### FORM 4

☐ Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

☐ Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10.

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

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person *					2. Issuer Name and Ticker or Trading Symbol								5. Relationship of Reporting Person(s) to Issuer (Check all applicable)						
panying trevin ivi					LAKE SHORE BANCORP, INC. [ LSBK ]								_X_ Director	incable)		_ 10%	6 Owner		
(Last) (First) (Middle)				3.	3. Date of Earliest Transaction (MM/DD/YYYY)								Officer (give title below) Other (specify below) Chairman of the Board						
31 EAST FOURTH STREET						4/23/2024													
(Street)				4.	4. If Amendment, Date Original Filed (MM/DD/YYYY)								6. Individual or Joint/Group Filing (Check Applicable Line)						
DUNKIRK, NY 14048												X_Form filed by One Reporting Person Form filed by More than One Reporting Person							
(City) (State) (Zip)												Form fried by More than One Reporting Letson							
			Table I - I	Non-De	eriva	tive Sec	urities	Ac	quired	l, D	isposed o	f, or	Bene	eficially Owne	d				
1. Title of Security (Instr. 3)				Execu	Deemed 3. Trans. Coordinates (Instr. 8)		Code	or Dispo		rities Acquired (A osed of (D) 3, 4 and 5)		Follov	mount of Securities Beneficially Owned by owing Reported Transaction(s) and 4)  6.  Ownership Form: Beneficial Direct (D)  Ownership				irect neficial mership		
							Code		V Am	ount	(A) or (D)	Price					or Inc (I) (I: 4)	direct (In	str. 4)
Common Stock			4/23	/2024			A		1,1	90 (1	). A	\$0				15,536	I	D	
Common Stock																905	]	I for	Custodian andchildren
	Tal	ble II - Der	ivative Se	curities	s Ben	eficially	Owne	ed (	<i>e.g.</i> , p	uts,	calls, wa	ırrar	ıts, oj	ptions, conver	tible secu	ırities)			
1. Title of Derivate Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Trans. Date	3A. Deemed Execution Date, if any	4. Trans Code (Instr. 8		5. Number of Derivative Securi Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			6. Date Exe Expiration I		Date Securi Deriva		le and Amount of rities Underlying vative Security . 3 and 4)		Derivative Security	Securitie Beneficia Owned	e s ally	10. Ownershi Form of Derivativ Security:	Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D		Date Exercisa		Expiration Date	Title		Amount or Number of Shares		Followin Reported Transacti (Instr. 4)	Ĭ	Direct (D or Indirec (I) (Instr. 4)	
Stock Option (Right to Buy)	\$10.69	4/23/2024		A		1,8	97		(2)		4/22/2034	Common Stock		1,897	\$0	12,646		D	
Stock Option (Right to Buy)	\$14.38								(3)		10/21/2026		nmon ock	10,749		12	2,646	D	

### **Explanation of Responses:**

- (1) Shares of restricted stock vest on April 23, 2025
- (2) Stock options vest at a rate of 20% per year commencing on April 23, 2025
- (3) Stock options are fully vested

### **Reporting Owners**

Panarting Owner Name / Address	Relationships							
Reporting Owner Name / Address	Director	10% Owner	Officer	Other				
Sanvidge Kevin M. 31 EAST FOURTH STREET	v			Chairman of the Board				
DUNKIRK, NY 14048	A			Chairman of the Board				

/s/ Taylor M. Gilden, Pursuant to Power of Attorney

4/25/2024

\*\*Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- \* If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.