

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

**FORM 10-Q**

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2024  
or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from                      to  
Commission File No. 001-7784

**LUMEN<sup>®</sup>**

**LUMEN TECHNOLOGIES, INC.**  
(Exact name of registrant as specified in its charter)

**Louisiana**

(State or other jurisdiction of  
incorporation or organization)

**100 CenturyLink Drive,  
Monroe, Louisiana**

(Address of principal executive offices)

**72-0651161**

(I.R.S. Employer  
Identification No.)

**71203**

(Zip Code)

**(318) 388-9000**

(Registrant's telephone number, including area code)

**Securities registered pursuant to Section 12(b) of the Act:**

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value \$1.00 per share	LUMN	New York Stock Exchange
Preferred Stock Purchase Rights	N/A	New York Stock Exchange

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☒ Accelerated Filer ☐ Non-accelerated Filer ☐ Smaller Reporting Company ☐  
Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

On October 31, 2024, there were 1,014,812,246 shares of common stock outstanding.

## TABLE OF CONTENTS

	<a href="#">Special Note Regarding Forward-Looking Statements</a>	<a href="#">3</a>
<a href="#">Part I.</a>	<a href="#">Financial Information</a>	
<a href="#">Item 1.</a>	<a href="#">Financial Statements</a>	
	<a href="#">Consolidated Statements of Operations (Unaudited)</a>	<a href="#">6</a>
	<a href="#">Consolidated Statements of Comprehensive Loss (Unaudited)</a>	<a href="#">7</a>
	<a href="#">Consolidated Balance Sheets (Unaudited)</a>	<a href="#">8</a>
	<a href="#">Consolidated Statements of Cash Flows (Unaudited)</a>	<a href="#">9</a>
	<a href="#">Consolidated Statements of Stockholders' Equity (Unaudited)</a>	<a href="#">10</a>
	<a href="#">Notes to Consolidated Financial Statements (Unaudited)*</a>	<a href="#">11</a>
<a href="#">Item 2.</a>	<a href="#">Management's Discussion and Analysis of Financial Condition and Results of Operations</a>	<a href="#">45</a>
<a href="#">Item 3.</a>	<a href="#">Quantitative and Qualitative Disclosures About Market Risk</a>	<a href="#">69</a>
<a href="#">Item 4.</a>	<a href="#">Controls and Procedures</a>	<a href="#">69</a>
<a href="#">Part II.</a>	<a href="#">Other Information</a>	
<a href="#">Item 1.</a>	<a href="#">Legal Proceedings</a>	<a href="#">70</a>
<a href="#">Item 1A.</a>	<a href="#">Risk Factors</a>	<a href="#">70</a>
<a href="#">Item 2.</a>	<a href="#">Unregistered Sales of Equity Securities and Use of Proceeds</a>	<a href="#">71</a>
<a href="#">Item 6.</a>	<a href="#">Exhibits</a>	<a href="#">72</a>
<a href="#">Signature</a>		<a href="#">74</a>

---

\* All references to "Notes" in this quarterly report refer to these Notes to Consolidated Financial Statements.

## Special Note Regarding Forward-Looking Statements

This report and other documents filed by us under the federal securities law include, and future oral or written statements or press releases by us and our management may include, forward-looking statements about our business, financial condition, operating results or prospects. These "forward-looking" statements are defined by, and are subject to the "safe harbor" protections under the federal securities laws. These statements include, among others:

- forecasts of our anticipated future results of operations, cash flows or financial position;
- statements concerning our completed, pending or proposed transactions, investments, product development, transformation plans, participation in government programs, Private Connectivity Fabric<sup>SM</sup> and Quantum Fiber initiatives, deleveraging plans, and other initiatives, including benefits or costs associated therewith;
- statements about our liquidity, profitability, profit margins, tax position, tax assets, tax rates, asset values, contingent liabilities, growth opportunities, growth rates, acquisition and divestiture opportunities, business prospects, regulatory and competitive outlook, market share, product capabilities, investment and expenditure plans, business strategies, securities repurchase plans, leverage, capital allocation plans, financing or refinancing alternatives and sources, and pricing plans; and
- other similar statements of our expectations, beliefs, future plans and strategies, anticipated developments and other matters that are not historical facts, many of which are highlighted by words such as "may," "will," "would," "could," "should," "plans," "believes," "expects," "anticipates," "estimates," "forecasts," "projects," "proposes," "targets," "intends," "likely," "seeks," "hopes," or variations or similar expressions with respect to the future.

These forward-looking statements are based upon our judgment and assumptions as of the date such statements are made concerning future developments and events, many of which are beyond our control. These forward-looking statements, and the assumptions upon which they are based, (i) are not guarantees of future results, (ii) are inherently speculative and (iii) are subject to a number of risks and uncertainties. Actual events and results may differ materially from those anticipated, estimated, projected or implied by us in those statements if one or more of these risks or uncertainties materialize, or if our underlying assumptions prove incorrect. All of our forward-looking statements are qualified in their entirety by reference below to factors that could cause our actual results to differ materially from those anticipated, estimated, projected or implied by us in those forward-looking statements. These factors include but are not limited to:

- the effects of intense competition from a wide variety of competitive providers, including decreased demand for our more mature service offerings and increased pricing pressures;
- the effects of new, emerging or competing technologies, including those that could make our products less desirable or obsolete;
- our ability to successfully and timely attain our key operating imperatives, including simplifying and consolidating our network, simplifying and automating our service support systems, attaining our Quantum Fiber buildout schedule, replacing aging or obsolete plant and equipment, strengthening our relationships with customers and attaining projected cost savings;
- our ability to successfully and timely monetize our network related assets through leases, commercial service arrangements or similar transactions (including as part of our Private Connectivity Fabric<sup>SM</sup> solutions), including the possibility that the benefits of these initiatives may be less than anticipated, that the costs thereof may be more than anticipated or that we may be unable to satisfy any conditions of any such transactions in a timely manner, or at all;
- our ability to safeguard our network, and to avoid the adverse impact of cyber-attacks, security breaches, service outages, system failures, or similar events impacting our network or the availability and quality of our services;

- the effects of ongoing changes in the regulation of the communications industry, including the outcome of legislative, regulatory or judicial proceedings relating to content liability standards, intercarrier compensation, universal service, service standards, broadband deployment, data protection, privacy and net neutrality;
- our ability to generate cash flows sufficient to fund our financial commitments and objectives, including our capital expenditures, operating costs, debt obligations, taxes, pension contributions and other benefits payments;
- our ability to effectively retain and hire key personnel and to successfully negotiate collective bargaining agreements on reasonable terms without work stoppages;
- our ability to successfully adjust to changes in customer demand for our products and services, including increased demand for high-speed data transmission services and artificial intelligence services;
- our ability to successfully maintain the quality and profitability of our existing product and service offerings, to introduce profitable new offerings on a timely and cost-effective basis and to transition customers from our legacy products to our newer offerings;
- our ability to successfully and timely implement our corporate strategies, including our transformation, buildout and deleveraging strategies;
- our ability to successfully and timely realize the anticipated benefits from our 2022 and 2023 divestitures, and to successfully operate and transform our remaining business;
- changes in our operating plans, corporate strategies, or capital allocation plans, whether based upon changes in our cash flows, cash requirements, financial performance, financial position, market or regulatory conditions or otherwise;
- the impact of any future material acquisitions or divestitures that we may transact;
- the negative impact of increases in the costs of our pension, healthcare, post-employment or other benefits, including those caused by changes in capital markets, interest rates, mortality rates, demographics or regulations;
- the potential negative impact of customer or shareholder complaints, government investigations, security breaches or service outages impacting us or our industry;
- adverse changes in our access to credit markets on acceptable terms, whether caused by changes in our financial position, lower credit ratings, unstable markets, debt covenant restrictions or otherwise;
- our ability to meet the terms and conditions of our debt obligations and covenants, including our ability to make transfers of cash in compliance therewith;
- our ability to attain the anticipated benefits of our March 22, 2024 and September 24, 2024 debt transactions;
- our ability to maintain favorable relations with our security holders, key business partners, suppliers, vendors, landlords and lenders;
- our ability to timely obtain necessary hardware, software, equipment, services, governmental permits and other items on favorable terms;
- our ability to meet evolving environmental, social and governance ("ESG") expectations and benchmarks, and effectively communicate and implement our ESG strategies;

- the potential adverse effects arising out of allegations regarding the release of hazardous materials into the environment from network assets owned or operated by us or our predecessors, including any resulting governmental actions, removal costs, litigation, compliance costs, or penalties;
- our ability to collect our receivables from, or continue to do business with, financially-troubled customers;
- our ability to continue to use intellectual property used to conduct our operations;
- any adverse developments in legal or regulatory proceedings involving us;
- changes in tax, trade, pension, healthcare or other laws or regulations, in governmental support programs, or in general government funding levels, including those arising from governmental programs promoting broadband development;
- our ability to use our net operating loss carryforwards in the amounts projected;
- the effects of changes in accounting policies, practices or assumptions, including changes that could potentially require additional future impairment charges;
- the effects of adverse weather, terrorism, epidemics, pandemics, rioting, vandalism, societal unrest, political discord or other natural or man-made disasters or disturbances;
- the potential adverse effects if our internal controls over financial reporting have weaknesses or deficiencies, or otherwise fail to operate as intended;
- the effects of changes in interest rates or inflation;
- the effects of more general factors such as changes in exchange rates, in operating costs, in public policy, in the views of financial analysts, or in general market, labor, economic, public health or geopolitical conditions; and
- other risks referenced in the "Risk Factors" section or other portions of this report or other of our filings with the U.S. Securities and Exchange Commission (the "SEC").

Additional factors or risks that we currently deem immaterial, that are not presently known to us or that arise in the future could also cause our actual results to differ materially from our expected results. Given these uncertainties, investors are cautioned not to unduly rely upon our forward-looking statements, which speak only as of the date made. We undertake no obligation to publicly update or revise any forward-looking statements for any reason, whether as a result of new information, future events or developments, changed circumstances, or otherwise. Furthermore, any information about our intentions contained in any of our forward-looking statements reflects our intentions as of the date of such forward-looking statement, and is based upon, among other things, our assessment of regulatory, technological, industry, competitive, economic and market conditions as of such date. We may change our intentions, strategies or plans (including our capital allocation plans) at any time and without notice, based upon any changes in such factors or otherwise.

# PART I—FINANCIAL INFORMATION

## ITEM 1. FINANCIAL STATEMENTS

### LUMEN TECHNOLOGIES, INC. CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(Dollars in millions, except per share amounts, and shares in thousands)				
OPERATING REVENUE	\$ 3,221	3,641	9,779	11,040
OPERATING EXPENSES				
Cost of services and products (exclusive of depreciation and amortization)	1,692	1,850	4,997	5,407
Selling, general and administrative	696	791	2,261	2,302
Net loss on sale of business	—	22	17	112
Depreciation and amortization	707	755	2,198	2,234
Goodwill impairment	—	—	—	8,793
Total operating expenses	3,095	3,418	9,473	18,848
OPERATING INCOME (LOSS)	126	223	306	(7,808)
OTHER (EXPENSE) INCOME				
Interest expense	(351)	(295)	(1,015)	(868)
Net (loss) gain on early retirement of debt (Note 5)	(1)	—	277	618
Other income (expense), net	54	(13)	321	(37)
Total other expense, net	(298)	(308)	(417)	(287)
LOSS BEFORE INCOME TAXES	(172)	(85)	(111)	(8,095)
Income tax (benefit) expense	(24)	(7)	29	208
NET LOSS	(148)	(78)	(140)	(8,303)
BASIC AND DILUTED LOSS PER COMMON SHARE				
BASIC	\$ (0.15)	(0.08)	(0.14)	(8.45)
DILUTED	\$ (0.15)	(0.08)	(0.14)	(8.45)
WEIGHTED-AVERAGE COMMON SHARES OUTSTANDING				
BASIC	988,794	983,550	986,963	982,853
DILUTED	988,794	983,550	986,963	982,853

See accompanying notes to consolidated financial statements.

**LUMEN TECHNOLOGIES, INC.**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS**  
(UNAUDITED)

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2024</b>	<b>2023</b>	<b>2024</b>	<b>2023</b>
	<b>(Dollars in millions)</b>			
NET LOSS	\$ (148)	(78)	(140)	(8,303)
OTHER COMPREHENSIVE INCOME (LOSS):				
Items related to employee benefit plans:				
Change in net actuarial loss, net of \$(6), \$(6), \$(17) and \$(16) tax	18	16	52	47
Change in net prior service cost, net of \$1, \$1, \$3 and \$3 tax	(3)	(3)	(8)	(8)
Foreign currency translation adjustment, net of \$—, \$5, \$— and \$(3) tax	5	(17)	—	3
Other comprehensive income (loss)	20	(4)	44	42
COMPREHENSIVE LOSS	\$ (128)	(82)	(96)	(8,261)

See accompanying notes to consolidated financial statements.

**LUMEN TECHNOLOGIES, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
**(UNAUDITED)**

	September 30, 2024	December 31, 2023
	(Dollars in millions and shares in thousands)	
<u>ASSETS</u>		
CURRENT ASSETS		
Cash and cash equivalents	\$ 2,640	2,234
Accounts receivable, less allowance of \$60 and \$67	1,225	1,318
Other	871	1,223
Total current assets	4,736	4,775
Property, plant and equipment, net of accumulated depreciation of \$22,525 and \$21,318	20,344	19,758
GOODWILL AND OTHER ASSETS		
Goodwill	1,964	1,964
Other intangible assets, net	4,967	5,470
Other, net	1,978	2,051
Total goodwill and other assets	8,909	9,485
TOTAL ASSETS	\$ 33,989	34,018
<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>		
CURRENT LIABILITIES		
Current maturities of long-term debt	\$ 415	157
Accounts payable	905	1,134
Accrued expenses and other liabilities		
Salaries and benefits	700	696
Income and other taxes	434	251
Current operating lease liabilities	263	268
Interest	236	168
Other	179	213
Current portion of deferred revenue	808	647
Total current liabilities	3,940	3,534
LONG-TERM DEBT	18,142	19,831
DEFERRED CREDITS AND OTHER LIABILITIES		
Deferred income taxes, net	3,138	3,127
Benefit plan obligations, net	2,249	2,490
Deferred revenue	3,541	1,969
Other	2,637	2,650
Total deferred credits and other liabilities	11,565	10,236
COMMITMENTS AND CONTINGENCIES (Note 11)		
STOCKHOLDERS' EQUITY		
Preferred stock—non-redeemable, \$25.00 par value, authorized 2,000 and 2,000 shares, issued and outstanding 7 and 7 shares	—	—
Common stock, \$1.00 par value, authorized 2,200,000 and 2,200,000 shares, issued and outstanding 1,014,850 and 1,008,486 shares	1,015	1,008
Additional paid-in capital	18,140	18,126
Accumulated other comprehensive loss	(766)	(810)
Accumulated deficit	(18,047)	(17,907)
Total stockholders' equity	342	417
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 33,989	34,018

See accompanying notes to consolidated financial statements.



**LUMEN TECHNOLOGIES, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	Nine Months Ended September 30,	
	2024	2023
	(Dollars in millions)	
OPERATING ACTIVITIES		
Net loss	\$ (140)	(8,303)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	2,198	2,234
Net loss on sale of business	17	112
Goodwill impairment	—	8,793
Deferred income taxes	(6)	38
Provision for uncollectible accounts	54	77
Net gain on early retirement of debt	(277)	(618)
Debt modification costs and related fees	(80)	—
Gain on sale of investment	(205)	—
Unrealized loss on investments	10	96
Stock-based compensation	21	39
Changes in current assets and liabilities:		
Accounts receivable	39	3
Accounts payable	(212)	(147)
Accrued income and other taxes	440	(996)
Other current assets and liabilities, net	264	(196)
Retirement benefits	(185)	(9)
Change in deferred revenue	1,572	161
Changes in other noncurrent assets and liabilities, net	185	33
Other, net	(50)	59
Net cash provided by operating activities	3,645	1,376
INVESTING ACTIVITIES		
Capital expenditures	(2,316)	(2,279)
Proceeds from sale of business	15	3
Proceeds from sale of property, plant and equipment, and other assets	283	35
Other, net	19	9
Net cash used in investing activities	(1,999)	(2,232)
FINANCING ACTIVITIES		
Net proceeds from issuance of long-term debt	1,325	—
Payments of long-term debt	(2,069)	(145)
Net (payments) proceeds on revolving line of credit	(200)	75
Dividends paid	(3)	(10)
Debt issuance and extinguishment costs and related fees	(282)	(14)
Other, net	(12)	(7)
Net cash used in financing activities	(1,241)	(101)
Net increase (decrease) in cash, cash equivalents and restricted cash	405	(957)
Cash, cash equivalents and restricted cash at beginning of period	2,248	1,307
Cash, cash equivalents and restricted cash at end of period	\$ 2,653	350
Supplemental cash flow information:		
Income taxes refunded (paid), net	\$ 425	(1,289)
Interest paid (net of capitalized interest of \$130 and \$75)	\$ (877)	(886)
Supplemental noncash information regarding financing activities:		
Cancellation of senior unsecured notes as part of exchange offers (Note 5)	\$ —	(1,554)
Issuance of senior secured notes as part of exchange offers (Note 5)	\$ —	924
Cash, cash equivalents and restricted cash:		
Cash and cash equivalents	\$ 2,640	311
Cash and cash equivalents and restricted cash included in Assets held for sale	—	28
Restricted cash included in Other current assets	2	—
Restricted cash included in Other, net noncurrent assets	11	11
Total	\$ 2,653	350

See accompanying notes to consolidated financial statements.

**LUMEN TECHNOLOGIES, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
**(UNAUDITED)**

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2024</b>	<b>2023</b>	<b>2024</b>	<b>2023</b>
<b>(Dollars in millions except per share amounts)</b>				
<b>COMMON STOCK</b>				
Balance at beginning of period	\$ 1,016	1,008	1,008	1,002
Net issuance of common stock through incentive and benefit plans	(1)	1	7	7
Other	—	(1)	—	(1)
Balance at end of period	1,015	1,008	1,015	1,008
<b>ADDITIONAL PAID-IN CAPITAL</b>				
Balance at beginning of period	18,135	18,100	18,126	18,080
Shares withheld to satisfy tax withholdings	(4)	(1)	(5)	(5)
Stock-based compensation	10	16	21	39
Other	(1)	2	(2)	3
Balance at end of period	18,140	18,117	18,140	18,117
<b>ACCUMULATED OTHER COMPREHENSIVE LOSS</b>				
Balance at beginning of period	(786)	(1,053)	(810)	(1,099)
Other comprehensive income (loss)	20	(4)	44	42
Balance at end of period	(766)	(1,057)	(766)	(1,057)
<b>ACCUMULATED DEFICIT</b>				
Balance at beginning of period	(17,899)	(15,834)	(17,907)	(7,609)
Net loss	(148)	(78)	(140)	(8,303)
Balance at end of period	(18,047)	(15,912)	(18,047)	(15,912)
<b>TOTAL STOCKHOLDERS' EQUITY</b>	<b>\$ 342</b>	<b>2,156</b>	<b>342</b>	<b>2,156</b>

See accompanying notes to consolidated financial statements.

**LUMEN TECHNOLOGIES, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(UNAUDITED)

*References in the Notes to "Lumen Technologies" or "Lumen," "we," "us," the "Company," and "our" refer to Lumen Technologies, Inc. and its consolidated subsidiaries, unless the context otherwise requires.*

**Note 1— Background**

**General**

We are a facilities-based technology and communications company that provides a broad array of integrated products and services to our domestic and global business customers and our domestic mass markets customers. We operate one of the world's most interconnected networks. Our platform empowers our customers to swiftly adjust digital programs to meet immediate demands, create efficiencies, accelerate market access and reduce costs, which allows our customers to rapidly evolve their IT programs to address dynamic changes. Our specific products and services are detailed in Note 3—Revenue Recognition.

