UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

☐ Preliminary Proxy Statement

☐ **Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**

☐ Definitive Proxy Statement

☒ Definitive Additional Materials

☐ Soliciting Material Pursuant to §240.14a-12

DESTINATION XL GROUP, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check all boxes that apply):

☐ No fee required

☒ Fee paid previously with preliminary materials

☐ Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11

Destination XL Group Files Definitive Proxy Statement and Mails Letter to Stockholders

DXL Board Believes FullBeauty Transaction is Not in Best Interest of Stockholders and Recommends that Stockholders Vote Today Against the Issuance Proposal

CANTON, Mass., November 17, 2026 — Destination XL Group, Inc. ("DXL" or the "Company") (NASDAQ: DXLG) today announced that it has filed its definitive proxy statement with the U.S. Securities and Exchange Commission (the "SEC") in connection with its proposed merger with FBB Holdings I, Inc., including a proposal to approve the issuance of shares of DXL common stock as the merger consideration pursuant to the terms of the merger agreement.

DXL encourages DXL stockholders to vote their shares today. The DXL Board unanimously recommends that stockholders vote "AGAINST" the issuance proposal.

The definitive proxy statement can be found on DXL's investor relations website at investor.dxl.com or the SEC's website at www.sec.gov. DXL encourages DXL stockholders to read the definitive proxy statement carefully.

In connection with the filing of the definitive proxy statement, DXL has mailed the following letter to DXL stockholders:

November 16, 2026

Dear Fellow DXL Stockholders,

We need your vote. We are reaching out today because DXL is reaching an inflection point and your vote will determine the future of our Company and your investment.

Destination XL is a strong business. Over the last 25 years, we have built a differentiated leadership position in a traditionally underserved market through our relentless commitment to innovating and improving the way we serve the Big + Tall customer. With our proprietary fit, extensive selection of exclusive brands, strong financial position and the actions we are taking to navigate a dynamic market environment, we are poised to drive long-term growth and create stockholder value.

As you may know, in December 2025, DXL agreed to merge with FBB Holdings I, Inc. ("FullBeauty"). Since then, circumstances have changed materially. FullBeauty's operating performance and financial results have declined, its level of indebtedness has increased and the combined company's go-forward financing is materially less favorable. Based on its evaluation, **the DXL Board has determined the merger is no longer advisable and not in the best interests of DXL and its stockholders.**

On December 21, 2026, DXL will hold a Special Meeting related to our proposed merger with FullBeauty. One of the proposals included in the meeting is a proposal to approve the issuance of shares of DXL common stock as the consideration for the merger, which will determine whether we can complete the proposed merger.

Your vote is important, and we encourage you to vote today. Our Board of Directors unanimously recommends that DXL stockholders vote AGAINST the issuance proposal for the reasons detailed below and in the proxy statement.

THE BOARD BELIEVES THAT PROCEEDING WITH THE FULLBEAUTY MERGER IS NOT IN THE BEST INTEREST OF DXL STOCKHOLDERS

As articulated more fully in the definitive proxy statement, since we entered into our merger agreement with FullBeauty in December 2025, circumstances surrounding the transaction have changed materially. **The FullBeauty merger presents the combined company with risk due to:**

- **FullBeauty's continuing decline in operating performance and financial results.** Since we announced the merger, FullBeauty's operating performance and financial results have continued to decline, including lower-than-expected net sales, net income (loss), adjusted EBITDA and cash flow from operations as compared to both prior-year performance and prior projections (and the corresponding heightened risk that FullBeauty will not achieve its projections for the current fiscal year).

- **FullBeauty's increased level of indebtedness.** FullBeauty's indebtedness raises concerns regarding leverage and execution risk, including the potential constraints that a more highly leveraged combined company could face with respect to financial flexibility, capital allocation, reinvestment in the business, and the ability to withstand adverse economic conditions.

- **New financing and our go-forward financial condition.** As detailed in the definitive proxy statement, on September 25, 2026, Bank of America notified DXL and FullBeauty that it would not extend its commitments beyond their October 14, 2026 expiration date and, as a result, would not proceed with underwriting the contemplated combined ABL facility. Although DXL has since entered into a commitment letter for replacement financing with Gordon Brothers, its terms are materially less favorable, including significant prepayment penalties, and there is a risk that such replacement financing may not be consummated within the required timeframe, or at all.

