

Memo

To: City Council
From: Amy E. Gilson, P.E., Director of Public Works
Date: September 21, 2015
Re: Chemical Building Project



Under the Consent Agenda you will find a proposal from Moore & Bruggink, Inc. for engineering on the Chemical Building project at the wastewater treatment plant. The project will replace chemical storage equipment from 1978 and move it to a separate building. Currently the chemicals are stored inside the main building and because the chemicals are corrosive, damage is being caused to other equipment, thus the need for a separate building.

I am requesting approval of the contract with Moore & Bruggink, Inc. to provide design engineering at a not to exceed price of \$64,000.00. Once the design is complete and the project is bid, the engineer will provide a budget for construction engineering. We worked with Moore & Bruggink, Inc. on the recent UV project at the wastewater plant and were pleased with their work.

This project is included in the water and sewer budget for the current fiscal year.

Please let me know if you have any questions.

MOORE & BRUGGINK, INC.

Consulting Engineers

2020 Monroe Avenue, N.W.

Grand Rapids, Michigan 49505-6298

September 18, 2015

Proposal – Chemical Building

City of Charlotte
Ms. Amy Gilson, Director of Public Works
111 E. Lawrence Avenue
Charlotte, Michigan 48813

Dear Ms. Gilson:

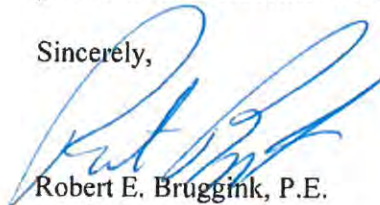
Moore & Bruggink, Inc. is pleased to submit a proposal for the **Charlotte Chemical Building Project** to the City of Charlotte. Our proposal is prepared in accordance with our site visit with your staff to determine the project scope on September 9, 2015. Our understanding is that the City would like to construct a new Chemical Storage and Pumping Building. This would entail a new block building, concrete chemical containment, FRP storage tanks, chemical metering pumps, fill piping, a safety shower, and all necessary platforms to access the tanks. Sheets will be prepared to detail the demolition of the existing chemical tanks and equipment. Yard piping will be placed to distribute the chemical and provide water for the building. A survey will be conducted for use as a site plan, and we assume one soil boring will be necessary to assess the soil conditions under the proposed building.

A breakdown of design phase tasks is included in the attached manhour worksheet, detailing our scope of work and estimated manhours for the design of the chemical building project. A line item is included for our electrical engineering sub consultant, Century AE (also used on the UV Disinfection Project). We have also included a line item for one soil boring under the building location. As usual, we will only bill for time and materials expended on the project, and will complete the design phase for a not-to-exceed price of \$64,000.


Once the design is complete and the bids are taken, the construction phase can be negotiated with the City based on the selected contractor's construction timeline. Our understanding is that the City may want to phase the design work to be completed after the Grit Chamber Renovation Project. Our proposal was prepared assuming a separate set of bid documents. Some economies of scale may be gained by bidding both projects together.

We look forward to working with the City of Charlotte and the Wastewater Staff and hope to be your selected consultant. Please call me if you have any questions.

Sincerely,



Robert E. Bruggink, P.E.
President



Brian Hannon, P.E.
Project Engineer

REB/kjk

Attachment #1 – Manhour Cost Worksheet

9/18/2015

	Project Manager	Project Engineer	Structural Engineer	Survey Crew	CAD Tech	Clerical	Total M&B
kick-off meeting w/ staff	4	4					8
survey area of new building				8	8		16
soil boring in bldg area	1	1					2
design sketches	4						4
discuss design w/ tank and pump vendors and get initial estimates	2	8					10
coordinate w/ architectural	4	8					12
create yard piping demo and re-routing sheets	2	4			8		14
confirm design elements w/ staff	4	4					8
confirm design elements w/ vendors	2	6					8
site grading plan	4	2			8		14
draw P&ID's	4	4			2		10
run hydraulic scenarios	1	4					5
draw plan/profile views and note	16	40			24		80
design structural for containment and pump room	2	2	8		4		16
put specifications together	32	16				32	80
write SCADA process control description	4	1				1	6
final design review w/ staff	4	4				1	9
part 41 permit	1	2				1	4
engineers estimate	2	8					10
put final bid docs on the table	4	4				8	16
conduct prebid meeting	4	4				1	9
answer RFI's	3	6				1	10
take bids	4	4				1	9
award and budget letters	1					1	2
get contract books processed and signed	4	2				4	10
coordination w/ electrical and architectural (throughout)	12	8					20
QA/QC	4	4	4				12
TOTAL HOURS, DESIGN PHASE	129	150	12	8	54	51	404
Estimated M&B Cost Chemical Building	\$	37,000					
Estimated Century A&E Cost Chemical Building	\$	24,000					
MTC - soil boring	\$	2,000					
Expenses (mileage and printing)	\$	1,000					
ESTIMATED TOTAL COST, Chemical Building design phase	\$	64,000					