During 2022 and 2023, we divested components of our business, referenced herein as (i) the Europe, Middle East and Africa ("EMEA") business, divested November 1, 2023, (ii) the incumbent local exchange ("ILEC") business conducted in 20 Midwestern and Southeastern states, divested October 3, 2022 and (iii) the Latin American business, divested August 1, 2022. Refer to Note 2—Divestitures of the Latin American, ILEC and EMEA Businesses in our Annual Report on Form 10-K for the year ended December 31, 2023 for more information on these divestitures. As we determined that none of these divestitures represented a strategic shift for Lumen, they did not meet the criteria to be treated as discontinued operations and we continued to report our operating results for all three of the divested businesses in our consolidated operating results through their respective disposal dates.

**Basis of Presentation**

Our consolidated balance sheet as of December 31, 2023, which was derived from our audited consolidated financial statements, and our unaudited interim consolidated financial statements provided herein have been prepared in accordance with the instructions for Form 10-Q. Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") have been condensed or omitted pursuant to rules and regulations of the U.S. Securities and Exchange Commission ("SEC"). However, in our opinion, the disclosures made therein are adequate to make the information presented not misleading. We believe these consolidated financial statements include all normal recurring adjustments necessary to fairly present the results for the interim periods. The consolidated results of operations and cash flows for the first nine months of the year are not necessarily indicative of the consolidated results of operations and cash flows that might be expected for the entire year. These consolidated financial statements and the accompanying notes should be read in conjunction with the audited consolidated financial statements and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2023.

The accompanying consolidated financial statements include our accounts and the accounts of our subsidiaries in which we have a controlling interest. Intercompany amounts and transactions with our consolidated subsidiaries have been eliminated.

To simplify the overall presentation of our consolidated financial statements, we report immaterial amounts attributable to noncontrolling interests in certain of our subsidiaries as follows: (i) income attributable to noncontrolling interests in other income (expense), net, (ii) equity attributable to noncontrolling interests in additional paid-in capital and (iii) cash flows attributable to noncontrolling interests in other, net financing activities.

We reclassified certain prior period amounts to conform to the current period presentation, including the recategorization of our Business revenue by product category and sales channel in our segment reporting. See Note 3—Revenue Recognition and Note 10—Segment Information for additional information. These changes had no impact on total operating revenue, total operating expenses or net loss for any period.

During 2023, we identified errors in our previously reported consolidated financial statements related to accounts receivable and accounts payable which resulted in revisions to certain line items on our December 31, 2022 consolidated balance sheet. We recorded an increase to our accumulated deficit by \$63 million, reflected in our January 1, 2023 and September 30, 2023 accumulated deficit in our consolidated statements of stockholders' equity in this report. Refer to Note 1— Background and Summary of Significant Accounting Policies to the consolidated financial statements and accompanying notes in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023 for more information.

Operating lease assets are included in Other, net under Goodwill and Other Assets on our consolidated balance sheets. Noncurrent operating lease liabilities are included in Other under Deferred Credits and Other Liabilities on our consolidated balance sheets.

There was an immaterial amount of book overdrafts included in Accounts payable at September 30, 2024 and none at December 31, 2023.

### ***Change in Accounting Estimates***

Effective January 1, 2024, we changed our method of depreciation and amortization for ILEC and certain competitive local exchange carriers ("CLEC") fixed assets from the group method of depreciation to straight line by individual asset method. Historically, we have used the group method of depreciation for the property, plant and equipment and amortization of certain intangible capitalized software assets of our ILECs and certain CLECs. Under the group method, all like kind assets for each subsidiary were combined into common pools and depreciated under composite depreciation rates. Recent business divestitures and asset sales have significantly reduced our composite asset base. We believe the straight-line depreciation method for individual assets is preferable to the group method as it will result in a more precise estimate of depreciation expense and will result in a consistent depreciation method for all our subsidiaries. This change in the method of depreciation is considered a change in accounting estimate inseparable from a change in accounting principle and has resulted solely in prospective changes to our depreciation and amortization expense. This change in accounting estimate had an immaterial impact to our net (loss) income and diluted (loss) earnings per share for the three and nine months ended September 30, 2024.

Additionally, during the first quarter of 2024, we updated our analysis of economic lives of owned fiber network assets. As of January 1, 2024, we extended the estimated economic life and depreciation period of such assets from 25 years to 30 years to better reflect the physical life of the assets that we have experienced and absence of technological changes that would replace fiber. The change in accounting estimate decreased depreciation expense by approximately \$16 million, \$12 million net of tax, and \$48 million, \$36 million net of tax, for the three and nine months ended September 30, 2024, respectively, and resulted in an increase of \$0.01 and \$0.03, respectively, per diluted share for the three and nine months ended September 30, 2024.

### ***Summary of Significant Accounting Policies***

Refer to the significant accounting policies described in Note 1— Background and Summary of Significant Accounting Policies to the consolidated financial statements and accompanying notes in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023.

### ***Recently Adopted Accounting Pronouncements***

#### ***Supplier Finance Programs***

On January 1, 2023, we adopted Accounting Standards Update ("ASU") 2022-04, "*Liabilities-Supplier Finance Program (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*" ("ASU 2022-04"). These amendments require that a company that uses a supplier finance program in connection with the purchase of goods or services disclose sufficient information about the program to allow a user of financial statements to understand the program's nature, program activity during the period, changes from period to period and the potential magnitude of program transactions. The adoption of ASU 2022-04 did not have a material impact on our consolidated financial statements.

## **Credit Losses**

On January 1, 2023, we adopted ASU 2022-02, "*Financial Instruments-Credit Losses (Topic 326): Troubled Debt Restructurings ("TDR") and Vintage Disclosures*" ("ASU 2022-02"). The ASU eliminates the TDR recognition and measurement guidance, enhances existing disclosure requirements and introduces new requirements related to certain modifications of receivables made to borrowers experiencing financial difficulty. The adoption of ASU 2022-02 did not have a material impact on our consolidated financial statements.

## **Adoption of Other ASU With No Impact**

On January 1, 2024, we adopted ASU 2023-01, "*Leases (Topic 842): Common Control Arrangements*", and ASU 2022-03, "*Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*". The adoption of these ASUs did not have any impact on our consolidated financial statements.

## **Recently Issued Accounting Pronouncements**

In December 2023, the Financial Accounting Standards Board ("FASB") issued ASU 2023-09 "*Income Taxes (Topic 740): Improvements to Income Tax Disclosures*" ("ASU 2023-09"). This ASU requires public business entities to annually (i) disclose specific categories in the rate reconciliation and (ii) provide additional information for reconciling items that meet a quantitative threshold (if the effect of those reconciling items is equal to or greater than 5 percent of the amount computed by multiplying pretax income or loss by the applicable statutory income tax rate). ASU 2023-09 will become effective for us in fiscal year 2025 and early adoption is permitted. As of September 30, 2024, we have not early adopted this ASU and are currently evaluating its impact on our consolidated financial statements, including our annual disclosure within our Income Taxes note.

In November 2023, the FASB issued ASU 2023-07, "*Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*" ("ASU 2023-07"). This ASU is intended to improve reportable segment disclosure requirements primarily through enhanced disclosures about significant segment expenses. This ASU will become effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. As of September 30, 2024, we have not early adopted this ASU. We anticipate adopting this ASU for the year ended December 31, 2024 and expect the Segment Information footnote to the consolidated financial statements included in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2024 will align with the standard. We do not anticipate that this standard will affect our operating results.

**Note 2—Goodwill, Customer Relationships and Other Intangible Assets**

Goodwill, customer relationships and other intangible assets consisted of the following:

	September 30, 2024	December 31, 2023
	(Dollars in millions)	
Goodwill	\$ 1,964	1,964
Indefinite-lived intangible assets	\$ 9	9
Other intangible assets subject to amortization:		
Customer relationships, less accumulated amortization of \$4,361 and \$4,248 <sup>(1)</sup>	3,346	3,811
Capitalized software, less accumulated amortization of \$4,112 and \$4,045 <sup>(1)</sup>	1,536	1,564
Trade names, patents and other, less accumulated amortization of \$82 and \$72	76	86
Total other intangible assets, net	\$ 4,967	5,470

<sup>(1)</sup> Certain customer relationships with a gross carrying value of \$352 million and capitalized software with a gross carrying value of \$153 million became fully amortized during 2023 and were retired during the first quarter of 2024.

As of September 30, 2024 and December 31, 2023, the gross carrying amount of goodwill, customer relationships, indefinite-lived and other intangible assets was \$15.5 billion and \$15.8 billion, respectively.

Our goodwill was derived from numerous acquisitions where the purchase price exceeded the fair value of the net assets acquired. We report our results within two segments: Business and Mass Markets. See Note 10—Segment Information for more information on these segments. We assigned no goodwill to our Business segment as of September 30, 2024 and December 31, 2023. We assigned approximately \$2.0 billion of goodwill to our Mass Markets segment as of both September 30, 2024 and December 31, 2023. Total goodwill as of both September 30, 2024 and December 31, 2023 was net of accumulated impairment losses of \$21.7 billion.

We are required to assess our goodwill and other indefinite-lived intangible assets for impairment annually, or, under certain circumstances, more frequently, such as when events or changes in circumstances indicate there may be impairment. We are required to write down the value of goodwill only when our assessment determines the carrying value of equity of any of our reporting units exceeds its fair value. Our annual impairment assessment date for goodwill is October 31, at which date we assess our reporting units. Our annual impairment assessment date for indefinite-lived intangible assets other than goodwill is December 31.

As of September 30, 2024, we had three reporting units, which are (i) Mass Markets, (ii) North American Business ("NA Business") and (iii) Asia Pacific region ("APAC"). Our reporting units are not discrete legal entities with discrete full financial statements. Our assets and liabilities are deployed in and relate to the operations of multiple reporting units. When we assess goodwill for impairment, we compare the estimated fair value of each reporting unit's equity to the carrying value of equity that we assign to the reporting unit. If the estimated fair value of the reporting unit is greater than the carrying value, we conclude that no impairment exists. If the estimated fair value of the reporting unit is less than the carrying value, we record a non-cash impairment charge equal to the excess amount. Depending on the facts and circumstances, we typically estimate the fair value of our reporting units by considering either or both of (i) a discounted cash flow method, which is based on the present value of projected cash flows over a discrete projection period and a terminal value, which is based on the expected normalized cash flows of the reporting units following the discrete projection period, and (ii) a market approach, which includes the use of market multiples of publicly-traded companies whose services are comparable to ours.

### *Second Quarter 2023 Goodwill Impairment Analysis*

During the second quarter of 2023, we determined circumstances existed indicating it was more likely than not that the carrying value of our reporting units exceeded their fair value. Given the continued erosion in our market capitalization at the time, we determined our quantitative impairment analysis would accurately estimate the fair value of our reporting units using only the market approach. Applying this approach, we utilized company comparisons and analyst reports within our industry which supported a range of fair values derived from annualized revenue and Earnings Before Interest, Tax, Depreciation and Amortization ("EBITDA") multiples between 1.5x and 4.3x and 4.6x and 10.5x, respectively. In determining the fair value of each reporting unit, we used revenue and EBITDA multiples below these comparable market multiples. The estimated fair values of the reporting units determined in connection with our impairment analysis in the second quarter of 2023 resulted in no control premium, which we determined to be reasonable based on our market capitalization relative to recent transactions. For the three months ended June 30, 2023, based on our assessments performed with respect to the reporting units as described above, we concluded the estimated fair value of certain of our reporting units was less than their carrying value of equity. As a result, we recorded a non-cash, non-tax-deductible goodwill impairment charge of \$8.8 billion for the three months ended June 30, 2023.

The market approach that we used in the quarter ended June 30, 2023 incorporated estimates and assumptions related to the forecasted results for the remainder of the year, including revenues, expenses, and the achievement of certain strategic initiatives. In developing the market multiples applicable for each reporting unit, we considered observed trends of our industry peers. Our assessment included many factors that required significant judgment. Alternative interpretations of these factors could have resulted in different conclusions regarding the size of our impairments.

Total amortization expense for finite-lived intangible assets for the three months ended September 30, 2024 and 2023 totaled \$253 million and \$271 million, respectively, and for the nine months ended September 30, 2024 and 2023 totaled \$802 million and \$794 million, respectively.

We estimate that future total amortization expense for finite-lived intangible assets will be as follows:

	(Dollars in millions)	
2024 (remaining three months)	\$	238
2025		901
2026		848
2027		760
2028		690
2029 and thereafter		1,521
Total finite-lived intangible assets future amortization expense	\$	4,958

### **Note 3—Revenue Recognition**

#### ***Product and Service Categories***

We categorize our products and services revenue among the following categories for the Business segment:

- *Grow*, which includes existing and emerging products and services in which we are significantly investing, including our conduit, dark fiber, Edge Cloud, IP, managed security, software-defined wide area networks ("SD WAN"), Unified Communications and Collaboration ("UC&C") and wavelengths services;
- *Nurture*, which includes our more mature offerings, including ethernet and VPN data networks services;
- *Harvest*, which includes our legacy services managed for cash flow, including Time Division Multiplexing ("TDM") voice, and private line services; and
- *Other*, which includes equipment sales, managed and professional service solutions and other services.

We categorize our products and services revenue among the following categories for the Mass Markets segment:

- *Fiber Broadband*, under which we provide high speed broadband services to residential and small business customers utilizing our fiber-based network infrastructure;
- *Other Broadband*, under which we provide primarily lower speed broadband services to residential and small business customers utilizing our copper-based network infrastructure; and
- *Voice and Other*, under which we derive revenues from (i) providing local and long-distance voice services, professional services, and other ancillary services, and (ii) federal broadband and state support programs.

#### ***Reconciliation of Total Revenue to Revenue from Contracts with Customers***

The following tables provide total revenue by segment, sales channel and product category. They also provide the amount of revenue that is not subject to ASC 606, "*Revenue from Contracts with Customers*" ("ASC 606"), but is instead governed by other accounting standards. The amounts in the tables below include revenue for the EMEA business prior to its sales on November 1, 2023. See Note 2—Divestitures of the Latin American, ILEC and EMEA Businesses in our Annual Report on Form 10-K for the year ended December 31, 2023 for additional information on these divestitures.



	Three Months Ended September 30, 2024			Three Months Ended September 30, 2023		
	Total Revenue	Adjustments for Non-ASC 606 revenue <sup>(1)</sup>	Total revenue from Contracts with Customers	Total Revenue	Adjustments for Non-ASC 606 revenue <sup>(1)</sup>	Total revenue from Contracts with Customers
(Dollars in millions)						
<b>Business Segment by Sales Channel and Product Category</b>						
<b>Large Enterprise</b>						
Grow	\$ 436	(73)	363	429	(48)	381
Nurture	253	—	253	297	—	297
Harvest	106	—	106	131	—	131
Other	44	—	44	57	(3)	54
<b>Total Large Enterprise Revenue</b>	<b>839</b>	<b>(73)</b>	<b>766</b>	<b>914</b>	<b>(51)</b>	<b>863</b>
<b>Mid-Market Enterprise</b>						
Grow	211	(6)	205	201	(6)	195
Nurture	167	—	167	203	—	203
Harvest	83	(1)	82	93	(1)	92
Other	10	(4)	6	9	(1)	8
<b>Total Mid-Market Enterprise Revenue</b>	<b>471</b>	<b>(11)</b>	<b>460</b>	<b>506</b>	<b>(8)</b>	<b>498</b>
<b>Public Sector</b>						
Grow	131	(21)	110	118	(22)	96
Nurture	87	—	87	98	—	98
Harvest	86	(1)	85	96	—	96
Other	123	—	123	133	—	133
<b>Total Public Sector Revenue</b>	<b>427</b>	<b>(22)</b>	<b>405</b>	<b>445</b>	<b>(22)</b>	<b>423</b>
<b>Wholesale</b>						
Grow	259	(73)	186	256	(61)	195
Nurture	183	(6)	177	206	(5)	201
Harvest	261	(35)	226	312	(42)	270
Other	3	—	3	2	—	2
<b>Total Wholesale Revenue</b>	<b>706</b>	<b>(114)</b>	<b>592</b>	<b>776</b>	<b>(108)</b>	<b>668</b>
<b>International and Other</b>						
Grow	39	(1)	38	127	(29)	98
Nurture	39	—	39	70	—	70
Harvest	13	—	13	30	—	30
Other	2	—	2	37	—	37
<b>Total International and Other</b>	<b>93</b>	<b>(1)</b>	<b>92</b>	<b>264</b>	<b>(29)</b>	<b>235</b>
<b>Business Segment by Product Category</b>						
Grow	1,076	(174)	902	1,131	(166)	965
Nurture	729	(6)	723	874	(5)	869
Harvest	549	(37)	512	662	(43)	619
Other	182	(4)	178	238	(4)	234
<b>Total Business Segment Revenue</b>	<b>2,536</b>	<b>(221)</b>	<b>2,315</b>	<b>2,905</b>	<b>(218)</b>	<b>2,687</b>
<b>Mass Markets Segment by Product Category</b>						
Fiber Broadband	190	(3)	187	163	(4)	159
Other Broadband	282	(25)	257	341	(31)	310
Voice and Other	213	(5)	208	232	(9)	223
<b>Total Mass Markets Revenue</b>	<b>685</b>	<b>(33)</b>	<b>652</b>	<b>736</b>	<b>(44)</b>	<b>692</b>
<b>Total Revenue</b>	<b>\$ 3,221</b>	<b>(254)</b>	<b>2,967</b>	<b>3,641</b>	<b>(262)</b>	<b>3,379</b>

	Nine Months Ended September 30, 2024			Nine Months Ended September 30, 2023		
	Total Revenue	Adjustments for Non-ASC 606 revenue <sup>(1)</sup>	Total revenue from Contracts with Customers	Total Revenue	Adjustments for Non-ASC 606 revenue <sup>(1)</sup>	Total revenue from Contracts with Customers
(Dollars in millions)						
<b>Business Segment by Sales Channel and Product Category</b>						
<b>Large Enterprise</b>						
Grow	\$ 1,287	(183)	1,104	1,278	(145)	1,133
Nurture	779	—	779	890	—	890
Harvest	337	—	337	403	—	403
Other	131	(1)	130	153	(5)	148
<b>Total Large Enterprise Revenue</b>	<b>2,534</b>	<b>(184)</b>	<b>2,350</b>	<b>2,724</b>	<b>(150)</b>	<b>2,574</b>
<b>Mid-Market Enterprise</b>						
Grow	628	(19)	609	601	(21)	580
Nurture	533	—	533	632	—	632
Harvest	248	(3)	245	283	(3)	280
Other	26	(5)	21	27	(4)	23
<b>Total Mid-Market Enterprise Revenue</b>	<b>1,435</b>	<b>(27)</b>	<b>1,408</b>	<b>1,543</b>	<b>(28)</b>	<b>1,515</b>
<b>Public Sector</b>						
Grow	383	(62)	321	354	(60)	294
Nurture	262	—	262	298	—	298
Harvest	272	(3)	269	290	—	290
Other	378	—	378	350	—	350
<b>Total Public Sector Revenue</b>	<b>1,295</b>	<b>(65)</b>	<b>1,230</b>	<b>1,292</b>	<b>(60)</b>	<b>1,232</b>
<b>Wholesale</b>						
Grow	783	(211)	572	792	(194)	598
Nurture	562	(20)	542	627	(19)	608
Harvest	807	(110)	697	974	(129)	845
Other	7	—	7	9	—	9
<b>Total Wholesale Revenue</b>	<b>2,159</b>	<b>(341)</b>	<b>1,818</b>	<b>2,402</b>	<b>(342)</b>	<b>2,060</b>
<b>International and Other</b>						
Grow	117	(3)	114	384	(89)	295
Nurture	121	—	121	214	—	214
Harvest	33	—	33	109	—	109
Other	10	—	10	113	—	113
<b>Total International and Other</b>	<b>281</b>	<b>(3)</b>	<b>278</b>	<b>820</b>	<b>(89)</b>	<b>731</b>
<b>Business Segment by Product Category</b>						
Grow	3,198	(478)	2,720	3,409	(509)	2,900
Nurture	2,257	(20)	2,237	2,661	(19)	2,642
Harvest	1,697	(116)	1,581	2,059	(132)	1,927
Other	552	(6)	546	652	(9)	643
<b>Total Business Segment Revenue</b>	<b>7,704</b>	<b>(620)</b>	<b>7,084</b>	<b>8,781</b>	<b>(669)</b>	<b>8,112</b>
<b>Mass Markets Segment by Product Category</b>						
Fiber Broadband	541	(10)	531	473	(12)	461
Other Broadband	895	(80)	815	1,065	(96)	969
Voice and Other	639	(23)	616	721	(27)	694
<b>Total Mass Markets Revenue</b>	<b>2,075</b>	<b>(113)</b>	<b>1,962</b>	<b>2,259</b>	<b>(135)</b>	<b>2,124</b>
<b>Total Revenue</b>	<b>\$ 9,779</b>	<b>(733)</b>	<b>9,046</b>	<b>11,040</b>	<b>(804)</b>	<b>10,236</b>

(1) Includes regulatory revenue and lease revenue not within the scope of ASC 606.

