

CC2023-02 DESIGN, BIDDING CONSTRUCTION PHASE ENGINEERING SERVICES FOR MAJOR UPGRADES AT THE CENTRAL PUMPING STATION PROPOSAL OPENING DATE: 2/16/2023 AT 11:00AM

CC2023-02 DESIGN, BIDDING & CONSTRUCTION PHASE ENGINEERING SERVICES FOR THE MAJOR UPGRADES AT THE CENTRAL PUMPING STATION FOR THE DEPARTMENT OF WATER AND SEWER - PROPOSAL OPENING DATE 2/16/2023 AT 11:00AM FOR A PERIOD OF FOUR (4) YEARS					
NUMBER OF RESPONDENTS:	5				
NAME OF BIDDER	ATC GROUP SERVICES, LLC DBA ATLAS TECHNICAL	ARCADIS U.S., INC.	CME	H2M ASSOCIATES, INC.	JACOBS ENGINEERING GROUP, INC.
ADDRESS	920 GERMANTOWN PIKE - SUITE 200	17-17 TOUTE 208 NORTH - SUITE 200 EAST	3141 BORDENTOWN AVENUE	4810 BELMAR BLVD.	412 MOUNT KEMBLE - SUITE 100S P.O. BOX 1936
CITY, STATE, ZIP	PLYMOUTH MEETING, PA 19462	FAIRLAWN, NJ 07410	PARLEN, NJ 08859	WALL TOWNSHIP, NJ 07753	MORRISTOWN, NJ 07962-1936
CONTACT NAME	MICHAEL R. FILMYER, P.E.	GERALD M. SPIESBACH	MICHAEL J. MCCLELLAND, PE	DAVID J. PACHECO, AIA	RUSSELL FORD, PHD, PE, BCEE
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STATEMENT OF OWNERSHIP DISCLOSURE	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
REQUIRED EVIDENCE EEO/AFFIRMATIVE ACTION REGULATIONS QUESTIONNAIRE	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
EQUAL EMPLOYMENT OPPORTUNITY EXHIBIT A	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA #1 FROM (1-25-23)	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
NJ BUSINESS REGISTRATION CERTIFICATE	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
NON-COLLUSION AFFADAVIT	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
AMERICANS WITH DISABILITIES ACT OF 1990 LANGUAGE	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
ETHICS COMPLAINT DISCLOSURE	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
CERTIFICATION AND DISCLOSURE OF POLITICAL CONTRIBUTIONS	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
PROHIBITED RUSSIA-BELARUS ACTIVITIES & IRAN INVESTMENT ACTIVITIES	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
EIC	CERT#3446 7/15/2024	CERT.#188 EXP. 8/15/2024	CERT#1818 EXP.2/18/2026	CERT#3244 EXP. 5/15/2023	CERT# 3187 EXP. 1/15/2023
CITY OF TRENTON RESIDENT EMPLOYMENT	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
DEBARMENT FEDERAL GOVERNMENT CONTRACT	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
CERTIFICATE OF INSURANCE	REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS	REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS	REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS	REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS	REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS
REFERENCES	INCLUDED	N/A	INCLUDED	N/A	N/A
W-9	INCLUDED	N/A	INCLUDED	N/A	N/A
60-DAY EXTENSION COMPLIANCE	N/A	YES	YES	N/A	YES
WILLING TO PROVIDE PRIORITY EMERGENCY SERVICES	YES	YES	YES	N/A	YES
SEE ATTACHED BREAK-DOWN OF PRICING	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED
EXCEPTIONS (IF ANY)	NONE	NONE	NONE	NONE	NONE
FATAL FLAW	NONE	NONE	NONE	NONE	NONE



