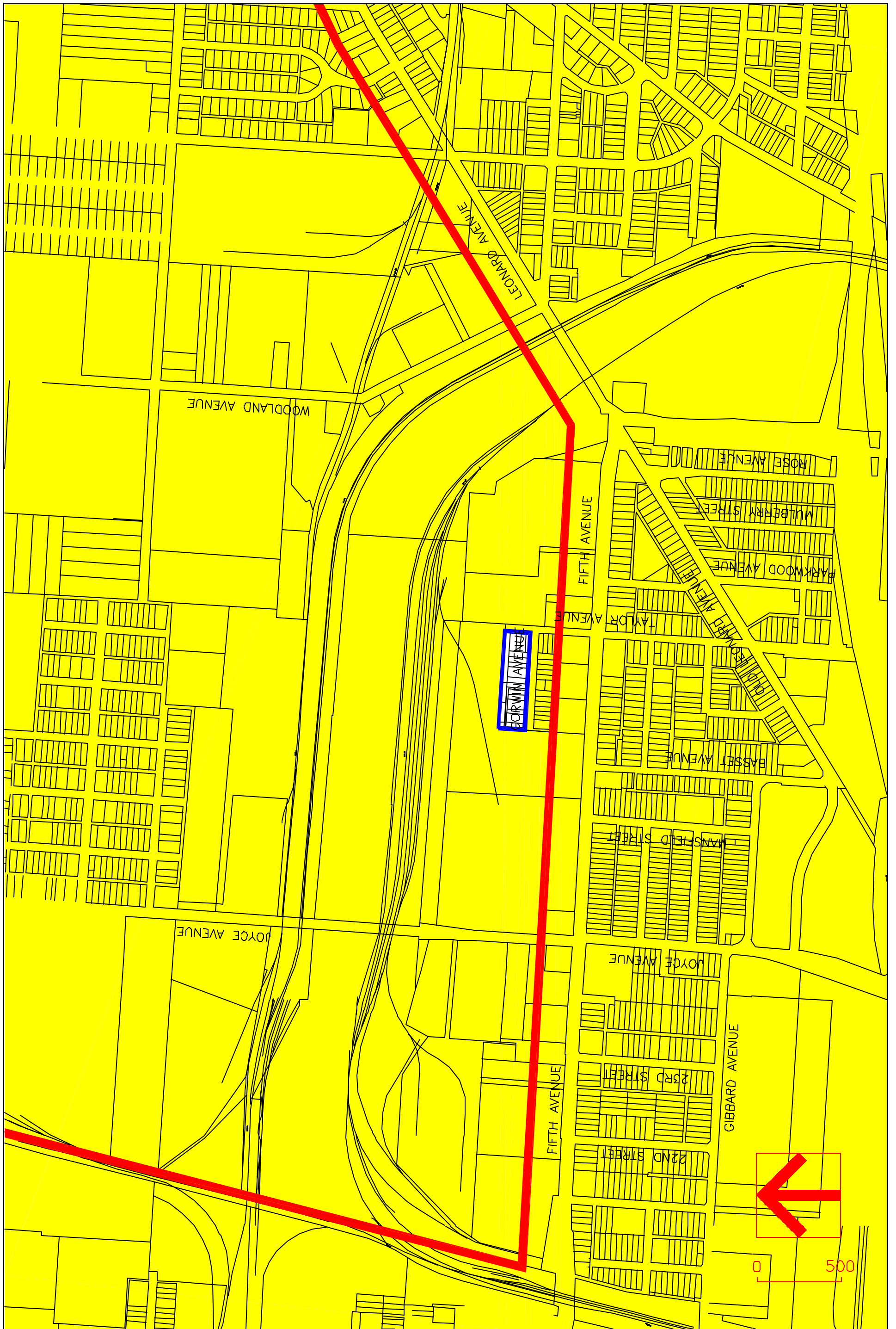


CONTRACT & MAINTENANCE AREA
FRANKLIN COUNTY
COLUMBUS



DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.



**SEWER DISTRICT
MIFFLIN NO. 1**



CONTRACT & MAINTENANCE AREA

FRANKLIN COUNTY

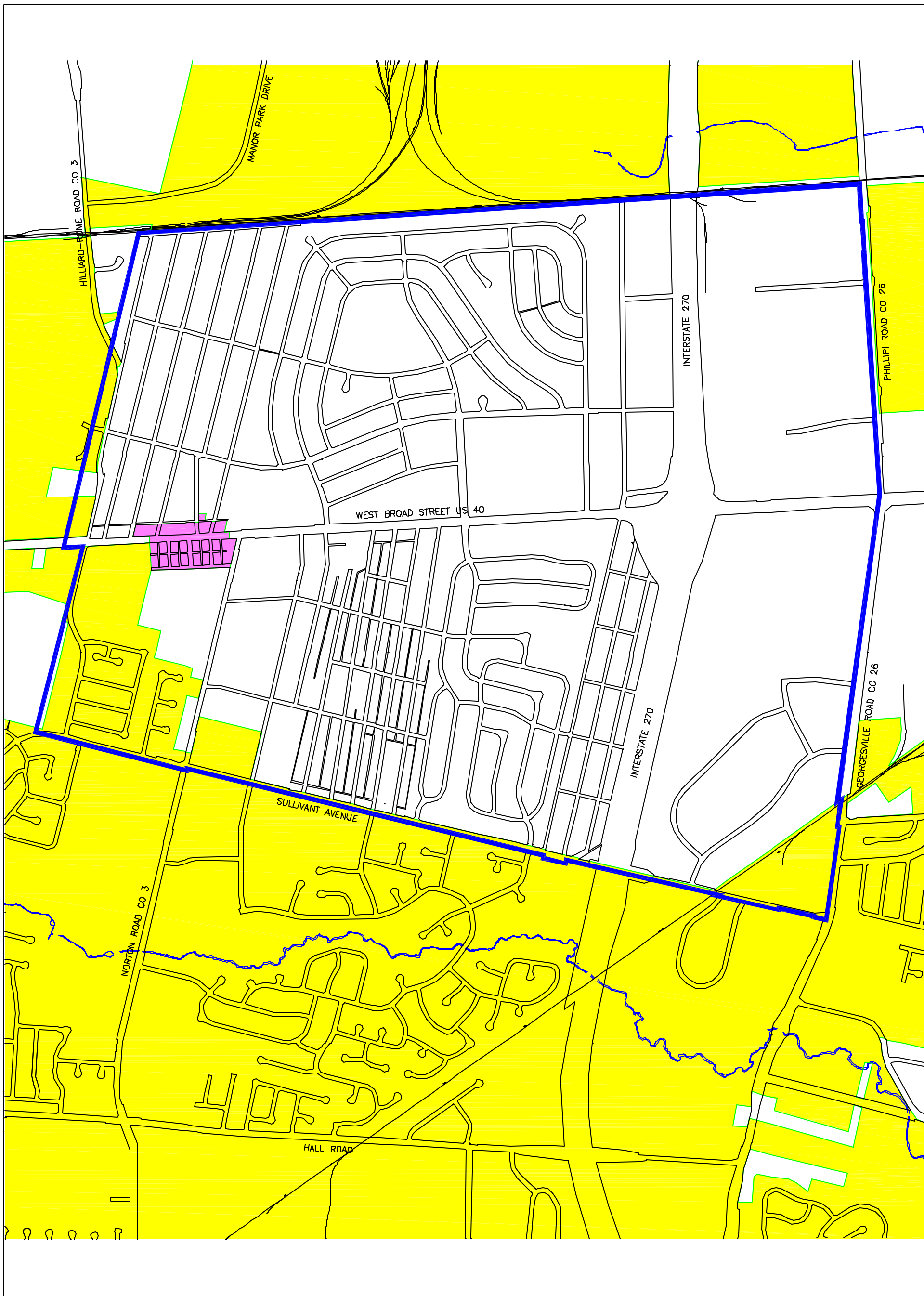
COLUMBUS



DISTRICT BOUNDARY

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.