### *Operating Lease Revenue*

Lumen Technologies leases various dark fiber (including conduit), office facilities, colocation facilities, switching facilities, other network sites and service equipment to third parties under operating leases. Lease and sublease revenue are included in Operating Revenue in our consolidated statements of operations.

For the three months ended September 30, 2024 and 2023, our gross rental revenue was \$250 million and \$254 million, respectively, which represented approximately 8% and 7%, respectively, of our operating revenue for the three months ended September 30, 2024 and 2023. For the nine months ended September 30, 2024 and 2023, our gross rental revenue was \$711 million and \$780 million, respectively, which represented approximately 7% of our operating revenue for both the nine months ended September 30, 2024 and 2023.

### *Customer Receivables and Contract Balances*

The following table provides balances of customer receivables, contract assets and contract liabilities, net of amounts classified as held for sale, as of September 30, 2024 and December 31, 2023:

	September 30, 2024	December 31, 2023
	(Dollars in millions)	
Customer receivables, less allowance of \$53 and \$60	\$ 1,193	1,256
Contract assets	21	29
Contract liabilities	741	698

Contract liabilities are consideration we have received from our customers or billed in advance of providing goods or services promised in the future. We defer recognizing this consideration as revenue until we have satisfied the related performance obligation to the customer. Contract liabilities include recurring services billed one month in advance and installation and maintenance charges that are deferred and recognized over the actual or expected contract term, which typically ranges from one to five years depending on the service. Contract liabilities are included within Deferred revenue on our consolidated balance sheets. During the three and nine months ended September 30, 2024, we recognized \$47 million and \$390 million, respectively, of revenue that was included in contract liabilities of \$698 million as of January 1, 2024. During the three and nine months ended September 30, 2023, we recognized \$44 million and \$391 million, respectively, of revenue that was included in contract liabilities of \$715 million as of January 1, 2023, including contract liabilities that were classified as held for sale.

### *Performance Obligations*

As of September 30, 2024, we expect to recognize approximately \$6.7 billion of revenue in the future related to performance obligations associated with existing customer contracts that are partially or wholly unsatisfied. As of September 30, 2024, the transaction price related to unsatisfied performance obligations that are expected to be recognized for the remainder of 2024, 2025 and thereafter was \$934 million, \$2.5 billion and \$3.3 billion, respectively.

These amounts exclude (i) the value of unsatisfied performance obligations for contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed (for example, uncommitted usage or non-recurring charges associated with professional or technical services to be completed) and (ii) contracts that are classified as leasing arrangements or government assistance that are not subject to ASC 606.

## Contract Costs

The following tables provide changes in our contract acquisition costs and fulfillment costs:

	<b>Three Months Ended September 30, 2024</b>		<b>Three Months Ended September 30, 2023</b>	
	<b>Acquisition Costs</b>	<b>Fulfillment Costs</b>	<b>Acquisition Costs</b>	<b>Fulfillment Costs</b>
	<b>(Dollars in millions)</b>		<b>(Dollars in millions)</b>	
Beginning of period balance <sup>(1)</sup>	\$ 185	204	183	186
Costs incurred	36	41	31	41
Amortization	(32)	(36)	(37)	(35)
End of period balance <sup>(3)</sup>	<u>\$ 189</u>	<u>209</u>	<u>177</u>	<u>192</u>

  

	<b>Nine Months Ended September 30, 2024</b>		<b>Nine Months Ended September 30, 2023</b>	
	<b>Acquisition Costs</b>	<b>Fulfillment Costs</b>	<b>Acquisition Costs</b>	<b>Fulfillment Costs</b>
	<b>(Dollars in millions)</b>		<b>(Dollars in millions)</b>	
Beginning of period balance <sup>(2)</sup>	\$ 182	184	202	192
Costs incurred	104	126	96	120
Amortization	(97)	(101)	(117)	(106)
Change in contract costs held for sale	—	—	(4)	(14)
End of period balance <sup>(3)</sup>	<u>\$ 189</u>	<u>209</u>	<u>177</u>	<u>192</u>

(1) Beginning of period balance for the three months ended September 30, 2023 excludes \$10 million of acquisition costs and \$14 million fulfillment costs classified as held for sale related to the EMEA business.

(2) Beginning of period balance for the nine months ended September 30, 2023 excludes \$6 million of acquisition costs and no fulfillment costs classified as held for sale related to the EMEA business.

(3) End of period balance for the three and nine months ended September 30, 2023 excludes \$10 million of acquisition costs and \$14 million of fulfillment costs classified as held for sale related to the EMEA business.

Acquisition costs include commission fees paid to employees as a result of obtaining contracts. Fulfillment costs include third party and internal costs associated with the provision, installation and activation of services to customers, including labor and materials consumed for these activities.

We amortize deferred acquisition and fulfillment costs based on the transfer of services on a straight-line basis over the average contract life of approximately 50 months for mass markets customers and 35 months for business customers. We include amortized fulfillment costs in cost of services and products and amortized acquisition costs in Selling, general and administrative in our consolidated statements of operations. We include the amount of these deferred costs that are anticipated to be amortized in the next twelve months in Other under Current Assets on our consolidated balance sheets. We include the amount of deferred costs expected to be amortized beyond the next twelve months in Other under Deferred Credits and Other Liabilities on our consolidated balance sheets. We assess deferred acquisition and fulfillment costs for impairment on a quarterly basis.

#### Note 4—Credit Losses on Financial Instruments

To assess our expected credit losses on financial instruments, we aggregate financial assets with similar risk characteristics to monitor their credit quality or deterioration over the life of such assets. We periodically monitor certain risk characteristics within our aggregated financial assets and revise their composition accordingly, to the extent internal and external risk factors change. We separately evaluate financial assets that do not share risk characteristics with other financial assets. Our financial assets measured at amortized cost primarily consist of accounts receivable.

We use a loss rate method to estimate our allowance for credit losses. Our determination of the current expected credit loss rate begins with our review of historical loss experience as a percentage of accounts receivable. We measure our historical loss period based on the average days to recognize accounts receivable as credit losses. When asset specific characteristics and current conditions change from those in the historical period, due to changes in our credit and collections strategy, certain classes of aged balances, or credit loss and recovery policies, we perform a qualitative and quantitative assessment to adjust our historical loss rate. We use regression analysis to develop an expected loss rate using historical experience and economic data over a forecast period. We measure our forecast period based on the average days to collect payment on billed accounts receivable. To determine our current allowance for credit losses, we combine the historical and expected credit loss rates and apply them to our period end accounts receivable.

If there is an unexpected deterioration of a customer's financial condition or an unexpected change in economic conditions, including macroeconomic events, we assess the need to adjust the allowance for credit losses. Any such resulting adjustments would affect earnings in the period that adjustments are made.

The assessment of the correlation between historical observed default rates, current conditions and forecasted economic conditions requires judgment. Alternative interpretations of these factors could have resulted in different conclusions regarding our allowance for credit losses. The amount of credit loss is sensitive to changes in circumstances and forecasted economic conditions. Our historical credit loss experience, current conditions and forecast of economic conditions may also not be representative of the customers' actual default experience in the future, and we may use methodologies that differ from those used by other companies.

The following table presents the activity of our allowance for credit losses by accounts receivable portfolio for the nine months ended September 30, 2024:

	Business	Mass Markets	Total
	(Dollars in millions)		
As of December 31, 2023	\$ 36	31	67
Provision for expected losses	19	35	54
Write-offs charged against the allowance	(26)	(43)	(69)
Recoveries collected	5	3	8
Ending balance at September 30, 2024	\$ 34	26	60

**Note 5—Long-Term Debt and Credit Facilities**

At September 30, 2024, most of our outstanding consolidated debt had been incurred by us or one of the following three subsidiaries, each of which has borrowed funds either on a standalone basis or as part of a separate restricted group with certain of its subsidiaries:

- Level 3 Financing, Inc. ("Level 3 Financing"), including its parent guarantor Level 3 Parent, LLC and certain subsidiary guarantors;
- Qwest Corporation ("Qwest"); and
- Qwest Capital Funding, Inc., including its parent guarantor, Qwest Communications International Inc.

Each of these borrowers or borrowing groups has entered into one or more credit agreements with certain financial institutions or other institutional lenders, or issued senior notes. Certain of these debt instruments are described further in (i) Note 5 below, (ii) Note 7 to the consolidated financial statements included in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023 or (iii) Note 5 to the consolidated financial statements included in Item 1 of Part I of our Quarterly Report on Form 10-Q for the three months ended March 31, 2024.

[Table of Contents](#)

The following tables reflect the consolidated long-term debt of Lumen Technologies and its subsidiaries as of the dates indicated below, including unamortized discounts and premiums and unamortized debt issuance costs:

	Interest Rates <sup>(1)</sup>	Maturities <sup>(1)</sup>	September 30, 2024	December 31, 2023
(Dollars in millions)				
<b>Secured Senior Debt:</b> <sup>(2)</sup>				
<i>Lumen Technologies, Inc.</i>				
Series A Revolving Credit Facility	SOFR + 4.00%	2028	\$ —	—
Series B Revolving Credit Facility	SOFR + 6.00%	2028	—	—
Term Loan A <sup>(3)</sup>	SOFR + 6.00%	2028	362	—
Term Loan B-1 <sup>(4)</sup>	SOFR + 2.35%	2029	1,610	—
Term Loan B-2 <sup>(4)</sup>	SOFR + 2.35%	2030	1,610	—
Term Loan B <sup>(5)</sup>	SOFR + 2.25%	2027	57	3,891
Other Facilities <sup>(6)</sup>	SOFR + 2.00%	2025	—	1,399
Superpriority Notes	4.125% - 10.000%	2029 - 2032	1,247	—
Former Parent Secured Notes	4.000%	2027	—	1,250
<i>Subsidiaries</i>				
<i>Level 3 Financing, Inc.</i>				
Term Loan B-1 <sup>(7)</sup>	SOFR + 6.56%	2029	1,199	—
Term Loan B-2 <sup>(7)</sup>	SOFR + 6.56%	2030	1,199	—
Former Level 3 Facility <sup>(8)</sup>	SOFR + 1.75%	2027	12	2,411
First Lien Notes <sup>(9)</sup>	10.500% - 11.000%	2029 - 2030	3,846	925
Second Lien Notes	3.875% - 10.000%	2029 - 2032	2,579	—
Former Level 3 Senior Notes	3.400% - 3.875%	2027 - 2029	—	1,500
<b>Unsecured Senior Notes and Other Debt:</b>				
<i>Lumen Technologies, Inc.</i>				
Senior notes <sup>(10)</sup>	4.000% - 7.650%	2025 - 2042	1,539	2,143
<i>Subsidiaries:</i>				
<i>Level 3 Financing, Inc.</i>				
Senior notes <sup>(11)</sup>	3.400% - 4.625%	2027 - 2029	1,508	3,940
<i>Qwest Corporation</i>				
Senior notes	6.500% - 7.750%	2025 - 2057	1,974	1,986
Term loan <sup>(12)</sup>	SOFR + 2.50%	2027	—	215
<i>Qwest Capital Funding, Inc.</i>				
Senior notes	6.875% - 7.750%	2028 - 2031	192	192
<b>Finance lease and other obligations</b>	Various	Various	263	285
Unamortized discounts, net			(412)	(4)
Unamortized debt issuance costs			(228)	(145)
Total long-term debt			18,557	19,988
Less current maturities			(415)	(157)
Long-term debt, excluding current maturities			\$ 18,142	19,831

- (1) As of September 30, 2024. All references to "SOFR" refer to the Secured Overnight Financing Rate.
- (2) As discussed further below in this Note, the debt listed under the caption "Senior Secured Debt" is either secured by assets of the issuer, guaranteed on a secured or unsecured basis by certain affiliates of the issuer, or both. As discussed further in footnotes 10 and 11, we reclassified in the table above certain notes that were guaranteed, secured, or both prior to the Effective Date (as defined below) from "secured" to "unsecured" in light of amendments that released such security interests.
- (3) Term Loan A had an interest rate of 11.247% as of September 30, 2024.
- (4) Term Loan B-1 and B-2 each had an interest rate of 7.742% as of September 30, 2024.
- (5) Term Loan B had an interest rate of 7.611% and 7.720% as of September 30, 2024 and December 31, 2023, respectively.
- (6) Reflects revolving credit facility and term loan A and A-1 debt issued under the Former Parent Facilities, which had interest rates of 7.464% and 7.470%, respectively, as of December 31, 2023.
- (7) The Level 3 Term Loan B-1 and B-2 each had an interest rate of 11.838% as of September 30, 2024.
- (8) Reflects Level 3 Tranche B 2027 Term Loan issued under the Former Level 3 Facility, which had an interest rate of 7.111% and 7.220% as of September 30, 2024 and December 31, 2023, respectively.
- (9) Includes Level 3's 10.500% Senior Secured Notes due 2030 issued in early 2023, the terms of which have been amended to be consistent with Level 3's first lien notes issued on March 22, 2024.
- (10) The total amount of these notes at September 30, 2024 includes the remaining aggregate principal amount due under the Former Parent Secured Notes, the terms of which were amended on March 22, 2024 to release the guarantees of such debt that could be released in accordance with their indentures and the security interests relating thereto.
- (11) The total amount for these notes at September 30, 2024 includes the remaining aggregate principal amount due under the Former Level 3 Secured Notes, the terms of which were amended on March 22, 2024 to release the security interests relating thereto.
- (12) The Qwest Corporation Term Loan had an interest rate of 7.970% as of December 31, 2023.

### **Long-Term Debt Maturities**

Set forth below is the aggregate principal amount of our long-term debt as of September 30, 2024 (excluding unamortized discounts, net, and unamortized debt issuance costs), maturing during the following years.

	(Dollars in millions)
2024 (remaining three months)	\$ 23
2025	448
2026	101
2027	302
2028	1,080
2029 and thereafter	17,243
Total long-term debt	\$ 19,197

### **Impact of Recent Debt Transactions**

#### **Exchange Offers**

Pursuant to exchange offers that commenced on September 3, 2024 (the "Exchange Offers"), on September 24, 2024:

- Lumen Technologies issued approximately \$438 million aggregate principal amount of its newly-issued 10.000% Secured Notes due 2032 (the "New Lumen Notes") and paid approximately \$14 million cash (excluding accrued and unpaid interest payable with respect to the exchange) in exchange for approximately \$491 million aggregate principal amount of four series of its outstanding senior unsecured notes, maturing between 2026 and 2029 (which were concurrently cancelled), and



## [Table of Contents](#)

- Level 3 Financing issued approximately \$350 million aggregate principal amount of its newly-issued 10.000% Second Lien Notes due 2032 in exchange for \$357 million aggregate principal amount of two series of its outstanding senior unsecured notes maturing in 2027 (which were concurrently cancelled).

These transactions reduced the aggregate principal amount of Lumen's consolidated indebtedness by approximately \$60 million.

Consistent with FASB ASC Topic 470 *Debt*, ("ASC 470"), the Company is required to analyze whether the Exchange Offers constituted (i) an extinguishment of debt which requires borrowers to record a gain or loss for the difference between the net carrying value of the old derecognized debt and the fair value of the new debt, or (ii) a debt modification, which results in no gain or loss and requires borrowers to establish a new effective interest rate based on the carrying value of the debt and revised cash flow. The Company has determined that the Exchange Offers constituted a debt modification consistent with ASC 470 and recorded no gain or loss. In conjunction with the Exchange Offers we recorded \$14 million of fees to Selling, general and administrative expense in our consolidated statements of operations for the three and nine months ended September 30, 2024.

The following table sets forth the aggregate principal amount of each series of senior unsecured notes of Lumen and Level 3 Financing exchanged and retired on September 24, 2024 in connection with the Exchange Offers:

Debt	Aggregate Principal Amount (in millions)
<i>Lumen Technologies, Inc.</i>	
5.125% senior notes due 2026	\$ 137
4.000% senior secured notes due 2027 (unsecured)	188
6.875% debentures, series G, due 2028	80
4.500% senior notes due 2029	86
<i>Level 3 Financing, Inc.</i>	
3.400% senior secured notes due 2027 (unsecured)	77
4.625% senior notes due 2027	280
Total	\$ 848

### **TSA Transactions**

On March 22, 2024 (the "Effective Date"), Lumen Technologies, Level 3 Financing, Qwest and a group of creditors holding a majority of our consolidated debt completed transactions contemplated under the amended and restated transaction support agreement ("TSA") that such parties entered into on January 22, 2024 (the "TSA Transactions"), including the termination, repayment or exchange of previous commitments and debt and the issuance of new term loan facilities, notes, and revolving credit facilities.

The following table sets forth the aggregate principal amount of each of Lumen's consolidated debt arrangements that were partially or fully paid in exchange for cash or newly-issued debt during the first quarter of 2024 in connection with the TSA Transactions:

Debt	Aggregate Principal Amount (in millions)	
	Repaid	Exchanged
<b>Lumen Technologies, Inc.</b>		
Term Loan A	\$ 933	—
Term Loan A-1	266	—
Term Loan B	575	3,259
5.125% Senior Notes due 2026	116	147
4.000% Senior Notes due 2027	153	865
<b>Level 3 Financing, Inc.</b>		
Term Loan B	—	2,398
3.400% Senior Notes due 2027	—	668
3.875% Senior Notes due 2029	—	678
4.625% Senior Notes due 2027	—	606
4.250% Senior Notes due 2028	—	712
3.625% Senior Notes due 2029	—	458
3.750% Senior Notes due 2029	—	453
<b>Qwest Corporation</b>		
Senior Term B Loan	215	—
<b>Total</b>	<b>\$ 2,258</b>	<b>10,244</b>

The following table sets forth the aggregate principal balance as of September 30, 2024 of the debt issued by Lumen or Level 3 Financing in connection with the TSA Transactions:

New Debt Issuances <sup>(1)</sup>	Aggregate Principal Amount as of September 30, 2024 (in millions)	
<b>Lumen Technologies, Inc.</b>		
Term Loan A <sup>(2)</sup>	\$	362
Term Loan B-1 <sup>(2)</sup>		1,610
Term Loan B-2 <sup>(2)</sup>		1,610
4.125% Superpriority Notes due 2029-2030		808
<b>Level 3 Financing, Inc.</b>		
Term Loan B-1		1,199
Term Loan B-2		1,199
10.500% First Lien Notes due 2029		668
10.750% First Lien Notes due 2029		678
11.000% First Lien Notes due 2029		1,575
4.875% Second Lien Notes due 2029		606
4.500% Second Lien Notes due 2030		712
3.875% Second Lien Notes due 2030		458
4.000% Second Lien Notes due 2031		453
<b>Total</b>	<b>\$</b>	<b>11,938</b>

<sup>(1)</sup> Except for Lumen's Term Loan A and \$1.375 billion of Level 3 Financing's 11.000% First Lien Notes due 2029, all of the new debt listed in this table was issued in the first quarter of 2024 in exchange for previously-issued debt of Lumen or Level 3 Financing in connection with the TSA Transactions.

(2) Reflects approximately \$53 million of term loan installment payments made between the Effective Date and September 30, 2024.

