TIFA

AUGUST 20, 2026

AGENDA

TIFA LLC MEETING AGENDA
August 20, 2026
11:00 a.m.
MEETING LOCATION
CITY OF TITUSVILLE
CITY HALL, COUNCIL CHAMBER, SECOND FLOOR
555 S. WASHINGTON AVENUE – TITUSVILLE, FLORIDA
Call in Number:
(US) 1-877-304-9269 (PIN: 480560)

Roll Call

Public Comment

Action Items

I. Approval of the Minutes of the TIFA LLC Meeting July 16, 2026 (Presenter: Jeremy Lebrun)

II. Approve Update to the Authorized Signers for Northern Trust Bank Accounts

Financial Items and Reports

III. Ratification of Expenses Paid from Operating Account and Request for Reimbursement (Presenter: Jeremy Lebrun)

IV. Presentation of Financial Statements

V. Consideration of Capital Distribution Notice

VI. Update of Northwestern Charge Account (Presenter: Jim Ball)

Staff Reports / Informational Items

Other Business

VII. Consideration of Wellfield Rehabilitation Agreement

Next Scheduled Meeting

Open Items

Adjournment

Any person who decides to appeal any decision of the TIFA Members with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

TIFA desires to accommodate persons with disabilities. Accordingly, any physically handicapped person, pursuant to Chapter 286.26 Florida Statutes, should, at least 48 hours prior to the meeting, submit a written request to the chairperson that the physically handicapped person desires to attend the meeting.

FIRST ORDER OF BUSINESS

Date: August 20, 2026

To: TIFA LLC Management Committee

From: Sarah Sweeting, GMS, LLC

Subject: Approval of Minutes – August 20, 2026 TIFA LLC Meeting

Summary Explanation & Background: The draft minutes of the July 16, 2026 TIFA LLC meeting were previously circulated for review. The minutes of the TIFA LLC meeting are presented for review and approval. Since the draft minutes were circulated, no comments have been received.

Source of Funds: This action requires no funds.

Minutes of TIFA LLC Meeting
July 16, 2026
11:01 a.m.
City Hall Council Chamber, Second Floor
555 S. Washington Avenue
Titusville, Florida

Persons in Attendance

Robbie E. Lee, Jr., Miami Corp. Management, LLC, TIFA Management Committee Member
Jim Ball, City of Titusville, TIFA Management Committee Member
Chad Clark, City of Titusville, Water Production
Ashley Smith, City of Titusville, Assistant Public Works Director
Yuan Zhou, Miami Corporation (by telephone)
Helen Hutchens, Farmton Water Resources (by telephone)
Jeremy LeBrun, GMS LLC

Jeremy LeBrun conducted the meeting.

Roll Call

Public Comment

Action Items

I. Approval of the Minutes of the TIFA LLC Meeting of May 21, 2026 (Presenter: Jeremy LeBrun)

Member Ball moved to approve the May 21, 2026 meeting minutes as presented. Member Lee concurred and the motion passed.

Financial Items and Reports

II. Ratification of Expenses Paid from Operating Account and Request for Reimbursement (Presenter: Jeremy LeBrun)

Member Lee moved to ratify the expenses paid from the operating account and request for reimbursement in the amount of $23,312.35. Member Ball concurred and the motion passed.

Staff Reports/Informational Items

III. Resiliency Project Update

Mr. Clark: They began work on WR-1 transfer switch yesterday and they are back again this morning to complete the first one. I previously spoke with Corey from Zombas and he is potentially going to do two next week or he may just be able to do one.

IV Discussion of Letter Modification for Consumptive Use Permit (Gene DeMayo/Ashleigh Smith)

Ms. Smith: The city modified our Area 2 and 3 CUP and we removed references basically from Area 4. St. Johns has the same thing on the Area 4 CUP that references to our Area 2 and 3 CUPS should be removed, as each had modifications it makes them where they are not correct. That removes all those inconsistencies. St. Johns did have one additional language add specifically to the Area 4 CUP and it is the well ID tags. It is something you already do so I think it was they just like to see that on all of their CUPS, so they just added that language.

Member Lee moved to approve the letter modification for consumptive use permit. Member Ball concurred and the motion passed.

V. Discussion of Semi-Annual Geotechnical Pattern Analysis Performance by the Colinas Group, Inc.

Ms. Hutchens: We wanted to bring discussion of this into the manager's meeting on a semi-annual basis. We have a water quality assessment done by our hydrogeological consultant, Colinas Group, and we wanted to bring into the record that the water quality associated with that analysis is continuing to show stable water quality within the wellfield and no adverse impacts to the water quality in the area.

Other Business

Member Lee: Chad, will your review well 411?

Mr. Clark: We worked with Jim to slowly reduce flow and started the drawdown and yesterday we made a decision to shut it down, we weren't comfortable running it any lower than it was. He has come up with an alternative schedule so we can run the wells and still produce the same volume of water.

Ms. Hutchens: I'm comfortable that we have budget available to do at least one well and we are hoping to be able to get the vendor more than that much runway to work with but that well needs the work done now. I will send out communication to get that ball rolling.

Public Comment

Next Scheduled Meeting

The next meeting is August 20, ,2026.

Open Items

Adjournment

Member Lee moved to adjourn the meeting at 11:13 a.m. Member Ball concurred and the meeting adjourned.

SECOND ORDER OF BUSINESS

Resolution to Update Authorized Signers on Northern Trust Bank Accounts

Meeting Date: August 20, 2026

At a regular meeting of TIFA LLC duly called and held on August 20, 2026, the following resolutions were presented, considered, and approved regarding certain bank accounts maintained by TIFA LLC at Northern Trust.

WHEREAS, TIFA LLC maintains bank accounts with Northern Trust, including the accounts identified as ending in 8866 and 8877; and

WHEREAS, TIFA LLC desires to update the authorized signers for each account as set forth below.

NOW, THEREFORE, BE IT RESOLVED, that the authorized signers for the Northern Trust account ending in 8866 shall be updated to include the following individuals:

1. Robert E. Lee, Jr. - Manager
2. James E. Ball - Manager
3. Glenn D. Storch - Alternate Manager
4. Kevin Cook - Alternate Manager

FURTHER RESOLVED, that the authorized signers for the Northern Trust account ending in 8877 shall be updated to include the following individuals:

1. Robert E. Lee, Jr. - Manager
2. James E. Ball - Manager
3. Glenn D. Storch - Alternate Manager
4. Kevin Cook - Alternate Manager
5. James Oliver – Agent
6. Jeremy LeBrun - Agent

FURTHER RESOLVED, that any prior authorized signers for the above-referenced accounts who are not listed for the applicable account above are hereby removed from authority to sign, transact, or otherwise act with respect to such account, unless otherwise authorized in writing by TIFA LLC.

FURTHER RESOLVED, that Northern Trust is hereby authorized and directed to rely upon this resolution and to update its records accordingly, including any signature cards, account documentation, online banking access, and related account authority records as necessary to reflect the authorized signers identified above.

FURTHER RESOLVED, that any officer, manager, member, or other authorized representative of TIFA LLC is authorized to execute and deliver any documents, forms,

certificates, or other instruments and to take all actions necessary or appropriate to carry out the intent of these resolutions.

These resolutions shall remain in full force and effect until amended, revoked, or superseded by subsequent written action of TIFA LLC.

IN WITNESS WHEREOF, the undersigned certifies that the foregoing resolutions were duly adopted and approved at a regular meeting of TIFA LLC held on August 20, 2026.

TIFA LLC

By: _____
Robert E. Lee, Jr.
Manager

By: _____
James E. Ball
Manager

THIRD ORDER OF BUSINESS

TIFA LLC
INVOICE APPROVAL BY MANAGERS

WHEREAS, the undersigned are the duly appointed and acting Managers of TIFA LLC, which operates pursuant to that certain Limited Liability Company Operating Agreement of TIFA LLC dated May 24, 2010 ("Operating Agreement"); and,

WHEREAS, at a duly called and noticed public meeting of the Managers as indicated below, the undersigned approved the contract and/or authorized the expenditure as indicated below, and further authorized the managers to execute the Invoice Approval by Managers form reflecting such authorized expenditures in order to process payments.

Previous Authorizations

TIFA Meeting Date	Approved	Total Contract or Expenditure Authorized
08/20/2026	Imprest Account Reimbursement from Depository Account	See Attached

NOW, THEREFORE, the Managers of TIFA LLC, based upon the previous TIFA authorizations, approve the following payments:

Invoice Description	Total Amount	Pursuant to Previous TIFA Authorization Date	Invoice Payment
Transfer to imprest account at Northern Trust ending *8866	$41,117.75	7/16/2026	To be paid by TIFA upon this approval

Except as otherwise set forth herein, defined terms shall have the meaning set forth in the Operating Agreement. This Action may be executed in several counterparts, and all counterparts so executed shall constitute one Approval binding on all parties.

IN WITNESS WHEREOF, the undersigned represent and warrant that each is the duly authorized and appointed agent of TIFA LLC.

_____
Robert E. Lee, Manager

Date: _____, 2025

_____
Jim Ball, Manager

Date: _____, 2025

TIFA LLC
Check Detail
July 7 through August 12, 2026

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Bill Pmt -Check	**ACH0623604**	**07/15/2026**	**Florida Power & Light**	**103.00 · Cash- Nort...**		**-8,076.16**
Bill	July26	07/13/2026		511.00 · Utilities	-8,076.16	8,078.16
TOTAL					-8,076.16	8,078.16
Bill Pmt -Check	**ACH0623604**	**07/15/2026**	**Florida Power & Light**	**103.00 · Cash- Nort...**		**-2.00**
Bill	July26	07/13/2026		511.00 · Utilities	-2.00	8,078.16
TOTAL					-2.00	8,078.16
Bill Pmt -Check	**1468**	**07/20/2026**	**The City of Titusville**	**103.00 · Cash- Nort...**		**-9,158.33**
Bill	COT06302026	06/30/2026		501.00 · O&M Oper...	-9,158.33	9,158.33
TOTAL					-9,158.33	9,158.33
Bill Pmt -Check	**ACH080626**	**08/06/2026**	**Florida Power & Light**	**103.00 · Cash- Nort...**		**-8,523.06**
Bill	Aug2026	08/07/2026		511.00 · Utilities	-8,523.06	8,523.06
TOTAL					-8,523.06	8,523.06
Bill Pmt -Check	**1469**	**08/07/2026**	**Avanti Company**	**103.00 · Cash- Nort...**		**-4,725.00**
Bill	139827	07/28/2026		501.50 · O&M Parts ...	-4,725.00	4,725.00
TOTAL					-4,725.00	4,725.00
Bill Pmt -Check	**ACH081226**	**08/12/2026**	**Cardmember Service**	**103.00 · Cash- Nort...**		**-10,633.20**
Bill	July 2026	08/12/2026		203.50 · Northen Tr...	-10,633.20	10,633.20
TOTAL					-10,633.20	10,633.20