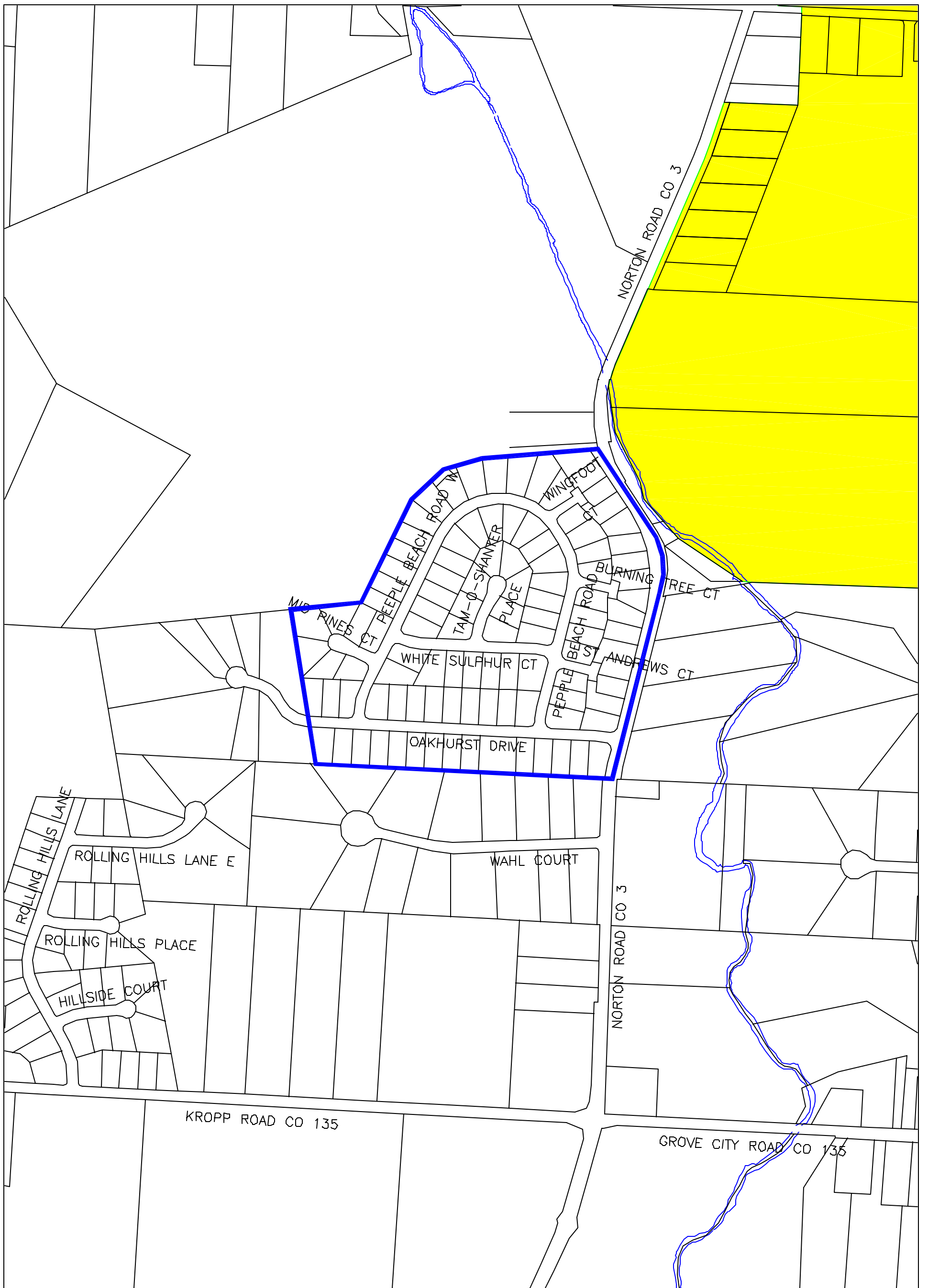
NEW ROME & LINCOLN VILLAGE

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

- SERVICE BOUNDARY
- CORP. LINE
- COLUMBUS
- NEW ROME
- FRANKLIN COUNTY



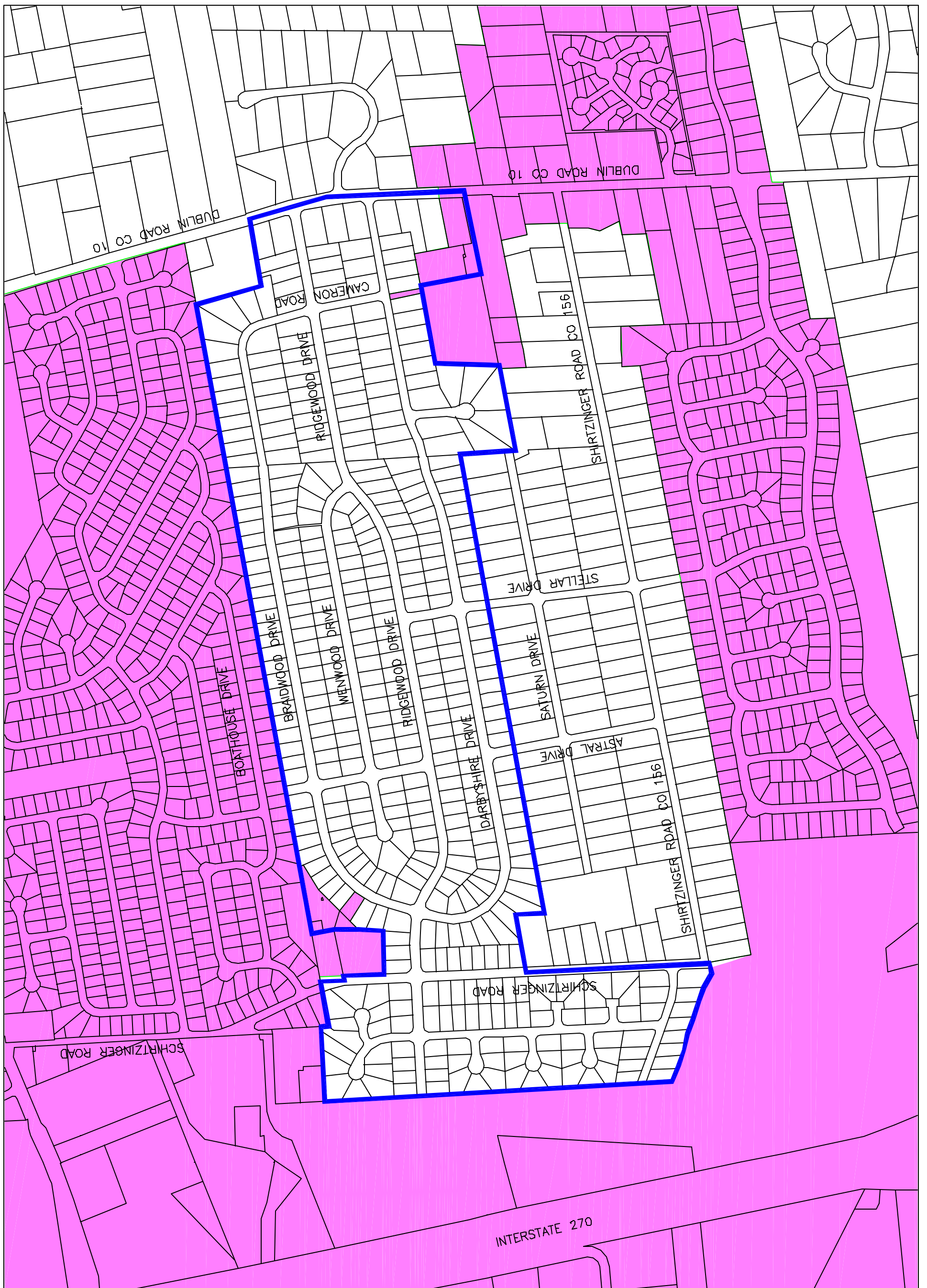
OAKHURST KNOLLS SUBDIVISION

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003



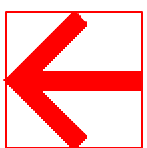
NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- COLUMBUS
- FRANKLIN COUNTY