In evaluating the terms of the TSA Transactions, we determined that for certain of our creditors the new debt instruments were substantially different than pre-existing debt and therefore constituted a non-cash extinguishment of old debt for Lumen Technologies, Inc. and Level 3 Financing, Inc. of \$744 million and \$2.6 billion and establishment of new debt for which we recorded a \$275 million gain on extinguishment in the first quarter of 2024. This new debt was recorded at fair value generating a reduction to debt of \$492 million which was included in our aggregate Net (loss) gain on early retirement of debt of \$277 million, recognized in Other income (expense), net in our consolidated statement of operations for the nine months ended September 30, 2024. The remaining creditors' newly-issued debt was not substantially different under the terms of the TSA Transactions and was treated under modification accounting rules. In conjunction with the TSA Transactions, we paid \$209 million in lender fees and \$174 million in additional third-party costs. Of these amounts, \$157 million of lender fees were an offset to the gain on extinguishment and \$112 million in third-party costs were recorded to Selling, general and administrative expense in our consolidated statement of operations for the nine months ended September 30, 2024. In accordance with GAAP provisions for modification and extinguishment accounting, \$52 million in lender fees and \$62 million in third-party costs, respectively, were capitalized and will be amortized over the terms of the newly-issued indebtedness.

### **Repurchases of Outstanding Notes and Debt Instruments**

During the third quarter of 2024, we repurchased a total of approximately \$19 million aggregate principal amount of senior unsecured notes of Lumen and Qwest maturing in 2025 and \$19 million of Lumen Superpriority notes and term loans maturing between 2028 and 2030, which resulted in an immaterial aggregate net loss. During the second quarter of 2024, we repurchased a total of approximately \$75 million aggregate principal of Lumen's senior unsecured notes maturing in 2025. These repurchases in the second and third quarter of 2024 resulted in an aggregate net gain of \$3 million, which is included in our aggregate Net (loss) gain on early retirement of debt in Other income (expense), net in our consolidated statement of operations for the nine months ended September 30, 2024.

### **2023 Transactions**

For information on various issuances, exchanges or payments of long-term indebtedness by Lumen or its subsidiaries during 2023, see Note 7—Long-Term Debt and Credit Facilities in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023.

### **Lumen Credit Agreements**

As further described in our prior periodic reports, Lumen may prepay amounts outstanding under its new Superpriority Term Loan A Facility and new Superpriority Term Loan B Facilities at any time without premium or penalty. If no amounts are outstanding under its Superpriority Series B Revolving Credit Facility, Lumen may prepay amounts outstanding under the Series A Revolving Credit Facility without premium or penalty. The new Superpriority Term Loan A Facility and new Superpriority Term Loan B Facilities require Lumen to make quarterly amortization payments of 1.25% and 0.25%, respectively, of the initial principal amount and certain specified mandatory prepayments upon the occurrence of certain transactions.

At September 30, 2024, no borrowings were outstanding under Lumen's (i) Series A Revolving Credit Facility, with commitments of approximately \$489 million, or (ii) Series B Revolving Credit Facility, with commitments of approximately \$465 million.

### **Level 3 Financing Credit Agreement**

As further described in our prior periodic reports, amounts outstanding under Level 3 Financing's new Credit Agreement may be prepaid at any time, subject to a premium of (i) 2.00% of the aggregate principal amount if prepaid on or prior to the 12-month anniversary of the Effective Date and (ii) 1.00% of the aggregate principal amount if prepaid after the 12-month anniversary of the Effective Date and on or prior to the 24-month anniversary of the Effective Date. The new Level 3 facilities established under the new Credit Agreement require Level 3 Financing to make certain specified mandatory prepayments upon the occurrence of certain transactions.

### **Senior Notes**

The Company's consolidated indebtedness at September 30, 2024 included:

- superpriority senior secured notes issued by Lumen;
- first and second lien secured notes issued by Level 3 Financing; and
- senior unsecured notes issued by Lumen, Level 3 Financing, Qwest, and Qwest Capital Funding, Inc.

All of these notes carry fixed interest rates and all principal is due on the notes' respective maturity dates, which rates and maturity dates are summarized in the table above.

Except for a limited number of senior notes issued by Qwest Corporation, the issuer generally can redeem the notes, at its option, in whole or in part, (i) pursuant to a fixed schedule of pre-established redemption prices, (ii) pursuant to a "make whole" redemption price or (iii) under certain other specified limited conditions.

### **Letters of Credit**

At September 30, 2024, we had \$219 million undrawn letters of credit outstanding, \$216 million of which were issued under Lumen's revolving credit facilities, \$1 million of which were issued under our \$225 million uncommitted letter of credit facility and \$2 million of which were issued under a separate facility maintained by one of our subsidiaries (the full amount of which is collateralized by cash that is reflected on our consolidated balance sheets as restricted cash within Other, net under Goodwill and Other Assets).

### **Certain Guarantees and Security Interests**

Lumen's obligations under its Superpriority Revolving/Term Loan A Credit Agreement are unsecured, but certain of Lumen's subsidiaries have provided or, in certain cases after receiving necessary regulatory approvals, will provide an unconditional guarantee of payment of Lumen's obligations (such entities, the "Lumen Guarantors") and certain of such guarantees will be secured by a lien on substantially all of the assets of the applicable Lumen Guarantors. Level 3, Level 3 Financing and certain of Level 3 Financing's subsidiaries have provided or, in certain cases after receiving necessary regulatory approvals, will provide an unconditional guarantee of payment of Lumen's obligations under its Series A Revolving Credit Facility of up to \$150 million and under its Series B Revolving Credit Facility of up to \$150 million, in each case secured by a lien on substantially all of their assets (such entities, the "Level 3 Collateral Guarantors"). The guarantee by the Level 3 Collateral Guarantors may be reduced or terminated under certain circumstances. Qwest Corporation and certain of its subsidiaries have provided an unsecured guarantee of collection of Lumen's obligations under its revolving credit facilities and Superpriority Term Loan A Facility (the "Qwest Guarantors").

Lumen's obligations under the Superpriority Term Loan B Credit Agreement are unsecured. The term loans issued under this agreement are guaranteed by the Lumen Guarantors and the Qwest Guarantors on the same basis as those entities guarantee Lumen's obligations under its Superpriority Revolving/Term Loan A Credit Agreement.

Level 3 Financing's obligations under its new Credit Agreement are secured by a first lien on substantially all of its assets (subject, in certain cases, to receipt of necessary regulatory approvals). In addition, the other Level 3 Collateral Guarantors have provided or, in certain cases after receiving necessary regulatory approvals, will provide an unconditional guarantee of payment of Level 3 Financing's obligations under its new Credit Agreement secured by a lien on substantially all of their assets.

Lumen's superpriority secured senior notes are guaranteed by the Lumen Guarantors and the Qwest Guarantors on the same basis as those entities guarantee Lumen's obligations under its Superpriority Revolving/Term Loan A Credit Agreement. Level 3 Financing's obligations under its first lien notes are secured by a first lien on substantially all of its assets (subject, in certain cases, to receipt of necessary regulatory approvals), and are guaranteed by the other Level 3 Collateral Guarantors (or, for certain such guarantors, will be guaranteed upon the receipt of required regulatory approvals) on the same basis as the guarantees provided by such entities under its new Credit Agreement. Level 3 Financing's obligations under its second lien notes are secured by a second lien on substantially all of its assets (subject, in certain cases, to receipt of necessary regulatory approvals), and are guaranteed by the other Level 3 Collateral Guarantors (or, for certain such guarantors, will be guaranteed upon the receipt of required regulatory approvals) on the same basis as the guarantees provided by such entities under its new Credit Agreement, except the lien securing such guarantees is a second lien.

Level 3 Financing's obligations under its unsecured notes are guaranteed on an unsecured basis by the same affiliated entities that guarantee Level 3 Financing's new Credit Agreement and secured notes. The senior unsecured notes issued by Qwest Capital Funding, Inc. are guaranteed by its parent, Qwest Communications International Inc.

## **Covenants**

### ***Lumen***

Under its Superpriority Revolving/Term Loan A Credit Agreement, Lumen may not permit:

(i) its maximum total net leverage ratio to exceed 5.75 to 1.00 as of the last day of each fiscal quarter, stepping down to 5.50 to 1.00 with respect to each fiscal quarter ending after December 31, 2024 and further stepping down to 5.25 to 1.00 with respect to each fiscal quarter ending after December 31, 2025; or

(ii) its interest coverage ratio as of the last day of any test period to be less than 2.00 to 1.00.

Lumen's superpriority credit agreements and superpriority senior secured notes contain various representations and warranties and extensive affirmative and negative covenants. Such covenants include, among other things and subject to certain significant exceptions, restrictions on our ability to declare or pay dividends, repurchase stock, repay certain other indebtedness, create liens, incur additional indebtedness, make investments, engage in transactions with our affiliates, dispose of assets and merge or consolidate with other persons.

Lumen's senior unsecured notes were issued under four separate indentures. These indentures restrict Lumen's ability to (i) incur, issue or create liens upon its property and (ii) consolidate with or merge into, or transfer or lease all or substantially all of its assets to, any other party.

Under certain circumstances in connection with a "change of control" of Lumen, Lumen will be required to make an offer to repurchase each series of these senior notes (other than two of its older series of notes) at a price of 101% of the principal amount redeemed, plus accrued and unpaid interest.

### ***Level 3***

Level 3 Financing's new Credit Agreement and first and second lien secured notes contain various representations and extensive affirmative and negative covenants. Such covenants include, among other things and subject to certain significant exceptions, restrictions on their ability to declare or pay dividends, repay certain other indebtedness, create liens, incur additional indebtedness, make investments, dispose of assets and merge or consolidate with other persons. Also, under certain circumstances in connection with a "change of control" of Level 3 or Level 3 Financing, Level 3 Financing will be required to make an offer to repurchase each series of its outstanding senior notes at a price of 101% of the principal amount redeemed, plus accrued and unpaid interest.

### **Qwest Companies**

The senior notes of Qwest Corporation were issued under indentures dated April 15, 1990 and October 15, 1999. These indentures contain restrictions on the incurrence of liens and the consummation of certain transactions substantially similar to the above-described covenants in the indentures governing Lumen's senior unsecured notes (but contain no mandatory repurchase provisions). The senior notes of Qwest Capital Funding, Inc. were issued under an indenture dated June 29, 1998 containing terms substantially similar to those set forth in Qwest Corporation's indentures.

### **Compliance**

As of September 30, 2024, Lumen Technologies, Inc. believes it and its subsidiaries were in compliance with the provisions and financial covenants in their respective material debt agreements in all material respects.

### **Guarantees**

Lumen does not guarantee the debt of any unaffiliated parties, but, as noted above, as of September 30, 2024, certain of its key subsidiaries guaranteed (i) its debt outstanding under its superpriority credit agreements, its superpriority senior secured notes and its \$225 million letter of credit facility and (ii) the outstanding term loans or senior secured notes issued by certain other subsidiaries. As further noted above, several of the subsidiaries guaranteeing these obligations have pledged substantially all of their assets to secure certain of their respective guarantees.

### **Note 6—Severance**

Periodically, we reduce our workforce and accrue liabilities for the related severance costs. These workforce reductions result primarily from the progression or completion of our post-acquisition integration plans, increased competitive pressures, cost reduction initiatives, process improvements through automation and reduced workloads due to reduced demand for certain services.

During April 2024, we reduced our workforce by approximately 6% as a part of our efforts to change our workforce composition to reflect our ongoing transformation and cost reduction opportunities that align with our shapeshifting and focus on our strategic priorities. As a result of this plan, we incurred severance and related costs of approximately \$103 million during the second quarter of 2024. We have not incurred, and do not expect to incur, material impairment or exit costs related to this workforce reduction.

Changes in our accrued liabilities for severance expenses were as follows:

	<b>Severance</b>	
	<b>(Dollars in millions)</b>	
Balance at December 31, 2023	\$	18
Accrued to expense		119
Payments, net		(122)
Balance at September 30, 2024	\$	15

### **Note 7—Employee Benefits**

For detailed descriptions of the various defined benefit pension plans (qualified and non-qualified), post-retirement benefits plans and defined contribution plan we sponsor, see Note 11—Employee Benefits to the consolidated financial statements and accompanying notes in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023.

Net periodic benefit expense for the Lumen Combined Pension Plan (the "Combined Pension Plan" or the "Plan") includes the following components:

	Combined Pension Plan			
	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions)			
Service cost	\$ 6	7	18	19
Interest cost	63	67	188	202
Expected return on plan assets	(68)	(72)	(204)	(215)
Recognition of prior service credit	(3)	(2)	(6)	(5)
Recognition of actuarial loss	28	27	82	78
Net periodic pension expense	<u>\$ 26</u>	<u>27</u>	<u>78</u>	<u>79</u>

Net periodic benefit expense for our post-retirement benefit plans includes the following components:

	Post-Retirement Benefit Plans			
	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions)			
Service cost	\$ 1	1	3	4
Interest cost	23	26	70	77
Recognition of prior service credit	(1)	(2)	(5)	(6)
Recognition of actuarial gain	(4)	(5)	(13)	(15)
Special termination benefits charge	—	—	2	—
Net periodic post-retirement benefit expense	<u>\$ 19</u>	<u>20</u>	<u>57</u>	<u>60</u>

Service costs for our pension and post-retirement benefit plans are included in the Cost of services and products (exclusive of depreciation and amortization) and Selling, general and administrative line items on our consolidated statements of operations and all other costs listed above are included in Other income (expense), net on our consolidated statements of operations for the three and nine months ended September 30, 2024 and 2023. As a result of ongoing efforts to reduce our workforce, we recognized a one-time charge of \$2 million during the second quarter of 2024 for special termination benefit enhancements paid to certain eligible employees upon voluntary retirement.

Our Combined Pension Plan contains provisions that allow us, from time to time, to offer lump sum payment options to certain former employees in settlement of their future retirement benefits. We record an accounting settlement charge, consisting of the recognition of certain deferred costs of the pension plan associated with these lump sum payments, only if in the aggregate they exceed or are probable to exceed the sum of the annual service and interest costs for the plan's net periodic pension benefit cost, which represents the settlement accounting threshold. The amount of any future non-cash settlement charges will be dependent on several factors, including the total amount of our future lump sum benefit payments.

Benefits paid by the Combined Pension Plan are paid through a trust that holds the Plan's assets. The amount of required contributions to the Combined Pension Plan in 2024 and beyond will depend on a variety of factors, most of which are beyond our control, including earnings on plan investments, prevailing interest rates, demographic experience, changes in plan benefits and changes in funding laws and regulations. Based on current laws and circumstances, we do not expect to be required to make any additional contributions in 2024. We made a voluntary contribution of \$170 million to the trust for the Combined Pension Plan during the third quarter of 2024.

## Note 8—Earnings Per Common Share

Basic and diluted loss per common share for the three and nine months ended September 30, 2024 and 2023 were calculated as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(Dollars in millions, except per share amounts, shares in thousands)				
Loss (numerator)				
Net loss	\$ (148)	(78)	(140)	(8,303)
Net loss applicable to common stock for computing basic loss per common share	(148)	(78)	(140)	(8,303)
Net loss as adjusted for purposes of computing diluted loss per common share	(148)	(78)	(140)	(8,303)
Shares (denominator):				
Weighted-average number of shares:				
Outstanding during period	1,016,211	1,008,523	1,014,473	1,006,140
Non-vested restricted stock	(27,417)	(24,973)	(27,510)	(23,287)
Weighted average shares outstanding for computing basic loss per common share	988,794	983,550	986,963	982,853
Incremental common shares attributable to dilutive securities:				
Shares issuable under convertible securities	—	—	—	—
Shares issuable under incentive compensation plans	—	—	—	—
Number of shares as adjusted for purposes of computing diluted loss per common share	988,794	983,550	986,963	982,853
Basic loss per common share	\$ (0.15)	(0.08)	(0.14)	(8.45)
Diluted loss per common share <sup>(1)</sup>	\$ (0.15)	(0.08)	(0.14)	(8.45)

<sup>(1)</sup> For the three and nine months ended September 30, 2024, we excluded from the calculation of diluted loss per share 12 million and 5 million shares, respectively, potentially issuable under incentive compensations plans or convertible securities, as their effect, if included, would have been anti-dilutive due to our net loss position. For the three and nine months ended September 30, 2023, we excluded from the calculation of diluted loss per share less than 1 million shares, potentially issuable under incentive compensations plans or convertible securities, as their effect, if included, would have been anti-dilutive due to our net loss position.

Our calculation of diluted loss per common share excludes non-vested restricted stock awards that are anti-dilutive based upon the terms of the award and due to the lower stock price resulting in more assumed repurchases and greater antidilution. Such shares were 11.3 million and 24.5 million for the three months ended September 30, 2024 and 2023, respectively, and 18.5 million and 22.2 million for the nine months ended September 30, 2024 and 2023, respectively.



## Note 9—Fair Value of Financial Instruments

Our financial instruments consist of cash, cash equivalents, restricted cash, accounts receivable, accounts payable, long-term debt (excluding finance lease and other obligations), interest rate swap contracts, certain equity investments and certain indemnification obligations. Due primarily to their short-term nature, the carrying amounts of our cash, cash equivalents, restricted cash, accounts receivable and accounts payable approximate their fair values.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between independent and knowledgeable parties who are willing and able to transact for an asset or liability at the measurement date. We use valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs when determining fair value and then we rank the estimated values based on the reliability of the inputs using the below-described fair value hierarchy.

We determined the fair values of our long-term debt, including the current portion, based on quoted market prices where available or, if not available, based on inputs other than quoted market prices in active markets that are either directly or indirectly observable such as discounted future cash flows using current market interest rates.

The three input levels in the hierarchy of fair value measurements are defined by the FASB generally as follows:

Input Level	Description of Input
Level 1	Observable inputs such as quoted market prices in active markets.
Level 2	Inputs other than quoted prices in active markets that are either directly or indirectly observable.
Level 3	Unobservable inputs in which little or no market data exists.

The following table presents the carrying amounts and estimated fair values of our financial assets and liabilities as of September 30, 2024 and December 31, 2023:

	Input Level	September 30, 2024		December 31, 2023	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
(Dollars in millions)					
Long-term debt, excluding finance lease and other obligations	2	\$ 18,294	16,766	19,703	13,304
Indemnifications related to the sale of the Latin American business <sup>(1)</sup>	3	87	84	86	86

<sup>(1)</sup> Nonrecurring fair value is measured as of August 1, 2022.

## Note 10—Segment Information

We report our results within two segments: Business and Mass Markets.

Under our Business segment we provide products and services to meet the needs of our enterprise and wholesale customers under five distinct sales channels: Large Enterprise, Mid-Market Enterprise, Public Sector, Wholesale, and International and Other. For Business segment revenue, we report the following product categories: Grow, Nurture, Harvest, and Other, in each case through the sales channels outlined above. The Business segment included the results of our EMEA business prior to its sale on November 1, 2023.

Under our Mass Markets Segment, we provide products and services to residential and small business customers. We report the following product categories: Fiber Broadband, Other Broadband, and Voice and Other.

See detailed descriptions of these product and service categories in Note 3—Revenue Recognition.

As described in more detail below, our segments are managed based on the direct costs of providing services to applicable customers and directly associated selling, general and administrative costs (primarily salaries and commissions). Shared costs are managed separately and included in "other unallocated expense" in the table below under the heading "— Revenue and Expenses". As referenced above, we reclassified certain prior period amounts to conform to the current period presentation. See Note 1— Background for additional detail on these changes.

The following tables summarize our segment results for the three and nine months ended September 30, 2024 and 2023, based on our segment categorization as of September 30, 2024.