CITY OF TRENTON
TRENTON WATER WORKS
CENTRAL PUMPING STATION UPGRADE
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES
MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)											Totals	Hours	Labor	Exp.	Fee
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Surve Construction	QA/QC Review	Clerical /Tech						
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr					
I PROJECT MANAGEMENT																
Invoicing & Progress Reports																
1. Invoice Preparation (44 over 4-year period)	2	22									44		68	\$6,310	\$50	\$6,360
2. Progress Report (with each invoice)		22											22	\$2,750	\$0	\$2,750
TASK I SUBTOTAL	2	44	0	0	0	0	0	0	0	44	90					
	(\$)	\$260	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,300		\$9,060	\$9,060	\$50	\$9,110
II DATA COLLECTION AND DOCUMENT REVIEW																
General																
1. Kickoff Meeting - Attendance & Meeting Notes	4	6											10	\$1,270	\$50	\$1,320
2. Existing Drawing & Documentation Reviews		12	8	16	2								62	\$6,610	\$50	\$6,660
3. Site Visit (Multidiscipline)		8		8	8								24	\$2,560	\$50	\$2,610
4. Review Water Pumping and Production Data		8		16									24	\$2,600	\$0	\$2,600
5. KEYSTONE - WORK FOR GATHERING PHASE													0	\$0	\$3,800	\$3,800
TASK II SUBTOTAL	4	34	8	40	10	0	24	0	0	0	120					
	(\$)	\$520	\$4,250	\$920	\$4,000	\$950	\$0	\$2,400	\$0	\$0	\$13,040		\$13,040	\$3,950		\$16,990
III DESIGN MEMORANDUM																
Design Memorandum																
1. Hydraulic Scenarios - Alternative Analysis includes identifying initial pump selections		12		12									24	\$2,700	\$0	\$2,700
2. Operational Sequencing		8		24									32	\$3,400	\$0	\$3,400
3. Construction Sequencing		12		24									36	\$3,900	\$0	\$3,900
4. Justification of Recommended Solution		2		8									10	\$1,050	\$0	\$1,050
5. Construction and Operational Cost Estimates		4	4	16	4	4							32	\$3,500	\$0	\$3,500
6. Operational Cost Evaluation - New vs Existing		4		16									20	\$2,100	\$0	\$2,100
7. Reviews & Coordination with TWB	2	16											18	\$2,260	\$0	\$2,260
8. Evaluate Future Operational Changes		12											12	\$1,500	\$0	\$1,500
9. Draft Memorandum Preparation (PDF)		12		32	4	4	48						100	\$10,440	\$0	\$10,440
10. Memorandum QA/QC Review													8	\$1,120	\$0	\$1,120
11. Memorandum Comment Review Mtg & Responses	4	8		4									16	\$1,920	\$50	\$1,970
12. Final Design Memorandum (PDF)	2	8		16	2	2	20						50	\$5,330	\$0	\$5,330
Subconsultant Coordination																
13. WIT - UT Pipe Testing - Field Support		8		32									40	\$4,200	\$250	\$4,450
14. WIT - UT Pipe Analysis Report Review	2	4											6	\$760	\$0	\$760
15. WIT COST - TETING & REPORT													0	\$0	\$12,410	\$12,410
16. Pennoni - Coordination		2	12		8								22	\$2,560	\$0	\$2,560
17. PENNONI - MODELING FOR REPORT PHASE													0	\$0	\$40,120	\$40,120
18. Keystone - Coordination		2	8										10	\$1,260	\$0	\$1,260
19. KEYSTONE - WORK FOR REPORT PHASE													0	\$0	\$6,200	\$6,200
TASK III SUBTOTAL	14	130	4	192	10	10	68	0	0	8	0	436				
	(\$)	\$1,820	\$16,250	\$460	\$19,200	\$950	\$1,400	\$6,800	\$0	\$0	\$1,120	\$0	\$48,000	\$48,000	\$59,030	\$107,030



CITY OF TON
TRENTON WATER WORKS
CENTRAL PUMPING STATION UPGRADE
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES
MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)											Totals	Hours	Labor	Exp.	Fee
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Surve Construction	QA/QC Review	Clerical /Tech					
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr					
IV 30% DESIGN DOCUMENTS																
Survey																
1. Survey Crew - Partial Site - 3 Man at 3 Days - To Supplement Aerial Topo																
30% Progress Plans																
G 2. Title Sheet				2		8						10	\$1,000	\$0	\$1,000	
G 3. General Notes & Drawing List		2		4		8						14	\$1,450	\$0	\$1,450	
G 4. General Notes and Legend				4		8						12	\$1,200	\$0	\$1,200	
G 5. Construction Sequencing Notes		4				8						12	\$1,300	\$0	\$1,300	
G 6. Valve Shutoff Diagrams / Const. Phasing - 1												0	\$0	\$0	\$0	
G 7. Valve Shutoff Diagrams / Const. Phasing - 2												0	\$0	\$0	\$0	
C 8. Site Plan - Existing / LOD	2	2	8				32					44	\$4,630	\$0	\$4,630	
C 9. Site Plan - Demolition												0	\$0	\$0	\$0	
C 10. Site Plan - New Work												0	\$0	\$0	\$0	
C 11. Utility Plan and Profile - New Work												0	\$0	\$0	\$0	
C 12. Erosion & Sediment Control Details												0	\$0	\$0	\$0	
C 13. Erosion & Sediment Control Notes												0	\$0	\$0	\$0	
A 14. Architectural Abbreviations and Legend	2			4		8						14	\$1,430	\$0	\$1,430	
A 15. Demolition Plans	2			4		16						22	\$2,230	\$0	\$2,230	
A 16. Demolition Elevations												0	\$0	\$0	\$0	
A 17. New Work Plans and Schedules				4		16						20	\$1,980	\$0	\$1,980	
A 18. New Work Elevations												0	\$0	\$0	\$0	
S 19. Structural Notes and Legend					4	8						12	\$1,360	\$0	\$1,360	
S 20. Typical Repair and New Work Details												0	\$0	\$0	\$0	
S 21. Miscellaneous Details												0	\$0	\$0	\$0	
S 22. Demolition - Lower Header Level	2				2	16						20	\$2,130	\$0	\$2,130	
S 23. Demolition - Pump Level	2				2	16						20	\$2,130	\$0	\$2,130	
S 24. New Work - Lower Header Level					2	16						18	\$1,880	\$0	\$1,880	
S 25. New Work - Pump Level						8	24					32	\$3,520	\$0	\$3,520	
M 26. Mechanical Legend & Abbreviations	2		4			8						14	\$1,450	\$0	\$1,450	
M 27. Pump and System Curves	2		8			8						18	\$1,850	\$0	\$1,850	
M 28. Demolition - Lower Header Level			4			16						20	\$2,000	\$0	\$2,000	
M 29. Demolition - Pump Level			4			16						20	\$2,000	\$0	\$2,000	
M 30. Demolition - Overhead / Crane Level	2	8				16						26	\$2,650	\$0	\$2,650	
M 31. Demolition - Cross Section												0	\$0	\$0	\$0	
M 32. New Work - Lower Header Level	2		8			24						34	\$3,450	\$0	\$3,450	
M 33. New Work - Pump Level	2		8			24						34	\$3,450	\$0	\$3,450	
M 34. New Work - Overhead / Crane Level	2		8			24						34	\$3,450	\$0	\$3,450	
M 35. New Work - Cross Section												0	\$0	\$0	\$0	
M 36. New Work - Long Section												0	\$0	\$0	\$0	
M 37. Mechanical Details and Schedules												0	\$0	\$0	\$0	
30% Specifications																
38. Specification Index		4			2	2						8	\$970	\$0	\$970	
Electrical and I&C (Keystone)																
39. Electrical Load List Development	8		8									16	\$1,800	\$0	\$1,800	
40. Instrumentation List	8		8									16	\$1,800	\$0	\$1,800	
41. Subconsultant Coordination	16			16								32	\$3,600	\$0	\$3,600	
42. KEYSTONE - WORK FOR REPORT 30% DESIGN												0	\$0	\$23,050	\$23,050	
Permit Requirements																
43. Identification	2		8									10	\$1,180	\$0	\$1,180	
44. Fee Estimate			4									4	\$460	\$0	\$460	
Construction Cost Estimate																
45. Estimate Preparation	4	16	20	4	4							48	\$5,280	\$0	\$5,280	