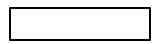


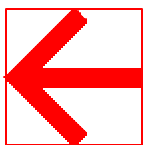
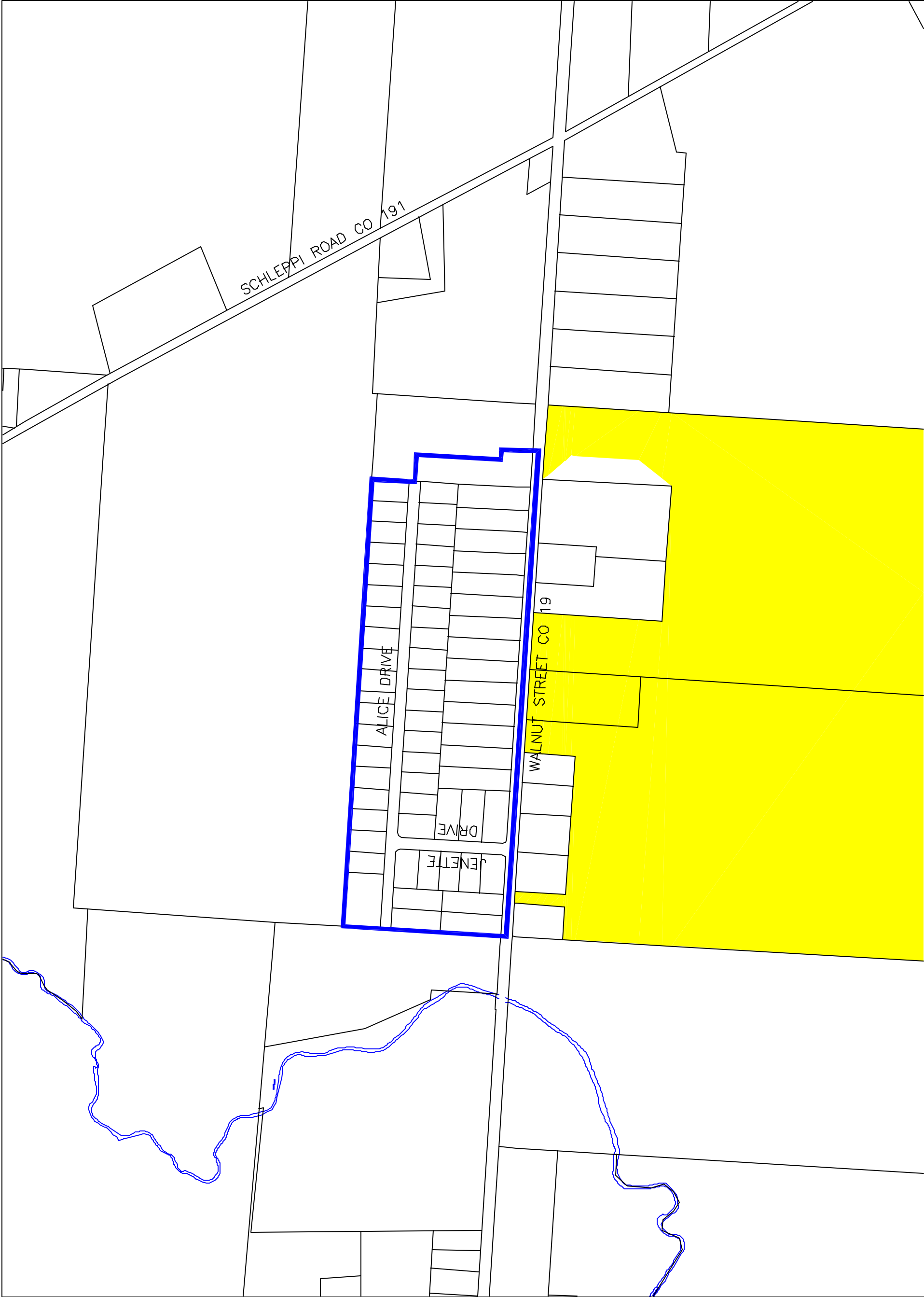
RIDGEWOOD ESTATES SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

-  SERVICE BOUNDARY
-  CORP. LINE
-  HILLIARD
-  FRANKLIN COUNTY

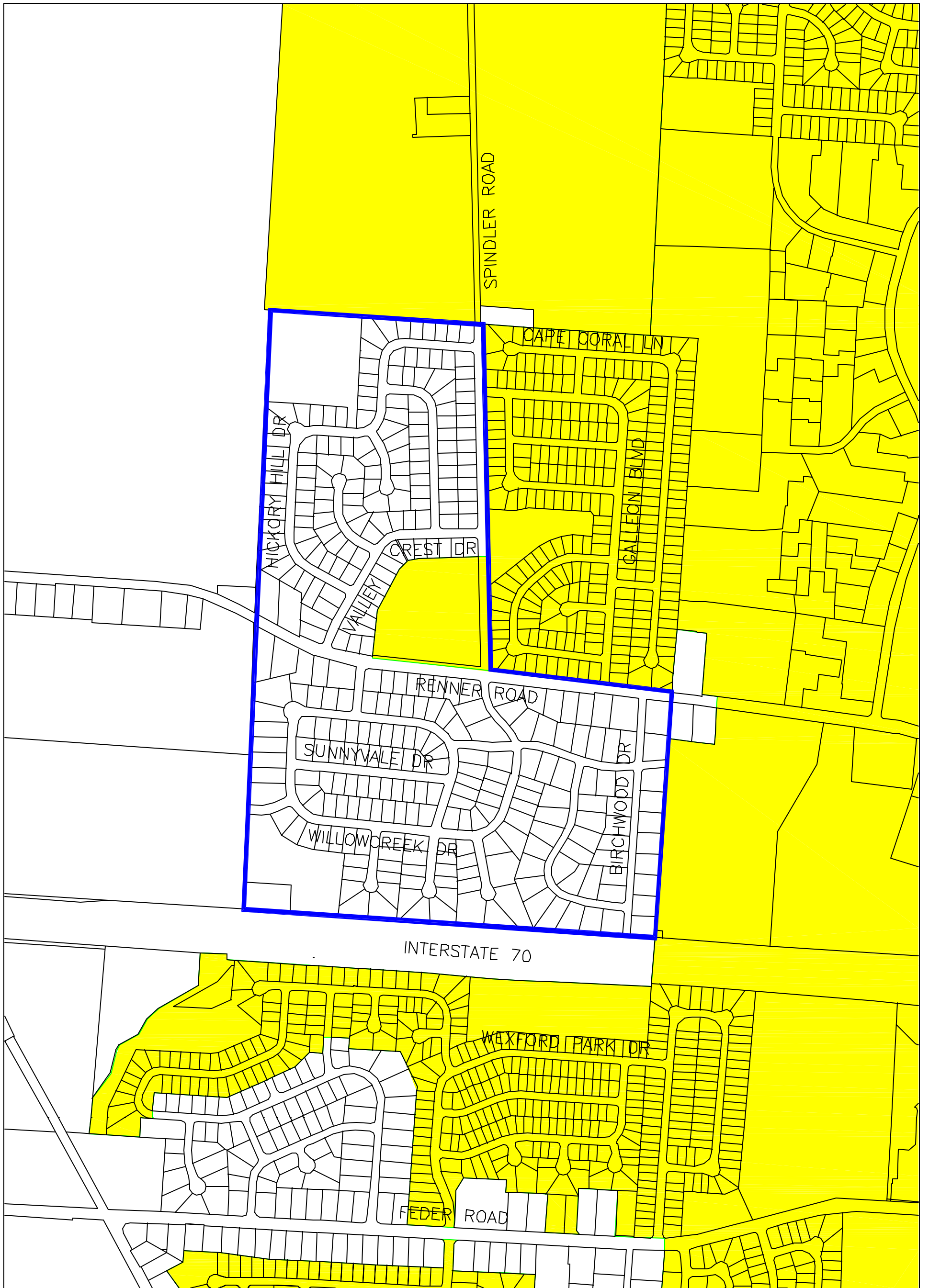


NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- CITY OF COLUMBUS
- FRANKLIN COUNTY

