

RFP2021-47 OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING AND CONSTRUCTION PHASE ENGINEERING SERVICES FOR THE CITY OF TRENTON, DEPARTMENT OF WATER AND SEWER PROPOSAL OPENED 1/6/2022 AT 11:00AM

TOTAL		COST SUMMARY FORMAT	
PART I - GENERAL		PART II - COST SUMMARY	
1. PROJECT TITLE: Odden Avenue Water Main Improvements		2. Task	001
3. NAME OF CONSULTANT: Johnson, Mirmiran and Thompson		4. PROPOSAL DATE	12/22/2021
1200 Lenoir Drive, Suite 101, Trenton, NJ 08648			
6. DIRECT LABOR (Specify labor categories)		HOURS	ESTIMATED COST
Project Manager	68	\$86.00	\$ 5,848.00
Quality Manager	31	\$75.00	\$ 2,325.00
WWW Senior Design Engineer	374	\$50.00	\$ 18,700.00
WWW Design Engineer	1,640	\$35.00	\$ 57,400.00
Senior Traffic Engineer	35	\$59.00	\$ 2,065.00
Traffic Engineer	14	\$35.00	\$ 490.00
Permit Specialist	133	\$50.00	\$ 6,650.00
Hydraulic Modeling	40	\$50.00	\$ 2,000.00
Surveyor	16	\$81.50	\$ 1,304.00
Survey Technician	120	\$37.50	\$ 4,500.00
Instrument Man	80	\$29.70	\$ 2,376.00
Rodman	80	\$26.00	\$ 2,080.00
Total Hours	2,631	X DIRECT LABOR	ESTIMATED COST
ESCALATION		RATE	
Escalation	0.00%	\$ 105,738.00	\$ 105,738.00
7. INDIRECT COSTS (Specify)		DIRECT LABOR SUBTOTAL:	\$ 105,738.00
OVERHEAD AND PAYROLL BURDEN		RATE	X DIRECT LABOR
INDIRECT COSTS SUBTOTAL	150.0000%	\$ 105,738.00	ESTIMATED
8. TOTAL OF DIRECT LABOR & INDIRECT COSTS (Combined Sum of Items 6&7)			
9. PROFIT			\$ 158,607.00
10. TOTAL PROFESSIONAL FEE (Combined Sum of Items 8 and 9)			\$ 264,345.00
11. OTHER DIRECT COSTS (refer to attached itemization)			\$ 290,779.50
a. DIRECT COSTS	QTY.	COST	ESTIMATED COST
Local Travel	1,000	\$0.580	\$ 580.00
Long Distance Travel, if required	0	\$0.580	\$ -
Printing	100	\$1.500	\$ 150.00
Miscellaneous	2,000	\$1.000	\$ 2,000.00
DIRECT COSTS - MARKUP			\$ -
b. TASK PRICING (UNIT-BASED)	QTY.	COST	ESTIMATED COST
c. SUBCONSULTANT(S)		TASK PRICING SUBTOTAL	\$ -
Boring Brothers Inc. (SUB-consultant)			ESTIMATED COST
Cooper (Sub-consultant)			\$ -
			\$ 8,025.00
			\$ -
			\$ 8,025.00
d. OTHER DIRECT COSTS TOTAL: (Combined Sum of Items a,b,c)		SUBCONSULTANT(S) - SUBTOTAL:	\$ 10,755.00
12. TOTAL PRICE (Combined Sum of Items 10 & 11g)			\$ 301,534.50

