	Newton Gravel Pit Watermain, Phases 2 and 3 Potential 4 Bid Packages City of Manitowoc	Quality Assurance/ Advisor Mazanec, P.E.	Client and Senior Project Manager Hartjes, P.E.	Lead Design Garon, P.E.	Lead Design Reiter, P.E.	Lead Design, Barteau, P.E.	Project Engineer	Project Engineer	Project Engineer	Survey Lead Sturm, P.L.S.	Surveyor Chief, York	Survey Chief, Fillcoft	Survey Crew	Survey Crew/Drone	GIS, Benott	Wetland Delineation and Permitting: Pergande, SPWS	Project Ecologist, Johns	Constructability, Schafer, PE	Constructability, Steinhart	TOTAL
	Hourly Rate	$188	$188	$163	$163	$163	$143	$143	$143	$160	$130	$130	$228	$158	$147	$158	$130	$188	$158	
	Task, Thru Bidding																			
	Phase 2 Watermain on Viebahn, Hecker and Silver Creek																			
	Review Existing Survey and Additional Data Inventory									8					8					16
	Confirm No Wetlands-Desktop Analysis (Previously Designed so no wetland delineation)															4	8			12
	Archeological/Historical	2														8				10
	Review Past Watermain Design and Continue Design on Silver Creek and Viebahn		4		40		80											4		128
	Permitting Updates/Submittals with DNR/DOT		8		12		8													28
	PSC Inclusion with overall project		4		4		4													12
	Final Bid Documents (separate water out of overall plans)		2		4		16													22
	Bidding (submit plans to City for Quest Upload and contractor questions)		4		4		4													12
	SUBTOTAL HOURS	2	22		64		112			8					8	12	8			240
		$376	$4,136		$10,432		$16,016			$1,280					$1,176	$1,896	$1,040			$36,352
	Phase 3 Watermain Section 1 (approx. 2.3 miles)																			
	Data Gathering/GIS Information														8					8
	Survey QC/Coordination									8										8
	Diggers/Survey Drafting										6	32								38
	Control/Benchmarks												16							16
	Corridor Survey/Drone													120						120
	Wetland Review-Desktop Analysis		2												8	6	6			22
	Wetland Delineation, Field Delineation/Survey (up to 12,000')		2													27	27			56
	Wetland Exemption		4						8						4	4	6			26
	Wetland Permitting, General Permitting, No Individual Permit/Mitigation		4						4							8	20			36
	Archeological/Historical	2														20				22
	Review Past Models/Confirm Sizing	2	6	4		4														16
	Master Plan Layout/Sections	2	4	16	4	4	16								8					54
	Prelim Design up to 30%		12	60			120													192
	Final Design to 90%		4	16			32											4	8	64
	Water Services		4	12			20													36
	Submittals/Reviews with City/MPU	2	8	8			8													26
	Cost Estimates 30/60/90		4	8			16													28
	Specifications		4	24														2		30
	Construction Staging/Phasing		8	4			4											8	4	28
	Easements (up to 3 per section)		4	4			4			4										16
	Final Bid Sets and Documents		4	8			16											2		30
	Utility Coordination (Gas, electric, Communications)			2			8													10
	DOT permitting (43 crossing)		2	2			8													12
	PSC and Construction Authorization		4	32			8													44
	WDNR Watermain Permit/Fire Flows		2	16			16													34
	WDNR NOI			2			8													10
	County and Township Coordinations		8	8																16
	RR Permit			16			16													32
	City, Committee and MPU Meetings (15 total)	4	40	20																64
	Bidding (provide Bid Documents and Calls with Contractors)		4	8			4													16
	SUBTOTAL HOURS	12	134	270	4	8	304		12	12	6	32	16	120	28	65	59	16	12	1110
		$2,256	$25,192	$44,010	$652	$1,304	$43,472		$1,716	$1,920	$780	$4,160	$3,648	$18,960	$4,116	$10,270	$7,670	$3,008	$1,896	$175,030
	Phase 3 Watermain Section 2 (approximately 2.3 miles)																			
	Data Gathering/GIS Information														8					8
	Survey QC/Coordination									8										8
	Diggers/Survey Drafting										6	32								38
	Control/Benchmarks												16							16
	Corridor Survey/Drone													112						112
	Wetland Review-Desktop Analysis		2					4							8	6	6			26
	Wetland Delineation, Field Delineation/Survey (up to 12,000')		2													27	27			56
	Wetland Exemption		4						8						4	4	6			26
	Wetland Permitting, General Permitting No Individual Permit/Mitigation		4						4							8	16			32
	Archeological/Historical	2														10				12
	Review Past Models/Confirm Sizing	2	2																	4
	Master Plan Layout/Sections		2		2															4
	Prelim Design up to 30%		12		60			100												172
	Final Design to 90%		4		16			32										4	8	64
	Water Services		4		12			16												32
	Submittals/Reviews with City/MPU	2	8		8			8												26
	Cost Estimates 30/60/90		4		8			16												28
	Specifications		4		12													2		18
	Construction Staging/Phasing		8		4			4										8	4	28
	Easements		4		4			4		4										16
	Final Bid Sets and Documents		4		8			16										2		30
	Utility Coordination (Gas, electric, Communications)				2			8												10
	DOT permitting (43 crossing)		2		2			8												12
	PSC and Construction Authorization		4		16			8												28
	WDNR Watermain Permit/Fire Flows		2		16			16												34
	WDNR NOI				2			8												10
	County and Township Coordinations		8		8															16
	RR Permit				16			16												32
	City, Committee and MPU Meetings (1 extra per section)	4	4																	8
	Bidding (provide Bid Documents and Calls with Contractors)		4		8			4												16
	SUBTOTAL HOURS	10	92		204			268	12	12	6	32	16	112	20	55	55	16	12	922
		$1,880	$17,296		$33,252			$38,324	$1,716	$1,920	$780	$4,160	$3,648	$17,696	$2,940	$8,690	$7,150	$3,008	$1,896	$144,356
	Phase 3 Watermain Section 3 (approximately 2.3 miles)																			
	Data Gathering/GIS Information														8					8
	Survey QC/Coordination									8										8
	Diggers/Survey Drafting										6	32								38
	Control/Benchmarks												16							16
	Corridor Survey/Drone													112						112
	Wetland Review-Desktop Analysis		2						6						8	6	6			28
	Wetland Delineation, Field Delineation/Survey (up to 12,000')		2													27	27			56
	Wetland Exemption		4						8						4	4	6			26
	Wetland Permitting, General Permitting No Individual Permit/Mitigation		4						4							8	16			32
	Archeological/Historical	2														4				6
	Review Past Models/Confirm Sizing	2	2																	4
	Master Plan Layout/Sections		2												2					4
	Prelim Design up to 30%		12			60			100											172
	Final Design to 90%		4			16			32									4	8	64
	Water Services		4			12			12											28
	Submittals/Reviews with City/MPU	2	8			8			8											26
	Cost Estimates 30/60/90		4			8			16											28
	Specifications		4			8												2		14
	Construction Staging/Phasing		4			2			2									2	4	14
	Easements		4			4			4	4										16
	Final Bid Sets and Documents		4			8			16									2		30
	Utility Coordination (Gas, electric, Communications)					2			8											10
	DOT permitting (43 crossing) (assume only needed on 2 sections)																			
	PSC and Construction Authorization		4			8			4											16
	WDNR Watermain Permit/Fire Flows		2			16			16											34
	WDNR NOI					2			8											10
	County and Township Coordinations		8			8														16
	RR Permit (none in this section)																			
	City, Committee and MPU Meetings (1 extra per section)		4			4														8
	Bidding (provide Bid Documents and Calls with Contractors)		4			8			4											16
	SUBTOTAL HOURS	6	86			174			248	12	6	32	16	112	22	49	55	10	12	840
		$1,128	$16,168			$28,362			$35,464	$1,920	$780	$4,160	$3,648	$17,696	$3,234	$7,742	$7,150	$1,880	$1,896	$131,228
	Total Hours	30	334	270	272	182	416	268	272	44	18	96	48	344	78	181	177	42	36	3,108
	Total Fee	$5,640	$62,792	$44,010	$44,336	$29,666	$59,488	$38,324	$38,896	$7,040	$2,340	$12,480	$10,944	$54,352	$11,466	$28,598	$23,010	$7,896	$5,688	$473,382
	Total Expenses		$300	$100	$100	$100					$200	$200	$200	$100		$800	$500			$2,600
	Total Fee and Expenses	$5,640	$63,092	$44,110	$44,436	$29,766	$59,488	$38,324	$38,896	$7,040	$2,540	$12,680	$11,144	$54,452	$11,466	$29,398	$23,510	$7,896	$5,688	$489,566