FOURTH ORDER OF BUSINESS

TIFA LLC
Balance Sheet
As of June 30, 2026

	Jun 30, 26
ASSETS	
Current Assets	
Checking/Savings	
102.00 · Cash-Northern Trust Company	760,784.59
103.00 · Cash- Northern Trust Operating	26,004.96
Total Checking/Savings	786,789.55
Accounts Receivable	
104.00 · Accounts Receivable	102,486.60
Total Accounts Receivable	102,486.60
Other Current Assets	
105.00 · Prepaid Insurance	41,272.56
107 · Deposits	9,712.00
Total Other Current Assets	50,984.56
Total Current Assets	940,260.71
Other Assets	
110.00 · Consumptive Use Permit	1,981,386.49
110.50 · CUP Accumulated Amortization	-1,366,331.34
115.00 · FPL Fee	871,451.54
115.50 · FPL Fee Accumulated Amort.	-358,269.90
120.00 · Easements	333,883.45
125.00 · Mitigation Credit	139,200.00
130.00 · Monitoring Wells	488,188.61
130.50 · A/D Monitoring Wells	-211,285.22
135.00 · Area IV Wellfield Phase 1	1,814,563.28
135.50 · A/D - Wellfield Phase 1	-824,624.57
140.00 · Area IV Wellfield Phase 2	5,069,052.98
140.50 · A/D - Wellfield Phase 2	-1,798,487.85
145.00 · Area IV Equipment	6,162.34
145.50 · A/D - Area IV Equipment	-6,162.34
150.00 · Wellfield Assets-Inactive	164,932.50
Total Other Assets	6,303,659.97
TOTAL ASSETS	**7,243,920.68**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
203.50 · Northen Trust Credit Card	1,350.13
Total Credit Cards	1,350.13

TIFA LLC
Balance Sheet
As of June 30, 2026

	Jun 30, 26
Total Current Liabilities	1,350.13
Total Liabilities	1,350.13
Equity	
301.00 · Contributed Capital - City	899,905.54
302.00 · Contributed Capital - Farmton	899,905.55
303.00 · Member's Equity	5,188,911.75
Net Income	253,847.71
Total Equity	7,242,570.55
TOTAL LIABILITIES & EQUITY	**7,243,920.68**

TIFA LLC
Profit & Loss Budget vs. Actual
January through June 2026

	Jan - Jun 26	Budget	$ Over Budget	% of Budget
Income				
401.00 · Water Sales	660,652.20	677,994.00	-17,341.80	97.4%
402.00 · Interest / Dividends	18.00	15.00	3.00	120.0%
Total Income	660,670.20	678,009.00	-17,338.80	97.4%
Gross Profit	660,670.20	678,009.00	-17,338.80	97.4%
Expense				
501.00 · O&M Operating Agreement	45,791.65	58,700.02	-12,908.37	78.0%
501.50 · O&M Parts & Labor	21,021.63	84,650.02	-63,628.39	24.8%
502.01 · Consulting	0.00	500.02	-500.02	0.0%
502.02 · Accounting	19,425.50	9,250.04	10,175.46	210.0%
502.03 · Legal	0.00	2,499.98	-2,499.98	0.0%
502.04 · Hydrogeological Services	2,400.00	3,750.00	-1,350.00	64.0%
503.00 · Managing Agent Fees	13,000.02	12,999.98	0.04	100.0%
504.00 · Insurance (P&C / Liability)	28,163.63	31,690.50	-3,526.87	88.9%
505.00 · Miscellaneous Expense	59.45	250.04	-190.59	23.8%
506.00 · Depreciation Wellfield	122,863.38	122,863.50	-0.12	100.0%
506.10 · Depreciation Equipment	0.00	0.00	0.00	0.0%
507.00 · CUP Amortization	49,534.68	49,534.50	0.18	100.0%
507.10 · FPL Amortization	14,524.20	14,523.98	0.22	100.0%
508.00 · Wetland Monitoring Expense	5,000.00	3,000.00	2,000.00	166.7%
509.00 · Wellfield Repair Expense	35,303.58			
511.00 · Utilities	49,112.96	47,250.00	1,862.96	103.9%
550.02 · Use Tax	621.81			
550.03 · Tangible Personal Property	0.00	3,500.02	-3,500.02	0.0%
Total Expense	406,822.49	444,962.60	-38,140.11	91.4%
Net Income	**253,847.71**	**233,046.40**	**20,801.31**	**108.9%**

FIFTH ORDER OF BUSINESS

TIFA LLC
2836 GARDEN STREET
TITUSVILLE, FLORIDA 32796

July 20, 2026

Mr. Kevin Cook
Public Works Director
City of Titusville
2836 Garden Street
Titusville, Florida 32796

Mr. David Fuechtman
Vice President & Secretary
Farmton Water Resources, LLC
410 N. Michigan Avenue Suite 590
Chicago, Illinois 60611

CAPITAL DISTRIBUTION NOTICE

Pursuant to the TIFA LLC Operating Agreement Section 4.1 Distribution of Distributable Cash, a cash distribution from TIFA LLC is requested today in the amount of $260,000.00 ($130,000.00 to the City of Titusville and $130,000.00 to Farmton Water Resources, LLC). Payment is to be made from the TIFA LLC Northern Trust main checking account within 30 days of receipt of this capital distribution notice.

Sincerely,

TIFA LLC

Jim Ball
Manager

Robert E Lee
Manager

TIFA LLC
Member Distributions

	6/30/2026
Cash Balance	$ 786,789.55
Expected Cash Needs	
Preventative Maintenance Electrical	(25,000.00)
Maintenance Cash Balance	(500,000.00)
Distributable Cash	$ 261,789.55
Recommended Distribution	$ 260,000.00
To City of Titusville	$ 130,000.00
To Farmton Water Resources LLC	$ 130,000.00

2025 Distributions

	FWR	City	Total
Budgeted	$ 415,000	$ 415,000	$ 830,000
3/31/2025	130,000	130,000	260,000
6/30/2025	107,500	107,500	215,000
9/30/2025	80,000	80,000	160,000
12/31/2025	150,000	150,000	300,000
Total	$ 467,500	$ 467,500	$ 935,000

2024 Distributions

	FWR	City	Total
Budgeted	$ 420,000	$ 420,000	$ 840,000
4/30/2024	210,000	210,000	420,000
6/30/2024	55,000	55,000	110,000
10/31/2024	150,000	150,000	300,000
Total	$ 415,000	$ 415,000	$ 830,000

2023 Distributions

	FWR	City	Total
Budgeted	$ 420,000	$ 420,000	$ 840,000
1/31/2023	150,000	150,000	300,000
5/31/2023	135,000	135,000	270,000
9/30/2023	160,000	160,000	320,000
Total	$ 445,000	$ 445,000	$ 890,000

SEVENTH ORDER OF BUSINESS

From: **Jim Boyd** jboyd@boydenvironmental.com
Subject: Re: TIFA - August 20, 2026 Agenda Package
Date: August 17, 2026 at 5:00 PM
To: Sarah Sweeting ssweeting@gmsnf.com
Cc: dfuechtman@miami-corp.com, Helen Hutchens hhutchens@miami-corp.com, Gene DeMayo Gene.demayo@titusville.com, Jeremy LeBrun jlebrun@gmscfl.com, Jimball921@gmail.com, Chad.Clark@titusville.com, Chris Boyd cboyd@boydenvironmental.com

Hi Sarah

This afternoon I received feedback from the Contractor (Atlantic Water Well Services, "AWWS") that affects the Contract Price for the TIFA Area IV Wellfield Rehabilitation project. As discussed in previous correspondence, the Pre- and Post-Rehabilitation Hydraulic Testing tasks were shifted from AWWS to the Owner. Deleting the corresponding bid amounts resulted in a $145,265.68 cost savings for the Owner. However, AWWS had embedded the cost of the submersible test pump, discharge piping, associated labor and miscellaneous materials into the hydraulic testing tasks. Consequently, AWWS needs to recover these costs elsewhere in the contract. They propose recovering these costs by adding $2,000 to both the Pre- and Post-Video Survey tasks, thus increasing the corresponding unit prices from $10,606.52 to $12,606.52. The net effect is a $4,000 increase for each well, totaling $28,000 for all seven wells. This change increases the overall Contract Price from $499,777.91 to $527,777.91.

I believe the AWWS proposal is fair and recommend acceptance by the TIFA Managers. I have revised the previously provided draft documents to incorporate this change. Corresponding revisions are highlighted in yellow in the following documents:

1. *Agreement*
2. *Appendix E (Schedule of Values)*
3. *Notice to Proceed*

Draft specification Section 02521 (Well Rehabilitation) remains unchanged from the previous version.

Sarah, please update the TIFA Agenda Package to incorporate the attached documents.

Thank you,

Jim Boyd, P.E.
Boyd Environmental Engineering, Inc.
175 West Broadway Street, Suite 101
Oviedo, FL 32765
Phone: 407-542-4919
Fax: 407-542-4920
E-Mail: jboyd@boydenvironmental.com

On Mon, Aug 17, 2026 at 12:26 PM Sarah Sweeting <ssweeting@gmsnf.com> wrote:

> *Good afternoon,*
>
> *Attached is an updated agenda package for Thursday's meeting.*
>
> *Thank you,*

Sarah Sweeting
Governmental Management Services, LLC
475 West Town Place, Suite 114
St. Augustine, Florida 32092
(904) 940-5850 x 402
ssweeting@gmsnf.com

> *On Aug 13, 2026, at 4:37 PM, Sarah Sweeting <ssweeting@gmsnf.com> wrote:*
>
> *Good afternoon,*
>
> *Attached is the agenda package for the upcoming meeting on Thursday, August 20, 2026.*
>
> *A copy will be posted to the website.*
>
> *Thank you,*
>
> *Sarah Sweeting*
> *Governmental Management Services, LLC*
> *475 West Town Place, Suite 114*
> *St. Augustine, Florida 32092*
> *(904) 940-5850 x 402*
> *(904) 940-5899 Fax*
> *ssweeting@gmsnf.com*
>
> *<08.20.26 Agenda Package.pdf>*

Appendix E_Schedule of Values_Revised.pdf

Section 00500 - Agreement (Rev 8-1...

Section 02521 - Well Rehabilitation (Rev 8...

Draft Date August 17, 2026

Mr. Carlos Fajardo
Atlantic Water Well Services LLC
304 South 16th Street

Fernandina Beach, FL 32034

Re: TIFA Area IV Wellfield Rehabilitation
Notice to Proceed Dated August 17, 2026

Dear Mr. Fajardo:

On behalf of TIFA LLC ("Owner"), please accept this letter as your formal Notice to Proceed for the above referenced project. The Contract Price for the project is $527,777.91.

The Contract Time for the project shall conform to the following procedures and timeframes:

1. The Owner shall notify Atlantic Water Well Services LLC ("Contractor") when a specific well is available for rehabilitation (hereafter referred to as "Well Availability Notification".) The Contractor shall mobilize to the identified well location and begin Work within thirty (30) days of the Well Availability Notification date.
2. The Contractor shall complete the rehabilitation work for an individual well in conformance with the timeframes described in specification Section 02521, Paragraph 1.02.

Mr. Fajardo, we look forward to working with Atlantic Water Well Services LLC on this project.

Sincerely,

Boyd Environmental Engineering, Inc.