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	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Surve Construction	QA/QC Review	Clerical /Tech					
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr					
TASK IV SUBTOTAL	4	68	36	114	18	24	320	0	0	0	0	584				
	(\$)	\$520	\$8,500	\$4,140	\$11,400	\$1,710	\$3,360	\$32,000	\$0	\$0	\$0	\$61,630	\$61,630	\$23,050	\$84,680	

V 60% DESIGN DOCUMENTS

60% Progress Plans

G	1. Title Sheet			2		4						6	\$600	\$0	\$600
G	2. General Notes & Drawing List	2		2		4						8	\$850	\$0	\$850
G	3. General Notes and Legend			4		4						8	\$800	\$0	\$800
G	4. Construction Sequencing Notes	4		4		4						12	\$1,300	\$0	\$1,300
G	5. Valve Shutoff Diagrams / Const. Phasing - 1											0	\$0	\$0	\$0
G	6. Valve Shutoff Diagrams / Const. Phasing - 2											0	\$0	\$0	\$0
C	7. Site Plan - Existing / LOD	4				16		8				28	\$2,840	\$0	\$2,840
C	8. Site Plan - Demolition	4	2			16		8				30	\$3,090	\$0	\$3,090
C	9. Site Plan - New Work & Bypass	4	4	8		24		8				48	\$5,060	\$0	\$5,060
C	10. Utility Plan and Profile - New Work	4	2	8		24		8				46	\$4,810	\$0	\$4,810
C	11. Erosion & Sediment Control Details					16		16				32	\$3,040	\$0	\$3,040
C	12. Erosion & Sediment Control Notes					16		16				32	\$3,040	\$0	\$3,040
A	13. Architectural Abbreviations and Legend	2			2		8					12	\$1,240	\$0	\$1,240
A	14. Demolition Plan				2		16					18	\$1,790	\$0	\$1,790
A	15. Demolition Elevations	2			4		24					30	\$3,030	\$0	\$3,030
A	16. New Work Plan and Schedules				4		8					12	\$1,180	\$0	\$1,180
A	17. New Work Elevations	2			4		24					30	\$3,030	\$0	\$3,030
S	18. Structural Notes and Legend					2		8				10	\$1,080	\$0	\$1,080
S	19. Typical Repair and New Work Details					2		16				18	\$1,880	\$0	\$1,880
S	20. Miscellaneous Details											0	\$0	\$0	\$0
S	21. Demolition - Lower Header Level					2		8				10	\$1,080	\$0	\$1,080
S	22. Demolition - Pump Level							8				8	\$800	\$0	\$800
S	23. New Work - Lower Header Level	2				2		8				12	\$1,330	\$0	\$1,330
S	24. New Work - Pump Level	2						8				10	\$1,050	\$0	\$1,050
M	25. Mechanical Legend & Abbreviations			4			4					8	\$800	\$0	\$800
M	26. Pump and System Curves	2		4			4					10	\$1,050	\$0	\$1,050
M	27. Demolition - Lower Header Level			4			8					12	\$1,200	\$0	\$1,200
M	28. Demolition - Pump Level			4			8					12	\$1,200	\$0	\$1,200
M	29. Demolition - Overhead / Crane Level			4			8					12	\$1,200	\$0	\$1,200
M	30. Demolition - Cross Section	2		4			16					22	\$2,250	\$0	\$2,250
M	31. New Work - Lower Header Level	4		4			12					20	\$2,100	\$0	\$2,100
M	32. New Work - Pump Level	4		4			12					20	\$2,100	\$0	\$2,100
M	33. New Work - Overhead / Crane Level	4		4			12					20	\$2,100	\$0	\$2,100
M	34. New Work - Cross Section			4			16					20	\$2,000	\$0	\$2,000
M	35. New Work - Long Section	4		8			32					44	\$4,500	\$0	\$4,500
M	36. Mechanical Details and Schedules	4		12			16					32	\$3,300	\$0	\$3,300

