

**CHF SOLUTIONS, INC.
NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD ON OCTOBER 10, 2017**

To our Stockholders:

A special meeting of stockholders will be held on Tuesday, October 10, 2017, at 8:30 a.m. U.S. Central Time, at our offices, located at 12988 Valley View Road, Eden Prairie, Minnesota 55344, to conduct the following items of business:

- Proposal 1 – To approve an amendment to our Fourth Amended and Restated Certificate of Incorporation, as amended, to effect a reverse split of our outstanding common stock at a ratio in the range of 1-for-10 to 1-for-20, to be determined at the discretion of our Board of Directors, whereby each outstanding 10 to 20 shares would be combined, converted and changed into 1 share of our common stock, without reducing the number of authorized shares of our common stock.
- Proposal 2 – To authorize one or more adjournments of the special meeting to solicit additional proxies in the event there are insufficient votes to approve the above proposal.
- To transact any other business that may properly come before the meeting or any postponement or adjournment of the meeting.

Our Board of Directors unanimously recommends that you vote FOR Proposals 1 and 2.

Only holders of our common stock at the close of business on Friday, September 1, 2017, the record date, are entitled to receive this notice and to attend and vote at the special meeting. For ten days prior to the meeting, a complete list of stockholders will be available during regular business hours at our principal executive office, 12988 Valley View Road, Eden Prairie, Minnesota 55344. A stockholder may examine the list for any legally valid purpose related to the meeting.

Your vote is important. Whether or not you plan to attend the meeting, please sign and submit your proxy as soon as possible so that your shares can be voted at our special meeting in accordance with your instructions. If you attend the meeting, you may revoke your proxy in accordance with the procedures set forth in the proxy statement and vote in person.

By Order of the Board of Directors,

Claudia Drayton
Secretary

Eden Prairie, Minnesota
September 8, 2017

TABLE OF CONTENTS

About the Special Meeting	1
Proposal 1—Reverse Stock Split	5
Proposal 2—Adjournment of Special Meeting	11
Security Ownership of Certain Beneficial Owners and Management	11
Additional Matters	12
Other Matters	12
Requirements for Submission of Stockholder Proposals and Nominations for 2018 Annual Meeting	12
Solicitation by Board; Expenses	12
Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to be Held on October 10, 2017	13
Appendix A	A-1

CHF SOLUTIONS, INC. PROXY STATEMENT

SPECIAL MEETING OF STOCKHOLDERS OCTOBER 10, 2017

ABOUT THE SPECIAL MEETING

Who is soliciting my vote?

The Board of Directors (the "**Board**") of CHF Solutions, Inc. (the "**Company**", "**we**" or "**us**") is soliciting your proxy, as a holder of our common stock, for use at the special meeting of stockholders and any adjournment or postponement of such meeting. We have retained Morrow Sodali LLC to assist in the solicitation of proxies. The special meeting will be held on Tuesday, October 10, 2017, at 8:30 a.m. U.S. Central Time, at the offices of the Company, located at 12988 Valley View Road, Eden Prairie, Minnesota 55344.

The notice of special meeting, proxy statement and form of proxy card are expected to be first mailed to stockholders of record on or about September 8, 2017.

What is the purpose of the special meeting?

At the special meeting, you will be voting on:

- Proposal 1 – An amendment to our Fourth Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our outstanding common stock at a ratio in the range of 1-for-10 to 1-for-20, to be determined at the discretion of the Board, whereby each outstanding 10 to 20 shares would be combined, converted and changed into 1 share of our common stock, without reducing the number of authorized shares of our common stock.
- Proposal 2 – To authorize one or more adjournments of the special meeting to solicit additional proxies in the event there are insufficient votes to approve Proposal 1.
- Such other business as may properly come before the special meeting or any adjournment thereof.

The Board recommends a vote **FOR** Proposals 1 and 2.

Except as noted herein, share numbers are provided as of the record date and on a pre-reverse stock split basis.

Who is entitled to vote?

You may vote if you owned shares of our common stock at the close of business on Friday, September 1, 2017, the record date, provided such shares are held directly in your name as the stockholder of record or are held for you as the beneficial owner through a broker, bank or other nominee. Each share of common stock is entitled to one vote on each matter properly brought before the meeting. As of the September 1, 2017, we had 12,516,338 shares of common stock outstanding and entitled to vote.

What is the difference between a stockholder of record and a beneficial owner?

Stockholders of Record. If your common shares are registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, you are considered the stockholder of record with respect to those shares, and these proxy materials are being sent directly to you by us. As the stockholder of record, you have the right to grant your voting proxy directly to us through the enclosed proxy card or to vote in person at the special meeting.

Beneficial Owners. Many of our stockholders hold their common shares through a broker, bank or other nominee rather than directly in their own names. If your shares are held in a stock brokerage account or by a bank or other nominee, you are considered the beneficial owner with respect to those shares, and these proxy materials (including a voting instruction card) are being forwarded to you by your broker, bank or

TABLE OF CONTENTS

nominee who is considered the stockholder of record with respect to those shares. As the beneficial owner, you have the right to direct your broker, bank or nominee on how to vote and are also invited to attend the special meeting. However, since you are not the stockholder of record, you may not vote these shares in person at the special meeting unless you request and obtain a proxy from your broker, bank or nominee. Your broker, bank or nominee has enclosed a voting instruction card for you to use in directing the broker, bank or nominee on how to vote your shares.