	Three Months Ended September 30, 2024		Nine Months Ended September 30, 2024	
	Business	Mass Markets	Business	Mass Markets
	(Dollars in millions)			
Segment revenue	\$ 2,536	685	7,704	2,075
Segment expenses:				
Cost of services and products	766	16	2,266	53
Selling, general and administrative	453	323	1,407	937
Total segment expense	1,219	339	3,673	990
Total segment adjusted EBITDA	\$ 1,317	346	4,031	1,085

	Three Months Ended September 30, 2023		Nine Months Ended September 30, 2023	
	Business	Mass Markets	Business	Mass Markets
	(Dollars in millions)			
Segment revenue	\$ 2,905	736	8,781	2,259
Segment expenses:				
Cost of services and products	825	19	2,428	61
Selling, general and administrative	610	364	1,723	1,038
Total segment expense	1,435	383	4,151	1,099
Total segment adjusted EBITDA	\$ 1,470	353	4,630	1,160

## Revenue and Expenses

Our segment revenue includes all revenue from our two segments as described in more detail above. Our segment revenue is based upon each customer's classification. We report our segment revenue based upon all services provided to that segment's customers. Our segment expenses include specific cost of service expenses incurred as a direct result of providing services and products to segment customers, along with selling, general and administrative expenses that are directly associated with specific segment customers or activities. We have not allocated assets or debt to specific segments.

The following items are excluded from our segment results, because they are centrally managed and not monitored by or reported to our chief operating decision maker by segment:

- network expenses not incurred as a direct result of providing services and products to segment customers and centrally managed expenses such as Finance, Human Resources, Legal, Marketing, Product Management and IT, all of which are reported as "other unallocated expense" in the table below;
- depreciation and amortization expense;
- goodwill or other impairments;
- interest expense;
- stock-based compensation; and
- other income and expense items.

The following table reconciles total segment adjusted EBITDA to net loss for the three and nine months ended September 30, 2024 and 2023:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions)			
Total segment adjusted EBITDA	\$ 1,663	1,823	5,116	5,790
Depreciation and amortization	(707)	(755)	(2,198)	(2,234)
Goodwill impairment	—	—	—	(8,793)
Other unallocated expense	(820)	(829)	(2,591)	(2,532)
Stock-based compensation expense	(10)	(16)	(21)	(39)
Operating income (loss)	126	223	306	(7,808)
Total other expense, net	(298)	(308)	(417)	(287)
Loss before income taxes	(172)	(85)	(111)	(8,095)
Income tax (benefit) expense	(24)	(7)	29	208
Net loss	\$ (148)	(78)	(140)	(8,303)

## **Note 11—Commitments, Contingencies and Other Items**

We are subject to various claims, legal proceedings and other contingent liabilities, including the matters described below, which individually or in the aggregate could materially affect our financial condition, future results of operations or cash flows.

We review our litigation accrual liabilities on a quarterly basis, but in accordance with applicable accounting guidelines only establish accrual liabilities when losses are deemed probable and reasonably estimable and only revise previously established accrual liabilities when warranted by changes in circumstances, in each case based on then-available information. As such, as of any given date we could have exposure to losses under proceedings as to which no liability has been accrued or as to which the accrued liability is inadequate. Subject to these limitations, at September 30, 2024 and December 31, 2023, we had accrued \$83 million and \$84 million, respectively, in the aggregate for our litigation and non-income tax contingencies, which is included in Other under Current Liabilities or Other under Deferred Credits and Other Liabilities in our consolidated balance sheets as of such dates. We cannot at this time estimate the reasonably possible loss or range of loss, if any, in excess of our \$83 million accrual at September 30, 2024 due to the inherent uncertainties and speculative nature of contested proceedings. The establishment of an accrual does not mean that actual funds have been set aside to satisfy a given contingency. Thus, the resolution of a particular contingency for the amount accrued could have no effect on our results of operations but nonetheless could have an adverse effect on our cash flows.

In this Note, a reference to a "putative" class action means a class has been alleged, but not certified, in that matter.

### **Principal Proceedings**

#### *Houser Shareholder Suit*

Lumen and certain of its current and former officers and directors were named as defendants in a putative shareholder class action lawsuit filed on June 12, 2018 in the Boulder County District Court of the state of Colorado, captioned Houser et al. v. CenturyLink, et al. The original complaint asserted claims on behalf of a putative class of former Level 3 shareholders who became CenturyLink, Inc. shareholders as a result of our acquisition of Level 3. It alleged that the proxy statement provided to the Level 3 shareholders failed to disclose various material information, including information about strategic revenue, customer loss rates, and customer account issues, among other items. The original complaint sought damages, costs and fees, rescission, rescissory damages, and other equitable relief. In May 2020, the court dismissed the original complaint. Plaintiffs appealed that decision, and in March 2022, the appellate court affirmed the district court's order in part and reversed it in part. It then remanded the case to the district court for further proceedings. Plaintiff filed an amended complaint asserting the same claims and prayer for relief, and we filed a motion to dismiss. The court granted our motion to dismiss in May 2023 and Plaintiffs appealed that dismissal. In August 2024, the appellate court set aside the trial court's dismissal. In October 2024, we filed a petition with the Colorado Supreme Court seeking a review of the appellate court's decision.

#### *Quantum Fiber Disclosure Litigation*

*In re Lumen Technologies, Inc. Securities Litigation.* On March 3, 2023, a purported shareholder of Lumen filed a putative class action complaint originally captioned Voigt et al. v. Lumen Technologies, et al. (now captioned *In re Lumen Technologies, Inc. Securities Litigation*, Case 3:23-cv-00286-TAD-KDM), in the U.S. District Court for the Western District of Louisiana. The complaint alleges that Lumen and certain of its current and former officers violated the federal securities laws by omitting or misstating material information related to Lumen's expansion of its Quantum Fiber business. The court appointed a lead plaintiff who filed an amended complaint, seeking money damages, attorneys' fees and costs, and other relief. On October 30, 2024, the court granted the motion to dismiss we filed against the amended complaint.

*Associated Derivative Litigation.* On August 5, 2024, a purported shareholder of Lumen filed a shareholder derivative complaint on behalf of Lumen captioned *Slack v. Johnson, et al.*, Case 3:24-cv-01043-TAD-KMM, in the U.S. District Court for the Western District of Louisiana. The complaint alleges claims for breach of fiduciary duty, violations of the federal securities laws, and other causes of action against current and former officers and directors of Lumen allegedly responsible for omitting or misstating material information related to Lumen's expansion of its Quantum Fiber business. The complaint seeks money damages, attorneys' fees and costs, and other relief. Substantially similar derivative cases have been filed as follows: (i) on August 20, 2024, *Capistrano v. Storey, et al.*, Case 3:24-cv-01130-TAD-KMM, in the U.S. District Court for the Western District of Louisiana; and on (ii) October 11, 2024, *Ostrow v. Johnson, et al.*, Case 2024-3706, in the 4th Judicial District Court for the Parish of Ouachita, State of Louisiana, subsequently removed on October 11, 2024, to the U.S. District Court for the Western District of Louisiana as Case 3:24-cv-01399-TAD-KMM.

#### *Lead-Sheathed Cable Litigation*

*Disclosure Litigation. In re Lumen Technologies, Inc. Securities Litigation II.* On September 15, 2023, a purported shareholder of Lumen filed a putative class action complaint originally captioned *Glauber, et al. v. Lumen Technologies* (now captioned *In re Lumen Technologies, Inc. Securities Litigation II*, Case 3:23-cv-01290), in the U.S. District Court for the Western District of Louisiana. The complaint alleged that Lumen and certain of its current and former officers violated the federal securities laws by omitting or misstating material information related to Lumen's responsibility for environmental degradation allegedly caused by the lead sheathing of certain telecommunications cables. The court appointed lead plaintiffs who filed an amended complaint, seeking money damages, attorneys' fees and costs, and other relief.

*Derivative Litigation.* On June 11, 2024, a purported shareholder of Lumen filed a shareholder derivative complaint on behalf of Lumen captioned *Brown v. Johnson, et al.*, Case 3:24-cv-00798-TAD-KDM, in the U.S. District Court for the Western District of Louisiana. The complaint alleges claims for breach of fiduciary duty, violations of the federal securities laws, and other causes of action against current and former officers and directors of Lumen relating to placement or presence of lead-sheathed telecommunications cables. The complaint seeks damages, injunctive relief, and attorneys' fees. Substantially similar derivative cases have been filed as follows: (i) on August 9, 2024, *Pourarian v. Johnson, et al.*, Case 3:24-cv-01071-TAD-KMM in the U.S. District Court for the Western District of Louisiana; (ii) on September 9, 2024, *Capistrano v. Johnson, et al.*, Case 3:24-cv-01234-TAD-KMM in the U.S. District Court for the Western District of Louisiana; (iii) on September 16, 2024, *Vogel v. Perry, et al.*, Case 2024-3360 in the 4th Judicial District Court for the Parish of Ouachita, State of Louisiana, subsequently removed on September 17, 2024 to the U.S. District Court for the Western District of Louisiana as Case 3:24-cv-01274-TAD-KMM; and (iv) on September 25, 2024, *Murray v. Allen, et al.*, Case 3:24-cv-01320 in the U.S. District Court for the Western District of Louisiana.

#### *Environmental Litigation*

*Parish of St. Mary.* On July 9, 2024, a putative class action complaint was filed in the 16th Judicial District Court for the Parish of St. Mary, State of Louisiana, Case 138575, asserting claims on behalf of all parishes, municipalities, and citizens owning real properties in the State of Louisiana that have been affected by lead-sheathed telecommunications cables installed by AT&T and Lumen or their predecessors. The complaint seeks damages and injunctive relief under Louisiana state law. The case has been removed to the United States District Court Western District of Louisiana Lafayette Division, Case 6:24-CV-01001-RRS-DJA.

*Blum.* On November 6, 2023, a putative class action complaint was filed in the 16th Judicial District Court for the Parish of St. Mary, State of Louisiana, Case 137935, asserting claims on behalf of all citizens owning real properties in the State of Louisiana that have been affected by lead-sheathed telecommunications cables installed by AT&T, BellSouth, Verizon, and Lumen or their predecessors. The complaint seeks damages and injunctive relief under Louisiana state law. The case has been removed to Federal Court in the United States District Court Western District of Louisiana Lafayette Division, Case 6:23-CV-01748.

### *State Tax Suits*

Since 2012, a number of Missouri municipalities have asserted claims in the Circuit Court of St. Louis County, Missouri, alleging that we and several of our subsidiaries have underpaid taxes. These municipalities are seeking, among other things, declaratory relief regarding the application of business license and gross receipts taxes and back taxes from 2007 to the present, plus penalties and interest. In a February 2017 ruling in connection with one of these pending cases, the court entered an order awarding the plaintiffs \$4 million and broadening the tax base on a going-forward basis. We appealed that decision to the Missouri Supreme Court. In December 2019, it affirmed the circuit court's order in some respects and reversed it in others, remanding the case to the circuit court for further proceedings. The Missouri Supreme Court's decision reduced our exposure in the case. In a June 2021 ruling in one of the pending cases, another trial court awarded the cities of Columbia and Joplin approximately \$55 million, plus statutory interest. On appeal, the Missouri Court of Appeals affirmed in part and reversed in part, vacated the judgment and remanded the case to the trial court with instructions for further proceedings consistent with the Missouri Supreme Court's decision.

### *FCRA Litigation*

In November 2014, a putative class action complaint captioned *Bultemeyer v. CenturyLink, Inc.* was filed in the United States District Court for the District of Arizona, Case CV-14-02530-PHX-SPL, alleging violations of the Fair Credit Reporting Act (the "FCRA"). In February 2017, the case was dismissed for lack of standing. Plaintiff appealed and the 9th Circuit reversed and remanded. Class certification was contested and ultimately granted in 2023. The 9th Circuit denied Lumen's request to appeal the class certification ruling. A jury trial was conducted in September 2024. The jury found that CenturyLink willfully violated the FCRA, and awarded each class member \$500 for statutory damages and \$2,000 for punitive damages. If the verdict is not set aside in connection with post-trial motion practice, Lumen will appeal to the 9th Circuit. We have not accrued a contingent liability for this matter. While liability is ultimately possible, we have not determined it to be probable, and cannot estimate any final damages exposure, if any, which remains uncertain.

### *Billing Practices Suits*

In June 2017, a former employee filed an employment lawsuit against us claiming that she was wrongfully terminated for alleging that we charged some of our retail customers for products and services they did not authorize. Thereafter, based in part on the allegations made by the former employee, several legal proceedings were filed, including consumer class actions in federal and state courts, a series of securities investor class actions in federal courts and several shareholder derivative actions in federal and Louisiana state courts. The derivative cases were brought on behalf of CenturyLink, Inc. against certain current and former officers and directors of the Company and seek damages for alleged breaches of fiduciary duties. We have settled the consumer and securities investor class actions and the derivative actions.

We have engaged in discussions regarding related claims with a number of state attorneys general, and have entered into agreements settling certain of the consumer practices claims asserted by several state attorneys general.

### *December 2018 Outage Proceedings*

We experienced an outage on one of our transport networks that impacted voice, IP, 911, and transport services for some of our customers between the 27th and 29th of December 2018. We believe that the outage was caused by a faulty network management card from a third-party equipment vendor.

The FCC and four states initiated formal investigations. In November 2020, following the FCC's release of a public report on the outage, we negotiated a settlement which was released by the FCC in December 2020. The amount of the settlement was not material to our financial statements.

In December 2020, the Staff of the Washington Utilities and Transportation Commission ("WUTC") filed a complaint against us based on the December 2018 outage, seeking penalties of approximately \$7 million for alleged violations of Washington regulations and laws. The Washington Attorney General's office sought penalties of \$27 million. Following trial before the WUTC, it issued an order in June 2023 penalizing us for approximately \$1 million. The case is pending before the Washington State Court of Appeals.

### *Latin American Tax Litigation and Claims*

In connection with the 2022 divestiture of our Latin American business, the purchaser assumed responsibility for the Brazilian tax claims described in our prior periodic reports filed with the SEC. We agreed to indemnify the purchaser for amounts paid with respect to the Brazilian tax claims. The value of this indemnification and others associated with the Latin American business divestiture are included in the indemnification amount as disclosed in Note 9—Fair Value of Financial Instruments.

### *Huawei Network Deployment Investigations*

Lumen has received requests from the following federal agencies for information relating to the use of equipment manufactured by Huawei Technologies Company ("Huawei") in Lumen's networks.

- DOJ. Lumen has received a civil investigative demand from the U.S. Department of Justice in the course of a False Claims Act investigation alleging that Lumen Technologies, Inc. and Lumen Technologies Government Solutions, Inc. failed to comply with certain specified requirements in federal contracts concerning their use of Huawei equipment.
- FCC. The FCC's Enforcement Bureau issued a Letter of Inquiry to Lumen Technologies, Inc. regarding its written certifications to the FCC that Lumen has complied with FCC rules governing the use of resources derived from the High Cost Program, Lifeline Program, Rural Health Care Program, E-Rate Program, Emergency Broadband Benefit Program, and the Affordable Connectivity Program. Under these programs, federal funds may not be used to facilitate the deployment or maintenance of equipment or services provided by Huawei, a company that the FCC has determined poses a national security threat to the integrity of U.S. communications networks or the communications supply chain.
- Team Telecom. The Committee for the Assessment of Foreign Participation in the United States Telecommunications Service Sector (comprised of the U.S. Attorney General, and the Secretaries of the Department of Homeland Security, and the Department of Defense), commonly referred to as Team Telecom, issued questions and requests for information relating to Lumen's FCC licenses and its use of Huawei equipment.

### *Marshall Fire Litigation*

On December 30, 2021, a wildfire referred to as the Marshall Fire ignited near Boulder, Colorado. The Marshall Fire killed two people, and it burned thousands of acres, including entire neighborhoods. Approximately 300 lawsuits naming various defendants and asserting various claims for relief have been filed. To date, three of those name our affiliate Qwest Corporation as being at fault: Allstate Fire and Casualty Insurance Company, et al., v. Qwest Corp., et al., Case 2023-cv-3048, and Wallace, et al. v. Qwest Corp., et al., Case 2023-cv-30488, both of which have been consolidated with Kupfner, et al., v. Public Service Company of Colorado, et al., Case 2022-cv-30195. The consolidated proceeding is pending in Colorado District Court, Boulder, Colorado. Preliminary estimates of potential damage claims exceed \$2 billion.

### *911 Surcharge*

In June 2021, the Company was served with a complaint filed in the Santa Fe County District Court by Phone Recovery Services, LLC ("PRS"), acting on behalf of the State of New Mexico. The complaint claims Qwest Corporation and CenturyTel of the Southwest have violated the New Mexico Fraud Against Taxpayers Act since 2004 by failing to bill, collect and remit certain 911 surcharges from customers. Through pre-trial proceedings, the Court narrowed the issues to be resolved by jury. On August 21, 2024, a jury decided the remaining issues, and consequently all claims asserted, in Lumen's favor. Plaintiff has filed a Notice of Appeal and Lumen submitted a cross-appeal as to the original motion to dismiss and motion for summary judgment.

## Other Proceedings, Disputes and Contingencies

From time to time, we are involved in other proceedings incidental to our business, including patent infringement allegations, regulatory hearings relating primarily to our rates or services, actions relating to employee claims, tax issues, or environmental law issues, grievance hearings before labor regulatory agencies, miscellaneous third-party tort actions, or commercial disputes.

We are currently defending several patent infringement lawsuits asserted against us by non-practicing entities which are seeking substantial recoveries. These cases have progressed to various stages and one or more may go to trial within the next twelve months if they are not otherwise resolved. Where applicable, we are seeking full or partial indemnification from our vendors and suppliers.

We are subject to various foreign, federal, state and local environmental protection and health and safety laws. From time to time, we are subject to judicial and administrative proceedings brought by various governmental authorities under these laws. Several such proceedings are currently pending, but none is reasonably expected to exceed \$300,000 in fines and penalties. In addition, in the past we acquired companies that had installed lead-sheathed cables several decades earlier, or had operated certain manufacturing companies in the first part of the 1900s. Under applicable environmental laws, we could be named as a potentially responsible party for a share of the remediation of environmental conditions arising from the historical operations of our predecessors.

The outcomes of these other proceedings described under this heading are not predictable. However, based on current circumstances, we do not believe that the ultimate resolution of these other proceedings, after considering available defenses and any insurance coverage or indemnification rights, will have a material adverse effect on us.

The matters listed in this Note do not reflect all our contingencies. For additional information on our contingencies, see Note 18—Commitments, Contingencies and Other Items to the consolidated financial statements and accompanying notes in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2023. The ultimate outcome of the above-described matters may differ materially from the outcomes anticipated, estimated, projected or implied by us in certain of our statements appearing above in this Note, and proceedings we currently consider immaterial may ultimately affect us materially.

## Note 12—Other Financial Information

### Other Current Assets

The following table presents details of other current assets reflected on our consolidated balance sheets:

	September 30, 2024	December 31, 2023
	(Dollars in millions)	
Prepaid expenses	\$ 357	395
Income tax receivable	16	273
Materials, supplies and inventory	173	209
Contract assets	13	19
Contract acquisition costs	101	107
Contract fulfillment costs	106	102
Assets held for sale	86	104
Other	19	14
Total other current assets	\$ 871	1,223



***Other Income (Expense), Net***

Other income (expense), net reflects certain items not directly related to our core operations, including gains and losses from non-operating asset dispositions. For the nine months ended September 30, 2024, Other income (expense), net included a gain on sale of investment of \$205 million.

**Note 13—Repurchases of Lumen Common Stock**

During the fourth quarter of 2022, our Board of Directors authorized a two-year program to repurchase up to an aggregate of \$1.5 billion of our outstanding common stock. During the three and nine months ended September 30, 2024, we did not repurchase any shares of our outstanding common stock under this program. As of September 30, 2024, we were authorized to purchase up to an aggregate of \$1.3 billion of our outstanding common stock under this program, which expired on November 2, 2024.