Remington & Vernick Engineers

City of Trenton - Olden Avenue Water Main Improvements

	Planned Hrs	Billing Rates	Planned Bill
Project Summary:			
Labor	2,376.00		\$275,380.00
Expense- mileage			\$3,600.00
Consultant - Aerial Survey			\$10,000.00
Allowance - Per RFP			\$100,000.00
Total for Trenton Water Works - Olden Avenue Water Main Improvements	2,376.00		\$388,980.00
Task 1 - Design Services			
Data Collection & Document Review			
Cuthbert, Stephanie - Project Manager	2.00	\$175.00	\$350.00
Hogan, Kalina - WaterGEMS Modeler	60.00	\$120.00	\$7,200.00
Kramer, Kristin - Design Engineer	24.00	\$95.00	\$2,280.00
Mingle, Joseph - Design Engineer	32.00	\$130.00	\$4,160.00
Expense - Mileage			\$400.00
Total for Data Collection & Document Review	118.00		\$14,390.00
Design Memorandum			
Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Gillen, Brian - LSRP	8.00	\$160.00	\$1,280.00
Hogan, Kalina - WaterGEMS Modeler	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	80.00	\$95.00	\$7,600.00
Manganaro, Joseph - Inspector - Constructability Review	12.00	\$120.00	\$1,440.00
Mingle, Joseph - Design Engineer	24.00	\$130.00	\$3,120.00
Nedrick, Vanessa - Design Engineer Lining	16.00	\$160.00	\$2,560.00
Yoder, Dennis - QAQC	1.00	\$175.00	\$175.00
Total for Design Memorandum	161.00		\$18,795.00
Survey			
Adams, Barry - Rodperson	96.00	\$95.00	\$9,120.00
Adamson, Charles - Survey QAQC	6.00	\$140.00	\$840.00
Dunkerley, Thomas - Party Chief	96.00	\$100.00	\$9,600.00
Jordan, Mark - Survey Draftsperson	104.00	\$120.00	\$12,480.00
Taylor, Brian - Survey PM	18.00	\$135.00	\$2,430.00
Yorkiewicz, Brian - Survey Manager	14.00	\$135.00	\$1,890.00
Consultant - Aerial Survey			\$10,000.00
Total for Survey	334.00		\$46,360.00

Remington & Vanick Engineers

Plans & Specifications

Angelastro, Michael - Design Engineer Road / Traffic Control	26.00	\$155.00	\$4,030.00
Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Gomes, John - Senior Draftsperson	60.00	\$120.00	\$7,200.00
Kramer, Kristin - Design Engineer	220.00	\$95.00	\$20,900.00
Jacovini, Veronica - Technical Aide	16.00	\$65.00	\$1,040.00
Marques, Timothy - Senior Engineering Technician	100.00	\$120.00	\$12,000.00
Meyer, Carl - Technical Aide - Repro	4.00	\$95.00	\$380.00
Nedrick, Vanessa - Design Engineer Lining	16.00	\$160.00	\$2,560.00
Rodgers, Gail - Technical Aide	6.00	\$65.00	\$390.00
Yoder, Dennis - QAQC	2.00	\$175.00	\$350.00
Total for Plans & Specifications	454.00		\$49,550.00

Permitting

Angelastro, Michael - Design Engineer Road / Traffic Control	16.00	\$155.00	\$2,480.00
Cuthbert, Stephanie - Project Manager	1.00	\$175.00	\$175.00
Gomes, John - Senior Draftsperson	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	32.00	\$95.00	\$3,040.00
Manganaro, Joseph - Onsite Inspector - Constructability Review	16.00	\$120.00	\$1,920.00
Marques, Timothy - Senior Engineering Technician	12.00	\$120.00	\$1,440.00
Total for Permitting	93.00		\$10,975.00

Design Phase Meetings

Cuthbert, Stephanie - Project Manager	12.00	\$175.00	\$2,100.00
Kramer, Kristin - Design Engineer	24.00	\$95.00	\$2,280.00
Marques, Timothy - Senior Engineering Technician	16.00	\$120.00	\$1,920.00
Expense - Mileage			\$200.00
Total for Design Phase Meetings	52.00		\$6,500.00