TAYLOR ESTATES SUBDIVISION

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003


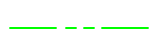

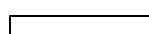


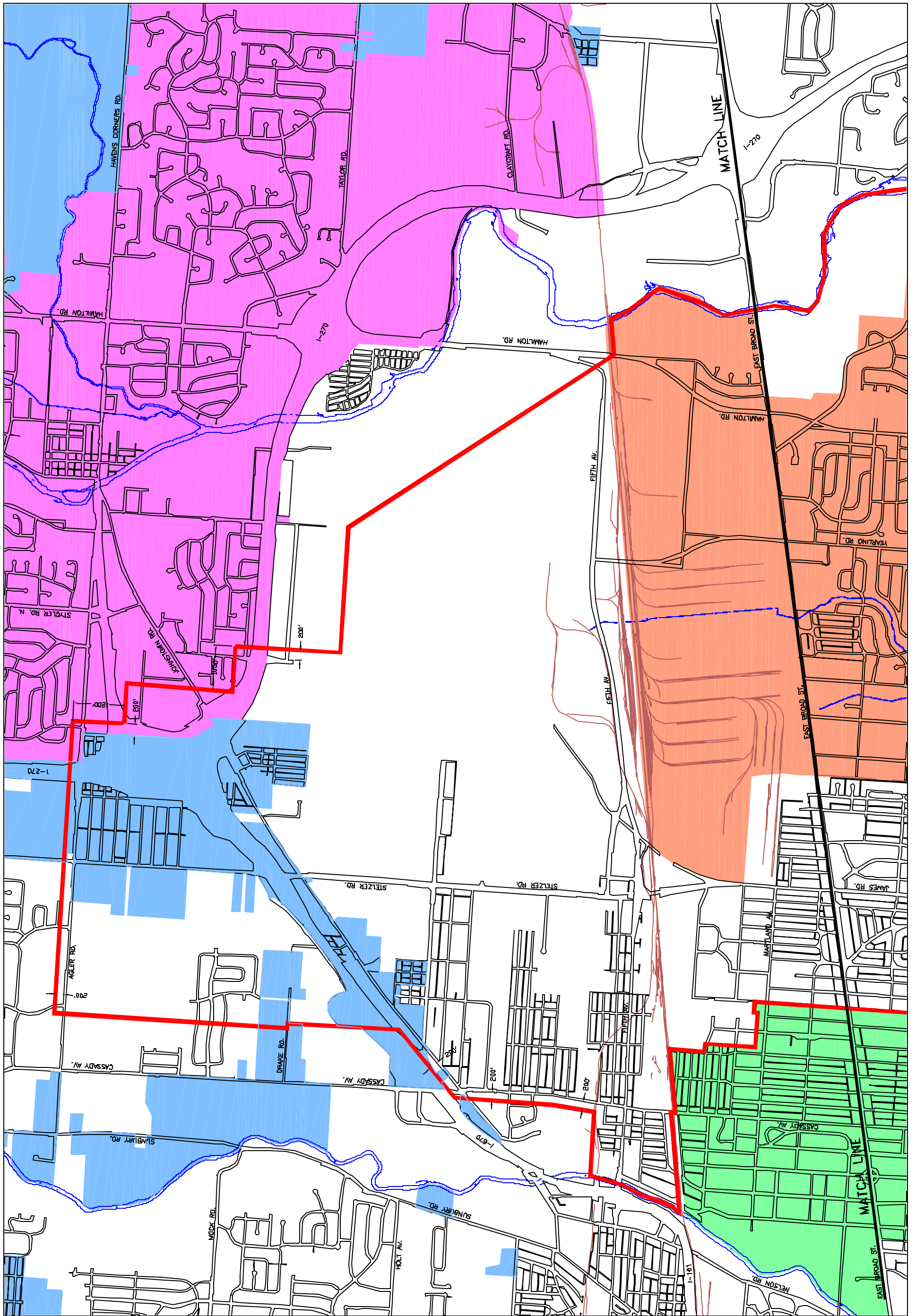
TIMBERBROOK SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

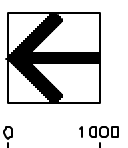
-  SERVICE BOUNDARY
-  CORP. LINE
-  COLUMBUS
-  FRANKLIN COUNTY



SEWER DISTRICT TRURO NO. 1

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003.

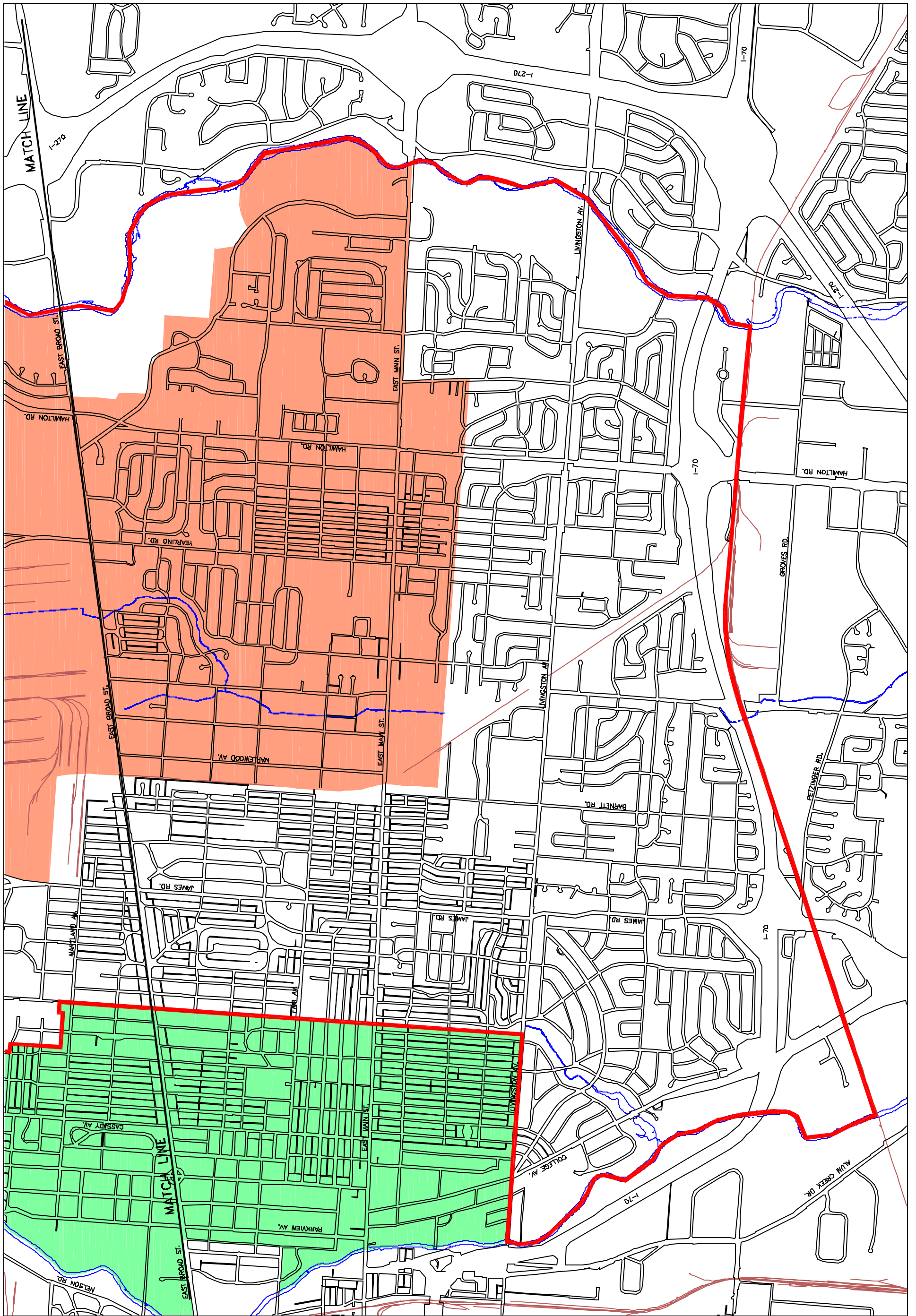
MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT
TRURO NO. 1 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT
C-177, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1998.