Can I vote my shares without attending the special meeting?

Stockholders of Record. You may vote by completing, signing and returning the enclosed proxy card in the postage-paid envelope provided. If the postage-paid envelope is missing, please mail your completed proxy card to CHF Solutions, Inc., c/o Claudia Drayton, Secretary, 12988 Valley View Road, Eden Prairie, Minnesota 55344.

If you are a stockholder of record, you may also vote electronically by internet. To vote by internet, you will need to use a control number provided to you in the materials with this proxy statement and follow the additional steps when prompted. The steps have been designed to authenticate your identity, allow you to give voting instructions, and confirm that those instructions have been recorded properly.

Beneficial Owners. If you are a beneficial owner, you must vote your shares in the manner prescribed by your broker, bank or other nominee. You will receive a voting instruction card (not a proxy card) to use in directing the broker, bank or other nominee how to vote your shares. You may also have the option to vote your shares electronically via the internet or automated telephone service.

May I attend the special meeting and vote my shares in person?

All of our stockholders are invited to attend the special meeting in person. You may be asked to present valid photo identification, such as a driver's license or passport, before being admitted to the meeting. If you are a beneficial owner, you also may be asked to present proof of ownership to be admitted to the meeting. A brokerage or holding statement or letter from your broker, bank or other nominee are examples of proof of ownership.

Stockholders of Record. If you are a stockholder of record and attend the special meeting, you may deliver your completed proxy card or vote by ballot.

Beneficial Owners. If you hold your common shares through a broker, bank or other nominee and want to vote such shares in person at the special meeting, you must obtain a proxy from your broker, bank or other nominee giving you the power to vote such shares.

Even if you plan to attend the meeting, we encourage you to vote your shares prior to the meeting.

Can I change my vote?

Stockholders of Record. You may change your vote at any time before your proxy is exercised by sending a written notice of revocation or a later-dated proxy to our Secretary, which must be received prior to commencement of the special meeting; by submitting a later-dated proxy via internet before 12:00 a.m. U.S. Central Time on October 10, 2017; or by voting in person at the special meeting. Your attendance at the special meeting in person will not cause your previously granted proxy to be revoked unless you file the proper documentation for it to be so revoked.

Beneficial Owners. If you hold your shares through a broker, bank or other nominee, you should contact such person prior to the time such voting instructions are exercised.

What does it mean if I receive more than one proxy card or voting instruction card?

If you receive more than one proxy card or voting instruction card, it means that you have multiple accounts with brokers, banks or other nominees and/or our transfer agent. Please sign and deliver, or otherwise vote, each proxy card and voting instruction card that you receive. We recommend that you contact your nominee

TABLE OF CONTENTS

and/or our transfer agent, as appropriate, to consolidate as many accounts as possible under the same name and address. Our transfer agent is American Stock Transfer & Trust Company LLC, 6201 15th Avenue, Brooklyn, New York 11219; Telephone: 800-937-5449.

What if I do not vote for some of the items listed on my proxy card or voting instruction card?

Stockholders of Record. If you indicate a choice with respect to any matter to be acted upon on your proxy card, the shares will be voted in accordance with your instructions. Proxy cards that are signed and returned, but do not contain voting instructions with respect to certain matters, will be voted in accordance with the recommendations of the Board on such matters.

Beneficial Owners. If you indicate a choice with respect to any matter to be acted upon on your voting instruction card, the shares will be voted in accordance with your instructions. If you do not indicate a choice or return the voting instruction card, the broker, bank or other nominee will determine if it has the discretionary authority to vote on each matter. Under applicable law, a broker, bank or nominee has the discretion to vote on routine matters. Brokers and certain banks and nominees will be unable to vote on your behalf for one or more proposals if you do not instruct them how to vote your shares in the manner set forth on your voting instruction card. Therefore, it is very important for you to vote your shares for each proposal.

How many shares must be present to hold the meeting?

In order for us to conduct the special meeting, a majority of our outstanding shares entitled to vote as of September 1, 2017 must be present in person or by proxy at the meeting. This is called a quorum. Proxy cards returned with "Abstain" selected and broker non-votes will be considered present for purposes of determining a quorum.

What vote is required to approve each item of business?

Proposal 1 – Approval of Reverse Stock Split. The affirmative vote of holders of a majority of shares entitled to vote at the special meeting is required for the approval of the reverse stock split. Abstentions and broker non-votes will have the same effect as votes against the matter.

Proposal 2 – Approval of Adjournment. The affirmative vote of holders of a majority of shares entitled to vote and present at the special meeting, in person or by proxy, is required for any adjournment of the special meeting to solicit additional proxies in the event there are insufficient votes to approve the first proposal. Abstentions and broker non-votes will not be treated as present at the special meeting and thus will have no effect on the outcome of this proposal unless you return your proxy card and select "Abstain", which will have the same effect as a vote against the matter.

Other Matters. The Board does not propose to conduct any business at the meeting, nor is it aware of any other matter to be presented for action at the meeting, other than as stated above. If any other matter is properly submitted to the stockholders at the meeting, its adoption generally will require the affirmative vote of holders of a majority of shares entitled to vote and present at the special meeting, in person or by proxy.

Who will count the votes and where can I find the voting results?

American Stock Transfer & Trust Company will tabulate the voting results. We intend to announce the preliminary voting results at the special meeting and, in accordance with the rules of the Securities and Exchange Commission (the "**SEC**"), we intend to publish the final results in a current report on Form 8-K within four business days of the special meeting.