APPENDIX E

OWNER and CONTRACTOR agree that the Schedule of Values presented in Appendix E replaces the Bid Schedule presented in Section 00300 “Bid Form” and establishes the Contract Price. The Schedule of Values makes the following correction and modifications to the Bid Schedule:

1. Correction: The Schedule of Values revises the Item 1 Mobilization/Demobilization unit prices for Well Nos. 408, 409, 411, WR-4, WR-6, and WR-7 to correct typographical errors that resulted in the sum of individual bid item amounts exceeding the CONTRACTOR’s Total Bid Amount.
2. Modification: The Schedule of Values modifies the Bid Schedule for Well Nos. 407, 408, 409, 411, WR-4, WR-6, and WR-7 by deleting Pre-Rehabilitation Hydraulic Testing from the Work to be completed by the CONTRACTOR. Schedule of Values items are herein renumbered to reflect this deletion. Pre-Rehabilitation Hydraulic Testing shall be performed by the OWNER prior to turning over each well to the CONTRACTOR for the Pre-Rehabilitation Video Survey. The unit price for the Pre-Rehabilitation Video Survey is also adjusted to reflect this scope revision.
3. Modification: The Schedule of Values modifies the Bid Schedules for Well Nos. 407, 408, 409, 411, WR-4, WR-6, and WR-7 by deleting Post-Rehabilitation Hydraulic Testing from the Work to be completed by the CONTRACTOR. Schedule of Values items are herein renumbered to reflect this deletion. Post-Rehabilitation Hydraulic Testing shall be performed by the OWNER after the CONTRACTOR returns each well to the OWNER following the Post-Rehabilitation Video Survey. The unit price for the Post-Rehabilitation Video Survey is also adjusted to reflect this scope revision.

SCHEDULE OF VALUES

TIFA AREA IV WELLFIELD REHABILITATION

Production Well No. 407					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 11,628.92	$ 11,628.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. 407 **$ 74,615.13**

SCHEDULE OF VALUES (CONTINUED)

TIFA AREA IV WELLFIELD REHABILITATION

Production Well No. 408					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,780.92	$ 12,780.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. 408 **$ 75,767.13**

Production Well No. 409					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,780.92	$ 12,780.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. 409 **$ 75,767.13**

SCHEDULE OF VALUES (CONTINUED)

TIFA AREA IV WELLFIELD REHABILITATION

Production Well No. 411					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,204.92	$ 12,204.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. 411 **$ 75,191.13**

Production Well No. WR-4					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,492.92	$ 12,492.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. WR-4 **$ 75,479.13**

SCHEDULE OF VALUES (CONTINUED)

TIFA AREA IV WELLFIELD REHABILITATION

Production Well No. WR-6					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,492.92	$ 12,492.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. WR-6 **$ 75,479.13**

Production Well No. WR-7					
Item	**Description**	**Quantity**	**Unit**	**Unit Price ($)**	**Amount ($)**
1	Mobilization/Demobilization	1	Lump Sum	$ 6,067.59	$ 6,067.59
2	Conformance with General Requirements	1	Lump Sum	$ 1,440.00	$ 1,440.00
3	Pre-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
4	Brushing with Dilute Acid Solution	1	Lump Sum	$ 6,840.92	$ 6,840.92
5	Well Acidification via 20° Baume Hydrochloric Acid	1	Lump Sum	$ 12,492.92	$ 12,492.92
6	Well Development	24	HR	$ 727.74	$ 17,465.69
7	Post-Rehabilitation Video Survey	1	Lump Sum	$ 10,606.52	$ 12,606.52
8	Water Quality Testing	1	Lump Sum	$ 1,246.15	$ 1,246.15
9	Well Site Cleanup	1	Lump Sum	$ 4,008.62	$ 4,008.62
10	Re-install, Repair, and/or Replace Perimeter Fencing and Gates (if Necessary)	1	Lump Sum	$ 100.00	$ 100.00
11	Re-sod (if Necessary)	1	Lump Sum	$ 604.20	$ 604.20

TOTAL FOR PRODUCTION WELL No. WR-7 **$ 75,479.13**

TOTAL CONTRACT PRICE **$ 527,777.91**

ADDITIONAL COST ITEMS (UNIT RATES)

Item	Description	Unit	Unit Price ($)
A-1	Standby Time	HR	$ 500.00

Draft Date August 17, 2026

Mr. Carlos Fajardo
Atlantic Water Well Services LLC
304 South 16th Street
Fernandina Beach, FL 32034

Re: TIFA Area IV Wellfield Rehabilitation
Notice to Proceed Dated August 17, 2026

Dear Mr. Fajardo:

On behalf of TIFA LLC ("Owner"), please accept this letter as your formal Notice to Proceed for the above referenced project. The Contract Price for the project is $527,777.91.

The Contract Time for the project shall conform to the following procedures and timeframes:

1. The Owner shall notify Atlantic Water Well Services LLC ("Contractor") when a specific well is available for rehabilitation (hereafter referred to as "Well Availability Notification".) The Contractor shall mobilize to the identified well location and begin Work within thirty (30) days of the Well Availability Notification date.
2. The Contractor shall complete the rehabilitation work for an individual well in conformance with the timeframes described in specification Section 02521, Paragraph 1.02.

Mr. Fajardo, we look forward to working with Atlantic Water Well Services LLC on this project.

Sincerely,

Boyd Environmental Engineering, Inc.

James C. Boyd, P.E.
President

SECTION 00500

AGREEMENT BETWEEN
OWNER AND CONTRACTOR

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES. CONSULTING WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS SIGNING, COMPLETION OR MODIFICATION.

This Agreement is dated as of the _____ day of _____ in the year _____ by and between:

TIFA LLC
2836 Garden Street
Titusville, FL 32796

(hereinafter called OWNER) and

Atlantic Water Well Services LLC
304 South 16th Street
Fernandina Beach, FL 32034

(hereinafter called CONTRACTOR)

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Rehabilitate seven (7) production wells located within the TIFA Area IV Wellfield in Brevard County, Florida.

The Project title is as follows:

TIFA Area IV Wellfield Rehabilitation

ARTICLE 2. ENGINEER

The Project has been designed by Boyd Environmental Engineering, Inc., 175 West Broadway Street, Suite 101, Oviedo, Florida, 32765 (hereinafter called ENGINEER) who will assume all duties and responsibilities and will have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

3.1 The Work shall be performed in conformance with the procedures and timeframes described in the Notice to Proceed and specification Section 02521, Paragraph 1.02.

3.2 The Contract Time is also subject to the termination provision described in Article 15.1.

ARTICLE 4. CONTRACT PRICE

4.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents in current funds as follows: for all items listed on the Schedule of Values (Appendix E), payment for each item shall be the unit price bid for each item multiplied by the measured quantity. The Contract Price for the Project is $527,777.91 (Five Hundred Twenty Seven Thousand, Seven Hundred Seventy-Seven Dollars and 91cents.)

4.2 Payment to the CONTRACTOR will be made only for the actual quantities of Work completed as required by the Contract Documents, and it is understood that the quantities may be increased or decreased without invalidating any of the unit or lump sum prices bid.

4.3 In consideration of these premises and the additional sum of $10.00 paid by OWNER, receipt of which is acknowledged by CONTRACTOR, CONTRACTOR agrees to and does hereby defend, indemnify and save the OWNER, ENGINEER and below additional designated entities harmless from and against any and all loss, damage, claims, actions, liability and expense in contract or in tort, whether justified or not, in connection with loss of life, bodily injury and/or property damage occurring on or about or arising out of those portions of the Work under CONTRACTOR'S control, or wherever arising if occasion wholly or in part by any act or omission of, or any defect in workmanship or material furnished by the CONTRACTOR, his subcontractors, sub-subcontractors or any subcontractors or sub-subcontractors of any of them, or by his or their agents, servants, employees or materialmen, whether the same be during the progress of the Work or any time subsequent to the completion of the Work. The aforesaid shall include, but not be limited to, reasonable attorney fees and cost involved in arbitration or legal action both at trial and appeal levels. The OWNER shall have the right to withhold any monies due under this Agreement to the CONTRACTOR until any pending or threatened actions or claims covered by the aforesaid have been settled and suitable evidence to that effect furnished to the OWNER, except that monies due to CONTRACTOR will not be withheld under this provision when the CONTRACTOR produces satisfactory evidence that he has adequate insurance coverage, as established by the OWNER'S attorney. Additional designated entities protected by this provision include Miami Alternatives, LLC; Farmton Water Resources LLC; Farmton 5A, LLC; and City of Titusville.

ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with the following provisions:

5.1 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER, on or about thirty days after ENGINEER’S approval of submitted pay applications. For progress payments, the corresponding pay application period must extend at least thirty (30) days. All progress payments will be on the basis of the progress of the Work measured by the values provided for in the Schedule of Values (Appendix E), further detailed as follows:

5.1.1 OWNER will pay on a percent completed basis (as determined by ENGINEER) for the following two items identified in the Schedule of Values (Appendix E) for each individual production well:

a. Mobilization/Demobilization

b. Conformance with General Requirements

5.1.2 For all other items (3 through 11) identified in the Schedule of Values (Appendix E) for each individual production well, OWNER will only pay for individual items which have been fully completed by CONTRACTOR, as determined by ENGINEER.

5.1.3 OWNER will not pay for Stored Materials.

5.1.4 A Waiver and Release of Lien Upon Progress Payment, as specified in Exhibit IV of Appendix C, must be submitted by CONTRACTOR, subcontractors and suppliers with each progress payment application (except for the first pay application).

5.1.5 Prior to final completion, progress payments will be in an amount equal to 95 percent of the Work completed.

5.2 Final Payment. Upon final completion and acceptance of the completed Work by the OWNER and ENGINEER, OWNER shall pay the remainder of the Contract Price on or about thirty days after ENGINEER'S approval of the submitted final pay application. A Waiver and Release of Lien Upon Final Payment, as specified in Exhibit V of Appendix C, must be submitted by CONTRACTOR, subcontractors and suppliers with the final pay application.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

6.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and Federal, State and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

6.2 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Contract between OWNER and CONTRACTOR, consist of the following:

7.1 Section 00020 (Invitation to Bid)

7.2 Section 00300 (Bid Form)

7.3 Section 00500 (Agreement Between Owner and Contractor)

7.4 Section 02485 (Grassing)

7.5 Section 02521 (Well Rehabilitation)

7.6 Section 02820 (Fence and Gates)

7.7 Figures 1 through 14 (Appendix A)

7.8 Contractor Insurance Requirements (Exhibit I, Appendix B)

7.9 Release Agreements (Exhibits IIA, IIB and IIC, Appendix B)

7.10 Application for Payment (Exhibit III, Appendix C)

7.11 Waiver and Release of Lien Upon Progress Payment (Exhibit IV, Appendix C)

7.12 Waiver and Release of Lien Upon Final Payment (Exhibit V, Appendix C)

7.13 Addendum No. 1 Dated April 17, 2026 (Appendix D)

7.14 Schedule of Values (Appendix E)

7.15 Notice of Award

7.16 Notice to Proceed

There are no Contract Documents other than those listed above in this Article 7.