Task 2 - Bidding Services

Cuthbert, Stephanie - Project Manager	4.00	\$175.00	\$700.00
Kramer, Kristin - Design Engineer	8.00	\$95.00	\$760.00
Marques, Timothy - Senior Engineering Technician	8.00	\$120.00	\$960.00
Meyer, Carl - Technical Aide - Reproduction	2.00	\$95.00	\$190.00
Total for Task 2 - Bidding Services	22.00		\$2,610.00

Task 3 - Construction Phase Engineering & Inspection Services

Cuthbert, Stephanie - Project Manager	12.00	\$175.00	\$2,100.00
Kramer, Kristin - Design Engineer	32.00	\$95.00	\$3,040.00
Manganaro, Joseph - Onsite Inspector	980.00	\$120.00	\$117,600.00
Marques, Timothy - Senior Engineering Technician	32.00	\$120.00	\$3,840.00
Nedrick, Vanessa - Design Engineer Lining	10.00	\$160.00	\$1,600.00
Parent, Gabriel - Senior Inspector	20.00	\$127.00	\$2,540.00
Valentine, Ronald - Contract Administrator	24.00	\$110.00	\$2,640.00
Expense - Mileage			\$3,000.00
Total for Task 3 - Construction Phase Engineering & Inspection Services	1,142.00		\$139,800.00

Pennington & Varnick Engineers

Asbuilt Drawings

Gomes, John - Senior Draftsperson	16.00	\$120.00	\$1,920.00
Kramer, Kristin - Design Engineer	16.00	\$95.00	\$1,520.00
Total for Asbuilt Drawings	32.00	\$107.50	\$3,440.00

Task 4 - Allowance

Allowance	\$100,000.00
Total for Task 4 - Allowance	\$100,000.00

FEE PROPOSAL

REQUEST FOR PROPOSALS OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING & CONSTRUCTION PHASE SERVICES

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PROPOSED FEES:

1. Task 1—Design Services	\$179,470
2. Task 2—Bidding Services	\$9,000
3. Task 3—Construction Phase Engineering Services*	\$144,675
4. Task 4—Allowance	\$100,000
TOTAL ESTIMATED FEE	\$433,145

*Construction Phase Services fee will remain the same regardless of replacement, liner installation or a combination of replacement and liner installation.

ESTIMATED PERMIT FEES

Per the terms of the request for proposal, fees for the permits will be paid by SCE and reimbursed by TWW at direct cost without mark up. *The permit application filing fees are not included in our fees.*

An estimate of anticipated permit fees is provided below for reference and planning purposes.

NJDEP Bureau of Water Systems Engineering	\$ 4,000
NJDEP Freshwater Wetland Permit	\$ 2,000
NJDEP Flood Hazard Area Permit	\$ 6,000
NJDOT Road Opening Permit	\$ 1,580
Mercer County Soil Conservation District Certification	\$ 985
<u>Mercer County Road Opening Permit</u>	<u>No Charge</u>
TOTAL ESTIMATED PERMIT FEES	\$ 14,565



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FEE PROPOSAL

REQUEST FOR PROPOSALS OLDEN AVENUE WATER MAIN IMPROVEMENTS DESIGN, BIDDING & CONSTRUCTION PHASE SERVICES

Principal/Project Officer	\$160/hour
Senior Project Manager	\$158/hour
Project Manager	\$155/hour
Senior Project Licensed Professional	\$150/hour
Project Licensed Professional	\$145/hour
Licensed Professional	\$135/hour
Senior Project Coordinator	\$150/hour
Project Coordinator	\$145/hour
Senior Designer/Senior Survey Analyst	\$125/hour
Designer/Survey Analyst	\$120/hour
Senior Environmental Scientist	\$125/hour
Environmental Scientist	\$120/hour
Senior Project GIS Analyst	\$140/hour
Project GIS Analyst	\$130/hour
GIS Analyst	\$125/hour
Senior GIS Technician	\$115/hour
GIS Technician	\$105/hour
Senior GIS Project Coordinator	\$130/hour
GIS Project Coordinator	\$125/hour
Senior Inspector	\$115/hour
Inspector	\$105/hour
Senior Technician	\$110/hour
Technician	\$100/hour
Project Administrator	\$115/hour
Administrative Support	\$60/hour