Total Estimated Fee	**$489,566**

ASSUMPTIONS

Total project limits is 9 miles, or about 47,000' (phase 2 already under designed and surveyed)

Site Survey assumed 10' past right of way to 10' past right of way over 7 miles (most of phase 2 picked up already)

Wetland Delineation assumes 1 side over the 7 miles (nothing needed on phase 2); however, we will confirm exact limits with the desktop analysis and eliminate areas not needed.

No Geotech included, but depending on initital analysis could do 3 days worth of geotech (about 15 borings) for about $15,000

As of now we assume no Phase I will be needed and we will just complete an endangered resourse review, along with a screening for historical and archeological building and arftifacts.

However, if a Phase I is needed we can complete this task for approximately $15,000, depending on what the screening or review agencies ask for.

We assume that an environmental assessment is not needed; and the aforementioned screening will cover the Archeological/Historical needs, but if required we will work with the City on this item.

Fees include mileage for meetings, surveyors and wetland delineations, plus DNR NOI fee; no other fees anticipated but if required they will be pass through fees.

Final Bid Docs and Bidding assumes City/ MPU will bid thru Quest and we will provide PDF of final bid sets and answer bidders questions and prepare addendum's as necessary

Phase 2 design (Viebahn, Hecker and Silver Creek) is 50% done; we will finish the remaining design with this and remove the previous design and include with these bid docs.

We have assumed 3 total bid sections, with phase 2 incorporated into one of the 3 bid sections.

No Stormwater design/permitting required.

No Construction Services are needed at this time

Fees are based upon 2023 rates and will be held for all 2024 hours

Assume all bids will be completed in early 2024 (spring of 2024)