ARTICLE 8. MISCELLANEOUS

8.1 No assignment by a party hereto of any rights hereunder or interests in the Contract Documents will be binding to another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

8.2 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns, and legal representatives to the other party hereto, his partners, successors, assigns, and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 9. LIENS AND CLAIMS

9.1 The CONTRACTOR shall promptly and properly pay for all labor employed, materials purchased and equipment hired by him in connection with the Work; shall keep the OWNER'S property free from any materialmen or mechanics liens and claims or notices in respect thereto arising by reason of the CONTRACTOR'S Work; shall hold all payments received hereunder as trust funds to be first applied to the payment of any such liens or claims; and shall discharge the same within three (3) business days after any such lien or notice is filed. In the event that the CONTRACTOR does not pay or satisfy such claim or lien within three (3) business days after the filing of notice thereof, the OWNER, in addition to any and all other remedies, may forthwith terminate this Agreement, effective immediately.

9.2 In the event that the CONTRACTOR fails to pay and discharge when due, any bills or obligations of any kind or nature whatsoever incurred by the said CONTRACTOR by reason of or in the fulfillment of this Agreement, whether or not a lien or notice of lien has been or may be filed with respect thereto, which bills or obligations in the opinion of the OWNER are proper, the OWNER at his option but without being obligated to do so, may pay all or any part of such bills or obligations and deduct the amount of such payments from any sums due the CONTRACTOR.

ARTICLE 10. CUSTOM AND USAGE

10.1 It is hereby agreed, any law, custom or usage to the contrary notwithstanding, that the OWNER shall have the right at all times to enforce the conditions and agreements herein contained in strict accordance with the terms hereof, notwithstanding any conduct or custom on the part of the OWNER in refraining from so doing; and further, that the failure of the OWNER at any time or times to strictly enforce its rights hereunder shall not be construed as having created a custom in any way or manner contrary to the specific conditions and agreements hereof, or as having in any way modified or waived the same.

ARTICLE 11. SUBCONTRACTORS AND EMPLOYEES

11.1 CONTRACTOR shall neither assign this Agreement nor employ a subcontractor for the execution of any part hereof, without the express written prior approval of the OWNER. The OWNER reserves the right to reject any subcontractors or sub-subcontractors, materialmen or laborers from executing any part of the Work to be performed hereunder. The CONTRACTOR agrees that he will be responsible for the acts and omissions of his subcontractors, and their employees to the same extent that he is responsible for acts and omissions of persons directly employed by him. The CONTRACTOR agrees to bind every subcontractor and sub-subcontractor, and every subcontractor and sub-subcontractor agrees to be bound by the terms of this Agreement so far as same is applicable to his Work. Nothing contained herein, or in any statute or governmental regulation, shall obligate the OWNER to pay or see to the payment of any monies for any subcontractor, sub-subcontractor or materialman, or to pay or assure the withholding or payment of any taxes, or other payroll deductions required by law to be withheld from wages of employees of the CONTRACTOR or any subcontractors or sub-subcontractors. The CONTRACTOR shall, at all times, enforce strict discipline and good order among his employees and shall not employ on the Work any person unfit for or not skilled in the Work assigned to him. If any employee or subcontractor of CONTRACTOR causes a breach of the peace or disturbance in and around the Project, or is otherwise unfit for or unskilled in the Work assigned to him, OWNER may require that CONTRACTOR replace said employee or subcontractor within twenty-four (24) hours of a written notice from OWNER to CONTRACTOR. The CONTRACTOR shall designate an individual to be its authorized on-site supervisor, which designee must be approved by the OWNER, which approval will not be unreasonably withheld. However, the foregoing shall not be construed or interpreted that the OWNER in any way interferes with the CONTRACTOR'S right to hire and fire his employees, assign duties to them, fix their working hours, wages or terms and conditions of employment, which right shall be absolute.

11.2 A CONTRACTOR shall not sublet, sell, transfer, assign or otherwise dispose of this Contract or any portion thereof or of the Work provided for therein or of his right, title or interest therein, to any person, firm or corporation without the written consent of the OWNER. The CONTRACTOR agrees to bind specifically every subcontractor to the applicable terms and conditions of these Contract Documents for the benefit of the OWNER.

ARTICLE 12. CONTRACTOR'S WARRANTY

12.1 Any replaced or repaired infrastructure shall be guaranteed against defective workmanship and materials for a period of one (1) year from the date of Final Completion. The OWNER will give notice of observed defects with reasonable promptness during said warranty period. The making of the final payment by the OWNER to the CONTRACTOR shall not relieve the CONTRACTOR of any warranty

responsibilities.

ARTICLE 13. CONTRACTOR'S INSURANCE

13.1 The CONTRACTOR shall not commence Work under this Agreement until he has obtained and provided insurance, of the character and in the amounts specified in Exhibit I of Appendix B, that will protect the OWNER, ENGINEER and all additional named insureds and the CONTRACTOR against all liabilities, damages and accidents. Additionally, all Subcontractors shall meet these insurance requirements. The insurance obtained by the CONTRACTOR and Subcontractors is subject to the approval of the OWNER. The CONTRACTOR shall not allow any Subcontractor to commence Work on his subcontract until all insurance required of the Subcontractor has been so obtained, provided, and approved. Neither the approval of the OWNER, nor a failure to disapprove insurance furnished by the CONTRACTOR or any Subcontractor, shall release the CONTRACTOR or Subcontractor of full responsibility for liability, damages and accidents as set forth herein.

13.2 CONTRACTOR shall submit all required Certificates of Insurance (COI's) as specified in Exhibit I of Appendix B. The OWNER has the right to grant exceptions to the insurance requirements on a case-by-case basis but is not obligated to do so. The provision of compliant COI's by the CONTRACTOR and all Subcontractors is a necessary precursor to the issuance of a Notice to Proceed for the Work.

13.3 In addition to compliance with the insurance requirements, the CONTRACTOR and each Subcontractor shall furnish OWNER fully executed Release Agreements in order to be granted access to the Project site (see Exhibits IIA, IIB and IIC in Appendix B).

ARTICLE 14. NOTICES

14.1 Notices required or permitted to be given under this Agreement shall be in writing, may be delivered personally or by certified mail, email, or courier service, and shall be given when received by the addressee. Notices shall be addressed as follows:

TIFA LLC
2836 Garden Street
Titusville, FL 32796
321-567-3855
Attention: Gene DeMayo
gene.demayo@titusville.com

Atlantic Water Well Services LLC
304 South 16th Street
Fernandina Beach, FL 32034
239-770-8182
Attention: Carlos Fajardo
cfajardo@atlanticwells.com

ARTICLE 15. TERMINATION

15.1 If the Work has not been fully completed and ready for final payment within 360 days after the Notice to Proceed date, CONTRACTOR shall have the option of identifying and requesting revised unit prices for the remainder of the Work. In that event, if both parties are unable to negotiate revised unit prices to their mutual satisfaction, this Agreement shall terminate.

15.2 Anything in this Agreement to the contrary notwithstanding, OWNER shall, in its sole discretion and without cause, have the right to suspend or terminate this Agreement upon thirty (30) days prior written notice to CONTRACTOR. In the event of termination, OWNER'S sole obligation and liability to CONTRACTOR, if any, shall be to pay CONTRACTOR for services completed by the date of termination.

IN WITNESS WHEREOF, the parties hereto have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement will be effective on _____.

CONTRACTOR	OWNER
Atlantic Water Well Services LLC 304 South 16th Street Fernandina Beach, FL 32034 239-770-8182	TIFA LLC 2836 Garden Street Titusville, FL 32796 321-567-3855
By_____	By_____
_____ (Print Name and Title)	_____ (Print Name and Title)
ATTEST_____ (Secretary)	ATTEST_____

Affix Corporate Seal

END OF SECTION

SECTION 02521

WELL REHABILITATION

1.00 GENERAL

1.01 SCOPE

A. Work Included:

1. The Work to be performed under this Section includes the furnishing of all labor, materials, equipment, power, and all other activities and incidentals necessary to rehabilitate seven (7) potable water production wells. The wells are located within the TIFA Area IV Wellfield in Brevard County, Florida. The wells will be rehabilitated for TIFA, LLC (OWNER). Appendix A of the Contract Documents provides a Vicinity Map (Figure 1) and a Production Well Location Map (Figure 2).

2. These Specifications are intended to provide a general description of requirements, but are not intended to cover all variations that may occur during well rehabilitation. The Specifications cover the successful completion of the well rehabilitations, whether every detail is mentioned or not. Any part of the Work which is not mentioned in the Specifications, but which is necessary or normally required as a part of such work, or is necessary or normally required to make each well satisfactorily and legally operable, shall be performed by the CONTRACTOR as incidental work without extra cost to the OWNER, as if fully described in the Specifications, and the expense thereof shall be included in the applicable unit prices or lump sum bid for the Work.

B. Well Completion Reports:

1. The following table summarizes casing and open hole information obtained from the well completion reports prepared for each well:

Well	Surface Casing Depth, ft	Final Casing Depth, ft	Open Hole Depth, ft	Final Casing Diameter, in
407	42	115	200	12
408	42	115	220	12
409	40	115	220	12
411	40	115	210	12
WR-4	84	103	200	12
WR-6	83	100	200	12
WR-7	85	100	200	12

C. Sequence of Activities:

1. At each well to be rehabilitated, and following the Pre-Rehabilitation Hydraulic Testing task described in Paragraph 3.02,A, OWNER shall remove and store existing equipment items including the permanent well pump, drop pipe, well seal, flow meter, discharge tee, check valve, spool piece, and pressure transducer in order to provide the CONTRACTOR with access to the well casing. OWNER shall also install a temporary well cap to protect the well casing during the interim period between equipment removal and the commencement of CONTRACTOR'S well rehabilitation activities. CONTRACTOR shall remove the OWNER'S temporary cap and install a temporary cap furnished by the CONTRACTOR at the start of CONTRACTOR'S Work. OWNER'S temporary cap shall be protected by the CONTRACTOR such that the cap does not become dirty and/or damaged. CONTRACTOR shall re-install the OWNER's temporary well cap once the CONTRACTOR is ready for the OWNER to re-install stored equipment items at the conclusion of the Post-Rehabilitation Video Survey task as described in Paragraph 3.02, F.

2. CONTRACTOR shall take pre-rehabilitation site photos prior to commencing Work. CONTRACTOR shall provide well and water quality protection per Paragraph 3.01.

3. Each well shall be rehabilitated as follows:

    a. Pre-Rehabilitation Hydraulic Testing (by OWNER): Perform a Constant Rate Discharge test per Paragraph 3.02,A.

    b. Pre-Rehabilitation Video Survey (by CONTRACTOR): Complete a pre-rehabilitation video survey of the well per Paragraph 3.02,B.

    c. Brushing with Dilute Acid Solution (by CONTRACTOR): Brush well casing using a dilute acid solution per Paragraph 3.02,C.

    d. Well Acidification (by CONTRACTOR): Acidify the well per Paragraph 3.02,D.

    e. Well Development (by CONTRACTOR): Develop each well by pumping per Paragraph 3.02,E.

    f. Post-Rehabilitation Video Survey (by CONTRACTOR): Complete a post-rehabilitation video survey of the well, per Paragraph 3.02,F.

    g. Post-Rehabilitation Hydraulic Testing (by OWNER): Perform a Constant Rate Discharge test per Paragraph 3.02,G.

    h. Water Quality Sampling and Field Testing (by CONTRACTOR'S Lab): Perform water quality sampling and field testing during the final hour of the Constant Rate Discharge test (Post-Rehabilitation) per Paragraph 3.02,H.

    i. Water Quality Lab Testing (by CONTRACTOR'S Lab): Perform water quality lab testing per Paragraph 3.02,I.