Equipment Unit Cost:

- ⇒ Unmanned Aerial Systems/Remotely Operated Vehicle \$150/hour
- ⇒ Robotic/LiDAR \$50/hour
- ⇒ GPS \$25/hour

LSRP Services Unit Cost:

- ⇒ For any environmental services requiring LSRP oversight and certification, a \$25/hour unit cost will be included in addition to the hourly rate for roles above.

Any actual disbursements and expenses which we incur on your behalf, such as subconsultant fees, delivery charges, parking, printing and toll charges will be billed at actual **cost-plus 15 percent**.

Mileage will be billed in accordance with federal prevailing wage.



Buchart Horn Fee Proposal Estimate for TWW - Olden Avenue Water Main Improvements

Task Description	Direct Payroll	Grade	Wage Rate	5	7	8	9	10	Labor Hours per Task	Labor \$ per Task	SUB/ODC \$ per Task	Total \$ per Task
Task 1: Design Services												
Preliminary Engineering				4	1	5			872	50	922	
Kick-Off Meeting				20	16	1	37	4,908	50	4,958		
Sub-Task 1: Data Collection and Document Review				24	8	32	5,080	50	5,130			
Project Management and Coordination w/ TWW (during Design Phase)				40	8	48	8,280	10	8,290	19,300		
Design Memorandum				56	32	4	92	11,920	100	12,020	12,000	
Design Plans & Specifications (30%)				6	6	6	978	45,000	45,978			
Surveying (CE5 Subconsultant)				96	40	4	140	17,384	200	17,584		
Water Main Plans & Profiles (12 sheets)				8	2	0.5	11	1,268	20	1,288		
Misc. Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)				24	12	1	37	4,672	50	4,722		
Construction Details (4 sheets)				16	8	0.5	25	3,078	25	3,103		
Traffic Control Details (Standard Details, 2 sheets)				48	32	2	82	10,548	100	10,748		
Front-End Documents				8	4	0.5	13	1,594	50	1,644		
Construction Cost Estimate				8	4	0.5	13	1,594	10	1,604		
Update Design Memorandum				4	2	0.5	7	852	20	872		
Design Review Meeting				4	1	5	872	50	922			
Design Plans & Specifications (60%)				48	20	2	70	8,692	200	8,892		
Water Main Plans & Profiles (12 sheets)				4	1	0.25	5	634	20	654		
Misc. Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)				12	6	0.5	19	2,336	50	2,386		
Construction Details (4 sheets)				8	4	0.25	12	1,539	25	1,564		
Traffic Control Details (Standard Details)				24	16	1	41	5,324	150	5,474		
Technical Specifications				4	2	0.25	6	797	50	847		
Front-End Documents				4	2	0.25	6	797	10	807		
Construction Cost Estimate				4	2	0.25	3	426	20	446		
Update Design Memorandum				2	1	0.25	3	426	20	446		
Design Review Meeting				4	1	5	872	50	922			
Design Plans & Specifications (95%)				24	10	1	35	4,346	200	4,546		
Water Main Plans & Profiles (12 sheets)				2	0.5	0.25	3	345	20	365		
Misc. Sheets (Cover, Notes/Legend/Abbrev, Key Sheets - 4 sheets tot)				6	3	0.25	9	1,168	50	1,218		
Construction Details (4 sheets)				4	2	0.25	6	797	25	822		
Traffic Control Details (Standard Details)				12	8	0.5	21	2,662	100	2,762		
Front-End Documents				2	1	0.25	3	426	50	476		
Construction Cost Estimate				2	1	0.25	3	426	10	436		
Update Design Memorandum				1	0.5	0.25	2	241	20	261		
Design Review Meeting				4	1	5	872	50	922			
Bid Plans & Specifications (100%)				12	5	0.5	18	2,173	600	2,773		
Bid Plans & Specifications (15 sheets)				6	3	0.5	10	1,223	600	1,823	4,600	
Permitting				24	12	1	37	4,672	100	4,772		
BWSE Permit to Construct Water Main				12	4	0.5	17	2,010	100	2,110		
Mercer County SCD 2				6	2	0.25	8	1,005	100	1,105	8,000	
Mercer County ROW Permit				12	2	0.25	2	26	4,352	50	4,402	
Task 2: Bidding Services				32	16	2	50	6,376	50	6,426		
Risk-Rid Meeting (Agenda & Minutes Prep)				32	24	2	26	4,352	50	4,402	12,100	
RFIs and Addenda/Clarifications				12	20	2	34	4,948	100	5,048		
Review & Recommendation Letter/Report				1000			1000	104,000	5000	109,000		
Task 3: Construction Phase Engineering Services				36	6	6	42	7,188	300	7,488		
Precon Meetings (Agenda & Minutes Prep - 2 meetings)				12	2	14	2,396	150	2,546			
Shop Dwg Review				48	32	4	84	11,088	250	11,338		
Project Management during Construction				80	16	96	16,560	50	16,610			
Contractor Pay Requests				6	12	1	19	2,800	50	2,850		
Change Order, Review and Processing				12	20	2	34	4,948	100	5,048		
On-site Inspection (Full-time)				1000			1000	104,000	5000	109,000		
Progress Meetings (6)				40	20	2	62	7,860	250	8,110	163,000	
As-built Dwg Preparation				40								
Task 4: Allowance								0	0	0	0	
Total Hours per Grade	1645	24	576	8	75	Total Labor Hrs=	2328	\$54,710	341,258			
Total Payroll per Grade	171,080	3,528	93,888	1,552	16,500	Total Labor \$=	\$285,548	Total Fee	\$341,258			