Who can help answer my other questions?

If you have more questions about the proposals or voting, you should contact Morrow Sodali LLC, who is assisting us with the proxy solicitation.

**The Solicitation Agent for the Special Meeting is:
Morrow Sodali LLC
470 West Avenue – 3rd Floor
Stamford, CT 06902**

**Banks and Brokerage Firms, please call (203) 658-9400
Stockholders, please call toll free (877) 787-9239**

PROPOSAL 1 – REVERSE STOCK SPLIT

The Company's Fourth Amended and Restated Certificate of Incorporation, as amended, currently authorizes the issuance of 100,000,000 shares of common stock, par value \$0.0001 per share. On September 1, 2017, the Company had 12,516,338 shares of common stock issued and outstanding and 11,823,851 shares of common stock reserved pursuant to outstanding warrants, options or restricted stock units or under the Company's equity incentive plans.

The Board has unanimously approved an amendment to the Company's Fourth Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of the Company's common stock any time prior to the first anniversary of its approval by the stockholders at a ratio in the range of 1-for-10 to 1-for-20, to be determined at the discretion of the Board. A copy of the certificate of amendment (the "**Certificate of Amendment**") to the Fourth Amended and Restated Certificate of Incorporation, as amended, is attached hereto as **Appendix A**.

If the Certificate of Amendment is approved by a majority of the Company's stockholders, the Board will have discretion to determine, as it deems to be in the best interest of the Company's stockholders, the specific ratio to be used within the range described above and the timing of the reverse stock split, which must occur any time prior to the first anniversary of its approval by the stockholders. The Board believes that stockholder approval of the range of reverse stock split ratios (as opposed to approval of a single reverse stock split ratio) provides the Board with maximum flexibility to achieve the purpose of a reverse stock split, as discussed below, and therefore is in the best interests of the Company and its stockholders.

The Board may, in its discretion, determine not to effect the reverse stock split if it determines, subsequent to obtaining stockholder approval, that such action is not in the best interests of the Company. By voting in favor of the reverse stock split, you are expressly authorizing the Board to determine not to proceed with, and abandon, the reverse stock split if it should so decide.

The Board has recommended that the proposed Certificate of Amendment to effect the reverse stock split be presented to the Company's stockholders for approval.

Reasons for the Reverse Stock Split

As previously disclosed in a current report on Form 8-K filed on June 2, 2017, on June 1, 2017, the Listing Qualifications Staff (the "**Staff**") of The NASDAQ Stock Market LLC notified the Company that, based upon the closing bid price of the Company's common stock for the 30 prior consecutive business days, the Company no longer satisfied the minimum \$1.00 closing bid price requirement, as set forth in Nasdaq Listing Rule 5550(a)(2), and had been provided a 180-day grace period to regain compliance with that requirement, through November 28, 2017.

The Board is asking the stockholders to grant it the authority, at its discretion, to effect a reverse stock split, which the Board believes is an effective way to increase the minimum bid price of our common stock proportionately and put us in a position to regain compliance with Nasdaq Listing Rule 5550(a)(2).

The Board believes that maintaining the listing of the Company's common stock on Nasdaq is in the best interests of the Company and its stockholders. The Board believes that the delisting of the Company's common stock from Nasdaq would impair our ability to raise additional funds and result in lower prices and larger spreads in the bid and ask prices for the Company's common stock, among other things. See "Certain Risk Factors Associated with the Reverse Stock Split" below for more information.

Determination of the Reverse Stock Split Ratio

In determining the ratio to be used, the Board will consider various factors, including but not limited to, (i) the potential impact and anticipated benefits to the Company and its stockholders, (ii) market conditions and existing and expected market price of the Company's common stock at such time, (iii) the number of shares that will be outstanding after the reverse stock split, (iv) the stockholders' equity at such time and (v) the trading volume of the Company's common stock at such time.

Impact of the Reverse Stock Split, if Implemented

If approved and effected, the reverse stock split will automatically apply to all shares of the Company's common stock, and each stockholder will own a reduced number of shares of the Company's common stock. However, except for adjustments that may result from the treatment of fractional shares as described below or as a result of adjustments to the conversion prices of certain convertible securities, as described below, the reverse stock split will not affect any stockholder's percentage ownership or proportionate voting power.

Based on the Company's capitalization as of September 1, 2017, the principal effect of the reverse stock split (at a ratio between 1-for-10 and 1-for-20), not taking into account the treatment of fractional shares described under "–Procedure for Effecting the Reverse Stock Split–Treatment of Fractional Shares" below, would be that:

- the number of shares of the Company's authorized common stock would remain unchanged at 100,000,000 shares;
- the number of shares of the Company's common stock issued and outstanding would be reduced from 12,516,338 shares to between approximately 1,251,633 shares and 625,816 shares;
- the 40,000,000 shares of the Company's authorized preferred stock, none of which are outstanding, would remain unchanged;
- the number of shares of the Company's common stock issuable upon the exercise of outstanding warrants would be reduced from 9,932,723 to between approximately 993,272 shares and 496,636 shares (and the respective exercise prices of the warrants would increase by a factor equal to the inverse of the split ratio);
- the number of shares of the Company's common stock issuable upon the exercise of outstanding stock options and restricted stock units would be reduced in proportion to the reverse stock split ratio from 745,460 to between approximately 74,546 shares and 37,273 shares (and the respective exercise prices of the options would increase by a factor equal to the inverse of the split ratio);
- the aggregate number of shares of the Company's common stock reserved for issuance, in connection with future awards under the Company's equity incentive plans would be reduced in proportion to the reverse stock split ratio from 1,145,668 to between approximately 114,566 shares and 57,283 shares, subject to increase on January 1st of each year due to the "evergreen" provisions in the Company's 2017 Equity Incentive Plan and Non-Employee Directors' Equity Incentive Plan;
- the number of shares of the Company's common stock that are authorized, but unissued and unreserved, would increase from 75,659,811 to between approximately 97,565,982 shares and 98,782,991 shares; and
- the par value of the Company's common stock and preferred stock would remain unchanged at \$0.0001 per share, and, as a result, the stated capital attributable to common stock on the Company's balance sheet would be reduced proportionately based on the reverse stock split ratio, the additional paid-in capital account would be credited with the amount by which the stated capital is reduced, and the per-share net income or loss and net book value of the Company's common stock would be restated because there would be fewer shares of common stock outstanding.

TABLE OF CONTENTS

The following table contains approximate information relating to our common stock immediately following the reverse stock split under certain possible exchange ratios, based on share information as of September 1, 2017:

	September 1, 2017	1-for-10	1-for-15	1-for-20
Number of authorized shares of common stock	100,000,000	100,000,000	100,000,000	100,000,000
Number of outstanding shares of common stock	12,516,338	1,251,633	834,422	625,816
Number of authorized shares of preferred stock	40,000,000	40,000,000	40,000,000	40,000,000
Number of shares of common stock issuable upon exercise of outstanding stock options, restricted stock units and warrants	10,678,183	1,067,818	711,878	533,909
Number of shares of common stock reserved for issuance in connection with future awards under the Company's equity incentive plans(1)	1,145,668	114,566	76,378	57,283
Number of shares of common stock authorized, but unissued and unreserved	75,659,811	97,565,982	98,377,321	98,782,991

(1) The shares reserved for future issuance under the Company's 2017 Equity Incentive Plan and Non-Employee Directors' Equity Incentive Plan are subject to increase on January 1st of each year due to the "evergreen" provisions in such plans.

See also "Certain Risk Factors Associated with the Reverse Stock Split" and "Procedure for Effecting the Reverse Stock Split—Treatment of Fractional Shares" below for additional information regarding the potential impact of the reverse stock split.

Certain Risk Factors Associated with the Reverse Stock Split

Factors such as our financial results, market conditions and the market perception of our business may adversely affect the market price of our common stock. As a result, there can be no assurance that the total market capitalization of our common stock after the proposed reverse stock split will be equal to or greater than the total market capitalization before the proposed reverse stock split or that the per share market price of our common stock following the reverse stock split will increase in proportion to the reduction in the number of shares of common stock outstanding before the reverse stock split. Furthermore, a decline in the market price of our common stock after the reverse stock split may result in a greater percentage decline than would occur in the absence of a reverse stock split, and the liquidity of our common stock could be adversely affected following such a reverse stock split.

There can also be no assurance that the minimum bid price per share of our common stock would remain in excess of \$1.00 following the reverse stock split for a sustained period of time, or long enough to satisfy Nasdaq's continued listing requirements. If it appears to the Nasdaq staff that we will not be able to comply with Nasdaq Listing Rule 5550(a) (2), or if we do not meet the minimum stockholders' equity or any other listing standard, our common stock may be subject to delisting. If our common stock is delisted, our common stock would likely trade only in the over-the-counter market. If our common stock were to trade on the over-the-counter market, selling our common stock could be more difficult because smaller quantities of shares would likely be bought and sold, transactions could be delayed, and security analysts' coverage of us may be reduced, or eliminated. In addition, in the event our common stock is delisted, broker-dealers have certain regulatory burdens imposed upon them, which may discourage them from effecting transactions in

TABLE OF CONTENTS

our common stock, further limiting the liquidity thereof. These factors could result in lower prices and larger spreads in the bid and ask prices for our common stock and would substantially impair our ability to raise additional funds and could result in a loss of institutional investor interest and fewer development opportunities for us.

Because the number of authorized shares of the Company's common stock will not be reduced proportionately, the reverse stock split will increase the Board's ability to issue authorized and unissued shares without further stockholder action. Without taking into account the impact of the proposed reverse stock split, the Company already has a substantial number of authorized but unissued shares of stock, the issuance of which would be dilutive to our existing stockholders and may cause a decline in the trading price of our common stock. With respect to authorized but unissued and unreserved shares, the Company could also use such shares to oppose a hostile takeover attempt or delay or prevent changes in control or changes in or removal of management. The Company has an existing sales agreement with Cowen and Company, LLC for an "at the market" equity offering program. The Company plans to seek additional financing in fiscal 2017. Other than the foregoing, there are no existing plans, arrangements or understandings relating to the issuance of any of the authorized, but unissued and unreserved shares, whether available as a result of the proposed reverse stock split or otherwise.