4. Following successful completion of an individual well rehabilitation, and subject to scheduling provisions described in Paragraph 1.02, CONTRACTOR shall cleanup the job site per Paragraph 3.03,A; reinstall, repair and/or replace the perimeter fence and gate per Paragraph 3.03,B (if necessary); and re-sod per Paragraph 3.03,C (if necessary). CONTRACTOR shall maintain temporary erosion controls for the full duration between start of work and re-sodding.

5. At the conclusion of water quality sampling and field testing as described in Paragraph 3.02,H, the OWNER shall disinfect the well in compliance with AWWA Standard No. C654-13, Section 4.5.

6. Only one (1) well may be out of service at a time for rehabilitation. Each rehabilitated well must be successfully disinfected and returned to service by the OWNER prior to beginning rehabilitation activities on another well. OWNER shall notify CONTRACTOR when a specific well is available for rehabilitation (hereafter referred to as "Well Availability Notification".)

1.02 SCHEDULE

A. Rehabilitation work for an individual well shall be substantially completed within fourteen (14) calendar days from the time when the CONTRACTOR begins work on that well. Substantial completion for an individual well is defined as completion of water quality sampling and field testing as described in Paragraph 3.02,H.

B. If OWNER requires more than two (2) days to mobilize and perform the Post-Rehabilitation Hydraulic Testing task, the number of days allotted for the CONTRACTOR to achieve substantial completion of a well shall be extended by the additional number of days required by the OWNER.

C. Following completion of water quality sampling and field testing, OWNER shall disinfect the substantially completed well and collect bacteriological samples to confirm that the well can be returned to service. This process may require multiple well disinfection procedures. During this period, CONTRACTOR shall cleanup the job site per Paragraph 3.03,A and reinstall, repair and/or replace the perimeter fence and gate per Paragraph 3.03,B (if necessary).

D. Once the OWNER has returned the well to service, CONTRACTOR shall re-sod the well site per Paragraph 3.03,C (if necessary), whereupon the well rehabilitation process shall be considered to have reached final completion.

E. OWNER shall issue a Well Availability Notification to CONTRACTOR once the OWNER wishes for the next well to be rehabilitated. CONTRACTOR shall mobilize to the identified well location and begin Work within thirty (30) days of the Well Availability Notification date. The OWNER will not pay the CONTRACTOR for any standby time associated with the time period between individual well rehabilitations.

1.03 WELL PERMITTING AUTHORITY

A. The St. Johns River Water Management District ("SJRWMD") is the well permitting authority.

1.04 STANDARDS AND REGULATIONS

A. Well rehabilitation shall be performed by a State of Florida licensed Water Well CONTRACTOR. The CONTRACTOR shall meet all regulatory requirements defined by the SJRWMD. In addition, the latest revisions of standards by the AWWA shall apply as referenced herein. Standards shall include, but are not restricted to, the following:

1. American Water Works Association (AWWA) standards, latest implemented edition:

a. C654, Disinfection of Wells

1.05 QUALIFICATIONS

A. GENERAL - The ENGINEER may make all investigations deemed necessary to determine the ability of the CONTRACTOR to adequately perform the Work, and the CONTRACTOR shall furnish to the ENGINEER all such information and data for this purpose as the ENGINEER may request.

B. CONTRACTOR - The CONTRACTOR responsible for rehabilitating the wells shall be licensed as specified in Chapter 62-531, F.A.C., as a Water Well Contractor employing only competent workmen for the execution of this Work.

C. Rehabilitation - All rehabilitation work shall be performed under the direct supervision of an experienced well driller satisfactory to the ENGINEER. The driller must have prior experience operating the equipment and performing the rehabilitation procedures selected for the project.

1.06 OWNER'S REPRESENTATIVE

A. The OWNER'S REPRESENTATIVE shall be designated by the OWNER during the pre-construction conference. The OWNER'S REPRESENTATIVE shall be primarily responsible for witnessing the CONTRACTOR'S on-site rehabilitation activities.

1.07 PERSONNEL AND EQUIPMENT

A. The CONTRACTOR shall notify the ENGINEER, in writing, with a description of the well rehabilitation rig(s) and the names of key personnel to be used on the project. Any changes shall require at least twenty-four (24) hours notification to the ENGINEER.

B. The CONTRACTOR, in addition to furnishing the services of skilled and experienced

personnel in the type of work to be performed, shall also furnish an adequate number of competent helpers.

C. The CONTRACTOR shall furnish equipment and perform the Work with equipment that is adequate for all phases of well rehabilitation. If, in the opinion of the ENGINEER, the CONTRACTOR'S equipment is not capable of satisfactorily performing the work provided for in these Specifications, the CONTRACTOR shall substitute equipment satisfactory to the ENGINEER.

D. CONTRACTOR shall provide a portable generator sized as required to meet the power needs of CONTRACTOR'S equipment.

1.08 WELL ACCESS AND PROTECTION

A. The OWNER will provide the CONTRACTOR with access to each well site such that it allows the CONTRACTOR to mobilize equipment to the site without the need for clearing. However, the CONTRACTOR shall be aware that well site access on any given day may be hampered by weather conditions. If the CONTRACTOR cannot access the well site on any given day due to weather conditions, as confirmed by the OWNER'S REPRESENTATIVE, the OWNER will grant a corresponding Contract Time extension to the CONTRACTOR. However, the OWNER will not pay the CONTRACTOR for any standby time associated with the CONTRACTOR'S inability to access the well site.

B. The following figures included in Appendix A depict existing site conditions at each production well site, including aerial views, grade elevations, supporting infrastructure and well cross-sections:

1. Figure 3 – Production Well No. 407
2. Figure 4 – Production Well No. 408
3. Figure 5 – Production Well No. 409
4. Figure 6 – Production Well No. 411
5. Figure 7 – Production Well No. WR-4
6. Figure 8 – Production Well No. WR-6
7. Figure 9 – Production Well No. WR-7
8. Figure 10 – Production Wells 407, 408 & 409, Cross-Sections
9. Figure 11 – Production Well 411 Cross-Section
10. Figure 12 – Production Wells WR-4, WR-6 & WR-7, Cross-Sections
11. Figure 13 – Typical Phase 1 Well Piping Plan & Section View
12. Figure 14 – Typical Phase 2 Well Piping Plan & Section View

C. As indicated in Figures 3 through 9, each concrete pad at the well site is secured by a

chain-link perimeter fence and personnel access gate. At CONTRACTOR'S option and expense, CONTRACTOR may remove the perimeter fence and access gate to perform the rehabilitation work. CONTRACTOR shall promptly re-install the perimeter fence and gate once well rehabilitation activities are completed for an individual well, subject to the scheduling provisions described in Paragraph 1.02. CONTRACTOR shall repair or replace any damaged components and restore the fencing to its original condition at no additional cost to the OWNER.

D. The rehabilitation work is being performed in an active wellfield. CONTRACTOR shall position vehicles, equipment, etc. so as not to impede the OWNER'S access to active wells.

E. The CONTRACTOR shall protect all existing infrastructure during performance of the Work. This shall include, but not be limited to, well casings and associated grout seals; concrete well pads; well piping systems; and electrical equipment. CONTRACTOR shall be responsible for repairing or replacing any and all infrastructure damaged by the CONTRACTOR at no additional cost to the OWNER. Repairs and/or replacements shall be made by the CONTRACTOR to the satisfaction of the OWNER.

1.09 STANDBY

A. Standby time shall be payable to the CONTRACTOR only if authorized by the ENGINEER, due to circumstances beyond the CONTRACTOR'S control. The CONTRACTOR shall be compensated at the unit rate provided on the Bid Form. As detailed in subparagraphs 1.02.E and 1.08.A, the CONTRACTOR will not be compensated for standby time associated with well site access or for standby time between well rehabilitations.

1.10 LOCAL CONDITIONS AT THE PROJECT SITE

A. The CONTRACTOR shall satisfy himself regarding all local conditions affecting his work by personal investigations, and neither the information contained in these Specifications or obtained from the OWNER or his agents or employees, shall act to relieve the CONTRACTOR from any responsibility hereunder or from fulfilling any and all of the terms and requirements of the Contract Documents.

1.11 SUBMITTALS

A. Pre-Mobilization Submittals: Prior to commencement of mobilization activities, CONTRACTOR shall submit the following items to the ENGINEER for review and approval. No rehabilitation work shall commence until the below items have been approved by ENGINEER.

1. Subcontractors and References

a. Proposed water quality testing laboratory. The laboratory must meet the OWNER'S insurance requirements for well site access as specified in Exhibit I of the Agreement. Be advised that Pace Analytical Services, LLC,

Ormond Beach, Florida, is currently approved for well site access.

b. Provide company name and at least three references for the proposed video survey SUBCONTRACTOR. If the CONTRACTOR intends to self-perform the video surveys, the furnished references shall be for the CONTRACTOR. The reference list shall include the project date, project location, number of wells surveyed, borehole diameter(s), borehole depth(s), and reference contact information (contact name, affiliation, phone number, and email address).

2. Detailed Equipment Descriptions
   a. Well video survey equipment.
   b. Well brushing equipment.
   c. Well discharge routing system including piping and equipment and their proposed locations.
   d. Well acidification and neutralization equipment.
3. Product Data Sheets
   a. Submersible pump, inclusive of pump curve.
   b. Pump discharge piping.
   c. Flow meter for acid addition.
   d. Flow meter for well development.
   e. Flow meter and RPZ for groundwater connection.
   f. Video logging camera and lighting equipment.
   g. Casing brush data sheet, including materials of construction and dimensions.
   h. Acid injection pump, inclusive of pump curve.
   i. Pressure gauge and diaphragm seal.
   j. PVC pipe and fittings.
   k. CPVC pipe, fittings, and valves.
   l. Solvent cements and primers.
   m. Hydrochloric acid with inhibitor
   n. Alternate well rehabilitation products proposed by CONTRACTOR (if any)
   o. Dense soda ash (for neutralization)
   p. Sodium hypochlorite (for disinfection)
4. Safety Data Sheets (SDSs)
   a. Hydrochloric acid with inhibitor
   b. Dense soda ash (for neutralization)
   c. Sodium hypochlorite (for disinfection)

d. Alternate well rehabilitation products proposed by CONTRACTOR (if any)

5. Procedures

   a. Video logging procedure.

   b. Procedure for brushing with dilute acid solution.

   c. Well acidification and neutralization procedure.

   d. Alternate well rehabilitation procedures proposed by CONTRACTOR (if any)

   e. Well development procedure.

6. Quality Control

   a. Flow meter calibration certificates. The initial flow meter calibration certificates must be valid for at least 180 days from the Notice to Proceed date. Subsequent certificates shall be provided as necessary to document flow meter accuracy.

   b. Pressure gauge calibration certificate. The initial pressure gauge calibration certificate must be valid for at least 180 days from the Notice to Proceed date. Subsequent certificates shall be provided as necessary to document pressure gauge accuracy.

   c. RPZ Inspection Certificate. The initial inspection certificate must be valid for at least 180 days from the Notice to Proceed date. Subsequent certificates shall be provided as necessary to document proper RPZ function.