Total Not-To-Exceed Fee = 441,300

4.1 FEE

Below we present Arcadis' proposed fee and a tabular breakdown of labor and expenses for the project.

Fee Table

Task		Hours	Hourly Rate	Labor	Subs	Expenses	Total Fee
1	Design Services	1098	\$ 128.64	\$ 141,243	\$ 44,000	\$ 300	\$ 185,543
2	Bidding Services	89	\$ 128.02	\$ 11,394	\$ -	\$ 1,650	\$ 13,044
3	Construction Services	244	\$ 116.05	\$ 28,315	\$ -	\$ 5,616	\$ 33,931
4	Inspection Services	1000	\$ 114.00	\$ 114,000	\$ 44,000		\$ 114,000
	Allowance						\$ 100,000
	TOTAL	2431	\$ 121.33	\$ 294,952	\$ 44,000	\$ 7,566	\$ 446,518

Labor Table

Task		Principal Engineer	Senior Engineer/ Scientist II	Senior Engineer/ Scientist I	Project Engineer/ Scientist	Staff Engineer	Design Tech II	TOTAL
1	Design Services	154	105	288	305	180	66	1098
2	Bidding Services	6	23	0	60	0	0	89
3	Construction Services	62	82	0	100	0	0	244
4	Inspection Services	0	0	0	1000	0	0	1000
	TOTAL	222	210	288	1465	180	66	2431



Gannett Fleming Proposal Fee Table

Gannett Fleming Proposal Fee Table



Price proposal

This section provides a summary of our engineering fee proposal and labor hour summary for each project task.