- DISTRICT BOUNDARY
- COLUMBUS
- FRANKLIN COUNTY

- WHITEHALL
- GAHANNA
- BEXLEY

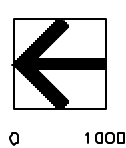




SEWER DISTRICT TRURO NO. 1

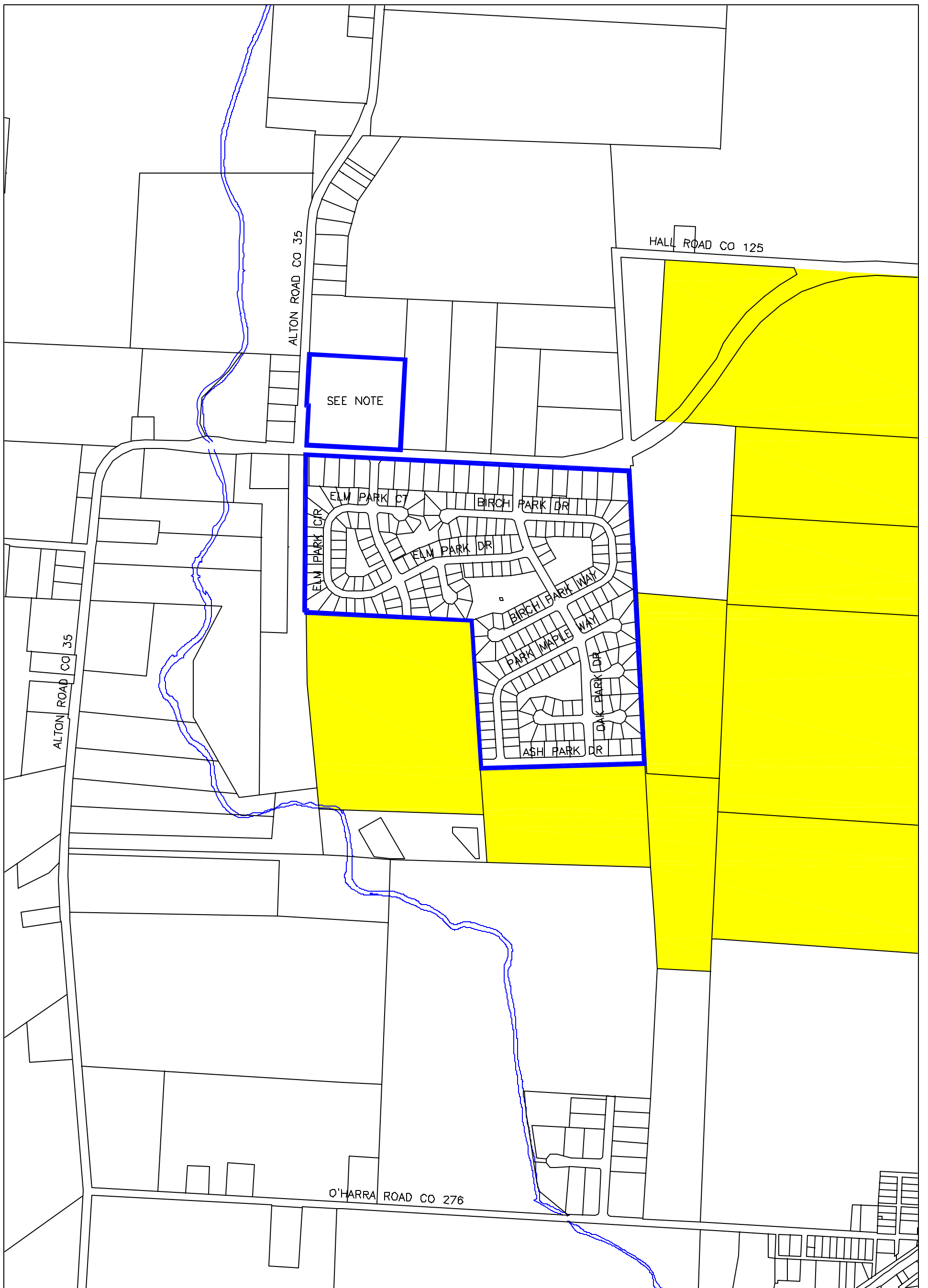
Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003.

MAP PRODUCED ON AUTOCAD MAP RELEASE 2002 UNDATED REDRAWN SEWER DISTRICT TRURO NO. 1 EXISTING SEWERS MAP FRANKLIN COUNTY ENGINEERING DEPARTMENT C-177, FRANKLIN COUNTY AUDITORS MAPPING APRIL, 1988.



- DISTRICT BOUNDARY
- WHITEHALL
- COLUMBUS
- BEXLEY
- FRANKLIN COUNTY

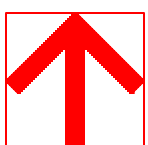




VILLAGE PARK SUBDIVISION

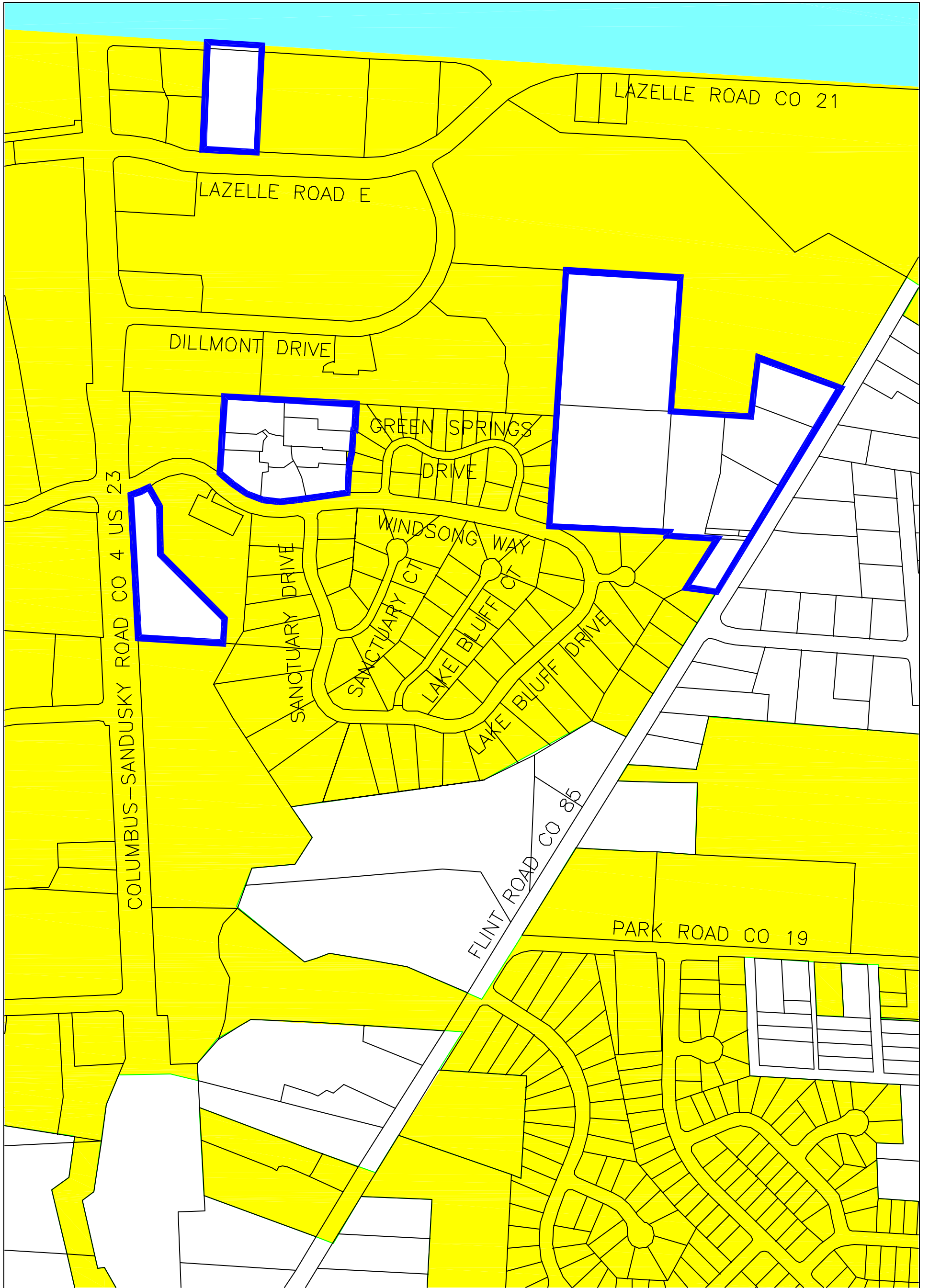
NOTE: 9.08 ACRES OF SOUTHWESTERN CITY SCHOOL DISTRICT,
ALTON HALL ELEMENTARY SCHOOL ADDED 9/12/95.

