

City of Waltham

Jeannette A. McCarthy
Mayor

CITY OF WALTHAM
CITY CLERK'S OFFICE

2017 SEP -7 A 11:41

RECORDED

September 7, 2017

TO: The City Council
RE: CIP Transfer Request – Woerd Avenue Sewer Main Rehab Design Services

Dear Councillors:

I respectfully request a transfer of capital improvement funds in the amount of \$38,527.00*. These funds will be used for the design services of the sewer main rehab project on Woerd Avenue. By the City funding the design phase of the project, Mass DOT will assume the construction costs for the sewer rehab portion as part of their bridge construction project at Woerd Avenue.

FROM:		
#603-440-2008-7305	Sewer-Sump Pump Program	\$38,527.00
TO:		
#603-440-2008-7345	Sewer-Design Woerd Ave Sewer	\$38,527.00

Attached is a copy of a memo that was received from the City Engineer, Steve Casazza. Mr. Casazza will be available to answer question concerning this request.

Sincerely,

Jeannette A. McCarthy
JAM/ccb

Enclosure

cc: Steve Casazza

*Mr. Casazza is getting two additional quotes that he will provide to you next week. I am submitting this now so as to not delay the bridge project.

CITY OF WALTHAM
Engineering Department



Stephen A. Casazza, P.E.
City Engineer

MEMORANDUM

TO: Honorable Jeannette A. McCarthy, Mayor
FROM: Stephen A. Casazza, PE, City Engineer SAC
DATE: July 31, 2017

RE: Woerd Avenue – Bridge Replacement Project
Sewer Main – Rehabilitation Work

Mayor,

I am requesting funding for the preparation of plans and specifications for the Sewer Main Rehabilitation on Woerd Avenue. The sewer main is very old. We have cleaned and camered the pipe to inspect and verify its integrity. The pipe is intact. Our recommendation is to have a Polyethylene pipe liner installed to protect the metal pipe from further corrosion and extend its longevity. Especially given the proximity to the Charles River. MassDOT has agreed to pay for the sewer rehabilitation work within the project limits of the Woerd Avenue Bridge Replacement Project. They have indicated the City is to be responsible for the design. I received a quote from the bridge design firm of CDR Maguire that MassDOT is using for their bridge work. CDR estimates it will cost them \$ 38,587.00 to prepare the plans and specifications for the sewer main rehabilitation. Their proposal is attached. It is my recommendation that we utilize the sewer budget retained earnings to fund the design of this project.

Sincerely,
Stephen



July 7, 2017 (revised July 19, 2017)

WINNER OF TWO
PRESIDENTIAL
AWARDS FOR
DESIGN
EXCELLENCE

Mr. Stephen A. Casazza, P.E.
City Engineer
City of Waltham
Government Center
Waltham, MA 02451

Re: City Sewer Rehabilitation for MassDOT Woerd Avenue over the Charles River
Bridge Replacement Project, Waltham, MA
Fee Proposal for Sewer Rehabilitation Design and Construction Oversight

Dear Mr. Casazza

Per your request, CDR Maguire, Inc. is submitting the attached fee proposal of engineering services for the City Sewer Main Rehabilitation within the limit of Woerd Avenue over the Charles River Bridge Replacement Project in Waltham, MA.

CDR Maguire was contracted with MassDOT to provide the design service for MassDOT project of Woerd Ave over the Charles River Bridge Replacement, City sewer main rehabilitation will be included into the bridge project final design and construction bid document. As requested, CRD Maguire will provide design and construction oversight service for the sewer main rehabilitation.

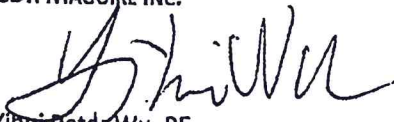
Enclosed please find the following documents:

1. Scope of Service Task Breakdown Description
2. Fee Proposal Work Hour Estimate Form
3. Meeting Minutes

We at CDR Maguire are looking forward to assisting the City of Waltham on this important project.

Please do not hesitate to call me at 617-778-1484, should you have any questions.

Sincerely,
CDR MAGUIRE INC.


Yihui Peter Wu, PE
Project Manager

City of Waltham
Government Center, Waltham, MA 02451

SCOPE OF SERVICES FOR SEWER MAIN REHABILITATION

PREPARED BY CDR MAGUIRE INC.

(July 7, 2107)

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION**

TASK DESCRIPTIONS

As requested, CDR Maguire will provide the design service for the city sewer main rehabilitation within the limit of MassDOT project of "Woerd Avenue over the Charles River Bridge Replacement". The design will be included into the MassDOT project final design and bid documents.

1. Coordination and Meeting

CDR Maguire will coordinate the design with the City and MassDOT during the design and construction. Will attend coordination and one review meeting per city request.

2. Existing Sewer Main Inspection and Evaluation

The City has hired a qualified video inspector to perform Video inspection of the existing sewer main within the project limit. The inspection results will be sent to CDR Maguire to evaluate condition of the existing sewer main, and recommendation for rehabilitation. It is anticipated that providing a pipe lining and back sewer manhole sealing will be necessary. Access will be from the existing manhole without modification, no new manhole is required.

3. Rehabilitation Design and Submission

It is anticipated CDR Maguire will perform the rehabilitation design and incorporate the design into the MassDOT PS&E and bid document package. Two design submissions are anticipated to comply with the MassDOT project schedule. It is anticipated that the rehabilitation will include insulation to provide pipe lining, and sewer main by pass system.

A. Final design and submission

- 1.) Review current flow rate information provided by the city.
- 2.) Prepare drawing and details for pipe lining.
- 3.) Prepare specification, Quantity and estimate. It is assumed unit bid items will be adequate for the sewer rehabilitation construction.
- 4.) Quality control and constructability review before submission.

