

**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:	<b>5</b>				
NAME OF BIDDER	<b>ATC GROUP SERVICES, LLC DBA ATLAS TECHNICAL</b>	<b>ARCADIS U.S., INC.</b>	<b>CME</b>	<b>H2M ASSOCIATES, INC.</b>	<b>JACOBS ENGINEERING GROUP, INC.</b>
ADDRESS	920 GERMANTOWN PIKE - SUITE 200 PLYMOUTH MEETING, PA 19462	17-17 TOUTE 208 NORTH - SUITE 200 EAST FAIRLAWN, NJ 07410	3141 BORDENTOWN AVENUE PARLEN, NJ 08859	4810 BELMAR BLVD. WALL TOWNSHIP, NJ 07753	412 MOUNT KEMBLE - SUITE 100S P.O. BOX 1936 MORRISTOWN, NJ 07962-1936
CITY, STATE, ZIP					
CONTACT NAME	<b>MICHAEL R. FILMYER, P.E.</b>	<b>GERALD M. SPIESBACH</b>	<b>MICHAEL J. MCCLELLAND, PE</b>	<b>DAVID J. PACHECO, AIA</b>	<b>RUSSELL FORD, PHD, PE, BCEE</b>
TELEPHONE	610-313-3100	201-398-4379	732-727-8000	<b>732-414-2661</b>	832-242-7040
FAX	610313-3151	N/A	732-727-3989	732-414-2662	973-267-3555
E-MAIL	<a href="mailto:mike.filmyer@oneatlas.com">mike.filmyer@oneatlas.com</a>	<a href="mailto:Gerry.Spiesbach@arcadis.com">Gerry.Spiesbach@arcadis.com</a>	<a href="mailto:mmccllland@cmeusa1.com">mmccllland@cmeusa1.com</a>	<a href="mailto:dpacheco@h2m.com">dpacheco@h2m.com</a>	<a href="mailto:Russell.Ford@jacobs.com">Russell.Ford@jacobs.com</a>
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 PROHIBITED RUSSIA-BELARUS ACTIVITIES & IRAN INVESTMENT ACTIVITIES	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
EIC	<b>CERT#3446 7/15/2024</b>	<b>CERT.#188 EXP. 8/15/2024</b>	<b>CERT#1818 EXP.2/18/2026</b>	<b>CERT#3244 EXP. 5/15/2023</b>	<b>CERT# 3187 EXP. 1/15/2023</b>
CITY OF TRENTON RESIDENT EMPLOYMENT	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
DEBARMENT FEDERAL GOVERNMENT CONTRACT	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
CERTIFICATE OF INSURANCE	<b>REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS</b>	<b>REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS</b>	<b>REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS</b>	<b>REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS</b>	<b>REQUIRED FROM AWARDED VENDOR WITH SIGNED CONTRACTS</b>
REFERENCES	INCLUDED	N/A	INCLUDED	N/A	N/A
W-9	INCLUDED	N/A	INCLUDED	N/A	N/A
60-DAY EXTENSION COMPLIANCE	<b>N/A</b>	YES	YES	<b>N/A</b>	YES
WILLING TO PROVIDE PRIORITY EMERGENCY SERVICES	YES	YES	YES	<b>N/A</b>	YES
SEE ATTACHED BREAK-DOWN OF PRICING	<b>SEE ATTACHED</b>	<b>SEE ATTACHED</b>	<b>SEE ATTACHED</b>	<b>SEE ATTACHED</b>	<b>SEE ATTACHED</b>
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			
	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/survey Construction 100\$/hr	QA/QC Review 140\$/hr	Clerical /Tech 75\$/hr	Hours	Labor	Exp.	Fee
<b>I PROJECT MANAGEMENT</b>															
<b>Invoicing &amp; Progress Reports</b>															
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
<b>TASK I SUBTOTAL</b>	2	44	0	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
<b>II DATA COLLECTION AND DOCUMENT REVIEW</b>															
<b>General</b>															
1. Kickoff Meeting - Attendance & Meeting Notes	4	6										10	\$1,270	\$50	\$1,320
2. Existing Drawing & Documentation Reviews		12	8	16	2		24					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
<b>TASK II SUBTOTAL</b>	4	34	8	40	10	0	24	0	0	0	0	120			
	(\$)	\$520	\$4,250	\$920	\$4,000	\$950	\$0	\$2,400	\$0	\$0	\$0	\$13,040	\$13,040	\$3,950	\$16,990
<b>III DESIGN MEMORANDUM</b>															
<b>Design Memorandum</b>															
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 TWW	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		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
<b>Subconsultant Coordination</b>															
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
<b>TASK III SUBTOTAL</b>	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	\$48,000	\$48,000	\$59,030	\$107,030