60% Specifications

G	1. Demolition	2		2		2						6	\$730	\$0	\$730
C	2. Earthwork (Excavation, Trenching, Backfilling)	2		16								18	\$2,100	\$0	\$2,100
C	3. Underground Piping Valves and Appurtenances											0	\$0	\$0	\$0
C	4. Tapping Sleeve, Valve & Vault Appurtenances	4		16								20	\$2,340	\$0	\$2,340
M	5. Temporary Bypass Pumping System	8		40								48	\$5,000	\$0	\$5,000
S	6. Concrete Formwork					2						2	\$280	\$0	\$280
S	7. Reinforcing Steel					2						2	\$280	\$0	\$280
S	8. Concrete Accessories					2						2	\$280	\$0	\$280
S	9. Cast-In-Place Concrete (includes calculations)					24						24	\$3,360	\$0	\$3,360
S	10. Concrete Removal and Repair											0	\$0	\$0	\$0
S	11. Pre-Cast Concrete Structures						2					2	\$280	\$0	\$280
S	12. Post-Installed Anchors						2					2	\$280	\$0	\$280
A	13. Sealants and Caulking											0	\$0	\$0	\$0
A	14. Painting											0	\$0	\$0	\$0
M	15. Louvers	4		4								8	\$900	\$0	\$900
M	16. Ventilation Fans (includes calculations)	4		32								36	\$3,700	\$0	\$3,700
M	17. Basic Mechanical Materials and Methods			4								4	\$400	\$0	\$400
M	18. Process Pipe and Pipe Fittings	4		4								8	\$900	\$0	\$900



CITY OF TON
TRENTON WATER WORKS
CENTRAL PUMPING STATION UPGRADE
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES
MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)											Totals Hours	Labor	Exp.	Fee	
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Surve y Construction	QA/QC Review	Clerical /Tech						
M 19. Miscellaneous Valves (less than 4-inch)	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr	0	\$0	\$0	\$0	
M 20. Split Case Finished Water Pumping Units		4		32								36	\$3,700	\$0	\$3,700	
M 21. Gate Valves - 4-inch and Larger		4		8								12	\$1,300	\$0	\$1,300	
M 22. Check Valves - 4-inch and Larger		4		8								12	\$1,300	\$0	\$1,300	
Electrical and I&C (Keystone)																
23. Electrical Load List Development		8		8								16	\$1,800	\$0	\$1,800	
24. Control Logic Narrative Development		12		12								24	\$2,700	\$0	\$2,700	
25. Subconsultant Coordination		16		16								32	\$3,600	\$0	\$3,600	
26. KEYSTONE - WORK FOR REPORT 60% DESIGN												0	\$0	\$23,050	\$23,050	
Misc.																
27. Station Site Visit (Multidiscipline)		4		4	4							12	\$1,280	\$50	\$1,330	
28. Construction Cost Estimate		4	12	12	4	2						34	\$3,740	\$0	\$3,740	
29. Written Responses to 30% Comments		4	4	8	2	2						20	\$2,230	\$0	\$2,230	
30. Permit Requirements/Fees	2	4	48		20		16		20			110	\$11,780	\$250	\$12,030	
31. 60% Submittal Review Meeting		4		4								8	\$900	\$50	\$950	
New Jersey Water Bank Services																
32. H2Loans		4				32						36	\$3,700	\$50	\$3,750	
33. Pre-App Meeting		8										8	\$1,000	\$50	\$1,050	
34. Loan Application		12	40									52	\$6,100		\$6,100	
35. Planning Documents		12	40									52	\$6,100		\$6,100	
36. SED Plan		2	2									4	\$480		\$480	
37. Award Package Submission		2	16									18	\$2,090		\$2,090	
38. Payment Applications			32					16				48	\$5,280		\$5,280	
39. Inspections								16				16	\$1,600	\$200	\$1,800	
40. Completion Certification		2										2	\$260	\$200	\$460	
TASK V SUBTOTAL	22	182	242	270	46	48	460	64	52	0	0	1386				
	(\$)	\$2,860	\$22,750	\$27,830	\$27,000	\$4,370	\$6,720	\$46,000	\$5,760	\$5,200	\$0	\$0	\$148,490	\$148,490	\$23,900	\$172,390



