



RLB#7986.43
BOWEN
2019 CENTER STREET
SUITE 500
CLEVELAND, OH 44113

Mr. G. Andrew Gardner
Mayor
City of Willoughby Hills
35405 Chardon Road
Willoughby Hills, OH 44094

February 17, 2020

Re: Professional Services Proposal
Sewer Rehab-2020

Dear Mayor Gardner,

We are pleased to provide this proposal for your consideration on the above referenced project. The following is our understanding of the project scope, and estimate of professional fees:

PROJECT DESCRIPTION

The project consists of rehabilitating certain sanitary sewers and manholes within the city to reduce infiltration. Infiltration is the leakage of ground water into the sewer system through cracked or defective pipes, pipe joints, and manholes. Defects may be caused by things such as poor original construction, heavy vehicle traffic, ground movement or degradation of sewer materials over time. Infiltration results in greater sewage volumes that exceed the design capacity, which may result in greater operating costs of pump stations and sewage treatment plants, decreased sewage treatment efficiencies due to dilution, undermining of pavement located above the sewers, and increased potential for downstream basement flooding during extreme storm events. The sewer rehabilitation process generally involves:

1. Cleaning and televising sewers,
2. Analyzing the video to determine the type and quantity of repair, grouting or lining, and
3. Performing the repairs.

The overall length of sewer that can be rehabilitated for the available budget won't be known until the sewer is televised and the type and quantity of repair for each segment of sewer is determined. Therefore this project will televise and rehabilitate sewer segments based on the attached priority list, and perform as much repair as possible for the available budget amount.

The attached priority list was prepared based on feedback from Mark Grubiss, Street Superintendent, as well as the age of the sewer. In addition to streets anticipated for repair this year based on the available budget, this project will televise streets anticipated for next year (or beyond) so quantities can be better estimated in advance. See attached conceptual schedule.

SCOPE OF SERVICES

- Serve as the authorized representative of the city and supervise the execution of the project work, including resident coordination and meetings as needed.
- Design and Document Preparation: Plans, specifications, cost estimate, and bid documents as needed.
- Bidding Assistance: Respond to bidder questions, tabulate and evaluate bids, assess contractor's ability, and make recommendation for award.
- Construction Administration: Respond to contractor questions, review contractor submittals, perform site visits, review change orders, review contractor payments, perform punch list and project close-out.

PROFESSIONAL SERVICES FEE

Based on Section 2.2 & 2.3 of the "AGREEMENT Between CITY OF WILLOUGHBY HILLS, OHIO & RICHARD L. BOWEN + ASSOCIATES, INC. For CITY ENGINEERING SERVICES", the Base Professional Services Fee is estimated to be:

1.	Professional Services Fee, including an estimated \$100.00 for reimbursable expenses invoiced at 1.1 times direct cost, is based on an estimated construction cost of \$180,000.00.	\$18,000.00
A.	75% to be invoiced at completion of plans	\$13,500.00
B.	Remaining 25% payable in pro rata monthly payments	\$4,500.00
Total Base Fee		\$18,000.00

Please note, the actual Professional Services Fee will be based on the actual cost of construction, therefore will not be determined until construction is complete and the cost is known.

Please indicate your acceptance of this proposal by providing a city-issued purchase order.

Sincerely,

RICHARD L. BOWEN + ASSOCIATES INC.



Allan L. Renzi, A.I.A.
President

cc: Pietro DiFranco, P.E.