B. Pre-Rehabilitation Site Photos: The CONTRACTOR shall take and provide photographs of each well site prior to commencing Work. The purpose of these photographs is to document conditions prior to the start of rehabilitation activities. Photographs shall clearly document the condition all existing well infrastructure and adjacent areas.

C. Pre-Rehabilitation video survey recordings shall be provided to the ENGINEER and OWNER'S REPRESENTATIVE within 24-hours of survey completion for each well.

D. Daily Rehabilitation Report: During rehabilitation of each well, a detailed daily report shall be maintained by the CONTRACTOR and submitted to the OWNER'S REPRESENTATIVE. The report shall include the Work activities performed; number of hours on the job; down time due to breakdown; number of brushing passes (as applicable), groundwater meter readings, amount of acid added to well (as applicable), pH of neutralized water (as applicable), the water level in the well at the beginning and end of each shift; and other pertinent data specified in advance by the OWNER'S REPRESENTATIVE.

E. Post-Rehabilitation video survey recordings shall be provided to the ENGINEER and OWNER'S REPRESENTATIVE within 24-hours of survey completion for each well.

F. Record Submittals: Upon completion of each well, the CONTRACTOR shall submit

the following items to the ENGINEER in electronic form:

1. Depth or location of any lost tools;
2. Pressure and pH log;
3. Water quality testing results;
4. Any other pertinent data requested by the ENGINEER or OWNER'S REPRESENTATIVE.

1.12 NOTIFICATION AND COORDINATION

A. No Work shall be performed by the CONTRACTOR without completing the notification and submittal requirements specified below.

1. The CONTRACTOR shall notify the ENGINEER and OWNER'S REPRESENTATIVE three (3) days prior to the commencement of any rehabilitation activities.

2. The CONTRACTOR shall provide approved certificates of insurance as specified in Exhibit I of the Agreement prior to conducting any on-site activity.

1.13 HANDLING OF MATERIALS AND WELL DISCHARGE

A. Water withdrawn from the well following acid addition shall be handled in an environmentally safe manner and shall be neutralized by the CONTRACTOR prior to discharge in conformance with the procedures specified herein. The method of discharge shall not result in soil erosion or turbid water entering any surface water bodies or wetlands. The CONTRACTOR shall be responsible for constructing any necessary discharge baffles, spreading plates and/or filter barriers to meet this requirement.

B. Water discharged from the well during airlifting shall be handled in an environmentally safe manner and shall be directed to a location as specified by the OWNER'S REPRESENTATIVE. The method of discharge shall not result in soil erosion or turbid water entering any surface water bodies or wetlands. The CONTRACTOR shall be responsible for constructing any necessary discharge baffles, spreading plates and/or filter barriers to meet this requirement.

C. Water pumped from the well during dynamic video survey and well development activities shall be handled in an environmentally safe manner and shall be directed to a location as specified by the OWNER'S REPRESENTATIVE. The CONTRACTOR shall furnish, install, maintain, and operate discharge piping for the pump unit of sufficient size and length (up to 1000-ft) capable of conveying pumped water to the location specified by the OWNER'S REPRESENTATIVE. The CONTRACTOR shall be responsible for maintaining the discharge pipe to prevent leaks. The method of discharge shall not result in soil erosion or turbid water entering any surface water bodies or wetlands. The CONTRACTOR shall be responsible for constructing any

necessary discharge baffles, spreading plates and/or filter barriers to meet this requirement.

D. CONTRACTOR shall dispose of unused chemicals (such as hydrochloric acid, dense soda ash, sodium hypochlorite, etc.) offsite in an environmentally safe manner and in accordance with all applicable federal, state, and local regulations and requirements.

1.14 WELL ACCEPTANCE CRITERIA

A. The rehabilitated well shall be developed until, in the opinion of the OWNER'S REPRESENTATIVE, the pumped water is:

1. Completely free of acidified water as demonstrated by field pH measurements per the table below;
2. Consistently at a turbidity of 1.0 NTU or less;
3. Substantially free of sand as determined by the Owner's Representative.

Table: pH Acceptance Criteria

Well Nos.	**pH, Standard Units**
407, 408, 409, 411	>7.0
WR-4, WR-6, WR-7	>6.8

B. The CONTRACTOR shall receive no compensation for a well which fails to meet all of the above requirements, unless the ENGINEER and OWNER'S REPRESENTATIVE determine that failure to achieve the Well Acceptance Criteria was due to unavoidable causes that were not the fault of the CONTRACTOR.

1.15 GUARANTEE

A. The CONTRACTOR guarantees:

1. The Work will be performed in a workmanlike manner by qualified personnel experienced in the type of formations to be encountered;
2. The Work and services to be performed under this Contract and all workmanship, materials, and equipment performed, furnished, used, or installed in the Work shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Contract Documents;
3. The strength of all parts and all manufactured equipment shall be adequate and as specified;
4. The rehabilitated well will meet the Well Acceptance Criteria specified in Paragraph 1.14.

B. The CONTRACTOR shall repair, correct, or replace all damage to the Work resulting from failures covered by this Guarantee at his expense, unless the ENGINEER and

OWNER'S REPRESENTATIVE determines that such failures were due to unavoidable causes that were not the fault of the CONTRACTOR.

1.16 ABANDONMENT OF WORK

A. If the CONTRACTOR abandons the Work because of loss of tools, or for other causes determined by the ENGINEER and OWNER'S REPRESENTATIVE to be due to the negligence of the CONTRACTOR, the CONTRACTOR shall receive no compensation for the Work, unless the ENGINEER and OWNER'S REPRESENTATIVE determine that the need for abandoning Work was due to unavoidable causes that were not the fault of the CONTRACTOR. Furthermore, the CONTRACTOR shall receive no compensation for time and material for the Work if, in the ENGINEER'S and OWNER'S REPRESENTATIVE'S opinion, the CONTRACTOR was negligent.

B. In the event that the CONTRACTOR abandons the Work for any cause whatsoever, including, but not limited to, mechanical problems, personnel problems, or financial problems, for a period greater than thirty (30) working days, the CONTRACTOR may be deemed by the ENGINEER to have abandoned the rehabilitation of the wells. If so deemed, the CONTRACTOR shall, if requested and as directed by the ENGINEER, re-install the OWNER'S temporary well cap, clean up the site in accordance with the terms of these Specifications, and remove all equipment from the site. Any equipment or materials left on the site for more than thirty (30) calendar days after the CONTRACTOR'S receipt of written notice to remove the equipment or material shall, at the ENGINEER'S option, become the property of the OWNER. The CONTRACTOR shall receive no compensation for the abandoned rehabilitation work.

1.17 SAFETY

A. The CONTRACTOR shall be solely responsible for developing, maintaining, and supervising all safety precautions and procedures for completion of the Work. Contractor shall take all appropriate safety precautions and protections to prevent damage, injury, or loss to all persons on the job site who may be affected by the Work. Adequate safety equipment such as hard hats, hard-toed shoes, chemical safety gloves, and chemical safety goggles shall be used by the rehabilitation crew while on the job site. CONTRACTOR shall obtain competent safety guidelines, protocols, and equipment prior to commencing the Work.

2.00 PRODUCTS

2.01 MATERIALS

A. Materials required for the Work include, but are not limited to, the materials defined in Paragraph 2.01. Materials shall be furnished by the CONTRACTOR unless otherwise stated.

B. Video Survey Equipment:

1. Video survey equipment shall be of sufficient quality to film and record the entire well depth in high resolution, color video for wells up to 12-inches in diameter. Video equipment shall have both down-hole, up-hole, and side-view capabilities with full 360° rotation. Lighting shall be of sufficient brightness to clearly identify the targets of the survey. The rate of down-hole and up-hole movement shall be the standard rate for the type of work being performed and shall allow for clear and detailed visualization of the entire well depth.

2. Recordings shall be continuous with date, time, and depth of camera clearly displayed on the final video recordings.

3. The recordings for each well shall be provided in both MP4 format and a high-resolution format, such as the WMV or AVI formats. All video files shall be suitable for viewing in Microsoft Media Player and supported by default without requiring the installation of separate codecs.

C. Well Development Equipment

1. Submersible Pump

a. Furnish a submersible pump and generator capable of continuously pumping from 150 to 450 gallons per minute (GPM). The pump used for well development shall be capable of continuous operation for the full duration of required activities.

b. The pumping unit, controls, and appurtenances shall be capable of being operated without interruption for up to 24 hours at a time.

2. Plug Valve

a. Furnish a plug valve, or equal, on the discharge side of the pump for adjustment of flow rate down to 150 GPM.

3. Pump Drop Piping

a. Furnish C900 Certa-Lok PVC piping, or approved equal, for secure installation of the test pump into the wells.

b. Furnish valved access ports on discharge piping for sand content testing and water sample collection.

4. Flow Meter

a. Furnish a calibrated flow meter with an indicator and totalizer capable of measuring the pump discharge within plus or minus 5 percent of true flow rates from 150 to 450 GPM. The flow meter shall be placed within 50 feet of the pumping well in proper alignment and location upstream of the throttling

valve. Provide straight lengths of pipe upstream and downstream of the meter as recommended by the meter manufacturer. The initially submitted flow meter calibration certificate must be valid for at least 180 days from the Notice to Proceed date and subsequent certificates shall be provided as necessary to document flow meter accuracy. No data shall be collected using a flow meter with an expired calibration certificate.

D. Well Rehabilitation Equipment:

1. Nylon Brushes:

a. Provide stiffened nylon brushes of sufficient strength to remove scale from the production casing without damaging the casing. The complete brush assembly shall extend over at least a five (5)-foot length of drill pipe. Brush diameter shall be selected such that the complete assembly brushes the entire inside circumference of the production casing.

2. Airtight Production Casing Header Assembly for Well Acidification: Furnish an airtight production casing header assembly with a minimum working pressure of 150 PSI. At a minimum, the header assembly shall include the following components:

a. Flange: The flange shall be a tapped blind flange or similar component that is bolted to the production casing flange and sealed with an EPDM gasket. The flange shall include connections for acid injection and venting.

b. Acid Injection Header: The acid injection header shall include a pressure gauge and CPVC ball valve along with connections for the acid pump discharge pipe and acid tremie pipe. The pressure gauge shall be located between the tremie pipe and valve and shall be used to monitor acid injection pressure during acid pumping and well pressure during acid soaking. The CPVC ball valve shall be used as a throttling valve during acid injection, a bleed valve to relieve well pressure and collect formation samples, and an isolation valve.

c. Vent: The vent shall be separate from the acid injection header and connect directly to the flange. The vent shall include a CPVC ball valve and shall be used to relieve well pressure during acid injection. Once acid injection is complete, the vent valve shall be closed, and well pressure shall be controlled at the acid injection header.