In addition, the reverse stock split may increase the number of stockholders who own odd lots (less than 100 shares). Any stockholder who owns fewer than 1,000 to 2,000 shares of common stock, depending on the final ratio, prior to the reverse stock split will own fewer than 100 shares of common stock following the reverse stock split. Stockholders who hold odd lots typically experience an increase in the cost of selling their shares and may have greater difficulty in effecting sales. Furthermore, some stockholders may cease being stockholders of the Company following the reverse stock split. Any stockholder who owns fewer than 10 to 20 shares of common stock, depending on the final ratio, prior to the reverse stock split will own less than one share of common stock following the reverse stock split and therefore such stockholder will receive cash equal to the market value of such fractional share and cease being a stockholder of the Company, as further described below under "–Procedure for Effecting the Reverse Stock Split–Treatment of Fractional Shares".

Vote Required

The affirmative vote of holders of a majority of shares entitled to vote at the special meeting is required for the approval of the Certificate of Amendment to effect a reverse stock split. Abstentions and broker non-votes will have the same effect as votes against the matter.

Procedure for Effecting the Reverse Stock Split

When and if the Board decides to implement the reverse stock split at any time before the first anniversary of its approval by the stockholders, the Company will promptly file the Certificate of Amendment with the Secretary of State of the State of Delaware to amend its existing Fourth Amended and Restated Certificate of Incorporation, as amended. The reverse stock split will become effective on the date of filing the Certificate of Amendment, which is referred to as the "**reverse stock split effective date**". Beginning on the reverse stock split effective date, each certificate representing pre-reverse stock split shares will be deemed for all corporate purposes to evidence ownership of post-reverse stock split shares. The text of the Certificate of Amendment is set forth in **Appendix A** to this proxy statement. The text of the Certificate of Amendment is subject to modification to include such changes as may be required by the office of the Secretary of State of the State of Delaware and as the Board deems necessary and advisable to effect the reverse stock split, including the applicable ratio for the reverse stock split.

After the reverse stock split effective date, our common stock will have a new CUSIP number, which is a number used to identify our securities, and stock certificates with the old CUSIP number will need to be exchanged for stock certificates with the new CUSIP number using the procedures described below.

Exchange of Stock Certificates

As soon as practicable after the effective date of the reverse stock split, stockholders will be notified that the reverse stock split has been effected. American Stock Transfer & Trust Company, our transfer agent, will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-split

TABLE OF CONTENTS

shares in certificated form will be asked to surrender to the exchange agent certificates representing pre-split shares in exchange for certificates representing post-split shares in accordance with the procedures to be set forth in a letter of transmittal that will be delivered to our stockholders. No new certificates will be issued to a stockholder until the stockholder has surrendered to the exchange agent his, her or its outstanding certificate(s) together with the properly completed and executed letter of transmittal. STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATES AND SHOULD NOT SUBMIT THEIR STOCK CERTIFICATES UNTIL THEY RECEIVE A TRANSMITTAL FORM FROM OUR EXCHANGE AGENT.

STOCKHOLDERS ARE ENCOURAGED TO PROMPTLY SURRENDER CERTIFICATES TO THE EXCHANGE AGENT FOLLOWING RECEIPT OF TRANSMITTAL FORMS IN ORDER TO AVOID HAVING SHARES POSSIBLY BECOMING SUBJECT TO ESCHEAT LAWS.

Stockholders whose shares are held by their stockbroker do not need to submit old share certificates for exchange. These shares will automatically reflect the new quantity of shares based on the selected reverse stock split ratio. Beginning on the reverse stock split effective date, each certificate representing pre-split shares will be deemed for all corporate purposes to evidence ownership of post-split shares.

Treatment of Fractional Shares

To avoid the existence of fractional shares of common stock after the reverse stock split, fractional shares that would be created as a result of the reverse stock split will be rounded down to the next whole share and the stockholder will receive cash equal to the market value of the fractional share, determined by multiplying such fraction by the closing sales price of the Company's common stock as reported on Nasdaq on the last trading day before the reverse stock split effective date. The ownership of a fractional interest will not give the holder any voting, dividend or other right except to receive the cash payment therefor. If a stockholder is entitled to a cash payment in lieu of any fractional share interest, a check will be mailed to the stockholder's registered address as soon as practicable after the reverse stock split effective date. By signing and cashing the check, stockholders will warrant that they owned the shares of common stock for which they received such cash payment.

No Appraisal Rights

Under the Delaware General Corporation Law, our stockholders do not have a right to dissent and are not entitled to appraisal rights with respect to the proposed Certificate of Amendment to effect the reverse stock split, and we will not independently provide our stockholders with any such rights.

Material Federal Income Tax Consequences

The following discussion of certain U.S. federal income tax consequences to the Company's stockholders of the reverse stock split, if effected, does not purport to be a complete discussion of all of the possible U.S. federal income tax consequences and is included for general information only, is not intended as tax advice to any person and is not a comprehensive description of the tax consequences that may be relevant to each shareholder's own particular circumstances. The discussion is based on the Internal Revenue Code of 1986, as amended (the "**Code**"), applicable Treasury Regulations promulgated thereunder, judicial authority and current administrative rulings and practices as in effect on the date of this proxy statement. Changes to the laws could alter the tax consequences described below, possibly with retroactive effect. The Company has not sought and will not seek an opinion of counsel or a ruling from the Internal Revenue Service regarding the U.S. federal income tax consequences of the reverse stock split.