## Note 14—Accumulated Other Comprehensive Loss

### Information Relating to 2024

The table below summarizes changes in accumulated other comprehensive loss recorded on our consolidated balance sheet by component for the nine months ended September 30, 2024:

	Pension Plans	Post-Retirement Benefit Plans	Foreign Currency Translation Adjustment and Other	Total
	(Dollars in millions)			
Balance at December 31, 2023	\$ (1,045)	276	(41)	(810)
Amounts reclassified from accumulated other comprehensive loss	57	(13)	—	44
Net current-period other comprehensive income (loss)	57	(13)	—	44
Balance at September 30, 2024	<u>\$ (988)</u>	<u>263</u>	<u>(41)</u>	<u>(766)</u>

The tables below present further information about our reclassifications out of accumulated other comprehensive loss by component for the three and nine months ended September 30, 2024:

Three Months Ended September 30, 2024	Decrease (Increase) in Net Income	Affected Line Item in Consolidated Statement of Operations
	(Dollars in millions)	
Amortization of pension & post-retirement plans <sup>(1)</sup>		
Net actuarial loss	\$ 24	Other income (expense), net
Prior service credit	(4)	Other income (expense), net
Total before tax	20	
Income tax benefit	(5)	Income tax (benefit) expense
Net of tax	<u>\$ 15</u>	

  

Nine Months Ended September 30, 2024	Decrease (Increase) in Net Income	Affected Line Item in Consolidated Statement of Operations
	(Dollars in millions)	
Amortization of pension & post-retirement plans <sup>(1)</sup>		
Net actuarial loss	\$ 69	Other income (expense), net
Prior service credit	(11)	Other income (expense), net
Total before tax	58	
Income tax benefit	(14)	Income tax (benefit) expense
Net of tax	<u>\$ 44</u>	

(1) See Note 7—Employee Benefits for additional information on our net periodic benefit expense (income) related to our pension and post-retirement plans.

### Information Relating to 2023

The table below summarizes changes in accumulated other comprehensive loss recorded on our consolidated balance sheets by component for the nine months ended September 30, 2023:

	Pension Plans	Post-Retirement Benefit Plans	Foreign Currency Translation Adjustment and Other	Total
	(Dollars in millions)			
Balance at December 31, 2022	\$ (985)	308	(422)	(1,099)
Other comprehensive income before reclassifications	—	—	3	3
Amounts reclassified from accumulated other comprehensive loss	55	(16)	—	39
Net current-period other comprehensive income (loss)	55	(16)	3	42
Balance at September 30, 2023	\$ (930)	292	(419)	(1,057)

The tables below present further information about our reclassifications out of accumulated other comprehensive loss by component for the three and nine months ended September 30, 2023:

Three Months Ended September 30, 2023	Decrease (Increase) in Net Income	Affected Line Item in Consolidated Statement of Operations
	(Dollars in millions)	
Amortization of pension & post-retirement plans <sup>(1)</sup>		
Net actuarial loss	\$ 22	Other income (expense), net
Prior service credit	(4)	Other income (expense), net
Total before tax	18	
Income tax benefit	(5)	Income tax (benefit) expense
Net of tax	\$ 13	

  

Nine Months Ended September 30, 2023	Decrease (Increase) in Net Income	Affected Line Item in Consolidated Statement of Operations
	(Dollars in millions)	
Amortization of pension & post-retirement plans <sup>(1)</sup>		
Net actuarial loss	\$ 63	Other income (expense), net
Prior service credit	(11)	Other income (expense), net
Total before tax	52	
Income tax benefit	(13)	Income tax (benefit) expense
Net of tax	\$ 39	

(1) See Note 7—Employee Benefits for additional information on our net periodic benefit income related to our pension and post-retirement plans.

**Note 15—Labor Union Contracts**

As of September 30, 2024, approximately 21% of our employees were represented by the Communications Workers of America ("CWA") or the International Brotherhood of Electrical Workers ("IBEW"). Approximately 10% of our represented employees are subject to collective bargaining agreements that are scheduled to expire over the 12 month period ending September 30, 2025.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*References in this report to "Lumen Technologies" or "Lumen," "we," "us" and "our" refer to Lumen Technologies, Inc. and its consolidated subsidiaries, unless the context otherwise requires.*

*All references to "Notes" in this Item 2 of Part I refer to the Notes to Consolidated Financial Statements included in Item 1 of Part I of this report.*

*Certain statements in this report constitute forward-looking statements. See "Special Note Regarding Forward-Looking Statements" appearing at the beginning of this report for factors relating to these statements and "Risk Factors" referenced in Item 1A of Part II of this report or other of our filings with the SEC for a discussion of certain risk factors applicable to our business, financial condition, results of operations, liquidity or prospects.*

### Overview

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") included herein should be read in conjunction with the information included in our Annual Report on Form 10-K for the year ended December 31, 2023 and with the consolidated financial statements and related notes in Item 1 of Part I of this report. The results of operations and cash flows for the first nine months of the year are not necessarily indicative of the results of operations and cash flows that might be expected for the entire year.

We are a facilities-based technology and communications company that provides a broad array of integrated products and services to our domestic and global business customers and our domestic mass markets customers. We operate one of the world's most interconnected networks. Our platform empowers our customers to swiftly adjust digital programs to meet immediate demands, create efficiencies, accelerate market access, and reduce costs, which allows our customers to rapidly evolve their IT programs to address dynamic changes. We are among the largest providers of communications services to domestic and global enterprise customers. Our long-haul network throughout North America and Asia Pacific connects to metropolitan fiber networks that we operate. As of September 30, 2024, we had approximately 25,000 employees.

### Macroeconomic Changes

Over the past few years macroeconomic changes have impacted us and our customers in several ways. On a regular basis, we review and rationalize our lease footprint and may incur accelerated lease costs when we determine to cease using underutilized leased property locations. We did not incur material accelerated lease costs during the nine months ended September 30, 2024.

Additionally, we believe macroeconomic changes over the past few years have resulted in (i) increases in certain revenue streams and decreases in others, (ii) operational challenges resulting from inflation and shortages of certain components and other supplies that we use in our business, (iii) delays in our cost transformation initiatives and (iv) delayed decision-making by certain of our customers. None of these effects, individually or in the aggregate, have to date materially impacted our financial performance or financial position.

Industry developments over the past few years have increased fiber construction demand from customers. The resulting increase in construction labor rates increased the cost of enabling units to be capable of receiving our Quantum Fiber broadband services. From time to time, we believe these factors contributed to a delay in attaining our Quantum Fiber buildout targets.

Continued business uncertainty, supply constraints or inflationary pressures could materially impact our financial results in a variety of ways, including by increasing our expenses, decreasing our revenues, further delaying our network expansion plans or otherwise interfering with our ability to deliver products and services.

These above-mentioned macroeconomic factors, coupled with dis-synergies resulting from our 2022 and 2023 divestitures, changes in customer preferences and negotiations with our creditors through the end of the first quarter of 2024, placed additional pressures on our financial performance and our market capitalization. These developments contributed to us recognizing a total of nearly \$14.0 billion in goodwill impairment charges in 2022 and 2023. Some of these pressures continue to impact us. To the extent these pressures continue, we could experience additional deterioration in our projected cash flows or market capitalization, or make significant changes to the assumed discount rates or market multiples that we use to determine the fair value of our reporting units. Any of these could result in additional future impairments of our approximately \$2.0 billion of remaining goodwill.

## Reporting Segments

Our reporting segments are currently organized by customer focus, as follows:

- **Business Segment:** Under our Business segment, we provide our products and services under the following five sales channels:
  - **Large Enterprise:** Under our large enterprise sales channel, we provide our products and services to large enterprise customers and carriers in North America.
  - **Mid-Market Enterprise:** Under our mid-market enterprise sales channel, we provide our products and services to medium-sized enterprises in North America primarily through our indirect channel partners.
  - **Public Sector:** Under our public sector sales channel, we provide our products and services to the public sector, including the U.S. Federal government, state and local governments and research and education institutions.
  - **Wholesale:** Under our wholesale sales channel, we provide our products and services to a wide range of other communication companies providing wireline, wireless, cable, voice and data center services.
  - **International and Other:** Under our international and other sales channel, we provide products and services (i) to multinational and global enterprise customers and carriers and (ii) under content delivery network ("CDN") contracts that we did not sell in late 2023.
- **Mass Markets Segment:** Under our Mass Markets segment, we provide products and services to domestic residential and small business customers. At September 30, 2024, we served 2.6 million broadband subscribers under our Mass Markets segment.

See Note 10—Segment Information to our consolidated financial statements in Item 1 of Part I of this report for additional information.

We categorize our Business segment revenue among the following products and services categories:

- **Grow**, which includes existing and emerging products and services in which we are significantly investing, including our conduit, dark fiber, Edge Cloud, IP, managed security, software-defined wide area networks ("SD WAN"), Unified Communications and Collaboration ("UC&C") and wavelengths services;
- **Nurture**, which includes our more mature offerings, including ethernet and VPN data networks services;
- **Harvest**, which includes our legacy services managed for cash flow, including Time Division Multiplexing ("TDM") voice, and private line services; and
- **Other**, which includes equipment sales, managed and professional service solutions and other services.

We categorize our Mass Markets products and services revenue among the following categories:

- *Fiber Broadband*, under which we provide high speed broadband services to residential and small business customers utilizing our fiber-based network infrastructure;
- *Other Broadband*, under which we provide primarily lower speed broadband services to residential and small business customers utilizing our copper-based network infrastructure; and
- *Voice and Other*, under which we derive revenues from (i) providing local and long-distance voice services, professional services, and other ancillary services, and (ii) federal broadband and state support programs.

From time to time, we may change the categorization of our products and services.

### **Trends Impacting Our Operations**

In addition to the above-described impact of macroeconomic pressures, our consolidated operations have been, and will continue to be, impacted by the following trends:

- Customers' demand for automated products and services and competitive pressures will require that we continue to invest in new technologies and automated processes to improve the customer experience and reduce our operating expenses.
- The increased use of digital applications, online video, gaming and artificial intelligence has substantially increased demand for robust, scalable network services. We are continuing to enhance our product and service offerings and taking other steps to enable customers to have access to greater bandwidth.
- Businesses continue to adopt distributed, global operating models. We are expanding and enhancing our fiber network, connecting more buildings to our network to generate revenue opportunities and reducing our reliance upon other carriers.
- Changes in customer preferences and in the regulatory, technological and competitive environment are (i) significantly reducing demand for our more mature service offerings, commoditizing certain offerings, or resulting in volume or rate reductions for other offerings and (ii) also creating certain opportunities for us arising out of increased demand for lower latency provided by Edge computing and for faster and more secure data transmissions.
- The operating margins of several of our newer, more technologically advanced services, some of which may connect to customers through other carriers, are lower than the operating margins on our traditional, on-net wireline services.
- Uncertainties regarding our financial performance, leverage and debt covenant compliance have caused, and may continue to cause, certain of our customers and other third parties to reduce or cease transacting business with us.
- Our expenses will be impacted by higher vendor costs, reduced economies of scale and other dis-synergies due to our completed 2022 and 2023 divestitures and any future divestitures.
- Declines in our traditional wireline services and other more mature offerings have necessitated right-sizing our cost structures to remain competitive.

- We have historically generated revenue by entering into transactions that utilize excess conduit, fiber or other assets on our network to create custom networks for our customers, including through our Private Connectivity Fabric<sup>SM</sup> solutions. We plan to continue to actively pursue additional revenue-generating opportunities with respect to these assets through right-of-use agreements, leases or other agreements. We may or may not consummate such transactions from time to time, and the revenue from and obligations associated with any such opportunities may be significant, either individually or in the aggregate. The completion of any future transactions may be subject to customary conditions, and may not be executed in a timely manner, or at all.

Inflation over the past few years has placed downward pressure on our margins and macroeconomic uncertainties have likely contributed to delayed decision-making by certain of our customers, which are trends that will likely continue to impact us as long as these factors persist. These and other developments and trends impacting our operations are discussed elsewhere in this Item 2.

## Results of Operations

In this section, we discuss our overall results of operations and highlight special items that are not included in our segment results. In "Segment Results" we review the performance of our two reporting segments in more detail. Results in this section include the results of our EMEA business prior to its sale on November 1, 2023.

The following table summarizes the results of our consolidated operations for the three and nine months ended September 30, 2024 and September 30, 2023:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions, except per share amounts)			
Operating revenue	\$ 3,221	3,641	9,779	11,040
Operating expenses	3,095	3,418	9,473	18,848
Operating income (loss)	126	223	306	(7,808)
Total other expense, net	(298)	(308)	(417)	(287)
Loss before income taxes	(172)	(85)	(111)	(8,095)
Income tax (benefit) expense	(24)	(7)	29	208
Net loss	(148)	(78)	(140)	(8,303)
Basic loss per common share	\$ (0.15)	(0.08)	(0.14)	(8.45)
Diluted loss per common share	\$ (0.15)	(0.08)	(0.14)	(8.45)



We have experienced revenue declines primarily due to declines in voice and other legacy products. More recently, we have experienced declines in revenues derived from a wide range of our other products and services. To partially mitigate these revenue declines, we remain focused on efforts to, among other things:

- increase the size, capacity, speed and usage of our networks, and utilize excess conduit, fiber or other network assets in the manner described elsewhere herein;
- promote long-term relationships with our customers through bundling of integrated services;
- allocate capital to strategically important products and services;
- increase revenue from providing our Grow products and services to Business customers and our Quantum Fiber services to Mass Markets customers;
- pursue acquisitions of additional assets or divestitures of non-strategic assets, in each case if available at attractive prices;
- optimize prices on our products and services and rationalize products across our portfolio if and when practicable; and
- market our products and services to new customers, and transition existing customers from our legacy products to our newer offerings.

## Revenue

The following tables summarize our consolidated operating revenue recorded under each of our two segments and in our five above-described revenue sales channels within the Business segment:

	Three Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Business Segment:			
Large Enterprise	\$ 839	914	(8)%
Mid-Market Enterprise	471	506	(7)%
Public Sector	427	445	(4)%
Wholesale	706	776	(9)%
International and Other	93	264	(65)%
Business Segment Revenue	2,536	2,905	(13)%
Mass Markets Segment Revenue	685	736	(7)%
Total consolidated operating revenue	\$ 3,221	3,641	(12)%

	Nine Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Business Segment:			
Large Enterprise	\$ 2,534	2,724	(7)%
Mid-Market Enterprise	1,435	1,543	(7)%
Public Sector	1,295	1,292	— %
Wholesale	2,159	2,402	(10)%
International and Other	281	820	(66)%
Business Segment Revenue	7,704	8,781	(12)%
Mass Markets Segment Revenue	2,075	2,259	(8)%
Total consolidated operating revenue	\$ 9,779	11,040	(11)%

Our consolidated operating revenue decreased by \$420 million and \$1.3 billion for the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023, \$158 million and \$490 million of which was due to the sale of the EMEA business and select CDN contracts in the fourth quarter of 2023. See our segment results below for additional information on the drivers of the remaining decrease in revenue.

## Operating Expenses

The following tables summarize our operating expenses for the three and nine months ended September 30, 2024 and 2023:

	Three Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Cost of services and products (exclusive of depreciation and amortization)	\$ 1,692	1,850	(9)%
Selling, general and administrative	696	791	(12)%
Net loss on sale of business	—	22	nm
Depreciation and amortization	707	755	(6)%
Total operating expenses	\$ 3,095	3,418	(9)%

	Nine Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Cost of services and products (exclusive of depreciation and amortization)	\$ 4,997	5,407	(8)%
Selling, general and administrative	2,261	2,302	(2)%
Net loss on sale of business	17	112	(85)%
Depreciation and amortization	2,198	2,234	(2)%
Goodwill impairment	—	8,793	nm
Total operating expenses	\$ 9,473	18,848	(50)%

nm Percentages greater than 200% and comparisons between positive and negative values or to/from zero values are considered not meaningful.

### Cost of Services and Products (exclusive of depreciation and amortization)

Cost of services and products (exclusive of depreciation and amortization) decreased by \$158 million and \$410 million for the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023. These decreases were primarily due to (i) a decrease of approximately \$151 million and \$398 million, respectively, due to the sale of the EMEA business in the fourth quarter of 2023, (ii) reductions of approximately \$64 million and \$129 million, respectively, in employee-related expense from lower headcount in our retained business and (iii) decreased network expenses of \$13 million for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023. These decreases were partially offset by increases of approximately \$40 million and \$92 million, respectively, from higher facilities costs, as well as increases of approximately \$22 million from higher equipment and maintenance costs for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023.

## Selling, General and Administrative

Selling, general and administrative expenses decreased by \$95 million and \$41 million, respectively, for the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023. For the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023, the decrease was due to (i) a decrease of approximately \$14 million and \$69 million, respectively, due to the sale of the EMEA business, (ii) a decrease of \$82 million in employee related expenses for the three months ended September 30, 2024 as compared to the three months ended September 30, 2023 as a result of our workforce reductions implemented in the second quarter of 2024, (iii) a decrease of approximately \$67 million for the nine months ended September 30, 2024 as compared to the comparable period in 2023 attributable to us recognizing a non-recurring loss in connection with our donation of our Monroe, Louisiana campus in 2023 and (iv) a decrease of \$22 million for the nine months ended September 30, 2024 as compared to the comparable period in 2023 due to the recognition in the first quarter of 2024 of a deferred gain on the fourth quarter 2023 sale of select CDN contracts. These decreases were offset by (i) an increase of \$14 million and \$157 million, respectively, in legal and other professional fees, mainly driven by our first and third quarter 2024 debt transactions and (ii) an increase of \$12 million and \$20 million, respectively, in insurance and other fees for the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023.

## Net Loss on Sale of Business

For a discussion of the net loss on sale of business that we recognized for the three and nine months ended September 30, 2023, see Note 2—Divestitures of the Latin American, ILEC and EMEA Businesses to our consolidated financial statements in Item 8 of Part II of our Annual Report Form 10-K for the year ended December 31, 2023.

## Depreciation and Amortization

The following tables provide detail of our depreciation and amortization expense:

	Three Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Depreciation	\$ 454	484	(6)%
Amortization	253	271	(7)%
Total depreciation and amortization	\$ 707	755	(6)%

  

	Nine Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Depreciation	\$ 1,396	1,440	(3)%
Amortization	802	794	1 %
Total depreciation and amortization	\$ 2,198	2,234	(2)%

Depreciation expense decreased by \$30 million and \$44 million for the three and nine months ended September 30, 2024, as compared to the three and nine months ended September 30, 2023 primarily due to a decrease of \$16 million and \$48 million, respectively, relating to changes in the depreciation lives of fiber network assets and a decrease of \$19 million and \$39 million, respectively, relating to a net decline in depreciable assets. These decreases were partially offset by (i) a \$2 million and \$14 million increase, respectively, relating to changes made at the beginning of 2024 in the method of depreciation from the group method of depreciation to the straight line by individual asset method, (ii) an increase of \$18 million for the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023 from accelerated depreciation of CDN assets, and (iii) an increase of \$8 million for the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023 due to decommissioned assets.

Amortization expense decreased by \$18 million for the three months ended September 30, 2024, as compared to the three months ended September 30, 2023. This decrease was due to (i) a \$3 million decrease associated with the accelerated amortization of software assets, (ii) an \$11 million decrease due to a changed method of amortization as discussed in Note 1— Background "— Change in Accounting Estimates", and (iii) a \$4 million decrease related to changes in our CDN customer relationships. Amortization expense increased by \$8 million for the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023. This increase was due to a \$29 million increase associated with the accelerated amortization of software assets, mostly related to CDN contracts, as well as an increase of \$21 million associated with net increases in amortizable assets. These increases were partially offset by (i) a \$19 million decrease due to a changed method of amortization as discussed in Note 1— Background "— Change in Accounting Estimates", (ii) a \$12 million decrease related to changes in our CDN customer relationships, and (iii) an \$11 million decrease due to certain customer relationship intangible assets becoming fully amortized in the second quarter of 2023.

Further analysis of our segment operating expenses by segment is provided below in "Segment Results."

### ***Goodwill Impairment***

We are required to perform impairment tests related to our goodwill annually, which we perform as of October 31, or sooner if an indicator of impairment occurs. The sustained decline in our share price during the second quarter of 2023 was considered a triggering event requiring evaluation of goodwill impairment.

We report under two segments: Business and Mass Markets. As of June 30, 2023, we had three reporting units for goodwill impairment testing, which were (i) Mass Markets, (ii) North America Business and (iii) Asia Pacific region.