SEWER REHAB LIST

WILLOUGHBY HILLS

RANK	STREET	SECTION	PIPE DIA (INCH)	PIPE LEN (LF)	YEAR BUILT	LAST VIDEO	GROUT	LINING	BUDGETING		NOTES
									\$/LF	Total	
1	Meadowbrook	East of Alan	8	915	1966	2019	-	2019	\$19	\$17,385	Excess I&I at Meadowbrook PS
2	Alan	All	8	1608	1966	2019	-	2019	\$19	\$30,552	Excess I&I at Meadowbrook PS
3	Diane	All	8	632	1966	2019	2019	-	\$19	\$12,008	Excess I&I at Meadowbrook PS
4	Miller	East of Alan	8	870	1966	2019		2019	\$19	\$16,530	Excess I&I at Meadowbrook PS
5	Camelot	All	8	1350	1987	2019	-	-	\$19	\$25,650	Poor Condition Noted by Mark Grubiss
6	Istra	All	8	1366	1986	2019	2019	2019	\$19	\$25,954	Poor Condition Noted by Mark Grubiss
7	Oakwood	Northern Run	8	1270	1987	2019	-	2019	\$19	\$24,130	Poor Condition Noted by Mark Grubiss
8	Oakwood	Southern Run	8	365	1989	2019	-	2019	\$19	\$6,935	Poor Condition Noted by Mark Grubiss
9	Lamplight	North of Creek	8	1107	1985	2019	2019	-	\$19	\$21,033	Poor Condition Noted by Mark Grubiss
10	Lamplight	South of Creek	8	1622	1989	2019	2019	-	\$19	\$30,818	Poor Condition Noted by Mark Grubiss
11	Chardon	Bishop to Istra	10	4138	1986				\$19	\$76,774	Poor Condition Noted by Mark Grubiss
12	Chardon	Istra to Rockefeller	8	1267	1986				\$19	\$23,507	Poor Condition Noted by Mark Grubiss
13	Chardon	Rockefeller to Oakwood	8	1010	1987				\$19	\$18,739	Poor Condition Noted by Mark Grubiss
14	Chardon	Oakwood to Lamplight	8	710	1988				\$19	\$13,173	Poor Condition Noted by Mark Grubiss
15	Chardon	Emerald Lake to Bishop	12	1000	1970				\$19	\$18,553	
16	Fowler	All	8	2078	1975				\$19	\$38,554	
17	Stark	All	8	1828	1978				\$19	\$33,916	
18	Stark	Fowler to Cul-De-Sac	10	1141	1978				\$19	\$21,169	
19	Chardon	Fowler to Stark	8	1090	1980				\$19	\$20,223	
20	Chardon	Stark to SR-91	10	972	1980				\$19	\$18,034	
21	Som Center	Chardon to Dixon	8	550	1983				\$19	\$10,204	
22	Bishop	Chardon to ECT	8	1245	1984				\$19	\$23,099	
23	Rockefeller	Chardon to ECI	8	1380	1985				\$19	\$25,604	
24	Canterbury	Northern Half	8	700	1986				\$19	\$12,987	
25	Willow	East of Canterbury	8	403	1986				\$19	\$7,477	
26	Gatsby	All	8	3229	1988				\$19	\$59,909	
27	Kourtney	All	8	936	1988				\$19	\$17,366	
28	Kristin	All	8	375	1988				\$19	\$6,958	
29	Legend	All	8	1287	1988				\$19	\$23,878	
30	Orchard	Southern Run	8	365	1989				\$19	\$6,772	
31	Eddy	Rockefeller to I-271	8	2169	1991				\$19	\$40,242	
32	Rosewood	All	8	1590	1991				\$19	\$29,500	
33	Steeplechase	All	8	2003	1993				\$19	\$37,162	
34	City Hall	Chardon to Parking Lot	8	342	1996				\$19	\$6,345	
35	Oak	All	8	1426	2001				\$19	\$26,457	
36	Chardon	West of Emerald Lake	21	1097	2002				\$19	\$20,353	
37	ECT	I-271 to Rosewood	10	1100	2002				\$19	\$20,409	
38	ECT	Istra to I-271	15	4288	2002				\$19	\$79,557	
39	ECT	Bishop to Istra	18	5011	2002				\$19	\$92,971	
40	ECT	West of Bishop	21	1295	2002				\$19	\$24,027	
41	Evergreen	All	8	889	2002				\$19	\$16,494	
42	Legend	ECI to Cul-de-sac	8	291	2002				\$19	\$5,399	
43	Roemisch Field	Parking Lot to Chardon	8	320	2002				\$19	\$5,937	
44	Cardinal	All	8	1070	2003				\$19	\$19,852	
45	Emerald Lakes	All	21	1434	2003				\$19	\$26,606	
46	Hunting Trail	All	6	700	2003				\$19	\$12,987	
47	City Hall	Parking Lot to Eddy	8	1383	2005				\$19	\$25,659	
48	Dixon	All	8	1850	2005				\$19	\$34,324	
49	Eddy	Bishop to Orchard	8	3396	2005				\$19	\$63,007	

RANK	STREET	SECTION	PIPE DIA (INCH)	PIPE LEN (LF)	YEAR BUILT	LAST VIDEO	GROUT	LINING	BUDGETING		NOTES
									\$/LF	Total	
50	Fairview	All	8	295	2005				\$19	\$5,473	
51	Forest	All	8	700	2005				\$19	\$12,987	
52	Marcum	All	8	4011	2005				\$19	\$74,418	
53	Martin	All	8	2417	2005				\$19	\$44,843	
54	Orchard	Northern Run	8	1045	2005				\$19	\$19,388	
55	Parkview	All	8	553	2005				\$19	\$10,260	
56	Rockefeller	South of ECI	8	3197	2005				\$19	\$59,315	
57	Roemisch Field	Dixon to Parking Lot	8	1469	2005				\$19	\$27,255	
58	Som Center	Rosewood to Dixon	8	3082	2005				\$19	\$57,181	
59	Som Center	White to Rosewood	8	2949	2005				\$19	\$54,714	
60	Trabar	Northern Run	8	1006	2005				\$19	\$18,665	
61	West Miller	All	8	522	2005				\$19	\$9,685	
62	White	Erich to I-271	8	3966	2005				\$19	\$73,583	
63	White	Marcum to SOM Center	8	1208	2005				\$19	\$22,412	
64	Stratford	All	8	1388	2008				\$19	\$25,752	
65	Bishop	ECI to Curtiss Wright	8	2227	2009				\$19	\$41,318	
66	Canterbury	Southern Half	8	432	2009				\$19	\$8,015	
67	Cricket	All	8	1576	2009				\$19	\$29,240	
68	Eddy	Orchard to Rockefeller	8	2396	2009				\$19	\$44,454	
69	Erich	All	8	1964	2009				\$19	\$36,439	
70	Lynn	All	8	2092	2009				\$19	\$38,814	
71	Rockefeller	North of Eddy	8	947	2009				\$19	\$17,570	
72	Sayle	All	8	1048	2009				\$19	\$19,444	
73	Tall Tree	All	8	610	2009				\$19	\$11,318	
74	Trabar	Southern Run	8	445	2009				\$19	\$8,256	
75	White	Lynn to Erich	8	1679	2009				\$19	\$31,151	
76	White	West of Tall Tree	8	2833	2009				\$19	\$52,562	
77	Willow	West of Canterbury	8	609	2009				\$19	\$11,299	
Total				115,129						\$2,140,989	

Notes:

- Budget unit pricing is annual cost divided by length performed.
- Budget pricing is simply a method to estimate future costs.
- Budget unit cost is expected to reduce as newer sewers are inspected.
- Actual annual unit cost varies greatly based on rehab method required.

Historical Cost Data			
Year	Cost	Length	\$/LF
2019	\$206,035	11,105	\$19
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
Total	\$206,035	11,105	\$19