This discussion addresses the U.S. federal income tax consequences only to a stockholder that is (i) a citizen or individual resident of the United States, (ii) a corporation organized in or under the laws of the United States or any state thereof or the District of Columbia or otherwise subject to U.S. federal income taxation on a net income basis in respect of our common stock, (iii) a trust if (1) a U.S. court is able to exercise primary supervision over administration of such trust and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) it has a valid election in place to be treated as a U.S. person, or (iv) an estate whose income is subject to U.S. federal income taxation regardless of its source. This discussion addresses only those shareholders who hold their pre-reverse stock split shares as "capital assets" as defined in the Code (generally, property held for investment), and will hold the shares received in the reverse

TABLE OF CONTENTS

stock split as capital assets. Further, it does not address any state, local, foreign or other income tax consequences, nor does it address the tax consequences to shareholders that are subject to special tax rules, such as, without limitation, shareholders who are subject to the alternative minimum tax, banks, insurance companies, regulated investment companies, personal holding companies, shareholders who are not "United States persons" as defined in Section 7701(a)(30) of the Code, U.S. persons whose functional currency is not the U.S. dollar, broker-dealers, tax-exempt entities, or S corporations, partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (or investors therein). If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds pre-reverse stock split shares of our stock, the U.S. federal income tax treatment of a partner of the partnership will depend on the status of the partner and the activities of the partnership and upon certain determinations made at the partnership level. Partners in partnerships holding our common stock are urged to consult their own tax advisors about the U.S. federal income tax consequences of the reverse stock split.

Stockholders are advised to consult their own tax advisers regarding the U.S. federal income tax consequences of the reverse stock split in light of their personal circumstances and the consequences under state, local and foreign tax laws, and also as to any estate or gift tax considerations.

Exchange Pursuant to Reverse Stock Split

No gain or loss will be recognized by a stockholder upon such stockholder's exchange of pre-reverse stock split shares for post-reverse stock split shares pursuant to the reverse stock split, except to the extent of cash, if any, received in lieu of fractional shares, further described in "*Cash in Lieu of Fractional Shares*" below. The aggregate tax basis of the post-reverse stock split shares received in the reverse stock split, including any fractional share deemed to have been received, will be equal to the aggregate tax basis of the pre-reverse stock split shares exchanged therefor, and the holding period of the post-reverse stock split shares will include the holding period of the pre-reverse stock split shares.

Cash in Lieu of Fractional Shares

A stockholder who receives cash in lieu of a fractional share of post-reverse stock split shares should generally be treated as having received such fractional share pursuant to the reverse stock split and then as having exchanged such fractional share for cash in a redemption of such fractional share. The amount of any gain or loss should be equal to the difference between the ratable portion of the tax basis of the pre-reverse stock split shares exchanged in the reverse stock split that is allocated to such fractional share and the cash received in lieu thereof. In general, any such gain or loss will constitute a long-term capital gain or loss if the stockholder's holding period for such pre-reverse stock split shares exceeds one year at the time of the reverse stock split. Deductibility of capital losses by holders is subject to limitations. Depending on a stockholder's individual facts and circumstances, it is possible that cash received in lieu of a fractional share could be treated as a distribution under Section 301 of the Code, so stockholders should consult their own tax advisors as to that possibility and the resulting tax consequences to them in that event.

The Company will not recognize any gain or loss as a result of the reverse stock split.

The Board recommends that you vote FOR the approval of the Certificate of Amendment to effect the reverse stock split.

PROPOSAL 2 – ADJOURNMENT OF SPECIAL MEETING

The Board has approved the submission to the stockholders of a proposal to approve one or more adjournments of the special meeting in the event that there is not a sufficient number of votes at the special meeting to approve Proposal 1. In order to permit proxies that have been timely received to be voted for such adjournments, we are submitting this proposal as a separate matter for your consideration. If it is necessary to adjourn the special meeting, the adjournment is for a period of less than 30 days and the record date remains unchanged, no notice of the time and place of the reconvened meeting will be given to stockholders, other than an announcement made at the special meeting.

The Board recommends that you vote FOR the adjournment of the special meeting if there are insufficient votes to approve Proposal 1.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding the beneficial ownership (as defined in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”)) of our common stock as of September 1, 2017 by (i) each of the directors and named executive officers, (ii) all of the directors and executive officers as a group, and (iii) to our knowledge, beneficial owners of more than 5% of our common stock. As of September 1, 2017, there were 12,516,338 shares of our common stock outstanding. Unless otherwise indicated and subject to applicable community property laws, each owner has sole voting and investment powers with respect to the securities listed below.

Name of Beneficial Owner	Number of Shares	Right to Acquire (1)	Total	Aggregate Percent of Class (2)
John L. Erb	115,468	109,061	224,529	1.8%
Steve Brandt	1,437	3,119	4,556	*
Matthew E. Likens	1,437	3,119	4,556	*
Jon W. Salveson	1,416	4,486	5,902	*
Gregory D. Waller	1,535	4,044	5,579	*
Warren S. Watson	1,416	4,424	5,840	*
Claudia Drayton	739	3,361	4,100	*
All directors and named executive officers as a group (7 persons)	123,448	131,614	255,062	2.0%
Sabby Management, LLC(3) 10 Mountainview Road, Suite 205 Upper Saddle River, New Jersey 07458	154,348	5,137,917	5,292,265	30.0%
Ki Young Choi(4) 36 Great Circle Drive Mill Valley, California 94941	1,653,253	—	1,653,253	13.2%

* Less than one percent.

