

2017 ANNUAL MEETING OF SHAREHOLDERS OF  
**GREEN BANCORP, INC.**

May 24, 2017

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**NOTICE OF INTERNET AVAILABILITY OF PROXY MATERIAL:**

The Notice of Meeting, proxy statement and proxy card are available at <http://proxy.greenbank.com>

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. ↓

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**THE BOARD OF DIRECTORS RECOMMENDS THAT YOU VOTE "FOR" EACH OF THE NOMINEES LISTED IN ITEM 1 AND "FOR" ITEM 2. PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE**

1. Election of Directors: Election of three (3) directors of Class III to serve on the Board of Directors of the Company until the Company's 2020 Annual Meeting of Shareholders, each until their successors are duly elected and qualified, or until their earlier resignation or removal.

FOR ALL NOMINEES

**NOMINEES:**

- Alan M. Silberstein
- Robert B. B. Smith
- Derek Weiss

WITHHOLD AUTHORITY FOR ALL NOMINEES

FOR ALL EXCEPT (See instructions below)

2. Proposal to ratify the appointment of Deloitte & Touche LLP as the independent registered public accounting firm of the Company for the year ending December 31, 2017. FOR  AGAINST  ABSTAIN

These items of business are more fully described in the proxy statement.

**INSTRUCTIONS:** To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT" and fill in the circle next to each nominee you wish to withhold, as shown here: ●

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 Shareholder

Date:

Signature of Shareholder

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.

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## **GREEN BANCORP, INC.**

**2017 Annual Meeting of Shareholders to be held on Wednesday, May 24, 2017**

**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS.**

The 2017 Annual Meeting of Shareholders of Green Bancorp, Inc. (the "Company") will be held in the Juniper Room of the Houstonian Hotel, 111 North Post Oak Lane, Houston, Texas 77024, on May 24, 2017, beginning at 8:30 a.m. Central Daylight Savings Time. The undersigned hereby acknowledges receipt of the related Notice of 2017 Annual Meeting of Shareholders and Proxy Statement dated April 14, 2017 accompanying this proxy.

The undersigned shareholder hereby appoints Manuel J. Mehos and Geoffrey D. Greenwade and each of them, attorneys and agents, with full power of substitution, to vote as proxy all shares of common stock, par value \$0.01 per share, of the Company owned of record by the undersigned and otherwise to act on behalf of the undersigned at the 2017 Annual Meeting of Shareholders and any adjournment or postponement thereof in accordance with the directions set forth herein and with discretionary authority with respect to such other matters as may properly come before such meeting or any adjournment or postponement thereof, including, without limitation, any matter presented by a shareholder at such meeting for which advance notice was not received by the Company in accordance with the Company's Amended and Restated Bylaws.

This proxy is solicited by the Board of Directors of the Company and will be voted in accordance with the undersigned's directions set forth herein. If no direction is made, this proxy will be voted (1) FOR the election of all nominees for director named herein and (2) FOR the proposal to ratify the appointment of Deloitte & Touche LLP as the independent registered public accounting firm of the Company for the year ending December 31, 2017.

**This proxy is solicited on behalf of the Board of Directors of the Company and will be voted FOR items 1 and 2 unless otherwise indicated.**

**(Continued and to be signed on the reverse side.)**