CITY OF TON
TRENTON WATER WORKS
CENTRAL PUMPING STATION UPGRADE
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES
MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)												Totals Hours	Labor	Exp.	Fee
	Client Manager 130\$/hr	Project Manager 125\$/hr	Sr. Project Engr 115\$/hr	Project Engr 100\$/hr	Project Engr 95\$/hr	Struct Engr 140\$/hr	CADD Designer 100\$/hr	Scientist /Tech. 90\$/hr	Civil/Surve Construction 100\$/hr	QA/QC Review 140\$/hr	Clerical /Tech 75\$/hr					
VI 95% DESIGN DOCUMENTS																
95% Progress Plans																
1. Revising thirty-three (33) previously submitted dwgs	4	32	20	8	4	264						332	\$33,900	\$0	\$33,900	
2. Work on three (3) not previously submitted dwgs	4	16		2	72							94	\$9,820	\$0	\$9,820	
95% Specifications																
3. Revisions to 17 previously submitted sections	4	16	24		4							48	\$5,300	\$0	\$5,300	
4. Work on 5 not previously submitted sections	4	12	8	20	4							48	\$5,140	\$0	\$5,140	
Miscellaneous																
5. Written Responses to 60% Comments	4		16	2	2							24	\$2,570	\$0	\$2,570	
6. Construction Cost Estimate		2		12	2	2						18	\$1,920	\$0	\$1,920	
7. 95% Submittal QA/QC Review												16	\$2,240	\$0	\$2,240	
8. 95% Submittal Review Meeting	4	4	4									12	\$1,360	\$60	\$1,410	
Electrical (Keystone)																
9. Subconsultant Coordination		12		20								32	\$3,500	\$0	\$3,500	
10. KEYSTONE - WORK FOR REPORT 95% DESIGN												0	\$0	\$13,200	\$13,200	
11. Pennoni - Coordination	2	4		4								10	\$1,160	\$0	\$1,160	
12. PENNONI - MODELING FOR REPORT PHASE												0	\$0	\$10,030	\$10,030	
Permits																
13. Permit Requirements - Revisions	2	8	8				24		32			74	\$7,780	\$0	\$7,780	
TASK VI SUBTOTAL	4	50	88	108	32	18	360	0	32	16	0	708				
	(\$)	\$520	\$6,250	\$10,120	\$10,800	\$3,040	\$2,520	\$36,000	\$0	\$3,200	\$2,240	\$0	\$74,690	\$74,690	\$23,280	\$97,970
VII COMPLETE CONSTRUCTION DOCUMENTS																
1. Incorporate Standard Front End & Div. 1 Sections	12		8									20	\$2,300	\$0	\$2,300	
2. 95 % Comment Incorporation	8		20	2	2	48						80	\$8,270	\$0	\$8,270	
3. Permit Agency Final Comment Incorporation	4	12				24						40	\$4,280	\$0	\$4,280	
4. Copies of Documents (15 for TWW)	2					8						4	\$1,350	\$1,680	\$3,030	
TASK VII SUBTOTAL	0	26	12	28	2	2	80	0	0	0	4	154				
	(\$)	\$0	\$3,250	\$1,380	\$2,800	\$190	\$280	\$8,000	\$0	\$0	\$0	\$300	\$16,200	\$16,200	\$1,680	\$17,880