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

Tasks	Manpower Estimates (hours)											Totals			
	Client	Project	Sr. Project	Project	Project	Struct	CADD	Scientist	Civil/Survey	QA/QC	Clerical	Hours	Labor	Exp.	Fee
	Manager	Manager	Engr	Engr	Engr	Engr	Designer	/Tech.	Construction	Review	/Tech				
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr				
<b>IV 30% DESIGN DOCUMENTS</b>															
<b>Survey</b>															
1. Survey Crew - Partial Site - 3 Man at 3 Days - To Supplement Ariel Topo			8				16		48			72	\$7,320	\$150	\$7,470
<b>30% Progress Plans</b>															
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
<b>30% Specifications</b>															
38. Specification Index		4			2	2						8	\$970	\$0	\$970
<b>Electrical and I&amp;C (Keystone)</b>															
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
<b>Permit Requirements</b>															
43. Identification	2		8									10	\$1,180	\$0	\$1,180
44. Fee Estimate			4									4	\$460	\$0	\$460
<b>Construction Cost Estimate</b>															
45. Estimate Preparation		4	16	20	4	4						48	\$5,280	\$0	\$5,280



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MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)												Totals			
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Survey Construction	QA/QC Review	Clerical /Tech	Hours	Labor	Exp.	Fee	
	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	\$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			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 TRENTON  
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CENTRAL PUMPING STATION UPGRADE  
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES  
MANPOWER COST MATRIX

Manpower Estimates (hours)																	
Tasks		Client Manager	Project Manager	Sr. Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Survey Construction	QA/QC Review	Clerical /Tech	Totals Hours	Labor	Exp.	Fee		
		130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	75\$/hr					
M	19. Miscellaneous Valves (less than 4-inch)											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



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Tasks	Manpower Estimates (hours)																									
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Survey Construction	QA/QC Review	Clerical /Tech	Totals Hours	Labor	Exp.	Fee											
	130\$/hr	125\$/hr	115\$/hr	100\$/hr	95\$/hr	140\$/hr	100\$/hr	90\$/hr	100\$/hr	140\$/hr	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		16	\$2,240	\$0	\$2,240											
8. 95% Submittal Review Meeting		4	4	4								12	\$1,360	\$50	\$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	14	\$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 OF TRENTON  
TRENTON WATER WORKS  
CENTRAL PUMPING STATION UPGRADE  
DESIGN, BIDDING CONSTRUCTION ENGINEERING SERVICES  
MANPOWER COST MATRIX