When we performed an impairment test during the second quarter of 2023, we concluded that the estimated fair value of certain of our reporting units was less than their carrying value of equity as of our testing date. As a result, we recorded a non-cash, non-tax-deductible goodwill impairment charge aggregating to \$8.8 billion in the second quarter of 2023.

See Note 2—Goodwill, Customer Relationships and Other Intangible Assets to our consolidated financial statements in this report for further details on these tests and impairment charges.

## Other Consolidated Results

The following tables summarize our total other income (expense), net and income tax expense:

	Three Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Interest expense	\$ (351)	(295)	19 %
Net loss on early retirement of debt	(1)	—	nm
Other income (expense), net	54	(13)	nm
Total other expense, net	\$ (298)	(308)	(3)%
Income tax (benefit) expense	\$ (24)	(7)	nm

  

	Nine Months Ended September 30,		% Change
	2024	2023	
	(Dollars in millions)		
Interest expense	\$ (1,015)	(868)	17 %
Net gain on early retirement of debt	277	618	(55)%
Other income (expense), net	321	(37)	nm
Total other expense, net	\$ (417)	(287)	45 %
Income tax expense	\$ 29	208	(86)%

nm Percentages greater than 200% and comparisons between positive and negative values or to/from zero values are considered not meaningful.

### Interest Expense

Interest expense increased by \$56 million and \$147 million for the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023. These increases were due to the increase in the average interest rate from (i) 6.17% to 7.85% for the three months ended September 30, 2023 compared to the three months ended September 30, 2024 and (ii) 5.89% to 7.09%, for the nine months ended September 30, 2023 compared to the nine months ended September 30, 2024. These increases were partially offset by a decrease of approximately \$1 billion in average outstanding long-term debt for both the three and nine months ended September 30, 2024 as compared to the three and nine months ended September 30, 2023.

### Net Gain on Early Retirement of Debt

For a discussion of certain transactions that resulted in the net gain on debt we recognized for the three and nine months ended September 30, 2024, see Note 5—Long-Term Debt and Credit Facilities. See Note 7—Long-Term Debt and Credit Facilities to our consolidated financial statements in Item 8 of Part II of our Annual Report Form 10-K for the year ended December 31, 2023 for discussion of the 2023 exchange offers that resulted in the net gain on debt recognized for the nine months ended September 30, 2023.

### Other Income (Expense), Net

Other income (expense), net reflects certain items not directly related to our core operations, including (i) components of net periodic pension and post-retirement benefit costs, (ii) foreign currency gains and losses, (iii) our share of income from partnerships we do not control, (iv) interest income, (v) gains and losses from non-operating asset dispositions, (vi) income from transition and separation services provided by us to the purchasers of our divested businesses and (vii) other non-core items.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions)			
Pension and post-retirement net periodic expense	\$ (38)	(39)	(114)	(117)
Foreign currency gain (loss)	11	(44)	(3)	(32)
Gain on sale of investment	—	—	205	—
Loss on investment in limited partnership	(7)	(15)	(10)	(74)
Transition and separation services	37	64	107	150
Interest income	18	4	90	21
Other	33	17	46	15
Total other income (expense), net	\$ 54	(13)	321	(37)

### Income Tax Expense

For the three and nine months ended September 30, 2024, our effective income tax rate was 14.0% and (26.1)%, respectively, including an unfavorable impact of interest on our uncertain tax position reserves. For the three and nine months ended September 30, 2023, our effective income tax rate was 8.2% and (2.6)%, respectively, which included a \$1.8 billion unfavorable impact of a non-deductible goodwill impairment and a \$11 million unfavorable impact as a result of our donating our Monroe, Louisiana campus.

### Segment Results

#### General

Reconciliation of segment revenue to total operating revenue is below. The results presented in this section include results of our EMEA business prior to its sale on November 1, 2023:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(Dollars in millions)			
Operating revenue				
Business	\$ 2,536	2,905	7,704	8,781
Mass Markets	685	736	2,075	2,259
Total operating revenue	\$ 3,221	3,641	9,779	11,040

Reconciliation of segment EBITDA to total adjusted EBITDA is below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(Dollars in millions)				
Net loss	\$ (148)	(78)	(140)	(8,303)
Income tax (benefit) expense	(24)	(7)	29	208
Total other expense, net	298	308	417	287
Depreciation and amortization expense	707	755	2,198	2,234
Goodwill impairment	—	—	—	8,793
Stock-based compensation expense	10	16	21	39
Total adjusted EBITDA	<u>\$ 843</u>	<u>994</u>	<u>2,525</u>	<u>3,258</u>
Business segment adjusted EBITDA	\$ 1,317	1,470	4,031	4,630
Mass Markets segment adjusted EBITDA	346	353	1,085	1,160
Other unallocated amounts	(820)	(829)	(2,591)	(2,532)

For additional information on our reportable segments and product and services categories, see Note 3—Revenue Recognition and Note 10—Segment Information to our consolidated financial statements in Item 1 of Part I of this report.



## Business Segment

	Three Months Ended September 30,		
	2024	2023	% Change
	(Dollars in millions)		
Business Segment Product Categories:			
Grow	\$ 1,076	1,131	(5)%
Nurture	729	874	(17)%
Harvest	549	662	(17)%
Other	182	238	(24)%
Total segment revenue	2,536	2,905	(13)%
Expenses:			
Total segment expense	1,219	1,435	(15)%
Total segment adjusted EBITDA	\$ 1,317	1,470	(10)%

	Nine Months Ended September 30,		
	2024	2023	% Change
	(Dollars in millions)		
Business Segment Product Categories:			
Grow	\$ 3,198	3,409	(6)%
Nurture	2,257	2,661	(15)%
Harvest	1,697	2,059	(18)%
Other	552	652	(15)%
Total segment revenue	7,704	8,781	(12)%
Expenses:			
Total segment expense	3,673	4,151	(12)%
Total segment adjusted EBITDA	\$ 4,031	4,630	(13)%

### Three and nine months ended September 30, 2024 compared to the same periods ended September 30, 2023

Business segment revenue decreased \$369 million and \$1.1 billion for the three and nine months ended September 30, 2024 as compared to September 30, 2023. Approximately \$158 million and \$490 million, for the three and nine months ended September 30, 2024, respectively, of these decreases was due to the sale of the EMEA business and select CDN contracts in the fourth quarter of 2023. More specifically, within each product category for the three and nine months ended September 30, 2024 as compared to the comparable period ended September 30, 2023:

- Grow decreased by \$55 million and \$211 million, due to a decrease of approximately \$83 million and \$245 million associated with the sale of the EMEA business. Excluding the impact of this divestiture, we saw growth in IP services of \$27 million and \$88 million for such respective periods and an \$11 million increase of revenue from dark fiber and conduit for such periods, partially offset by declines in other products, including declines in wavelength products revenue by \$6 million and \$41 million;
- Nurture decreased by \$145 million and \$404 million, approximately \$26 million and \$80 million of which was attributable to the sale of the EMEA business. The remainder of the declines are principally attributable to declines in traditional VPN services of \$80 million and \$222 million and declines in Ethernet services of \$34 million and \$98 million, for the three and nine months September 30, 2024, as compared to the comparable periods ended September 30, 2023, respectively;

- Harvest decreased by \$113 million and \$362 million, approximately \$17 million and \$67 million of which was attributable to the above-mentioned sale of the EMEA business. The remainder of the decline is principally attributable to a \$75 million and \$234 million decline in legacy voice and private line services; and
- Other decreased by \$56 million and \$100 million, approximately \$24 million and \$75 million of which was attributable to the above-mentioned sale of select CDN contracts and decreases in equipment sales revenue of approximately \$33 million and \$37 million, which was partially offset by a \$13 million and \$45 million increase in managed and professional services.

Business segment expense decreased by \$216 million and \$478 million for the three and nine months ended September 30, 2024, respectively, as compared to the three and nine months ended September 30, 2023 primarily driven by (i) a decrease of \$68 million and \$188 million due to the above-mentioned sale of the EMEA business and select CDN contracts, (ii) a \$54 million and \$147 million reduction in overall network expense and (iii) a decrease of \$54 million and \$97 million in employee-related costs.

Business segment adjusted EBITDA as a percentage of segment revenue was 52% for each of the three and nine months ended September 30, 2024, and 51% and 53% for of the three and nine months ended September 30, 2023, respectively.

### Mass Markets Segment

	Three Months Ended September 30,		
	2024	2023	% Change
	(Dollars in millions)		
Mass Markets Product Categories:			
Fiber Broadband	\$ 190	163	17 %
Other Broadband	282	341	(17)%
Voice and Other	213	232	(8)%
Total segment revenue	685	736	(7)%
Expenses:			
Total segment expense	339	383	(11)%
Total segment adjusted EBITDA	<u>\$ 346</u>	<u>353</u>	(2)%

	Nine Months Ended September 30,		
	2024	2023	% Change
	(Dollars in millions)		
Mass Markets Product Categories:			
Fiber Broadband	\$ 541	473	14 %
Other Broadband	895	1,065	(16)%
Voice and Other	639	721	(11)%
Total segment revenue	2,075	2,259	(8)%
Expenses:			
Total segment expense	990	1,099	(10)%
Total segment adjusted EBITDA	<u>\$ 1,085</u>	<u>1,160</u>	(6)%

*Three and nine months ended September 30, 2024 compared to the same periods ended September 30, 2023*

Mass Markets segment revenue decreased \$51 million and \$184 million for the three and nine months ended September 30, 2024, respectively, as compared to the three and nine months ended September 30, 2023. More specifically, within each product category:

- Fiber Broadband revenue increased \$27 million and \$68 million, primarily driven by growth in the number of fiber customers associated with our continued increase in enabled locations from our Quantum Fiber buildout;
- Other Broadband revenue decreased \$59 million and \$170 million, primarily due to fewer customers for our lower speed copper-based broadband services; and
- Voice and Other decreased \$19 million and \$82 million, principally due to the continued loss of copper-based voice customers.

Mass Markets segment expense decreased \$44 million and \$109 million for the three and nine months ended September 30, 2024, respectively, as compared to the three and nine months ended September 30, 2023, primarily driven by a decrease of \$31 million and \$58 million in employee costs, \$16 million and \$45 million in professional fees and \$12 million and \$25 million in other network related costs. These drivers were partially offset by an increase of \$9 million and \$30 million in marketing and advertising expense and \$10 million and \$25 million in hardware and software related costs.

Mass Markets segment adjusted EBITDA as a percentage of segment revenue was 51% and 52% for the three and nine months ended September 30, 2024, respectively, and 48% and 51% for the three and nine months ended September 30, 2023, respectively.

## **Liquidity and Capital Resources**

### ***Overview of Sources and Uses of Cash***

We are a holding company that is dependent on the capital resources of our subsidiaries to satisfy our parent company liquidity requirements. Several of our significant operating subsidiaries have borrowed funds either on a standalone basis or as part of a separate restricted group with certain of its subsidiaries or affiliates. The terms of the instruments governing the indebtedness of these borrowers or borrowing groups may restrict our ability to access their accumulated cash. In addition, our ability to access the liquidity of these and other subsidiaries may be constrained by tax, legal and other limitations.

At September 30, 2024, we held cash and cash equivalents of \$2.6 billion. As of September 30, 2024 we had \$738 million of borrowing capacity available under our approximately \$1.0 billion of revolving credit facilities, net of undrawn letters of credit issued to us thereunder. We typically use our revolving credit facilities as a source of liquidity for operating activities and our other cash requirements. We had approximately \$59 million of cash and cash equivalents outside the United States at September 30, 2024. We currently believe that there are no material restrictions on our ability to repatriate cash and cash equivalents into the United States, and that we may do so without paying or accruing U.S. taxes or significant foreign taxes. We do not currently intend to repatriate to the United States any material amounts of our foreign cash and cash equivalents from operating entities.

Our executive officers and our Board of Directors review our sources and potential uses of cash in connection with our annual budgeting process and throughout the year as circumstances warrant. Generally speaking, our principal funding source is cash from operating activities, and our principal cash requirements include operating expenses, capital expenditures, income taxes, debt payments, periodic securities repurchases, periodic pension contributions and other benefits payments.

Based on our current capital allocation objectives, for the full year 2024 we project approximately \$3.1 billion to \$3.3 billion of capital expenditures.

For the 12 month period ending September 30, 2025, we project that our fixed commitments will include (i) \$52 million of scheduled term loan amortization payments, (ii) \$37 million of finance lease and other fixed payments and (iii) \$326 million of debt maturities.

We will continue to monitor our future sources and uses of cash, and anticipate that we will make adjustments to our capital allocation strategies when, as and if determined by our executive officers and our Board of Directors. We may also draw on our revolving credit facilities as a source of liquidity for operating activities and to give us additional flexibility to finance our capital investments, payments of debt, pension contributions and other cash requirements.

For additional information, see "Risk Factors—Financial Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023.

### ***Impact of Recent Divestitures***

As discussed in Note 2—Divestitures of the Latin American, ILEC and EMEA Businesses in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023, we sold our Latin American, ILEC and EMEA Businesses on August 1, 2022, October 3, 2022 and November 1, 2023, respectively. Those transactions provided us with a substantial amount of cash proceeds but have also reduced our base of income-generating assets that generate our recurring cash from operating activities. For a discussion of the impact of our divestitures upon our federal income taxes, see "Liquidity and Capital Resources—Federal Income Tax Obligations."

In the fourth quarter of 2023, we sold substantially all of our content delivery network service contracts. In the second quarter of 2024, we sold our non-controlling interest in an investment in exchange for \$250 million of pre-tax cash proceeds.

### ***Impact of PCF Transactions***

The Company announced on August 5, 2024 that Lumen and its subsidiaries had recently sold \$5 billion in new Private Connectivity Fabric<sup>SM</sup> ("PCF") solutions and has since closed over \$3 billion in additional PCF sales.

Lumen and its subsidiaries expect to receive the majority of cash from these agreements over the next 3 to 4 years, including advance payments to fund network expansion projects. Lumen and its subsidiaries will incur certain material expenditures in connection with these agreements, and expect the majority of such expenditures to be made over the next 3 to 4 years. The payments Lumen and its subsidiaries actually make and receive may vary materially from what is expected and will depend, among other things, on the timing of delivery and installation of the services by Lumen and its subsidiaries.

During the quarter ended September 30, 2024, we began receiving advanced payments under these agreements, which increased our net cash provided by operating activities reflected in our consolidated statements of cash flows and our deferred revenue reflected in our consolidated balance sheets. We anticipate that our continued receipt of cash payments under these agreements will (i) cause our consolidated cash flows to vary from quarter to quarter over the next several years and (ii) enable us to accelerate our network simplification initiatives. In addition, we expect our consolidated capital expenditures to increase as we use these cash receipts to fund network expansion projects contemplated under such agreements.

We expect to enter into additional agreements in the future to sell products and services as part of our PCF solutions, but cannot provide any assurances. See "Risk Factors" under Item 1A of Part II of this report.

### ***Capital Expenditures***

We incur capital expenditures on an ongoing basis to expand and improve our service offerings, enhance and modernize our networks, fulfill our contractual obligations, and compete effectively in our markets. We evaluate our discretionary capital expenditure projects based on a variety of factors, including expected strategic impacts (such as forecasted impact on revenue growth, productivity, expenses, service levels and customer retention) and our expected return on investment. The amount of our capital investment is influenced by, among other things, current and projected demand for our services and products, our network and customer contract requirements, cash flow generated by operating activities, cash required for debt service and other purposes, regulatory considerations (such as governmentally-mandated infrastructure buildout requirements) and the availability of requisite supplies, labor and permits.

Our capital expenditures continue to be focused on enhancing network operating efficiencies, developing new services, and expanding our fiber network, including our Quantum Fiber buildout plan. A portion of our 2024 capital expenditures will also be focused on replacing aged network assets. For more information on our capital spending, see (i) "—Overview of Sources and Uses of Cash " above, (ii) "Cash Flow Activities—Investing Activities" below, (iii) "—Impact of PCF Transactions" above, and (iv) Item 1 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023.

## **Debt Instruments and Financing Arrangements**

### **Debt Instruments**

On September 24, 2024, (i) Lumen Technologies issued approximately \$438 million aggregate principal amount of its newly-issued 10.000% Secured Notes due 2032 and paid approximately \$14 million cash (excluding accrued and unpaid interest payable with respect to the exchanged notes) in exchange for approximately \$491 million aggregate principal amount of its outstanding senior unsecured notes (which were concurrently cancelled), and (ii) Level 3 Financing issued approximately \$350 million aggregate principal amount of its newly-issued 10.000% Second Lien Notes due 2032 in exchange for approximately \$357 million aggregate principal amount of its outstanding senior unsecured notes (which were concurrently cancelled). These transactions reduced the aggregate principal amount of Lumen's consolidated indebtedness of approximately \$60 million.

On March 22, 2024, Lumen completed the TSA Transactions with a group of consenting debtholders representing over \$15 billion of Lumen's outstanding consolidated long-term debt to, among other things, extend maturities of the debt instruments of Lumen and Level 3 Financing, Inc. and provide access to approximately \$1.0 billion of new Lumen revolving credit facilities maturing in 2028 to replace Lumen's former \$2.2 billion revolving credit facility. In addition, Level 3 Financing, Inc. privately placed \$1.575 billion aggregate principal amount of newly-issued first lien notes. For more information, see Note 5 to the financial statements included in Item 1 Part I of this report.

At September 30, 2024, we had:

- \$13.7 billion of outstanding consolidated secured indebtedness;
- \$5.2 billion of outstanding consolidated unsecured indebtedness (excluding (i) finance lease obligations, (ii) unamortized premiums, net, and (iii) unamortized debt issuance costs); and
- approximately \$738 million of unused borrowing capacity under our revolving credit facilities, as discussed further below.

Under its credit agreements dated March 22, 2024, Lumen maintained at September 30, 2024 (i) approximately \$1.0 billion of superpriority revolving credit facilities, under which it owed nothing as of such date and had approximately \$216 million of letters of credit issued and undrawn as of such date, and (ii) approximately \$3.6 billion of drawn superpriority term loan facilities. Under its credit agreement dated March 22, 2024, Level 3 Financing, Inc. maintained at September 30, 2024, \$2.4 billion of drawn secured term loan facilities. For additional information, see (i) "—Overview of Sources and Uses of Cash," (ii) Note 5—Long-Term Debt and Credit Facilities to our consolidated financial statements in Item 1 of Part I of this report and (iii) Note 7—Long-Term Debt and Credit Facilities in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023.

At September 30, 2024, we had \$219 million undrawn letters of credit outstanding, \$216 million of which were issued under our revolving credit facilities, \$1 million of letters of credit outstanding under our \$225 million uncommitted letter of credit facility and \$2 million of which were issued under a separate facility maintained by one of our subsidiaries (the full amount of which is collateralized by cash that is reflected on our consolidated balance sheets as restricted cash within Other, net under Goodwill and Other Assets).

In addition to indebtedness under their March 22, 2024 credit agreements, Lumen and Level 3 Financing, Inc. are indebted under their respective outstanding senior notes, and certain of Lumen's other subsidiaries are indebted under their respective outstanding senior notes.

For additional information on the terms and conditions of our debt instruments, including financial and operating covenants, see (i) Note 5—Long-Term Debt and Credit Facilities to our consolidated financial statements in Item 1 of Part I of this report, (ii) "—Other Matters" below, and (iii) our Current Report on Form 8-K dated March 22, 2024.

### Future Debt Transactions

Subject to market conditions, we plan to continue to issue debt securities from time to time to refinance a substantial portion of our maturing debt, including issuing debt securities of certain of our subsidiaries to refinance their maturing debt to the extent permitted under our debt covenants and consistent with our capital allocation strategies. The availability, interest rate and other terms of any new borrowings will depend on the ratings assigned by credit rating agencies, among other factors.