- (1) Amounts reflect the number of shares that such holder could acquire through (i) the exercise of outstanding stock options, (ii) the vesting/settlement of outstanding RSUs and (iii) the exercise of outstanding warrants to purchase common stock, in each case within 60 days after September 1, 2017.
- (2) Based on 12,516,338 shares outstanding as of September 1, 2017.
- (3) Share ownership based on information provided by Sabby Management, LLC as of March 13, 2017. Shares subject to right to acquire based on warrant holder records of CHF Solutions, Inc.
- (4) Based on Schedule 13D/A filed by the reporting person with the SEC on August 17, 2017.

ADDITIONAL MATTERS

Other Matters

The Company is unaware of any business, other than as described in this proxy statement, that may be considered at the special meeting. If any other matters should properly come before the special meeting, it is the intention of the persons named in the accompanying form of proxy to vote the proxies held by them in accordance with their best judgment.

To assure the presence of the necessary quorum and to vote on the matters to come before the special meeting, please promptly indicate your choices via the Internet, or by mail, according to the procedures described on the proxy card. The submission of a proxy via the internet, or by mail does not prevent you from attending and voting at the special meeting.

The Company's common stock is quoted on The Nasdaq Capital Market under the symbol "CHFS".

Requirements for Submission of Stockholder Proposals and Nominations for 2018 Annual Meeting

Under the rules of the SEC, if a stockholder wants us to include a proposal in our proxy statement and form of proxy for presentation at our 2018 annual meeting of stockholders (pursuant to Rule 14a-8 of the Exchange Act), the proposal must be received by us at our principal executive offices (Secretary, CHF Solutions, Inc., 12988 Valley View Road, Eden Prairie, MN 55344) by the close of business on December 14, 2017. As the rules of the SEC make clear, simply submitting a proposal does not guarantee that it will be included.

Any stockholder director nomination or proposal of other business intended to be presented for consideration at the 2018 annual meeting, but not intended to be considered for inclusion in our proxy statement and form of proxy relating to such meeting (i.e. not pursuant to Rule 14a-8 of the Exchange Act), must be received by us at the address stated above not less than 90 days and not more than 120 days before the first anniversary of the date of the 2017 annual meeting. Therefore, such notice must be received between January 25, 2018 and the close of business on February 24, 2018 to be considered timely. However, if our 2018 annual meeting occurs more than 30 days before or more than 30 days after May 25, 2018, we must receive nominations or proposals (i) not later than the close of business on the later of the 90th day prior to the date of the 2018 annual meeting or the 10th day following the day on which public announcement is made of the date of the 2018 annual meeting, and (ii) not earlier than the 120th day prior to the 2018 annual meeting.

The above-mentioned proposals must also be in compliance with our Bylaws and the proxy solicitation rules of the SEC and Nasdaq, including but not limited to the information requirements set forth in our Bylaws. We reserve the right to reject, rule out of order or take other appropriate action with respect to any proposal that does not comply with the foregoing and other applicable requirements.

Solicitation by Board; Expenses

Our Board of Directors is sending you this proxy statement in connection with the solicitation of proxies for use at the special meeting. We have retained Morrow Sodali LLC to assist in the solicitation of proxies for a fee of approximately \$8,500 plus reimbursement for out-of-pocket expenses. In addition, our directors, officers and regular employees may solicit proxies personally, telephonically, electronically or by other means of communication, but they will not receive any additional compensation for these services. We will pay the cost of preparing, assembling, and mailing the proxy materials. We have requested brokers, banks and other nominees to send the proxy materials to, and to obtain proxies from, the beneficial owners and we will reimburse such record holders for their reasonable expenses in doing so.

**Important Notice Regarding the Availability of Proxy Materials for the
Stockholder Meeting to be Held on October 10, 2017**

The proxy statement and proxy card are available at <http://www.astproxyportal.com/ast/21259>.

Your cooperation in giving this matter your immediate attention and in voting your proxies promptly is appreciated.

By Order of the Board of Directors,

Claudia Drayton
Secretary
September 8, 2017

**CERTIFICATE OF AMENDMENT
TO THE
FOURTH AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
CHF SOLUTIONS, INC.**

CHF Solutions, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), does hereby certify:

FIRST: That the Board of Directors of the Corporation duly adopted resolutions to amend its Fourth Amended and Restated Certificate of Incorporation as follows, declaring said amendment to be advisable and calling for submission of said resolution to a vote of the stockholders of said Corporation;

SECOND: That thereafter, at a meeting duly called and held upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware, the stockholders of the Corporation duly voted a majority of the outstanding stock of the Corporation entitled to vote thereon in favor of adoption of said amendment; and

THIRD: That said amendment being duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware, the Fourth Amended and Restated Certificate of Incorporation of CHF Solutions, Inc., as previously amended, is hereby amended as follows:

Paragraph A of ARTICLE IV, AUTHORIZED STOCK AND RELATIVE RIGHTS, as amended to date, is hereby deleted in its entirety and replaced by the following:

"The Corporation is authorized to issue two classes of stock to be designated, respectively, "**Common Stock**" and "**Preferred Stock**". The total number of shares that the Corporation is authorized to issue is One Hundred Forty Million (140,000,000) shares, each with a par value of \$0.0001 per share. One Hundred Million (100,000,000) shares shall be Common Stock and Forty Million (40,000,000) shares shall be Preferred Stock. Upon the filing and effectiveness (the "**Effective Time**") pursuant to the General Corporation Law of the State of Delaware (the "**DGCL**") of this Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation of the Corporation, as previously amended (the "**Restated Certificate**"), each _____ shares of the Corporation's Common Stock issued and outstanding immediately prior to the Effective Time shall, automatically and without any action on the part of the Corporation or respective holders thereof, be combined and converted into one (1) validly issued, fully paid and non-assessable share of Common Stock; provided, however, that the Corporation shall issue no fractional shares as a result of the actions set forth herein but shall instead pay to the holder of such fractional share a sum in cash equal to such fraction multiplied by the closing sales price of the Common Stock as reported on The Nasdaq Capital Market on the last trading day before the Effective Time."