Base Bid (Based on Open-Cut Water Main Replacement)

Task 1 – Design Services

Data Collection	\$60,936
Design Memorandum	\$33,427
Construction Drawings and Technical Specifications	\$73,108
Permitting	\$42,236
Design Phase Meetings	\$8,900
Task 2 – Bidding Services	\$7,114
Task 3 – Construction Phase Engineering Services	\$168,242
Task 4 – Allowance	\$100,000
Total Base Bid	\$493,963

In accordance with the RFP, we are also including an alternate fee proposal for construction phase services should the water main improvements be constructed utilizing an internal structural rehabilitation. The use of an internal structural rehabilitation liner will reduce construction administration largely associated with shop drawing reviews and record drawings preparation.

Alternate Bid (Based on Internal Structural Rehabilitation)

Task 1 – Design Services

Data Collection	\$60,936
Design Memorandum	\$33,427
Construction Drawings and Technical Specifications	\$73,108
Permitting	\$42,236
Design Phase Meetings	\$8,900
Task 2 – Bidding Services	\$7,114
Task 3 – Construction Phase Engineering Services	\$164,767
Task 4 – Allowance	\$100,000
Total Base Bid	\$490,488

In accordance with the RFP, please note the following:

- All fees are proposed as reimbursable, not-to-exceed. We have attached a table of our cost breakdown, supported with names, titles, hourly rates and number of hours. We have also attached Mott MacDonald's 2022 hourly rate table.
- Mott MacDonald will initially pay permit application fees, which will be reimbursed by TWW with no markup. We have not included the permit application fees in our Fee Proposal, but anticipate that a contract amendment will be issued once the costs are known.
- Mott MacDonald has allocated 1,000 hours for full time resident project representation during construction of the water main improvements for both the Base Bid and Alternate Bid fees.
- The permitting task is to include permitting that may be required at the two stream crossings. However, should the design include an internal structural rehabilitation of the existing water main at the stream crossings which does not require open-cutting of the stream or stream bank, the permitting effort and fees can be reduced as a Flood Hazard Area Individual Permit and Freshwater Wetlands GP-2 Permit would not be required.

Project Fee Assumptions:

- Rates shown are based upon the design phase and bidding phase services being performed in 2022; with construction administration and construction inspection services commencing the end of 2022 and being completed in 2023. Escalation would be necessary at 4% per year if work extends beyond the attached project schedule, unless such delays were caused by Mott MacDonald.
- Subconsultants are proposed to be marked up at 0 percent. Mott MacDonald is proposing to use Robinson Aerial Surveys of Hackettstown, New Jersey for aerial topographic mapping and Traffic Plan of Farmingdale, New Jersey for traffic control during to safely perform topographic field surveying.

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E. FEE PROPOSAL AND TERMS

FEE ESTIMATE

**ENGINEERING SERVICES FOR
 OLDEN AVENUE WATER MAIN IMPROVEMENTS
 DESIGN, BIDDING & CONSTRUCTION PHASE ENGINEERING SERVICES PROJECT
 RFP #2021-47**

Based on the Project Scope of this proposal, we find that the effort necessary to successfully undertake and complete the Scope of Work described under the RFP can be provided for the not-to-exceed cost indicated below:

Task ID	Description	Sub-task No	Hours	Cost
A	Task 1: Design Services	1. Data Collection and Document Review	132	\$21,912.00
		2. Design Memorandum	168	\$29,616.00
		3. Construction Drawings and Technical Specifications	1,390	\$265,613.00
		4. Permitting	120	\$19,824.00
		5. Design Phase Meetings	176	\$30,656.00
B	Task 2: Bidding Services	1. Bidding Services	74	\$11,808.00
C	Task 3: Construction Phase Engineering Services	1. Construction phase services		\$163,556.00
			929	
		2. Resident engineering / inspection services	1,000	\$172,000.00
		3. Furnish 2 (two) final hardcopy "As-Built" drawings	110	\$18,256.00
		SUBTOTAL		\$733,241.00
D	Task 4: Allowance	ALLOWANCE	-	\$100,000.00
		TOTAL		\$833,241.00

FEE PROPOSAL