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003



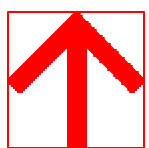
NO SCALE

- SERVICE BOUNDARY
- - - CORP. LINE
- FRANKLIN COUNTY
- COLUMBUS




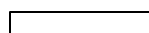


WINDSONG SUBDIVISION

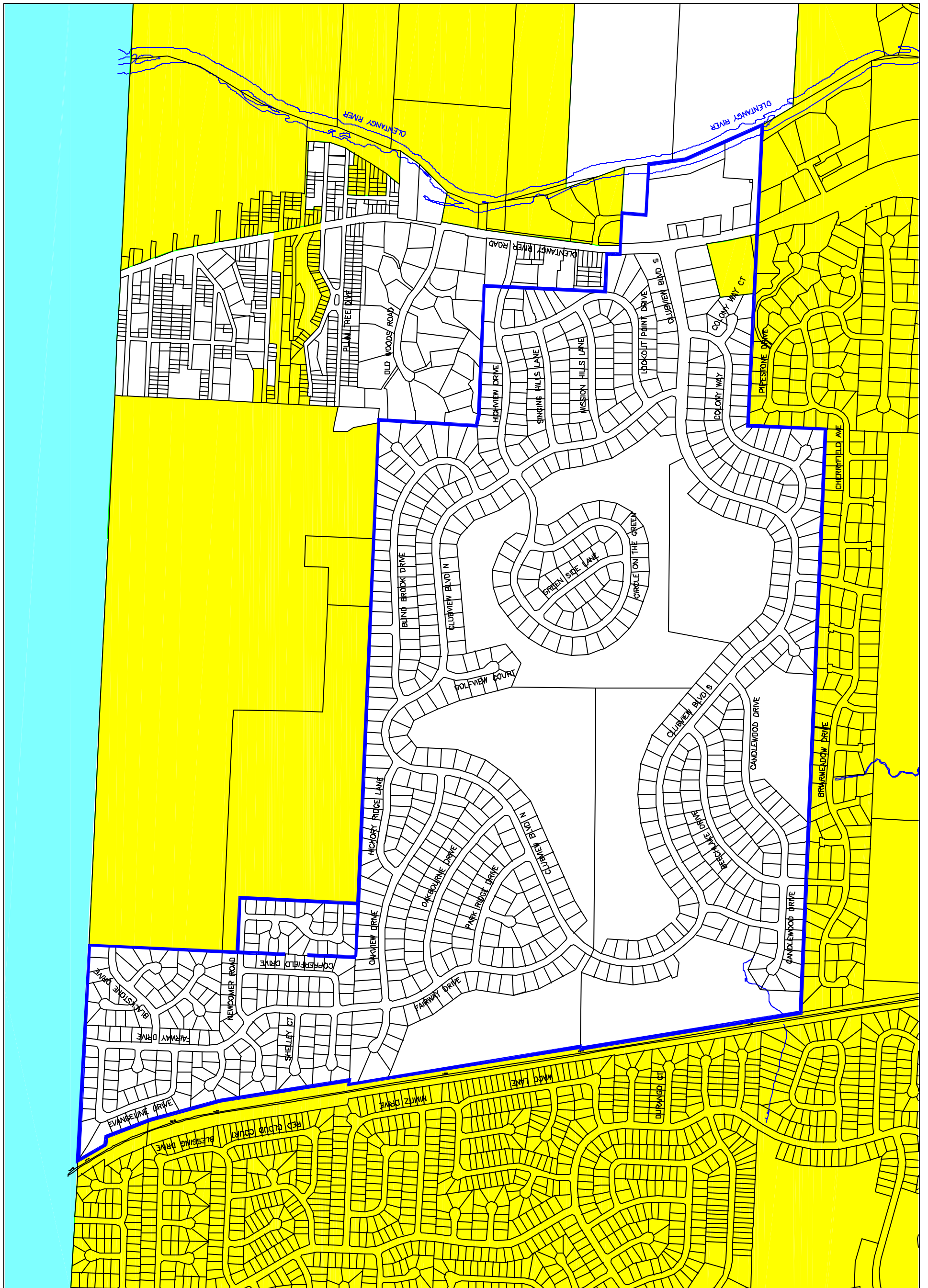
Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