3. Pressure Gauge:

a. Furnish a calibrated pressure gauge with a measurement range of 0 to 100 pounds per square inch (PSI). The initial pressure gauge calibration must be valid for at least 180 days from the Notice to Proceed date and subsequent

certificates shall be provided as necessary to document pressure gauge accuracy. No well acidification shall occur using a pressure gauge with an expired calibration certificate.

b. The pressure gauge shall be provided with a diaphragm seal that is suitable for hydrochloric acid service. Diaphragm seal bottom housing shall be Monel 400, Hastelloy C, Inconel 625, or nickel. Diaphragm shall be Monel 400, Hastelloy C, PTFE, Viton, or nickel. Subject to meeting the specified requirements, acceptable manufacturers include Ashcroft Inc. or approved equal.

4. Acid Piping, Solvent Cement, and Valves:

a. Piping and Fittings: Furnish 2.5-inch diameter Schedule 80 CPVC piping with Schedule 80 CPVC socket fittings. Piping and fittings shall conform to NSF/ANSI Standard 61.

b. Solvent Cement: Furnish solvent cement meeting ASTM F493. Solvent cement shall be NSF/ANSI Standard 61 certified, compatible with hydrochloric acid, and orange in color. Solvent cement shall be Weld-On 724 CPVC with Weld-On P 70 primer or approved equal.

c. Valves: Furnish CPVC ball valves that are suitable for hydrochloric acid service and conform to NSF/ANSI Standard 61.

5. Acid Pump:

a. Furnish a pump suitable for injecting 7-percent inhibited hydrochloric acid solution at a flow rate of 40 GPM at 136-feet of head. Alternate flow and head conditions, if proposed by CONTRACTOR, shall be subject to ENGINEER’S approval.

6. Acid Solution Preparation and Neutralization Tanks:

a. Furnish two or more water-tight tanks constructed from HDPE or polypropylene for compatibility with hydrochloric acid solutions. Other tank materials and associated liners may be proposed by CONTRACTOR for consideration by ENGINEER. The tanks shall be used for preparing diluted hydrochloric acid solutions for well rehabilitation and for collecting and neutralizing acidified formation water. Individual tanks shall have a minimum capacity of 2,000 gallons unless otherwise approved by ENGINEER. CONTRACTOR shall thoroughly clean the tanks before preparing any diluted hydrochloric acid solutions for well rehabilitation.

b. Provide a means of mixing the tank(s) such that acidic water is uniformly neutralized.

E. Chemicals

1. Hydrochloric Acid (Inhibited):

a. Hydrochloric acid (i.e. muriatic acid) used for well acidification shall have a strength between 31% and 31.5% (i.e., 20° Baume) and include an inhibitor formulated to protect steel casings from corrosion. The inhibited hydrochloric acid solution shall be NSF/ANSI Standard 60 certified.

b. Subject to meeting the specified requirements, acceptable products include Muriatic Acid 31% Inhibited by Harcros Chemicals, Inc. or approved equal.

c. ENGINEER will consider alternate well rehabilitation products (if proposed by CONTRACTOR) that meet the intent of these Specifications as determined by ENGINEER. CONTRACTOR shall provide corresponding product data and application procedures to ENGINEER for consideration.

2. Dense Soda Ash:

a. Furnish dense soda ash in granular form for neutralization of acidified formation water. Dense soda ash shall be NSF/ANSI Standard 60 certified. Store dense soda ash in a manner that keeps the chemical dry prior to use.

3. Chlorine Solution

a. The chlorine solution used for disinfecting the CONTRACTOR'S equipment shall be applied by spraying exposed areas with a solution having a chlorine residual of not less than 200 mg/L. The chlorine solution shall be NSF/ANSI Standard 60 certified.

b. The chlorine solution used for disinfecting the well shall be furnished and applied by the OWNER. The chlorine solution shall be of such volume and strength and shall be so applied that a concentration of at least 50 mg/L of free available chlorine is obtained in all parts of the well. The chlorine solution shall be NSF/ANSI Standard 60 certified.

F. Sample Containers:

1. Water quality sample containers shall meet the following requirements:

a. Sample bottles for water samples collected for OWNER'S REPRESENTATIVE use during well rehabilitation shall be new, one liter plastic bottles with plastic screw caps.

b. Sample bottles for water samples collected during test pumping shall be as specified by the testing laboratory.

G. Groundwater Supply for Well Rehabilitation Activities:

1. Flow Meter

a. Furnish a calibrated flow meter with an indicator and totalizer capable of measuring the groundwater flow within plus or minus 5 percent of true flow rates. Provide straight lengths of pipe upstream and downstream of the meter as recommended by the meter manufacturer. The initially submitted flow meter calibration certificate must be valid for at least 180 days from the Notice to Proceed date and subsequent certificates shall be provided as necessary to document flow meter accuracy. No data shall be collected using a flow meter with an expired calibration certificate.

2. RPZ

a. Furnish an RPZ suitable for potable water service. The initially submitted inspection certificate must be valid for at least 180 days from the Notice to Proceed date and subsequent certificates shall be provided as necessary to document proper RPZ function. No groundwater shall be used with an expired inspection certificate.

3.00 EXECUTION

3.01 WELL PROTECTION AND WATER QUALITY PROTECTION

A. Precautions - The CONTRACTOR shall take all necessary precautions to prevent contaminated water, diesel fuel, gasoline, unintended chemicals, debris, etc., from entering the well either through the opening or by seepage through the ground. The CONTRACTOR shall take precautions as necessary, or as required, to permanently prevent contaminated water or water having undesirable physical, bacteriological, or chemical characteristics from entering the well.

1. Temporary Capping:

a. The OWNER will remove the existing permanent well pump, drop pipe, well seal, flow meter, discharge tee, check valve, spool piece, and pressure transducer and install a temporary cap on the production casing prior to CONTRACTOR beginning Work at each well. CONTRACTOR shall remove the OWNER'S temporary cap and install a temporary cap furnished by the CONTRACTOR at the start of Work. OWNER'S temporary cap shall be protected by the CONTRACTOR such that the cap does not become dirty and/or damaged.

b. At all times during the progress of the Work, the CONTRACTOR shall provide a secure temporary cap to prevent tampering with the well and to

prevent the entrance of foreign matter into the well.

c. CONTRACTOR shall re-install the OWNER'S temporary cap prior to returning the well to the OWNER for Post-Rehabilitation Hydraulic Testing.

B. Corrective Work - In the event the well becomes contaminated, or water having undesirable physical or chemical characteristics does enter the well due to neglect of the CONTRACTOR, the CONTRACTOR shall, at the CONTRACTOR'S expense, perform such work or supply such casings, seals, sterilizing agents or other material as may be necessary to eliminate the undesirable water to the satisfaction of the ENGINEER and OWNER'S REPRESENTATIVE.

C. CONTRACTOR shall maintain his equipment to prevent any leaks of petroleum products or hazardous substances on the ground at the well site. In the event a spill does occur, the CONTRACTOR shall immediately remove and dispose of the contaminated soil in an appropriate manner.

D. CONTRACTOR shall provide, install and maintain erosion controls for the life of the well Work, as needed to prevent sediment and turbidity entering surface water bodies, or areas adjacent to the well site.

E. CONTRACTOR shall disinfect any and all items to be placed into a well. Disinfection shall occur prior to placing the item(s) into the well and shall include, but not be limited to, video equipment, drill piping, brushes, air piping, test pump, drop piping, instruments, etc. These items shall be disinfected by spraying exposed areas with a solution having a chlorine residual of not less than 200 mg/L. The chlorine solution shall be NSF/ANSI Standard 60 certified.

F. OWNER shall install a tapped blind flange, equipped with threaded ball valve, on the well discharge piping to provide the CONTRACTOR with raw groundwater for well rehabilitation activities. CONTRACTOR shall use raw groundwater from the TIFA Area IV Wellfield for all activities where water is needed to complete the Work, including, but not limited to, equipment washdowns and the preparation of chemical solutions.

G. CONTRACTOR shall furnish all items necessary for connecting to the raw groundwater supply. All items used for this purpose shall be NSF/ANSI Standard 61 certified and shall be disinfected per Paragraph 3.01,E. At a minimum, the CONTRACTOR shall furnish, install, and maintain the following items at each connection point:

1. One (1) RPZ for protection of the raw groundwater supply

2. One (1) calibrated flow meter

3. Fittings and/or couplings to facilitate connections

4. Piping and/or hoses to facilitate connections

3.02 WELL REHABILITATION

A. Pre-Rehabilitation Hydraulic Testing:

1. The OWNER shall provide an operator during the total duration of all pumping tests to operate the pumping equipment and to regulate the discharge using the available VFD for pump speed control. The well discharge shall be handled in conformance with the provisions detailed in Paragraph 1.13,C.

2. Water level measurements shall be obtained from the available level transducer. OWNER shall also provide a water level measurement tape to permit manual water level measurements by the OWNER'S REPRESENTATIVE. Water level shall be indicated by LED light and buzzer.

3. The OWNER shall conduct a 4-hour Constant Rate Discharge test. The Constant Rate Discharge test pumping rate for each well is shown in the following table.

Well Nos.	**Pumping Rate (GPM)**
407, 408, 409, 411	175
WR-4, WR-6, WR-7	320

4. During testing, the OWNER'S REPRESENTATIVE shall record discharge rates and water levels in the well at predetermined times. For this purpose, the OWNER shall operate the pump without interruption, at no more than two percent fluctuation in the designated rate of discharge, during the full period of the Constant Rate Discharge test as determined by the OWNER'S REPRESENTATIVE.

B. Pre-Rehabilitation Video Survey:

1. The CONTRACTOR shall perform a pre-rehabilitation video survey of each well. The well discharge shall be handled in conformance with the provisions detailed in Paragraph 1.13,C.

2. Video survey shall be performed under both static and dynamic conditions. Dynamic conditions shall be accomplished using the CONTRACTOR'S submersible pump at the flow rates defined in the following table. For the static condition, record the entire well depth from top of casing to bottom of well in the down-hole and up-hole directions. For the dynamic condition, record the well depth extending from below the pump bowls to bottom of well in the down-hole and up-hole directions. CONTRACTOR shall pause at and focus on any irregularities observed during the video survey as well as at the grout seal at the bottom of the production casing.

Well Nos.	**Pumping Rate (GPM)**

407, 408, 409, 411	175
WR-4, WR-6, WR-7	320

3. During inspection, maintain continuous image on the video screen. Display date, time, and numbers indicating depth of camera below top of casing on video monitor. Numbers shall also be displayed on the final video recordings.

C. Brushing with Dilute Acid Solution

1. Brushing shall be accomplished using a boom truck that lowers and raises the brush assembly to mechanically clean the production casing.

2. The CONTRACTOR shall brush the well casing for a minimum of ten (10) brushing passes. A single brushing pass shall consist of brushing the casing from top to bottom and then back to the top.

3. During brushing, the CONTRACTOR shall introduce a dilute hydrochloric acid solution into the casing to improve brushing effectiveness. The dilute hydrochloric acid solution shall have a maximum concentration of 5-percent unless otherwise recommended by the CONTRACTOR and approved by the Engineer. CONTRACTOR shall prepare the dilute hydrochloric acid solution onsite using inhibited hydrochloric acid and raw groundwater before introducing the solution into the well casing. The concentration and volume of dilute hydrochloric acid shall be determined by the CONTRACTOR and submitted to the Engineer for review and approval.