CITY: TON
 TRENTON WATER WORKS
 CENTRAL PUMPING STATION UPGRADE
 DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES
 MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)											Totals	Hours	Labor	Exp.	Fee
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Surve Construction	QA/QC Review	Clerical /Tech						
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr					
VIII ASSISTANCE DURING BIDDING																
1. Pre-Bid Meeting - Agenda and Summary Notes	4	8										12	\$1,520	\$50	\$1,570	
2. Answer Bidder Questions		8		20								32	\$3,360	\$0	\$3,360	
3. Prepare Addenda Documents		4		20								68	\$6,860	\$0	\$6,860	
4. Bid Opening	2						40	4				2	\$260	\$0	\$260	
5. Bid Tab Report w/ Background Checks (3 copies)		4		20								26	\$2,650	\$0	\$2,650	
6. KEYSTONE - BID PERIOD SERVICES												0	\$0	\$6,500	\$6,500	
TASK VIII SUBTOTAL	6	24	0	60	0	0	40	8	0	0	2	140				
	(\$)	\$780	\$3,000	\$0	\$6,000	\$0	\$0	\$4,000	\$720	\$0	\$0	\$150	\$14,650	\$14,650	\$50	\$14,700
IX DESIGN SERVICES DURING CONSTRUCTION																
1. Resident Inspector (RFP Allotment = 750 Hours)												750				
2. Pre-Construction Meetings (RFP Requires Two)		8										750	\$56,250	\$0	\$56,250	
3. Monthly Progress Meetings (Estimated 18 total)	36		36									8	\$1,000	\$100	\$1,100	
4. Shop Drawing Reviews (includes 86 Submittals + 43 Resubmittals)		40	30	120	20	120						72	\$8,100	\$900	\$9,000	
5. Review of Subconsultant Submittal Comments		24										330	\$39,150	\$0	\$39,150	
6. RFI Responses (40 estimated responses)	4	36		112	24	24						24	\$3,000	\$0	\$3,000	
7. RFC Responses (20 estimated responses)	2	12		36	12	12						200	\$21,860	\$0	\$21,860	
8. Review of Subconsultant RFI/RFC responses	2	24										74	\$8,180	\$0	\$8,180	
9. Change Order Evaluation (6 evaluations)	4	8	8	32	4	4						26	\$3,260	\$0	\$3,260	
10. Supplemental CO Drawings		4		12								60	\$6,580	\$100	\$6,680	
11. Field Witness Tests - Station Site		4	16	16								56	\$5,700	\$0	\$5,700	
12. Pump Factory Witness Testing		40										36	\$3,940	\$250	\$4,190	
13. O & M Manual Review		8		64								40	\$5,000	\$2,200	\$7,200	
14. Acceptance Site Visit & Punch List		6		8	4	4						72	\$7,400	\$0	\$7,400	
15. KEYSTONE - CONSTRUCITON SERVICES												22	\$2,490	\$50	\$2,540	
16. KEYSTONE - ARC FLASH STUDY												0	\$0	\$19,500	\$19,500	
												0	\$0	\$22,600	\$22,600	
TASK IX SUBTOTAL	12	250	54	436	64	164	40	0	0	0	750	1770	\$171,910	\$171,910	\$45,700	\$217,610
X PROJECT CLOSEOUT																
1. Record Drawings		2		8			40					50	\$5,050	\$0	\$5,050	
2. Closeout Applications for Permits			28									28	\$3,220	\$0	\$3,220	
3. Final Inspection of Facilities with Punchlist		4		8								12	\$1,300	\$50	\$1,350	
4. Operations Manual		2		28			24					54	\$5,450	\$0	\$5,450	
5. Maintenance Manual		2		28								30	\$3,050	\$0	\$3,050	
6. Standard Operating Procedures (SOP's)		2		28								30	\$3,050	\$0	\$3,050	
7. KEYSTONE CLOSEOUT SERVICES												0	\$0	\$7,300	\$7,300	
TASK X SUBTOTAL	0	12	28	100	0	0	64	0	0	0	0	204	\$21,120	\$21,120	\$7,350	\$28,470
XI ALLOWANCE																
1. Allowance												0	\$0	\$70,000	\$70,000	
TASK XI SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$70,000	\$70,000	
PROJECT TOTAL																
PROJECT TOTAL - HOURS	68	820	472	1348	182	266	1456	72	84	24	800	5592				
PROJECT TOTAL - COSTS	\$8,840	\$102,500	\$54,280	\$134,800	\$17,290	\$37,240	\$145,600	\$6,480	\$8,400	\$3,360	\$60,000	\$578,790	\$578,790	\$188,040	\$836,830	



6.0 FEE PROPOSAL

6.1 Compensation

Atlas' Fee-Cost/Hour Breakdown is provided in a separate sealed envelope that is part of the proposal submission. We expect the cost will fully cover the services described herein. The fees include all labor, expenses, travel, management, and costs related to the services rendered for the project. Costs for additional out of scope services requested to be performed by the City will be based upon our current Schedule of Billing Charges in effect at the time services are provided.

6.2 Insurance

Atlas maintains outstanding insurance coverage for the protection of itself and its clients in the performance of any of its services. A sample Certificate of Insurance, which can be found in **Appendix A**, illustrates the minimum insurance coverage carried by Atlas.

08. Fee Proposal

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 Not-to-Exceed Fee
1	Design / Permitting Services	2970	\$ 126.70	\$ 376,301	\$ 19,800	\$ 1,002	\$ 397,103
2	Bid Services	61	\$ 151.29	\$ 9,229	\$ -	\$ 3,520	\$ 12,749
3	Construction Phase Engineering Services	1383	\$ 140.84	\$ 194,779	\$ -	\$ 6,490	\$ 201,269
4	Smart Lighting	57	\$ 155.78	\$ 8,879	\$ -	\$ -	\$ 8,879
	TOTAL	4471	\$ 131.78	\$ 589,188	\$ 19,800	\$ 11,012	\$ 620,000

Note 1: A general allowance of \$70,000 will also be included upon execution of the contract.

	Task	Hours	Hourly Rate	Labor	Subs	Expenses	Total
	Surge Analysis, if required	150	\$ 195.00	\$ 29,250	\$ -	\$ -	\$ 29,250

Labor Table

	Task	Principal-in-Charge / Technical Advisor	Principal Engineer II	Principal Engineer I	Senior Engineer/Scientist II	Senior Engineer/Scientist I	Project Engineer/Scientist	Staff Engineer	Design Tech II	TOTAL
1	Design / Permitting Services	79	117	384	106	0	1261	50	973	2970
2	Bid Services	2	0	8	17	0	34	0	0	61
3	Construction Phase Engineering Services	36	20	114	307	0	254	652	0	1383
4	Smart Lighting	0	12	2	0	0	43	0	0	57
	TOTAL	117	149	508	430	0	1592	702	973	4471

5. Fee Proposal

We find that the effort necessary to successfully undertake and complete the Scope of Services described under the City of Trenton's RFP can be provided for the total, not to exceed cost, indicated below:

Task	Description	Sub-task No	Hours	Cost
1	Task 1: Design / Permitting Services	a. Data Collection and Document Review	50	\$ 9,020.00
		b. Design Memorandum	176	\$ 31,348.00
		c. Plans and Specs	1,415	\$ 245,728.00
		d. Permitting	48	\$ 8,407.00
		e. NJ I-Bank Application/Support	176	\$ 30,516.00
		f. Design Phase Meetings	96	\$ 17,952.00
		g. Surge Analysis	100	\$ 17,974.00
2	Task 2: Bid Services	a. Bid Phase Services – Responses and Reviews	17	\$ 3,066.00
		b. Bid Phase Services – Meetings Support	14	\$ 2,520.00
		c. Documentation – Bid Addenda	37	\$ 6,550.00
		d. Bid Report	15	\$ 2,724.00
		e. Deliverables	12	\$ 1,500.00
3	Task 3: Construction Phase Engineering Services	a. Construction Phase Services – Construction Period	364	\$ 66,248.00
		b. Construction Phase Services – Resident Engineering/Inspection	2,000	\$ 298,000.00
		c. Deliverables	25	\$ 2,500.00
		d. As-Builts	114	\$ 20,818.00
4	Task 4: Deleted	See Addendum #1		
		SUBTOTAL		\$ 764,871.00
	ALLOWANCE			\$ 70,000.00
		TOTAL		

Terms:

- Costs shall be billed hourly, in accordance with our submitted 2023 Rates.
- CME Associates is available to attend any meetings beyond those identified in the RFP scope of services upon receipt of the City's written authorization.

Limitations and Exclusions

The limitations and exclusions for this proposal are set forth below.



MUNICIPAL ENGINEERING SERVICES
GENERAL CONDITIONS AND HOURLY RATE SCHEDULE TO JANUARY 1, 2024

Senior Project Manager.....	\$191.00 Per Hour
Project Manager.....	\$190.00 Per Hour
Project Leader.....	\$189.00 Per Hour
Professional Engineer.....	\$186.00 Per Hour
Senior Project Engineer.....	\$179.00 Per Hour
Project Engineer.....	\$177.00 Per Hour
Senior Design Engineer.....	\$176.00 Per Hour
Design Engineer.....	\$171.00 Per Hour
Senior Engineering Technician.....	\$149.00 Per Hour
Drone Pilot.....	\$143.00 Per Hour
Engineering Technician/Management Information Systems Technician.....	\$142.00 Per Hour
Drone Technician.....	\$ 80.00 Per Hour
Professional Land Surveyor.....	\$187.00 Per Hour
Land Surveyor.....	\$164.00 Per Hour
Robotic Total Station.....	\$ 79.00 Per Hour
Party Chief.....	\$142.00 Per Hour
Survey Technician.....	\$129.00 Per Hour
Resident Engineer.....	\$164.00 Per Hour
Chief Construction Engineer.....	\$156.00 Per Hour
Senior Construction Engineer.....	\$149.00 Per Hour
Construction Engineer.....	\$144.00 Per Hour
Chief Construction Technician.....	\$142.00 Per Hour
Senior Construction Technician.....	\$135.00 Per Hour
Construction Technician.....	\$129.00 Per Hour
Technical Assistant.....	\$100.00 Per Hour
Senior CAD Technician.....	\$149.00 Per Hour
Licensed Landscape Architect.....	\$186.00 Per Hour
Senior Landscape Designer.....	\$170.00 Per Hour
Certified Tree Expert.....	\$149.00 Per Hour
Landscape Designer.....	\$135.00 Per Hour
Director of Planning.....	\$191.00 Per Hour
Professional Planner.....	\$190.00 Per Hour
Project Planner.....	\$181.00 Per Hour
Planning Technician.....	\$170.00 Per Hour
Principal.....	\$195.00 Per Hour
Partner.....	\$202.00 Per Hour
Managing Partner/Administrative Partner.....	\$223.00 Per Hour

Environmental services will be billed in accordance with CME's Environmental Rate Schedule

Invoices - CME Associates (CME) will submit invoices to Client monthly and a final invoice upon completion of services. Payment is due upon presentation of invoice and is past due thirty days from invoice date. Client agrees to pay a finance charge of one and one-half percent per month, or the maximum rate allowed by law, on past due accounts. In the event that the invoice is not paid voluntarily and promptly, and must therefore be referred to an attorney or agency for collection, the Client agrees to pay a collection fee equal to the actual attorney or agency collection fee incurred by CME. Overtime rates are applicable after eight hours Monday through Friday, and all day Saturday and Sunday, and charged at one and one-half times the quoted rate. Holidays are charged at two times the quoted rate. Expenses incurred for reproduction, postage handling, photographs and for services including subconsultants equipment and facilities not furnished by CME are charged to the Client at cost plus fifteen percent. Automobile travel may be charged at the current rate per mile allowed by the Internal Revenue Service.