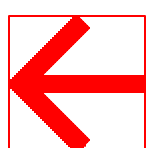
-  SERVICE BOUNDARY
-  CORP. LINE
-  COLUMBUS
-  FRANKLIN COUNTY

 DELAWARE COUNTY



WORTHINGTON HILLS SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



NO SCALE

--- 1987 AMENDED - 9.488 ACRE TRACT

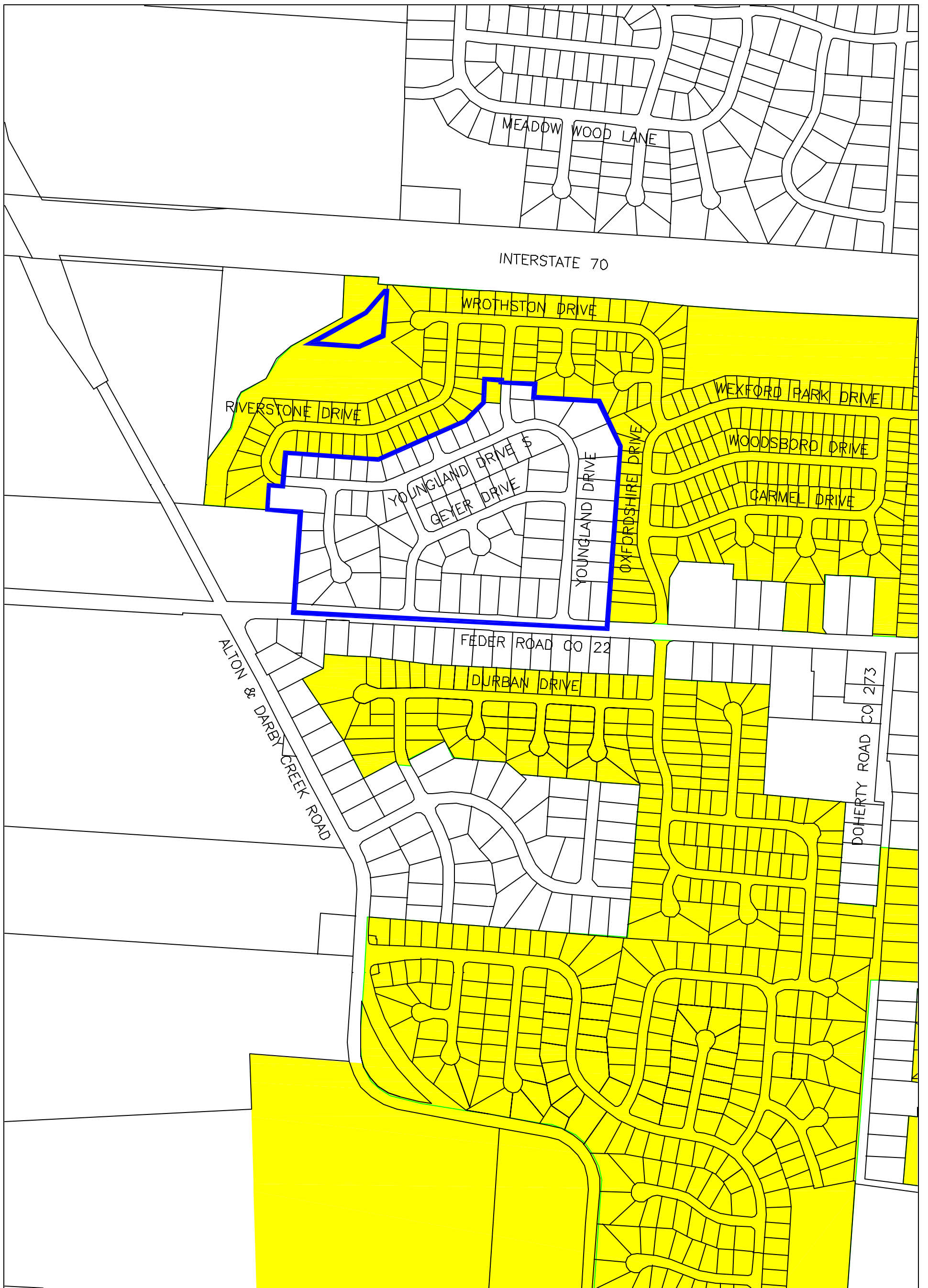
— SERVICE BOUNDARY

- - - CORP. LINE

■ COLUMBUS

□ FRANKLIN COUNTY

■ DELAWARE COUNTY







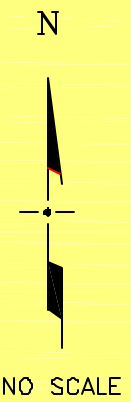
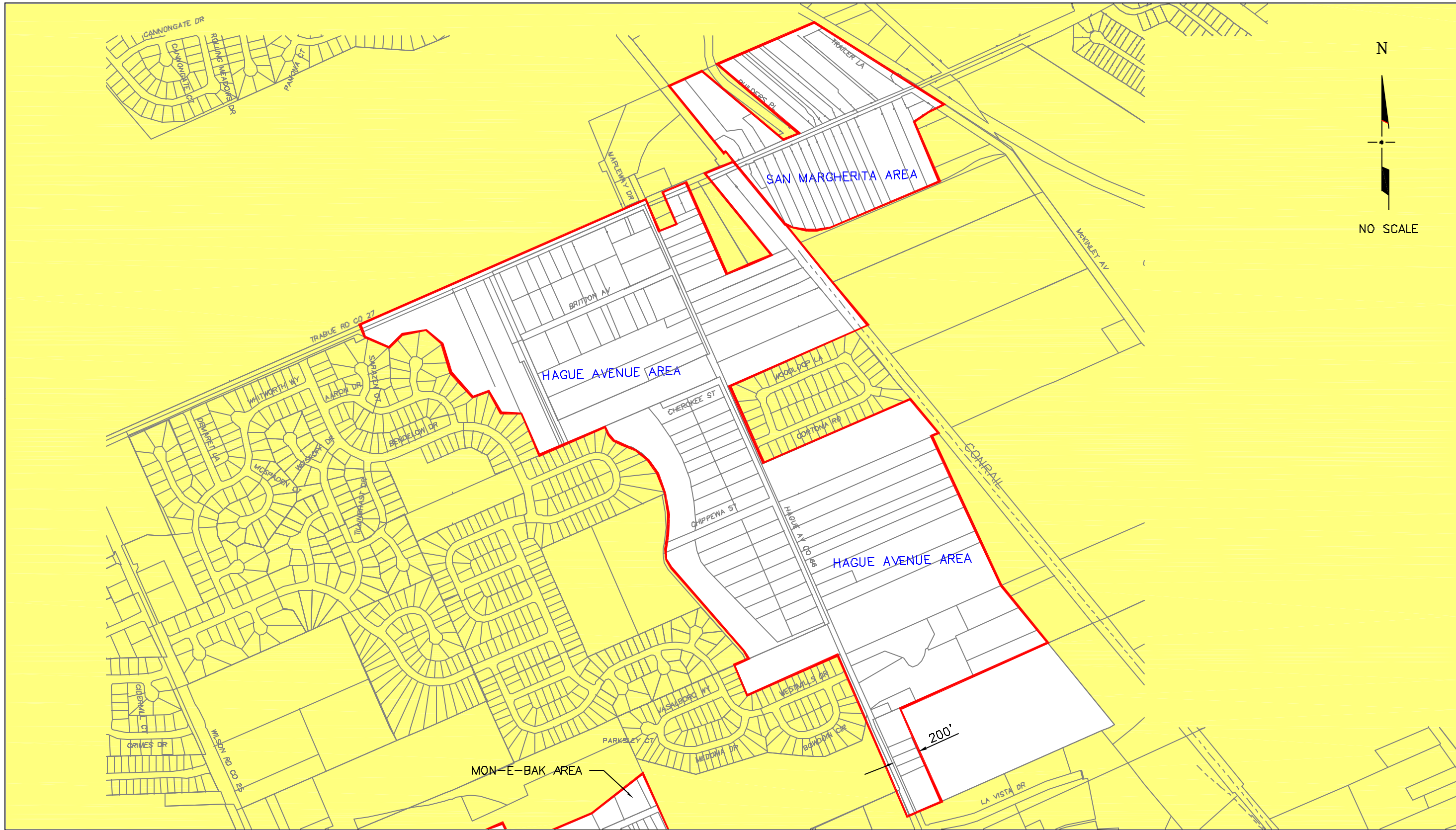
YOUNG ESTATES SUBDIVISION

Conforms to Franklin County/City of Columbus Sewage Disposal Contract Areas, 2003



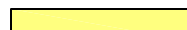


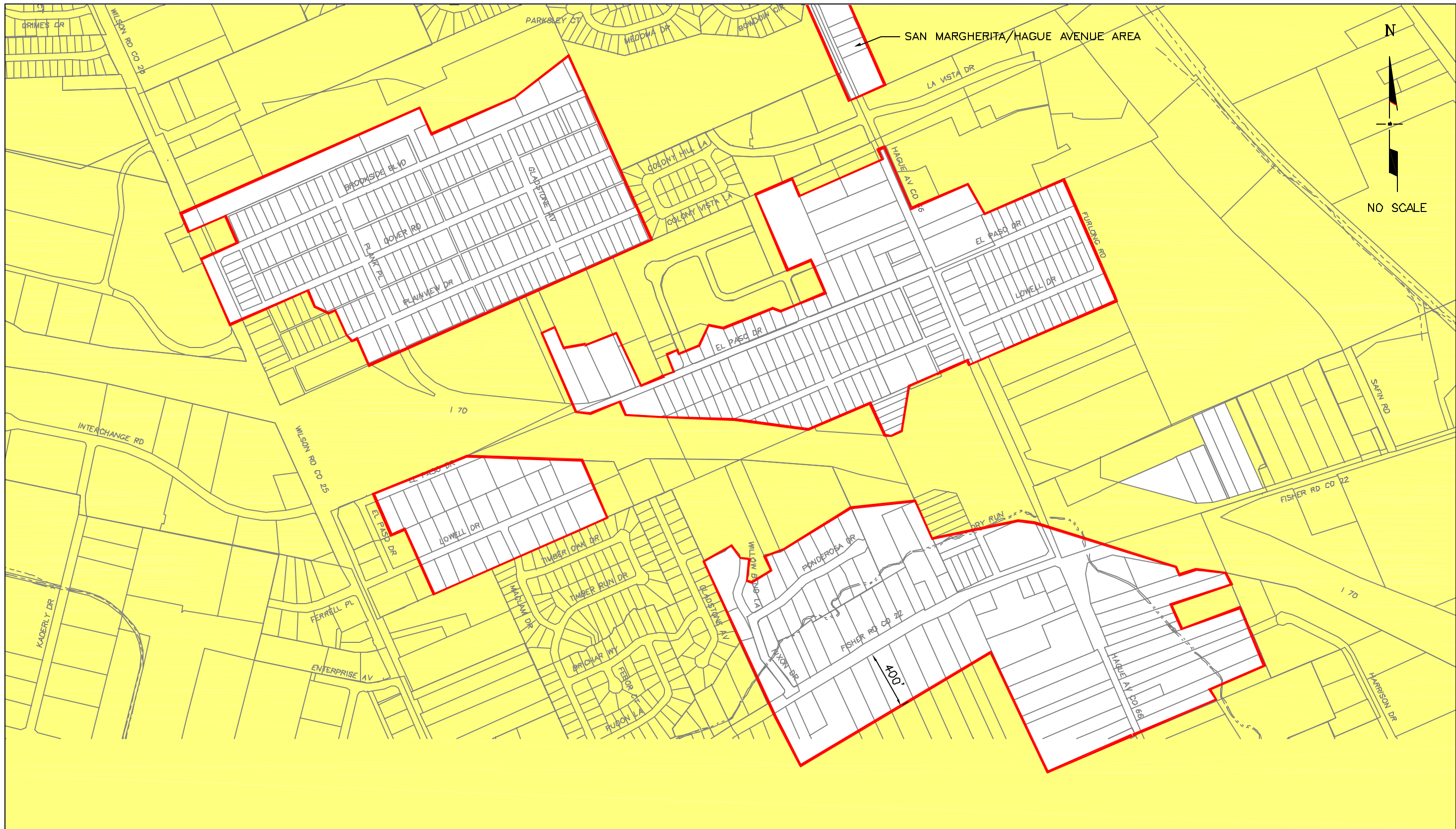
NO SCALE

-  SERVICE BOUNDARY
-  CORP. LINE
-  COLUMBUS
-  FRANKLIN COUNTY



SEWER DISTRICT
SAN MARGHERITA / HAGUE AVENUE AREA
 Conforms to Franklin County/City of Columbus
 Sewage Disposal Contract Areas, 2003