Tasks	Manpower Estimates (hours)															
	Client Manager	Project Manager	Sr. Project Engr	Project Engr	Project Engr	Struct Engr	CADD Designer	Scientist /Tech.	Civil/Survey Construction	QA/QC Review	Clerical /Tech	Totals Hours	Labor	Exp.	Fee	
	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				4				32	\$3,360	\$0	\$3,360	
3. Prepare Addenda Documents		4		20			40	4				68	\$6,860	\$0	\$6,860	
4. Bid Opening	2											2	\$260	\$0	\$260	
5. Bid Tab Report w/ Background Checks (3 copies)		4		20							2	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	750	\$56,250	\$0	\$56,250	
2. Pre-Construction Meetings (RFP Requires Two)		8										8	\$1,000	\$100	\$1,100	
3. Monthly Progress Meetings (Estimated 18 total)		36		36								72	\$8,100	\$900	\$9,000	
4. Shop Drawing Reviews (includes 86 Submittals + 43 Resubmittals)		40	30	120	20	120						330	\$39,150	\$0	\$39,150	
5. Review of Subconsultant Submittal Comments		24										24	\$3,000	\$0	\$3,000	
6. RFI Responses (40 estimated responses)	4	36		112	24	24						200	\$21,860	\$0	\$21,860	
7. RFC Responses (20 estimated responses)	2	12		36	12	12						74	\$8,180	\$0	\$8,180	
8. Review of Subconsultant RFI/RFC responses	2	24										26	\$3,260	\$0	\$3,260	
9. Change Order Evaluation (6 evaluations)	4	8	8	32	4	4						60	\$6,580	\$100	\$6,680	
10. Supplemental CO Drawings		4		12			40					56	\$5,700	\$0	\$5,700	
11. Field Witness Tests - Station Site		4	16	16								36	\$3,940	\$250	\$4,190	
12. Pump Factory Witness Testing		40										40	\$5,000	\$2,200	\$7,200	
13. O & M Manual Review		8		64								72	\$7,400	\$0	\$7,400	
14. Acceptance Site Visit & Punch List		6		8	4	4						22	\$2,490	\$50	\$2,540	
15. KEYSTONE - CONSTRUCTION SERVICES												0	\$0	\$19,500	\$19,500	
16. KEYSTONE - ARC FLASH STUDY												0	\$0	\$22,600	\$22,600	
TASK IX SUBTOTAL	12	250	54	438	64	164	40	0	0	0	750	1770				
(\$)	\$1,560	\$31,250	\$6,210	\$43,600	\$6,080	\$22,960	\$4,000	\$0	\$0	\$0	\$56,250	\$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				
(\$)	\$0	\$1,500	\$3,220	\$10,000	\$0	\$0	\$6,400	\$0	\$0	\$0	\$0	\$21,120	\$21,120	\$7,350	\$28,470	
XI ALLOWANCE																
1. Allowance												0	\$0	\$70,000	\$70,000	
TASK X1 SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0				
(\$)	\$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
	<b>TOTAL</b>	<b>4471</b>	<b>\$ 131.78</b>	<b>\$ 589,188</b>	<b>\$ 19,800</b>	<b>\$ 11,012</b>	<b>\$ 620,000</b>

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
	<b>TOTAL</b>	<b>117</b>	<b>149</b>	<b>508</b>	<b>430</b>	<b>0</b>	<b>1592</b>	<b>702</b>	<b>973</b>	<b>4471</b>





**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					120			4		124	\$ 19,500.00
		Design Memorandum		120		40		40		8		208	\$ 28,800.00
		Design - Water Process - 3D Scanning Effort/Equip. Allowance	40	8				16			\$ 2,500.00	64	\$ 10,540.00
		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 Restraint)		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		12		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 RFTs		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	\$ 618,525.00
			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.

Average Rate (LoE and Schedule Weighted) - Life of Contract >						\$ 266.27	\$ 181.28	\$ 115.05	\$ 181.48	\$ 112.50	\$ 252.76	\$ 95.93	\$ 245.41	\$ 90.44	\$ 220.12	\$ 136.86	\$ 291.93	\$ 230.18	\$ 142.82	\$ 194.30	\$ 126.65
Task	Description	Hours	Labor Costs	Expenses	Total Costs	Project Manager	Project Engineer	Jr. Project Engineer	Sr. Hydraulic Modeler	Hydraulic Modeler	Sr. Structural Engineer	Structural Engineer	Sr. Electrical Engineer	Electrical Engineer	Sr. Automation/I&C Engr.	H&V Engineer	Subject Matter Expert - QC	Sr. Cost Estimator	Condition Assessment Staff	Corrosion Specialist	Resident Engineering Staff
1	Design/Permitting Services	2,336	\$ 355,721	\$ 2,020	\$ 357,741	141	456	536	80	144	55	55	58	455	150	50	36	48	62	10	
2	Bid Services	62	\$ 10,123	\$ 252	\$ 10,375	6	16	24					6	6	2	2					
3	Construction Phase Engineering Services	1,310	\$ 218,183	\$ 1,500	\$ 219,683	220	116	20			4		37	59	96	8					750
3A	Allowance			\$ 70,000	\$ 70,000																
4	Not In Contract																				
5	Smart Lighting	173	\$ 16,775	\$ -	\$ 16,775								8	165							
TOTALS		3,881	\$ 600,801	\$ 73,772	\$ 674,573	367	588	580	80	144	59	55	109	685	248	60	36	48	62	10	750

### 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.