4. The CONTRACTOR shall furnish a minimum of two (2) brush assemblies. Promptly replace worn brushes such that the entire production casing is cleaned uniformly. Complete the necessary number of brushing passes per well as required to demonstrate to the OWNER'S REPRESENTATIVE that there are minimal deposits collected on the final utilized brush.

5. Brushings may remain in the well until after well acidification is complete. Brushings shall be removed during well development as part of the air lifting and pumping procedure specified in Paragraph 3.02,E.

D. Well Acidification:

1. The CONTRACTOR shall install an airtight production casing header assembly as specified in Paragraph 2.01,D,2.

2. The CONTRACTOR shall set the acid tremie pipe outlet per the following table such that the acid injection interval overlaps with the most productive section of the open well bore. CONTRACTOR shall field verify top of production casing elevations and adjust acid tremie pipe placement as required.

Well	**Top of Production Casing Elev.**	**Acid Injection Depth**

	(ft NAVD 88)	**Elevation** (ft NAVD 88)	**Depth*** (ft)
407	27.39	-119.8	147.19
408	26.82	-119.8	146.62
409	27.39	-120.4	147.79
411	27.5	-120.6	148.10
WR-4	27.05	-112.4	139.45
WR-6	27.72	-108.8	136.52
WR-7	28.02	-108.7	136.72

* Depth values are approximate and represent the distance from the top of the production casing.

3. The CONTRACTOR shall pre-dilute the inhibited hydrochloric acid to 7-percent strength prior to adding to the well. To add acid, the CONTRACTOR shall first open the Acid Injection Header valve and the vent valve. Pump the required volume of the 7-percent inhibited hydrochloric acid into the well at a rate of 40 GPM via the acid tremie line, unless an alternate pumping rate is proposed by CONTRACTOR and approved by ENGINEER. Verify and record the flow using a calibrated container and stopwatch. After the required volume of acid has been added to the well, close the Acid Injection Header valve and the vent valve and allow the acid to react with the calcium carbonate in the production zone. This reaction results in off-gassing that will increase the pressure in the well casing. CONTRACTOR shall monitor and maintain the internal well pressure at 40 PSI (gauge pressure). Regulate the pressure by adjusting the valve on the Acid Injection Header to slowly and periodically bleed off excess pressure and formation water. At no time shall the well pressure be allowed to exceed 50 PSI (gauge pressure). Direct the acidified formation water to the acid neutralization tank(s) for collection and neutralization. Provide a means for sampling the acidified formation water upstream of the acid neutralization tank(s) to monitor pH. Refer to Paragraph 3.02,D,4 for acid soak duration and Paragraph 3.02,D,5 for minimum data collection and recording requirements. The initial volume of acid added to each well is approximated in the following table. Additional acid may be required as described in Paragraph 3.02,D,6.

Well No.	**31.5% Inhibited Hydrochloric Acid (Prior to Onsite Dilution)**		**Dilution Water Volume [2] (Gallons)**	**Volume of 7% Acid Solution (Gallons)**
	Acid Volume (Gallons)	**Est. No. of Drums / Totes [1]**		
407	660	12 / 3	2,670	3,330
408	880	16 / 4	3,570	4,450
409	880	16 / 4	3,570	4,450
411	770	14 / 3	3,120	3,890
WR-4	825	15 / 3	3,340	4,165
WR-6	825	15 / 3	3,340	4,165
WR-7	825	15 / 3	3,340	4,165

[1] Drum and tote estimates assume 55 gallon drums and 275 gallon totes.

[2] Dilution water volumes have been rounded.

4. The CONTRACTOR shall allow the well to soak for 24 hours following addition of acid to the well. For overnight soaking, the valve on the Acid Injection Header shall be left cracked open (to prevent excessive pressure from building up in the well) unless otherwise approved by the ENGINEER and OWNER'S REPRESENTATIVE.

5. Following addition of the acid solution to the well, CONTRACTOR shall record the gauge pressure reading and pH of the formation water at 1-hour intervals until the start of the overnight soak. A minimum of 6 readings shall be collected for each parameter prior to starting the overnight soak. The CONTRACTOR shall also record the pressure and pH immediately upon returning to the job site the following morning and at 1-hour intervals thereafter until the conclusion of the soak.

6. If the pH of the formation water exceeds 3.0 Standard Units at any time during the 24-hour soak, the CONTRACTOR shall dilute 160 gallons of 31.5% hydrochloric acid with metal inhibitor to a 7-perecnt concentration and inject the resulting 810 gallons of 7-percent inhibited hydrochloric acid solution via the tremie line using the procedure described in Paragraph 3.02,D,3 and continue to monitor the pressure and pH of the formation water as described in Paragraph 3.02,D,5. CONTRACTOR shall repeat 7-percent acid addition at 810-gallon increments, as required, to maintain the formation water pH below 3.0 Standard Units. If the pH is greater than 3.0 Standard Units at the conclusion of the 24-hour soak, add 810 gallons of 7-percent acid as described above and extend the soak time for 3 hours. Repeat as required until the pH is below 3.0 Standard Units at the end of the soak time.

7. After the acid soak is complete, relieve any residual pressure from the well and remove the acid tremie pipe and header assembly. Install the test pump and begin pumping to remove acidified formation water from the well. This operation shall continue until the well acceptance criteria for pH is met. Pumping rate shall be as approved by the ENGINEER and OWNER'S REPRESENTATIVE.

8. Collect all formation water and spent acid removed from the well in a watertight storage tank (or tanks) of sufficient volume to allow for neutralization prior to discharge in accordance with all applicable regulations. Add dense soda ash to adjust the pH of formation water and spent acid in the neutralization tank(s) prior to discharge. This operation shall be closely monitored to ensure the pH of discharge water is within the range of 6.5 to 8.5 at all times when discharged to the property in conformance with Paragraph 1.13,A. Neutralizing shall be continuously adjusted to ensure the pH is within the acceptable range. CONTRACTOR shall maintain and submit pH logs to document compliance with this requirement.

9. CONTRACTOR shall be responsible for site clean-up and restoration resulting from well acidification activities.

E. Well Development:

1. The CONTRACTOR shall furnish and install necessary pump, tools, piping and any other equipment needed to develop the well. The well shall be developed by airlifting followed by pumping until the discharge water is substantially free of sand and turbidity is 1.0 NTU or less.

2. The CONTRACTOR shall periodically measure the following parameters at intervals to be specified by the OWNER'S REPRESENTATIVE during well development:

    a. Suspended sediment of the well discharge using a standard Imhoff Cone or Rossum Sand Tester

    b. Well discharge rate (in GPM) using a calibrated flow meter

    c. Turbidity in NTU

3. Well Development Procedures:

    a. CONTRACTOR shall set the submersible pump in the well and the well shall be pumped at a development rate as approved by the OWNER'S REPRESENTATIVE. Surging and over pumping techniques may be used during well development if approved by the OWNER'S REPRESENTATIVE. The well discharge shall be handled in conformance with the provisions detailed in Paragraph 1.13,C.

    b. The well shall be deemed sufficiently developed when the well discharge is substantially free of sand and turbidity is 1.0 NTU or less, as confirmed by the OWNER'S REPRESENTATIVE. Filter discharge water such that any debris removed from the well are collected. Dispose of collected debris off-site in accordance with all applicable regulations.

    c. The CONTRACTOR shall maintain on site a current record of development progress including pump start/stop times, discharge rates, pumping water levels, sand content and turbidity. This record shall be furnished to the OWNER'S REPRESENTATIVE at the conclusion of development.

F. Post-Rehabilitation Video Survey:

1. CONTRACTOR shall perform a post-rehabilitation video survey for each well. Follow the same procedure as defined for the pre-rehabilitation video survey in Paragraph 3.02,B.

G. Post-Rehabilitation Hydraulic Testing:

1. OWNER shall perform post-rehabilitation hydraulic testing for each well. Follow the same procedure as defined for the pre-rehabilitation hydraulic testing in Paragraph 3.02,A.

H. Water Quality Sampling and Field Testing:

1. Laboratory Requirements

a. During the final hour of the Constant Rate Discharge test, the CONTRACTOR shall have samples collected and tested for specific parameters as identified below. The samples must be collected and analyzed by a Laboratory accredited with NELAC and certified by FDEP. It is the responsibility of the CONTRACTOR to secure prior acceptance from the ENGINEER of the proposed testing laboratory.

b. The Laboratory shall prepare a cation-anion balance for analyzed samples.

2. Sampling of Water from Wells:

a. The collection of groundwater from the well for water quality testing purposes shall be in accordance with the Standard Operating Procedures outlined in FDEP publication SOP-001/01, standard FS 2200, Groundwater Sampling.

3. Field Testing – The following parameters shall be field tested:

a. Water temperature (degrees C)
b. Turbidity (NTU)
c. pH (SU)
d. Specific conductance (umhos/cm)

I. Water Quality Lab Testing:

1. Lab Testing – The following water quality parameters shall be tested in the lab:

a. Calcium (mg/L)
b. Magnesium (mg/L)
c. Potassium (mg/L)
d. Sodium (mg/L)
e. Total iron (mg/L)
f. Chloride (mg/L)
g. Sulfate (mg/L)
h. Bicarbonate Alkalinity (as mg/L CaCO3)

i. Carbonate Alkalinity (as mg/L CaCO3)

j. Specific conductance (umhos/cm)

k. Total dissolved solids (mg/L)

2. OWNER shall be provided with written reports prepared by the Laboratory which include the results of all field and lab testing.

3.03 CLEANUP

A. The CONTRACTOR shall keep the premises free from accumulation of waste materials caused by employees or work. After the well rehabilitation has been completed, any ditches dug shall be filled in, any ditches filled shall be dug up, all rehabilitation materials and any other imported substances shall be removed and the site returned to its original condition. Proper disposal of materials is the responsibility of the CONTRACTOR. Upon completion of well rehabilitation, development and testing, the CONTRACTOR shall remove equipment, materials, and supplies from the site.

B. If CONTRACTOR elects to remove existing fencing to facilitate well rehabilitation activities, CONTRACTOR shall re-install, repair, and/or replace perimeter fencing and gates. Repaired and/or replacement fencing shall meet the requirements specified in Section 02820 (Fences and Gates).

C. If CONTRACTOR'S activities result in any significant damage to existing maintained grassed areas as determined by ENGINEER, CONTRACTOR shall re-sod the damaged areas in accordance with Section 02485 (Grassing).

3.04 WELL DISINFECTION

A. Well disinfection shall be performed by the OWNER.

B. Following installation of the permanent submersible well pump and all well site mechanical pipe and fittings, the well shall be disinfected in accordance with AWWA Standard C654-13, Section 4.5. The chlorine solution used for disinfecting the well shall be of such volume and strength and shall be so applied that a concentration of at least 50 mg/L of available chlorine shall be obtained for the entire water depth of the well. The chlorine solution shall be NSF/ANSI Standard 60 certified.

C. Following application of the chlorine solution and mixing of the chlorine solution throughout the entire water depth of the well, the chlorinated water shall be allowed to rest in the well for a minimum period of 12 hours, not to exceed 24 hours. The chlorinated water shall then be flushed from the well to a disposal location approved by the OWNER'S REPRESENTATIVE. The discharge water shall be tested periodically for chlorine residual. The flushing process shall be terminated when no detectable chlorine residual is measured.

END OF SECTION