Simply put, the DXL Board determined that, taken together, the risks and uncertainties associated with the merger outweighed the potential benefits of the transaction on the existing terms.

Moreover, the DXL Board reevaluated whether the percentage of the combined company that would be held by DXL stockholders remained appropriate and continued to reflect the relative values of DXL and FullBeauty. Based on FullBeauty's increased level of indebtedness, the DXL Board believes FullBeauty may have negative equity value and, accordingly, the merger under its existing terms would result in **substantial economic dilution** to DXL stockholders.

In short, the DXL Board has determined that the merger, on the terms currently contemplated, is not in the best interests of DXL and its stockholders and recommends that stockholders vote **AGAINST** the issuance proposal.

YOUR VOTE MATTERS: VOTE TODAY

Regardless of how many shares you own, your vote matters. We encourage you to vote. The **DXL Board unanimously recommends that DXL stockholders vote (i) "AGAINST" the issuance proposal, (ii) "FOR" the reverse stock split proposal, (iii) "FOR" the 2016 plan proposal 3A and "FOR" proposal 3B, and (iv) "FOR" the adjournment proposal.**

The Special Meeting to vote on the merger proposal is separate from our Annual Meeting of Stockholders, which is scheduled for December 17, 2026. We encourage stockholders to submit their votes for each meeting.

You can vote online, by phone or by signing and returning the enclosed proxy card.

Thank you for your continued support of DXL.

Sincerely,
Lionel F. Conacher
Chairman and Interim CEO

The Special Meeting of DXL Stockholders to consider and vote on the issuance proposal relating to the merger agreement with FullBeauty has been scheduled for December 21, 2026 at 11:30 am ET. DXL stockholders of record as of the close of business on November 13, 2026 will be entitled to vote at the Special Meeting.

If you have questions or need assistance voting your shares, please contact DXL's proxy solicitation firm:

MACKENZIE PARTNERS, INC.
7 Penn Plaza, Suite 503
New York, New York 10001
Tel (for stockholders): (800) 322-2885
Tel (for banks or brokers): (212) 929-5500
Email: proxy@mackenziepartners.com

Advisors

Guggenheim Securities, LLC is acting as financial advisor to DXL, Greenberg Traurig, LLP is acting as its legal advisor and Joele Frank, Wilkinson Brimmer Katcher is serving as its strategic communications advisor.

About Destination XL Group, Inc.

Destination XL Group, Inc. is the leading retailer of Men's Big + Tall apparel that provides the Big + Tall man the freedom to choose his own style. Subsidiaries of Destination XL Group, Inc. operate DXL Big + Tall retail and outlet stores and Casual Male XL retail and outlet stores throughout the United States, and an e-commerce website, DXL.COM, and mobile app, which offer a multi-channel solution similar to the DXL store experience with the most extensive selection of online products available anywhere for Big + Tall men. DXL is headquartered in Canton, Massachusetts, and its common stock is listed on the Nasdaq Capital Market under the symbol "DXLG." For more information, please visit DXL's investor relations website: https://investor.dxl.com.

Forward-Looking Statements

Certain statements and information contained in this press release and the letter to stockholders constitute forward-looking statements under the federal securities laws, including statements regarding the DXL Board's belief that the merger and the issuance proposal are no longer advisable and are not in the best interests of DXL and its stockholders; the DXL Board's voting recommendations; the DXL Board's belief regarding the risks the merger presents to the combined company, including those relating to FullBeauty's operating performance and financial results, FullBeauty's increased level of indebtedness, and uncertainty about the combined company's go-forward financial condition; the DXL Board's determination that, taken together, the risks and uncertainties associated with the merger outweighed the potential benefits of the transaction on the existing terms; the DXL Board's belief that FullBeauty may have negative equity value and that the merger under its existing terms would result in substantial economic dilution to DXL stockholders; the availability and terms of replacement financing under the Gordon Brothers commitment letter, including the risk that such replacement financing may not be consummated within the required timeframe, or at all, the satisfaction of the conditions to funding, and the risk that the combined company may have insufficient liquidity to support its operations

following completion of the merger; the actions we are taking to navigate a dynamic market environment; and our belief in our ability to drive long-term growth and create stockholder value.