B. PS&E submission

- 1.) Respond and incorporate the final design review comments.
- 2.) Prepare the PS&E design plan
- 3.) Update project specification

**MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION**

4.) Update Construction Contract Time Determination

4. Water Quality Certification

It is assumed the anticipated rehabilitation will include sewer pipe lining, manhole sealing, and clean up, no significant in water construction will be required. All construction will be included into the WQC. CDR Maguire will prepare the WQC application documents for MassDOT to file, and MWRA to approve manhole sealer and pipe liner.

5 Construction Phase Engineering

CDR Maguire will assist the city for the project bidding, construction submittal review and approval, coordination and construction inspection.

- A. Prepare the project bid document and coordinate with MassDOT to include the sewer line rehabilitation design as part of the MassDOT construction project bidding and awarding.
- B. Prepare addenda, answer bidder's question, and review the bid before MassDOT award the contract.
- C. Attend pre-construction conference
- D. Review and approve contractor's submittal of the sewer main rehabilitation including procedure and materials submission. Furnish and respond to Contractor's RFI.
- E. Perform the construction inspection for the sewer line rehabilitation.
- F. Coordinate with the city, MassDOT and the contractor
- G. Provide as-build of Work.

City/Town: Waltham
 Location: Woerd Avenue over the Charles River
 Project: Sewer Main Rehabilitation

COORDINATION AND MEETING

	PIC	PM	SE	Eng	AE	ET	TOTAL
Coordination Meeting	1	8	10				19
		8	4				12
SUBTOTAL	1	16	14				31

EXISTING SEWER MAIN INSPECTION EVALUATION

	PIC	PM	SE	Eng	AE	ET	TOTAL
Existing Sewer Inspection Evaluation		2	4				6
Rehabilitation Recommendation	1	4	4				9
SUBTOTAL	1	6	8				15

REHABILITATION DESIGN AND SUBMISSION

	PIC	PM	SE	Eng	AE	ET	TOTAL
Final Design and Submission							
Review current rate information			4				4
Prepare drawing and details	1	2	4	16	4	24	51
Specification		2	8				10
Estimate			1		4		5
QA/QC review	1	1	2				4
PS&E Submission							
Respond and incorporate review comments	1	2	4				
Prepare PS&E design Plan		1	4	4	2	12	
Update Project Specification	1	2					
Update Construction Time Determination		1	4				
SUBTOTAL	4	11	31	20	10	36	74

City/Town: Waltham
 Location: Woerd Avenue over the Charles River
 Project: Sewer Main Rehabilitation

HOURLY RATE SUMMARY

	PIC	PM	SE	Eng	AE	ET	
DIRECT HOURLY RATE (\$) (Design)	\$65.00	\$60.00	\$55.00	\$45.00	\$30.00	\$41.60	
DIRECT HOURLY RATE (\$) (Construction)	\$65.00	\$60.00	\$55.00	\$45.00	\$30.00	\$41.60	
HOURLY RATE (\$) (Design)	\$182.33	\$168.30	\$154.28	\$126.23	\$84.15	\$116.69	
HOURLY RATE (\$) (Construction)	\$182.33	\$168.30	\$154.28	\$126.23	\$84.15	\$116.69	

WORK HOUR AND FEE SUMMARY

TASK DESCRIPTION	PIC	PM	SE	Eng	AE	ET	Task Hour	Task Fee
COORDINATION AND MEETING	1	16	14	0	0	0	31	\$ 5,034.98
EXISTING SEWER MAIN INSPECTION EVALUATION	1	6	8	0	0	0	15	\$ 2,426.33
REHABILITATION DESIGN AND SUBMISSION	4	11	31	20	10	36	74	\$ 14,929.89
WATER QULITY CERTIFICATE	0	1	2	0	0	0	3	\$ 476.85
CONSTRUCTION ENGINEERING	0	9	24	58	0	20	111	\$ 14,872.11
TOTAL WORK-HOURS	6	43	79	78	10	56	234	\$ 37,740.15

ACTUAL PERCENTAGES	3	18	34	33	4	24
(TYPICAL PERCENTAGES)	1-3%	10-15%	15-25%	25-35%	10-15%	10-15%

	DESIGN	CONSTRUCTION	TOTALS
(a) Salary Costs	\$ 13,454.60	\$ 170.00	\$ 13,624.60
(b) Indirect Costs (%)	\$ 20,854.63	\$ 263.50	\$ 21,118.13
(c) Net Fee (%)	\$ 3,430.92	\$ 43.35	\$ 3,474.27
TOTAL LIMITING FEE	\$ 37,740.15	\$ 476.85	\$ 38,217.00
(d) Direct Expenses	\$ 60.00	\$ 250.00	\$ 310.00
MAXIMUM PAYMENT AMOUNT	\$ 37,800.15	\$ 726.85	\$ 38,527.00
MAXIMUM OBLIGATION			\$ 38,527.00

BUDGET - LUMP SUM					
		DESIGN ENGINEERING	CONSTRUCTION ENGINEERING	TOTALS	
(a) Salary Costs		\$13,454.60	\$170.00	\$13,624.60	
(b) Indirect Costs	155.00%	\$20,854.63	\$263.50	\$21,118.13	
(c) Net Fee	10.00%	\$3,430.92	\$43.35	\$3,474.27	
TOTAL LIMITING FEE		\$37,740.15	\$476.85	\$38,217.00	
(d) Direct Costs		\$60.00	\$250.00	\$310.00	
MAX PAYMENT AMOUNT		\$37,800.15	\$726.85	\$38,527.00	
MAXIMUM OBLIGATION				\$38,527.00	