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be signed by its Chief Executive Officer this _____ day of _____, 2017.

CHF SOLUTIONS, INC.

By: _____
_____, _____



SPECIAL MEETING OF STOCKHOLDERS OF

CHF SOLUTIONS, INC.

October 10, 2017 8:30 a.m. U.S. Central Time

PROXY VOTING INSTRUCTIONS

INTERNET - Access "www.voteproxy.com" and follow the on-screen instructions or scan the QR code with your smartphone. Have your proxy card available when you access the web page.



Vote online until 12:00 a.m. U.S. Central Time on October 10, 2017.

MAIL - Sign, date and mail your proxy card in the envelope provided as soon as possible.

IN PERSON - You may vote your shares in person by attending the Special Meeting.

GO GREEN - e-Consent makes it easy to go paperless. With e-Consent, you can quickly access your proxy material, statements and other eligible documents online, while reducing costs, clutter and paper waste. Enroll today via www.astfinancial.com to enjoy online access.

COMPANY NUMBER	
ACCOUNT NUMBER	

NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL: The Notice of Meeting, proxy statement and proxy card are available at <http://www.astproxyportal.com/ast/21259>

Please detach along perforated line and mail in the envelope provided IF you are not voting via the Internet.

00030300000000001000 7

101017

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSAL 1 AND "FOR" PROPOSAL 2. PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE

- To approve an amendment to the Company's Fourth Amended and Restated Certificate of Incorporation, as amended, to effect a reverse split of the Company's outstanding common stock at a ratio in the range of one-for-ten (1:10) to one-for-twenty (1:20), to be determined at the discretion of the Company's Board of Directors.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- To authorize one or more adjournments of the special meeting to solicit additional proxies in the event there are insufficient votes to approve Proposal 1.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: Such other business as may properly come before the special meeting or any adjournment thereof.
The undersigned acknowledges receipt from the Company before the execution of this proxy of the Proxy Statement for the Special Meeting of Stockholders.

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

MARK "X" HERE IF YOU PLAN TO ATTEND THE MEETING.

Signature of Stockholder _____ Date: _____ Signature of Stockholder _____ Date: _____

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

CHF SOLUTIONS, INC.

12988 Valley View Road
Eden Prairie, MN 55344

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoints Claudia Drayton and Gordon Weber as proxies, each with full power of substitution, to represent and vote as designated on the reverse side, all the shares of Common Stock of CHF Solutions, Inc. held of record by the undersigned on September 1, 2017, at the Special Meeting of Stockholders to be held at the offices of CHF Solutions, Inc. located at 12988 Valley View Road, Eden Prairie, Minnesota 55344, on Tuesday, October 10, 2017 at 8:30 a.m. U.S. Central Time, or any adjournment or postponement thereof.

(Continued and to be signed on the reverse side)



SPECIAL MEETING OF STOCKHOLDERS OF

CHF SOLUTIONS, INC.

October 10, 2017 8:30 a.m. U.S. Central Time

GO GREEN

e-Consent makes it easy to go paperless. With e-Consent, you can quickly access your proxy material, statements and other eligible documents online, while reducing costs, clutter and paper waste. Enroll today via www.astfinancial.com to enjoy online access.

NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL:

The Notice of Meeting, proxy statement and proxy card are available at <http://www.astproxyportal.com/ast/21259>

Please sign, date and mail
your proxy card in the
envelope provided as soon
as possible.

↓ Please detach along perforated line and mail in the envelope provided. ↓

00030300000000001000 7

101017

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSAL 1 AND "FOR" PROPOSAL 2.
PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE

- | | | | |
|---|------------------------------|----------------------------------|----------------------------------|
| 1. To approve an amendment to the Company's Fourth Amended and Restated Certificate of Incorporation, as amended, to effect a reverse split of the Company's outstanding common stock at a ratio in the range of one-for-ten (1:10) to one-for-twenty (1:20), to be determined at the discretion of the Company's Board of Directors. | FOR <input type="checkbox"/> | AGAINST <input type="checkbox"/> | ABSTAIN <input type="checkbox"/> |
| 2. To authorize one or more adjournments of the special meeting to solicit additional proxies in the event there are insufficient votes to approve Proposal 1. | FOR <input type="checkbox"/> | AGAINST <input type="checkbox"/> | ABSTAIN <input type="checkbox"/> |

NOTE: Such other business as may properly come before the special meeting or any adjournment thereof.
The undersigned acknowledges receipt from the Company before the execution of this proxy of the Proxy Statement for the Special Meeting of Stockholders.

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

MARK "X" HERE IF YOU PLAN TO ATTEND THE MEETING.

Signature of Stockholder _____ Date: _____ Signature of Stockholder _____ Date: _____

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, attorney, trustee or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.