

**CERTIFICATE OF ASSISTANT SECRETARY  
OF  
THE NORTHERN TRUST COMPANY**

The undersigned, Robert F. Draths, Jr., does hereby certify that:

1. He or She is a duly elected, qualified and acting Assistant Secretary of The Northern Trust Company (the "Northern"), a company duly organized and existing and in good standing under the laws of the State of Illinois, and that as such Assistant Secretary he or she has custody of the corporate records of the Northern and the corporate seal.

2. Attached hereto as Exhibit A is a full, true and correct copy of an extract from the By-Laws and Executive Instruction No. X-237 of the Northern which are in full force and effect on the date hereof.

3. The persons whose names, titles and signatures appear on the Incumbency and Signature Schedule of the Northern attached hereto as Exhibit B are duly elected qualified and acting officers of the Northern and hold on the date hereof the offices set opposite their respective names in Exhibit B and the signatures therein appearing opposite their respective names are the genuine signatures of such officers.

**IN WITNESS WHEREOF**, the undersigned has hereunto set his hand and affixed the seal of The Northern Trust Company this 9<sup>th</sup> day of August, 2021.



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Assistant Secretary  
as aforesaid

(Corporate Seal)

EXTRACT FROM THE BY-LAWS OF  
THE NORTHERN TRUST COMPANY  
CHICAGO, ILLINOIS

ARTICLE VI  
SECTIONS 9, 12, 14 and 18

**SECTION 9. *REAL AND PERSONAL PROPERTY.*** Any Vice President, any Senior Vice President, any Executive Vice President, any Vice Chairman of the Board, the Cashier, the President, or the Chairman of the Board, whether acting for the Company itself or acting for the Company in its fiduciary capacity or as agent, custodian or otherwise, is authorized and empowered to purchase, sell, lease, exchange, transfer, mortgage, receive or otherwise deal in real or personal property, and exercise any rights pertaining thereto, and any Second Vice President is also authorized to take any such action on behalf of the Company in its fiduciary capacity or as agent or custodian.

**SECTION 12. *SECURITIES.*** Any Second Vice President, any Vice President, any Senior Vice President, any Executive Vice President, any Vice Chairman of the Board, the Cashier, the President, or the Chairman of the Board, whether acting for the Company itself or acting for the Company in its fiduciary capacity or as agent, custodian or otherwise, is authorized and empowered to purchase, sell, trade or otherwise deal in drafts, acceptances, notes, stocks, bonds or other securities and interests therein, whether registered or unregistered, certificated or uncertificated, of every kind and description whatsoever, including United States Registered Bonds, or any other securities or similar instruments or property whatsoever, and to appoint one or more attorneys for such purposes.

**SECTION 14. *OPERATIONS.*** Any Second Vice President, any Vice President, any Senior Vice President, any Executive Vice President, any Vice Chairman of the Board, the Cashier, the President, or the Chairman of the Board, whether acting for the Company itself or acting for the Company in its fiduciary capacity or as agent, custodian or otherwise, is authorized and empowered to receive payments; to sign and deliver checks, drafts, certificates of deposit, acceptances of trusts, appointments, designations or agencies, certifications, letters of credit, receipts for money, securities and other property, orders for the payment of money and for the delivery or transfer of securities; to indorse notes, bills, checks, drafts, certificates of deposits and acceptances, or other negotiable instruments; to enter into financial and currency contracts and deal in financial products; to guarantee signatures on transfers of securities or other instruments; to sign, countersign, certify, register, authenticate and identify bonds, debentures, notes, interim certificates, depository receipts, warrants, participation certificates, certificates of deposit, voting trust certificates, certificates of stock, or other corporate securities or similar instruments, and to generally manage or handle in anyway property of any description held or controlled by the Company in any fiduciary or agency capacity; to execute proxies, powers of attorney or of substitution, and other contracts covering transactions made in the ordinary course of business of the Company or in the exercise of its fiduciary or other duties.

**SECTION 18. *FURTHER AUTHORIZATIONS BY EXECUTIVE INSTRUCTIONS.*** Notwithstanding anything to the contrary appearing in the above Sections 9 through 16, by Executive Instructions, the Chief Executive Officer, or, in the absence of the Chief Executive Officer, the Chairman, the President or any Vice Chairman, may authorize and empower any officer or employee to exercise any of the powers or perform any of the functions specified therein, within such limits, if any, as may be set forth in such Executive Instructions.

STATEMENT OF AUTHORITIES GRANTED TO  
OFFICERS EXERCISING TRUST POWERS  
UNDER EXECUTIVE INSTRUCTION X-237 OF  
THE NORTHERN TRUST COMPANY  
CHICAGO, ILLINOIS

Pursuant to Section 18 of Article VI of the By-Laws of The Northern Trust Company (the "Bank"), authority has been delegated by Executive Instruction X-237 of the Bank, dated as of October 27, 1997, to any Officer acting for the Bank in its fiduciary capacity, or as agent, custodian or otherwise, to take any of the following actions and exercise any of the following authorities:

**SECTION 9. *REAL AND PERSONAL PROPERTY.*** To purchase, sell, lease, exchange, transfer, mortgage, receive or otherwise deal in real or personal property, and exercise any rights pertaining thereto.

**SECTION 12. *SECURITIES.*** To purchase, sell, trade or otherwise deal in drafts, acceptances, notes, stocks, bonds or other securities and interests therein, whether registered or unregistered, certificated or uncertificated, of every kind and description whatsoever, or any securities or similar instruments or property whatsoever, and appoint one or more attorneys for such purposes.

**SECTION 14. *OPERATIONS.***

<b>Payments</b>	To receive payments.
<b>Checks and Receipts</b>	To sign and deliver checks, drafts, certificates of deposit, acceptances of trusts appointments, designations or agencies, certifications, receipts for money, securities and other property, orders for the payment of money by wire transfer or otherwise and for the delivery or transfer of securities.
<b>Indorsements</b>	To indorse notes, bills, checks, drafts, certificates of deposit and acceptances, or other negotiable instruments.
<b>Financial Products</b>	To enter into financial and currency contracts and deal in financial products.
<b>Guarantee signatures</b>	To guarantee signatures on transfers of securities or other instruments.
<b>Signing Instruments</b>	To sign, countersign, certify, register, authenticate and identify bonds, debentures, notes interim certificates, depository receipts, warrants, participation certificates, certificates of deposit, voting trust certificates, certificates of stock, or other corporate securities or similar instruments.
<b>Trust Property</b>	To generally manage or handle in any way property of any description held or controlled by the Bank in any fiduciary or agency capacity.
<b>Powers of Attorney and Contracts</b>	To execute proxies, powers of attorney or of substitution, and other contracts covering transactions made in the exercise of the Bank's fiduciary or other duties.

Exhibit A to Assistant Secretary's Certificate  
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INCUMBENCY AND SIGNATURE SCHEDULE  
OF THE NORTHERN TRUST COMPANY

NAME	TITLE	SIGNATURE
____Fred V. Zubb____	____Vice President____	
____Danu Thomas____	____Senior Vice President____	
____DongYi_Carvell____	____Vice_President____	
____Eric J. Doane____	____Vice_President____	
_____	_____	_____
_____	_____	_____

Exhibit B to Assistant Secretary's Certificate  
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