-  CONTRACT BOUNDARY
-  FRANKLIN COUNTY
-  COLUMBUS

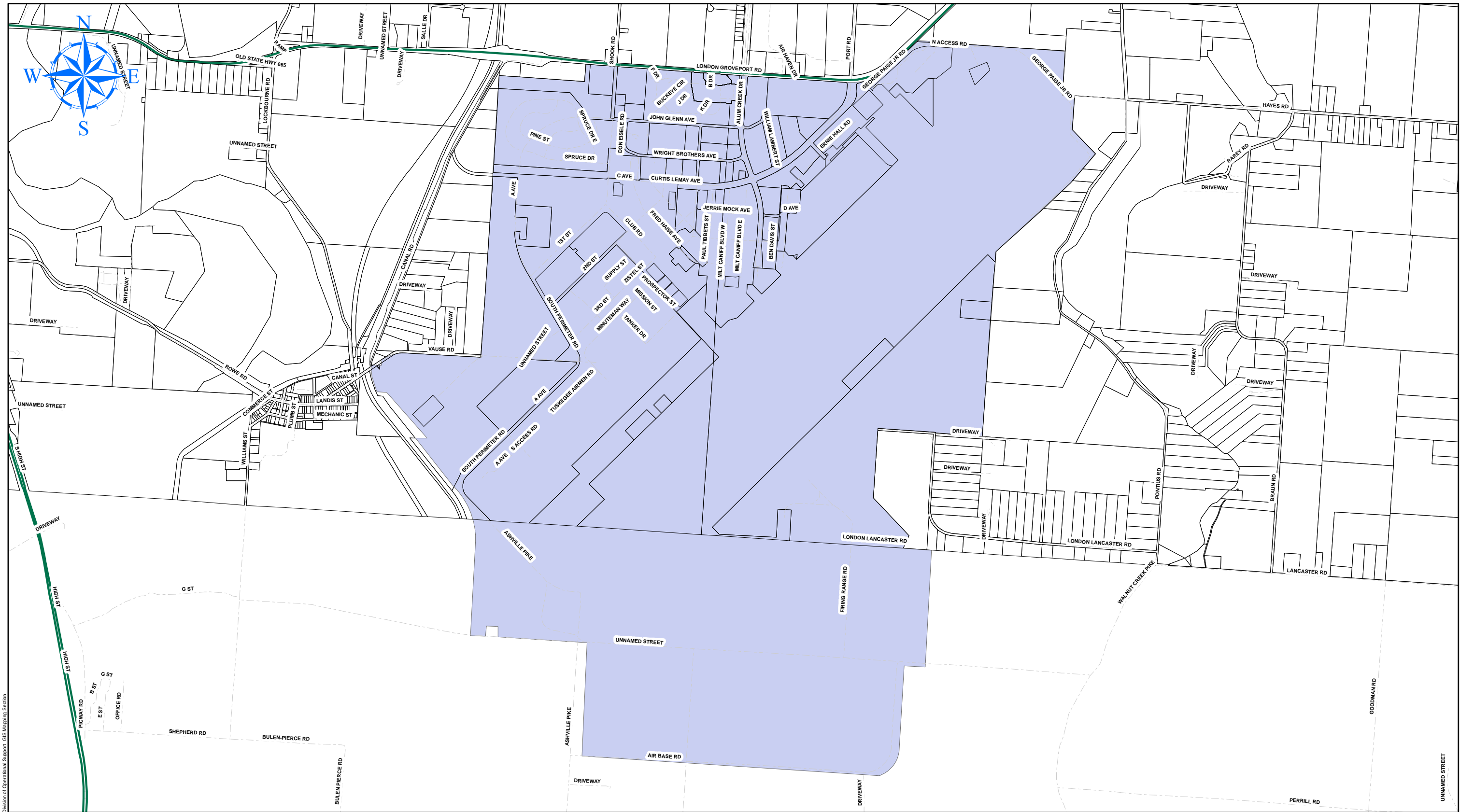


**SEWER DISTRICT
MON-E-BAK AREA**

Conforms to Franklin County/City of Columbus
Sewage Disposal Contract Areas, 2003

- CONTRACT BOUNDARY
- FRANKLIN COUNTY
- COLUMBUS



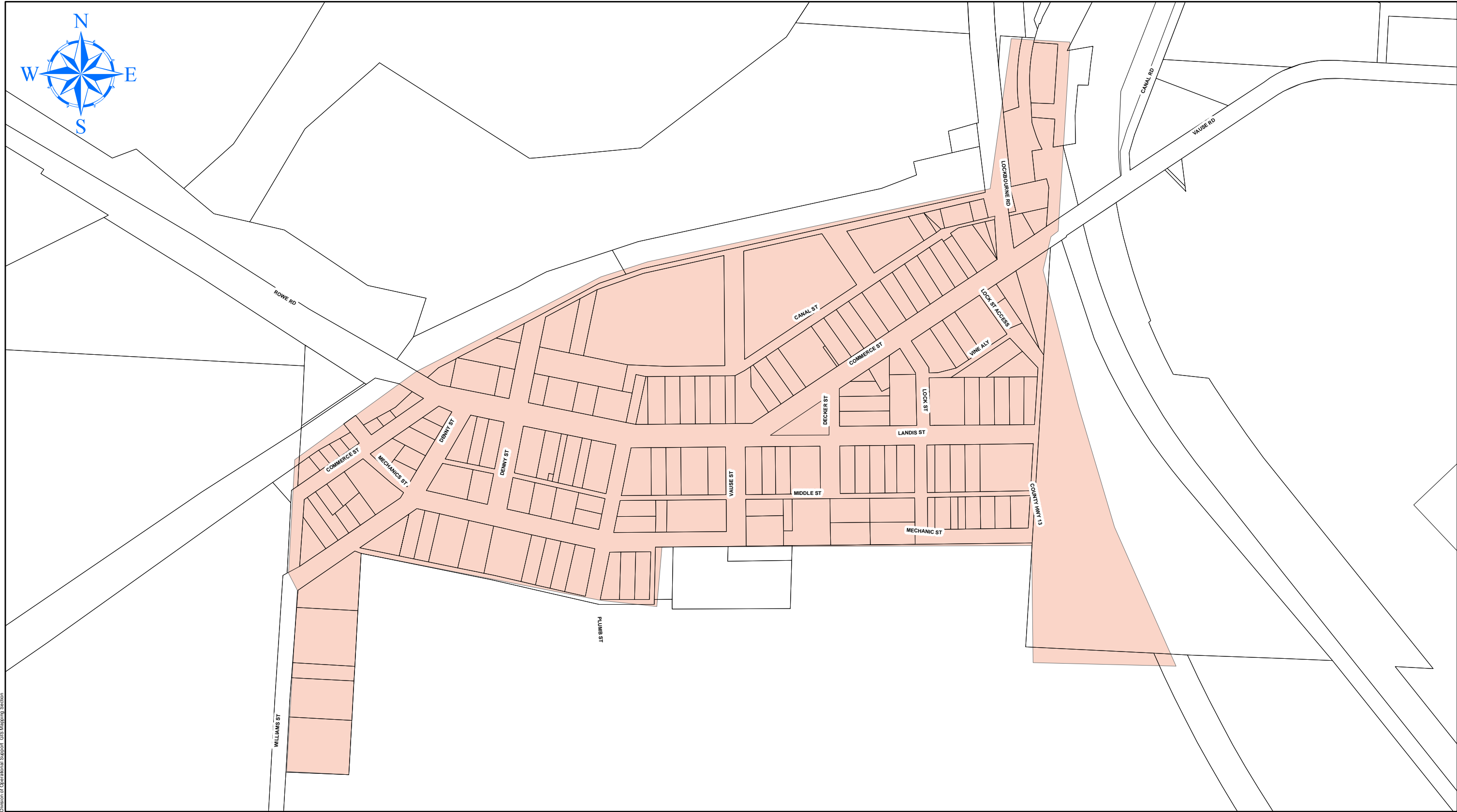


Division of Operations Support GIS Mapping Section

November 30, 2006

Rickenbacker, Ohio Water and Sewer Service Boundary

Rickenbacker Contract Service Area



November 30, 2006

Lockbourne, Ohio Water and Sewer Service Boundary

Lockbourne Contract Service Area