The discussion of forward-looking information requires the management of DXL to make certain estimates and assumptions regarding DXL's strategic direction and the effect of such plans on DXL's financial results. DXL's actual results and the implementation of its plans and operations may differ materially from forward-looking statements made by DXL. DXL encourages readers of forward-looking information concerning DXL to refer to its filings with the SEC, including without limitation, its Annual Report on Form 10-K filed on March 19, 2026, its Amendment No. 1 to Annual Report on Form 10-K/A filed on May 26, 2026, its definitive proxy statement on Schedule 14A filed on November 16, 2026, its Quarterly Reports on Form 10-Q and other filings with the SEC that set forth certain risks and uncertainties that may have an impact on future results and the direction of DXL, including risks relating to changes in consumer spending in response to economic factors; the impact of inflation with rising costs and high interest rates; the impact of tariffs; the impact of ongoing worldwide conflicts on the global economy; potential labor shortages; DXL's ability to grow its market share, predict customer tastes and fashion trends, forecast sales growth trends, and compete successfully in the U.S. men's big and tall apparel market; and the proposed merger with FullBeauty, including uncertainty as to whether the merger will be completed, the outcome of the stockholder vote on the issuance proposal, the availability and terms of financing for the combined company, the outcome of pending or future litigation relating to the merger, including claims asserted by FullBeauty, and related expenses.

Forward-looking statements contained in this press release and the letter to stockholders speak only as of the date of this release. Subsequent events or circumstances occurring after such date may render these statements incomplete or out of date. DXL undertakes no obligation and expressly disclaims any duty to update such statements, except as otherwise required by applicable law.

Important Information and Where to Find It

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval. This communication may be deemed to be solicitation material in respect of the proposed merger between DXL and FullBeauty. In connection with the merger, DXL filed a definitive proxy statement on Schedule 14A with the SEC on November 16, 2026 (the "Proxy Statement"), which has been mailed to the stockholders of DXL in connection with their votes on the issuance of common stock of DXL ("DXL Common Stock") in the merger and the other proposals described therein. INVESTORS AND SECURITY HOLDERS ARE ADVISED TO READ THE PROXY STATEMENT (AND ANY OTHER DOCUMENTS FILED WITH THE SEC IN CONNECTION WITH THE MERGER OR INCORPORATED BY REFERENCE INTO THE PROXY STATEMENT) BECAUSE SUCH DOCUMENTS CONTAIN IMPORTANT INFORMATION REGARDING THE MERGER AND RELATED MATTERS. Investors and security holders may obtain these documents, and any other documents DXL has filed with the SEC, free of charge at the SEC's website, www.sec.gov, or by accessing DXL's website at investor.dxl.com. In addition, documents filed with the SEC by DXL will be available free of charge by writing to DXL at 555 Turnpike Street, Canton, Massachusetts 02021, Attention: Corporate Secretary.

Participants in the Solicitation

DXL and certain of its directors and executive officers may be deemed to be participants in the solicitation of proxies from the stockholders of DXL in connection with the merger. Information about DXL's directors and executive officers, including a description of their direct or indirect interests, by security holdings or otherwise, is set forth in DXL's Annual Report on Form 10-K/A, which was filed with the SEC on May 26, 2026, including under the headings "Director Compensation," "Compensation Discussion and Analysis," "Executive Compensation," and "Security Ownership of Management," and in the Proxy Statement, including under the headings "Merger—Interests of DXL's Directors and Executive Officers in the Merger," "DXL's Executive Compensation," "Executive Officers and Directors Following the Merger" and "Principal Stockholders of DXL." To the extent holdings of DXL Common Stock by the directors and executive officers of DXL have changed from the amounts of DXL Common Stock held by such persons as reflected therein, such changes have been or will be reflected on Initial Statements of Beneficial Ownership of Securities on Form

3, Statements of Changes in Beneficial Ownership on Form 4 or Annual Statements of Changes in Beneficial Ownership of Securities on Form 5, in each case filed with the SEC.

FullBeauty and its chief executive officer may be deemed to be participants in the solicitation of proxies from the stockholders of DXL in connection with the merger. Information about FullBeauty and its chief executive officer can be found in the Form 8-K filed by DXL with the SEC on December 11, 2025 and in the Proxy Statement, including under the heading “Executive Officers and Directors Following the Merger.”

Additional information regarding the participants in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, is contained in the Proxy Statement. Free copies of this document may be obtained as described above.

No Offer or Solicitation

This communication shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the U.S. Securities Act of 1933, as amended.

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