Standard of Care - Services performed by CME under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. NO OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

Contaminated Material - It is understood that CME is not, and has no responsibility as a handler, generator, operator, treater or storer, transporter or disposer of hazardous or toxic substances found or identified at any site. Client shall undertake or arrange for, either directly or indirectly through other contractors, the handling, removal, treatment, storage, transportation and disposal of hazardous substances or constituents found or identified at any site.



Phase	Task Description	Phase Description										Billing Titles and Hourly Rates			
		Staff 2	Proj 1	Sen. Inspector	Proj 2	Sr Proj	PM	Sen. PM	Principal	Equipment, Travel, Lab Service, Printing	Total H2M Hours, by Task	Fee Submittal			
	SALARY APPROX	\$ 65,000	\$ 80,000		\$ 90,000	\$ 105,000	\$ 125,000	\$ 150,000	\$ 175,000						
	HOURLY RATE	\$ 105.00	\$ 120.00	\$ 125.00	\$ 135.00	\$ 155.00	\$ 180.00	\$ 205.00	\$ 225.00						
	LABOR MULT	3.36	3.12		3.12	3.07	3.00	2.84	2.67						
1	Design & Permits	Data Collection & Document Review	80		40		40		8		168		\$ 24,000.00		
	Modeling														
	Design Memorandum	120		40			40		4		124		\$ 19,500.00		
	Design - Water Process - 3D Scanning Effort/Equip. Allowance	40	8				16				208		\$ 28,800.00		
	Design - Water Process	320		120		80		16			536		\$ 72,600.00		
	Design - Electrical - Including Lighting					160		16			176		\$ 32,400.00		
	Design - Arc Flash / Short Circuit Studies (Ex. + Prop Gear)					100		10			110		\$ 20,250.00		
	Design - Controls					80		8			88		\$ 16,200.00		
	Design - Security Components (limited to Video, Door Alarms)					40		4			44		\$ 8,100.00		
	Design - Structural (Pedestals and Thrust Restraining)	80				16		4			100		\$ 13,380.00		
	Permitting - Limited to NJDEP / BWSE	80				8		4			92		\$ 11,940.00		
	NJ I-Bank - Application Support	80				80	40				212		\$ 31,900.00		
	Design Phase Meetings	24				24		16			64		\$ 10,800.00		
	PM and QAQC					32		16			48		\$ 9,360.00	\$ 309,770.00	
2	Bid Services	Coord Advertisement	4			1					5		\$ 660.00		
	Administer Pre-Bid Meeting	8				8		2			18		\$ 2,850.00		
	Bid Phase RFIs	24				8		4			36		\$ 5,220.00		
	Bid Opening / Review / Recommendation	8				8		2			18		\$ 2,850.00	\$ 11,580.00	
3	Con Services	Pre-Con Meeting	8			4		2			14		\$ 2,130.00		
	Shop Drawing Submittals Management	80				24		4			108		\$ 14,820.00		
	RFI Management	80				24		4			108		\$ 14,820.00		
	Amendment Request Reviews	24				8		4			36		\$ 5,220.00		
	Pay App Reviews	80				20		4			104		\$ 14,100.00		
	Monthly Progress Meetings Management	120				120		40			280		\$ 45,000.00		
	O&M Manuals	80				24		4			108		\$ 14,820.00		
	As-Built Drawings	40				12		4			56		\$ 7,860.00		
	Punchlist Management	20				8		2			30		\$ 4,290.00		
	Administrative Closeout	16				4		1			21		\$ 2,865.00		
	Resident Observer				750						750		\$ 101,250.00	\$ 227,175.00	
	Allowance - Miscellaneous												\$ 70,000.00	0	\$ 70,000.00
	TASK TOTAL		40	1384	0	950	200	949	0	203	72500	3726	\$ 818,525.00		
			1%	37%	0%	25%	5%	25%	0%	5%					

8. Fee Proposal

Our fee for the work as defined in the RFP and as clarified by our approach and scope is \$674,573. This includes the \$70,000 allowance in Task 3, Construction Phase Engineering Services as per the RFP. A breakdown of our costs, hours, expenses, and rates is provided in the table below.

Fee Table Notes:

- 1) Average Billing Rates over the duration of the contract are shown. Rates escalate by 3% on Jan 1 of each calendar year for the duration of the contract.
- 2) Resident Engineering Staff includes 50 hours of Senior Resident Engineering Level of Effort and 700 hours of Resident Engineering Level of Effort. Billing will be based on a per-employee basis.
- 3) Expenses include \$70,000 allowance in Task 3 per the RFP.

Additional Services:

- **Surge Analysis:** Per the RFP, Jacobs will perform a surge analysis of the CPS pumping system, if necessary. Our budgetary estimate to perform the surge analysis work we've defined in Section 4 – Project Work Program and Flow Chart is \$29,055 and the estimated level of effort is 204 hours.
- **Dynamic Simulation:** Jacobs has the capability of modelling the proposed pump station in our dynamic simulation software. Refer to **Section 4 – Project Work Program and Flow Chart** of our proposal where the scope of work and benefits to TWW are described. Jacobs will provide a detailed scope of work and cost proposal if TWW is interested in pursuing this additional service.
- **Computational Fluid Dynamics:** CFD assessment of the pumping arrangements can be provided as an additional service.