As of the filing date of this report, the credit ratings for the senior secured and unsecured debt of Lumen Technologies, Inc., Level 3 Financing, Inc. and Qwest Corporation were as follows:

Borrower	Moody's Investors Service, Inc.	Standard & Poor's	Fitch Ratings
<b>Lumen Technologies, Inc.:</b>			
Unsecured	Caa3	CCC-	CCC-
Secured	Caa1/Caa2	B	B+
<b>Level 3 Financing, Inc.</b>			
Unsecured	Caa1	CCC-	CCC-
Secured	B2/Caa1	CCC+	B+/CCC
<b>Qwest Corporation:</b>			
Unsecured	Caa3	B-	B+

Our credit ratings are reviewed and adjusted from time to time by the rating agencies. Any future changes in the senior unsecured or secured debt ratings of us or our subsidiaries could impact our access to capital or borrowing costs. We cannot provide any assurances that we will be able to borrow additional funds on favorable terms, or at all. See "Risk Factors—Financial Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023.

From time to time over the past couple of years, we have engaged in various debt refinancings, redemptions, tender offers, exchange offers, open market purchases and other transactions designed principally to reduce our consolidated indebtedness, extend our debt maturities, improve our financial flexibility or otherwise enhance our debt profile. Subject to market conditions, restrictions under our debt covenants, and other limitations, we expect to opportunistically pursue similar transactions in the future to the extent feasible. See Note 5—Long-Term Debt and Credit Facilities for additional information.

### Federal Income Tax Obligations

As of December 31, 2023, Lumen Technologies had approximately \$800 million of federal net operating loss carryforwards ("NOLs") which, for U.S. federal income tax purposes, may be used to offset future taxable income. These NOLs are primarily related to federal NOLs we acquired through the Level 3 acquisition on November 1, 2017 and are subject to limitations under Section 382 of the Internal Revenue Code of 1986, as amended ("Section 382"). We maintain a Section 382 rights agreement designed to safeguard through late 2026 our ability to use those NOLs. We utilized a substantial portion of our previously available NOLs to offset taxable gains generated by the completion of our 2022 divestitures. We expect to use substantially all of our remaining NOLs in future periods in accordance with Section 382's annual limitations, although we cannot assure this. See "Risk Factors—Financial Risks—We may not be able to fully utilize our NOLs" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023. For these reasons, we anticipate that our cash income tax liability will increase in future periods.

In January 2024, we received a federal income tax cash refund of \$729 million, including interest. The amounts of our near-term future tax payments will depend upon many factors, including our future earnings and tax circumstances and the impact of any potential corporate tax reform legislation or taxable transactions.

In August 2022, the Inflation Reduction Act was signed into law, which, among other things, implemented a corporate alternative minimum tax ("CAMT") on adjusted financial statement income effective for tax periods occurring after December 31, 2022. The CAMT had no material impact on our financial results as of December 31, 2023. In addition, the Organization for Economic Co-operation and Development has issued Pillar Two model rules introducing a new global minimum tax of 15% intended to be effective on January 1, 2024. While the U.S. has not yet adopted the Pillar Two rules, various other governments around the world are enacting legislation, some of which are effective for tax periods after December 31, 2023. While the global minimum tax will increase our administrative and compliance burdens, we expect that it will have an immaterial impact on our financial statements for the tax period ending December 31, 2024.

### ***Stock Repurchases***

Effective November 2, 2022, our Board of Directors authorized a two-year program to repurchase up to an aggregate of \$1.5 billion of our outstanding common stock (the "November 2022 stock repurchase program"). During the nine months ended September 30, 2024, we did not repurchase any shares of our outstanding common stock under this program. As of September 30, 2024, we were authorized to purchase up to an aggregate of \$1.3 billion of our outstanding common stock under this program, which expired on November 2, 2024.

### ***Pension and Post-retirement Benefit Obligations***

We are subject to material obligations under our existing defined benefit pension plans and post-retirement benefit plans. At December 31, 2023, the accounting unfunded status of our qualified and non-qualified defined benefit pension plans and our qualified post-retirement benefit plans was \$769 million and \$1.9 billion, respectively. For additional information about our pension and post-retirement benefit arrangements, see "Critical Accounting Policies and Estimates—Pension and Post-retirement Benefits" in Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2023; also see Note 11—Employee Benefits to our consolidated financial statements in Item 8 of Part II of the same report.

Benefits paid by our Combined Pension Plan are paid through the trust that holds the Combined Pension Plan's assets. Based on current laws and circumstances, we do not expect any contributions to be required for our Combined Pension Plan during 2024. The amount of required contributions to our Combined Pension Plan in 2025 and beyond will depend on a variety of factors, most of which are beyond our control, including earnings on plan investments, prevailing interest rates, demographic experience, changes in plan benefits and changes in funding laws and regulations. We occasionally make voluntary contributions to our plans in addition to required contributions and reserve the right to do so in the future. We made a voluntary contribution of \$170 million to the trust for the Combined Pension Plan during the third quarter of 2024.

Substantially all of our post-retirement health care and life insurance benefits plans are unfunded and are paid by us with available cash. Based on our most recent estimates, we expect to pay \$193 million of post-retirement benefits, net of participant contributions and direct subsidies, for the full year 2024. For additional information on our expected future benefits payments for our post-retirement benefit plans, see Note 11—Employee Benefits to our consolidated financial statements in Item 8 of Part II of our Annual Report Form 10-K for the year ended December 31, 2023.

Our pension plan contains provisions that allow us, from time to time, to offer lump sum payment options to certain former employees in settlement of their future retirement benefits. We record an accounting settlement charge, consisting of the recognition of certain deferred costs of the pension plan, associated with these lump sum payments only if, in the aggregate, they exceed the sum of the annual service and interest costs for the plan's net periodic pension benefit cost, which represents the settlement accounting threshold. See Note 11—Employee Benefits to our consolidated financial statements in Item 8 of Part II of our Annual Report Form 10-K for the year ended December 31, 2023 for additional information.

For 2024, our expected annual long-term rate of return on the pension plan assets is 6.5%. However, actual returns, if any, could be substantially different.

See Note 7—Employee Benefits to our consolidated financial statements in Item 1 of Part I of this report for more information.



### ***Future Contractual Obligations***

For information regarding our estimated future contractual obligations, see the MD&A discussion included in Item 7 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023.

### ***Federal Broadband Support Programs***

In January 2020, the FCC created the Rural Digital Opportunity Fund ("RDOF") program, a federal support program designed to fund broadband deployment in rural America. For the first phase of this program, RDOF Phase I, the FCC awarded \$6.4 billion in support payments to be paid in equal monthly installments over 10 years. We were awarded RDOF funding in several of the states in which we operate and began receiving monthly support payments during the second quarter of 2022. We received approximately \$17 million in annual RDOF Phase I support payments during 2023. In the third quarter of 2024, we relinquished rights to develop certain RDOF census blocks in four states, which resulted in (i) a reduction of the anticipated RDOF Phase I support payments to approximately \$16 million for the year ending December 31, 2024 and \$15 million each year thereafter through the program period and (ii) an expectation of payment to the Universal Service Administrative Company of approximately \$10 million.

For additional information on these programs, see (i) Note 4—Revenue Recognition to our consolidated financial statements in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2023, (ii) "Business—Regulation of Our Business" in Item 1 of Part I of the same Annual Report and (iii) "Risk Factors—Legal and Regulatory Risks" in Item 1A of Part I of the same Annual Report.

Federal officials have proposed changes to current programs and laws that could impact us, including proposals designed to increase broadband access, increase competition among broadband providers, lower broadband costs and increase broadband regulation. In late 2021, the U.S. Congress enacted legislation that appropriated \$65 billion to improve broadband affordability and access, primarily through federally funded state grants. As of the date of this report, various state and federal agencies are continuing to take steps to make this funding available to eligible applicants, including us. Although, it remains premature to speculate on the ultimate impact of this legislation on us, we anticipate that the release of this funding would increase competition for broadband customers in newly-served areas.

On April 25, 2024, the FCC adopted "net neutrality" rules regulating broadband internet services as "telecommunications services" in a manner comparable to rules in effect between 2015 and 2018. It is unclear if currently pending legal challenges of these rules will succeed. If the rules withstand these challenges, it is also unclear how the FCC will implement and enforce them. We remain committed to providing open and robust broadband services to all our customers regardless of the applicable regulatory regime. Nonetheless, it is possible that implementation of these new rules could impact our operational, legal and compliance costs.

## Cash Flow Activities

The following table summarizes our consolidated cash flow activities for the nine months ended September 30, 2024 and 2023.

	Nine Months Ended September 30,		
	2024	2023	\$ Change
	(Dollars in millions)		
Net cash provided by operating activities	\$ 3,645	1,376	2,269
Net cash used in investing activities	(1,999)	(2,232)	(233)
Net cash used in financing activities	(1,241)	(101)	1,140

## Operating Activities

Net cash provided by operating activities increased by \$2.3 billion for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023 primarily due to cash payments received in the third quarter of 2024 pursuant to our recent sales of PCF solutions and our federal income tax cash refund of \$729 million, including interest, received in the first quarter of 2024. These increases were partially offset by an increase in net loss adjusted for non-cash expenses and gains, partly as a result of the sale of our EMEA business in late 2023, and a voluntary contribution of \$170 million to the trust for the Combined Pension Plan during the third quarter of 2024. Cash provided by operating activities is subject to variability period over period as a result of timing differences, including with respect to the collection of receivables and payments of interest expense, accounts payable and bonuses.

For additional information about our operating results, see "Results of Operations" above.

## Investing Activities

Net cash used in investing activities decreased by \$233 million for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023 primarily due to the gross proceeds from the sale of an investment in the second quarter of 2024.

## Financing Activities

Net cash used in financing activities increased by \$1.1 billion for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023 primarily due to the payments of long-term debt and associated debt extinguishment costs and fees, partially offset by proceeds from issuance of long-term debt.

See Note 5—Long-Term Debt and Credit Facilities to our consolidated financial statements in Item 1 of Part I of this report for additional information on our outstanding debt securities.

**Other Matters**

We have cash management and loan arrangements with a majority of our income-generating subsidiaries, in which a substantial portion of the aggregate cash of those subsidiaries is periodically advanced or loaned to us or our service company affiliate. Although we periodically repay these advances to fund the subsidiaries' cash requirements throughout the year, at any given point in time we may owe a substantial sum to our subsidiaries under these arrangements. In accordance with generally accepted accounting principles, these arrangements are reflected in the balance sheets of our subsidiaries but are eliminated in consolidation and therefore not recognized on our consolidated balance sheets. For additional information, see "Risk Factors" in Item 1A of Part II of this report.

Our network includes some residual lead-sheathed copper cables installed years ago. These lead-sheathed cables constitute a small portion of our network. Due to media coverage over the past year of potential health and environmental risks associated with these cables, we anticipate incurring certain investigative costs. We also may incur other costs from related proceedings, including litigation, regulatory initiatives, and remediation. As of September 30, 2024, we have not accrued for any such potential costs and will only accrue when such costs are probable and reasonably estimable. For additional information about related litigation and potential risks, see Note 11—Commitments, Contingencies and Other Items to our consolidated financial statements in Item 1 of Part I of this report, and the risk factor disclosures incorporated by reference herein under "Risk Factors" in Item 1A of Part II of this report.

We are also involved in various legal proceedings that could substantially impact our financial position. See Note 11—Commitments, Contingencies and Other Items to our consolidated financial statements in Item 1 of Part I of this report for additional information.

## **Market Risk**

As of September 30, 2024, we were exposed to market risk from changes in interest rates on our variable rate long-term debt obligations and fluctuations in certain foreign currencies.

Management periodically reviews our exposure to interest rate fluctuations and periodically implements strategies to manage the exposure. From time to time, we have used derivative instruments to swap our exposure to variable interest rates for fixed interest rates. We have established policies and procedures for risk assessment and the approval, reporting and monitoring of derivative instrument activities. As of September 30, 2024, we did not hold or issue derivative financial instruments for trading or speculative purposes.

As of September 30, 2024, we had approximately \$6.0 billion aggregate principal amount of debt bearing unhedged floating interest rates based on the secured overnight financing rate ("SOFR"). A hypothetical increase of 100 basis points in SOFR relating to our \$6.0 billion of unhedged floating rate debt would, among other things, decrease our annual pre-tax earnings by approximately \$60 million.

We conduct a small portion of our business in currencies other than the U.S. dollar, the currency in which our consolidated financial statements are reported. Prior to the November 1, 2023 divestiture of our EMEA business, certain of our former European subsidiaries used the local currency as their functional currency, as the majority of their sales and purchases were transacted in their local currencies. Although we continue to evaluate strategies to mitigate risks related to the effect of fluctuations in currency exchange rates, we will likely continue to recognize gains or losses from international transactions. Accordingly, changes in foreign currency rates relative to the U.S. dollar could positively or negatively impact our operating results.

Certain shortcomings are inherent in the method of analysis presented in the computation of exposures to market risks. Actual values may differ materially from those disclosed by us from time to time if market conditions vary from the assumptions used in the analyses performed. These analyses only incorporate the risk exposures that existed at September 30, 2024.

## **Other Information**

Our website is [www.lumen.com](http://www.lumen.com). We routinely post important investor information in the "Investor Relations" section of our website at [ir.lumen.com](http://ir.lumen.com). We also use our website to webcast our earnings calls and certain of our meetings with investors or other members of the investment community. The information contained on, or that may be accessed through, our website is not part of this quarterly report. You may obtain free electronic copies of annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K filed by us or our affiliates Level 3 Parent, LLC and Qwest Corporation, and all amendments to those reports, in the "Investor Relations" section of our website ([ir.lumen.com](http://ir.lumen.com)) under the headings "FINANCIALS" and "SEC Filings." These reports are available on our website as soon as reasonably practicable after they are electronically filed with the SEC.

### ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

See "Liquidity and Capital Resources—*Market Risk*" in Item 2 of Part I above.

### ITEM 4. CONTROLS AND PROCEDURES

#### Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934 (the "Exchange Act")) designed to provide reasonable assurance that the information required to be disclosed by us in the reports we file or furnish under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. These include controls and procedures designed to ensure this information is accumulated and communicated to our senior management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Management, with the participation of our President and Chief Executive Officer, Kate Johnson, and our Executive Vice President and Chief Financial Officer, Chris Stansbury, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2024. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded our disclosure controls and procedures were effective, as of September 30, 2024, in providing reasonable assurance the information required to be disclosed by us in this report was accumulated and communicated in the manner provided above.

#### Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the third quarter of 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### Inherent Limitations of Internal Controls

The effectiveness of our or any system of disclosure controls and procedures is subject to certain limitations, including the exercise of judgment in designing, implementing and evaluating the controls and procedures, the assumptions used in identifying the likelihood of future events and the inability to eliminate misconduct completely. As a result, there can be no assurance that our disclosure controls and procedures will detect all errors or fraud. By their nature, our or any system of disclosure controls and procedures can provide only reasonable assurance regarding management's control objectives.

## PART II—OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS

The information contained in Note 11—Commitments, Contingencies and Other Items included in Item 1 of Part I of this quarterly report on Form 10-Q is incorporated herein by reference. The ultimate outcome of the matters described in Note 11 may differ materially from the outcomes anticipated, estimated, projected or implied by us in certain of our statements appearing in such Note, and proceedings currently viewed as immaterial by us may ultimately materially impact us. For more information, see “Risk Factors—Risks Relating to Legal and Regulatory Matters—Our pending legal proceedings could have a material adverse impact on our financial condition and operating results, on the trading price of our securities and on our ability to access the capital markets” in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2023.

### ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, which could adversely affect our business, financial condition or future results. We recommend that you carefully consider (i) the other information set forth elsewhere in this report and (ii) the risk factors discussed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, as supplemented by the disclosures in Part II, Item 1A of our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2024 and June 30, 2024 and as further supplemented below.

***We may not realize the anticipated benefits of our strategic focus on selling PCF solutions.***

The Company announced on August 5, 2024 that Lumen and its subsidiaries had recently sold \$5 billion in new Private Connectivity Fabric<sup>SM</sup> (“PCF”) solutions and has since closed over \$3 billion in additional PCF sales. Full payment for certain deals involving construction of new routes depends on delivery to customers, and revenue under our PCF agreements may be less than anticipated. Our costs under these agreements may be greater than anticipated due to construction delays or cost overruns as a result of weather, supply chain, labor, permitting, or other unforeseen issues. If customer needs or preferences change for any reason, future demand for, and profitability of, our PCF solutions could decline or cease.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

Effective November 2, 2022, our Board of Directors authorized a two-year program to repurchase up to an aggregate of \$1.5 billion of our outstanding common stock. During the three months ended September 30, 2024, we did not repurchase any shares of our outstanding common stock under this program which expired on November 2, 2024. For additional information, see Note 13—Repurchases of Lumen Common Stock to our consolidated financial statements included in Item 1 of Part I of this report.

The following table contains information about shares of our previously-issued common stock that we withheld from employees upon vesting of their stock-based awards during the third quarter of 2024 to satisfy the related tax withholding obligations:

Period	Total Number of Shares Withheld for Taxes	Average Price Paid Per Share
Jul-24	140,422	\$ 1.08
Aug-24	603,028	\$ 5.77
Sep-24	341,912	\$ 5.26
Total	1,085,362	

## ITEM 6. EXHIBITS

Exhibits identified in parentheses below are on file with the SEC and are incorporated herein by reference. All other exhibits are provided as part of this electronic submission.

Exhibit Number	Description
10.1*	<a href="#">Amendment No. 1, dated as of August 26, 2024, to the Superpriority Term B Credit Agreement dated as of March 22, 2024, among Lumen Technologies, Inc., as borrower, the lenders party thereto, Wilmington Trust, National Association, as administrative agent, and Bank of America, N.A., as collateral agent.</a>
10.2*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 3.400% Senior Secured Notes due 2027 (unsecured).</a>
10.3*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 3.875% Senior Secured Notes due 2029 (unsecured).</a>
10.4*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 4.625% Senior Notes due 2027.</a>
10.5*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 4.250% Senior Notes due 2028.</a>
10.6*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 3.750% Sustainability-Linked Senior Notes due 2029.</a>
10.7*	<a href="#">Fourth Supplemental Indenture, dated as of August 28, 2024, among Level 3 Parent, LLC, Level 3 Financing, Inc., the guarantors party thereto, and the Bank of New York Mellon Trust Company, N.A., as trustee and note collateral agent, relating to Level 3 Financing, Inc.'s 3.625% Senior Notes due 2029.</a>
10.8	<a href="#">Indenture, dated September 24, 2024, among Lumen Technologies, Inc., as issuer, certain guarantors party thereto, Regions Bank, as trustee, and Bank of America, N.A., as collateral agent, designating and outlining the terms and conditions of 10.000% Senior Notes due 2032 issued thereunder by Lumen Technologies Inc. (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed by the Registrant (File No. 001-07784) with the SEC on September 24, 2024).</a>
10.9	<a href="#">Indenture, dated September 24, 2024, among Level 3 Financing, Inc., as issuer, Level 3 Parent, LLC, as a guarantor, certain other guarantors party thereto, U.S. Bank Trust Company, National Association, as trustee, and Wilmington Trust, National Association, as collateral agent, designating and outlining the terms and conditions of 10.000% Second Lien Notes due 2032 issued thereunder by Level 3 Financing, Inc. (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed by the Registrant (File No. 001-07784) with the SEC on September 24, 2024).</a>
10.10*	<a href="#">Supplemental Indenture, dated October 31, 2024, among Lumen Technologies, Inc., as issuer, the guarantors party thereto, Wilmington Trust, National Association, as trustee, and Bank of America, N.A., as collateral agent, adding an additional guarantor of the 4.125% Superpriority Senior Secured Notes due 2029 of Lumen Technologies, Inc.</a>
10.11*	<a href="#">Supplemental Indenture, dated October 31, 2024, among Lumen Technologies, Inc., as issuer, the guarantors party thereto, Wilmington Trust, National Association, as trustee, and Bank of America, N.A., as collateral agent, adding an additional guarantor of the 4.125% Superpriority Senior Secured Notes due 2030 of Lumen Technologies, Inc.</a>
10.12*	<a href="#">Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 10.500% First Lien Notes due 2029 of Level 3 Financing, Inc.</a>



## Table of Contents

<b>Exhibit Number</b>	<b>Description</b>
10.13*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 11.000% First Lien Notes due 2029 of Level 3 Financing, Inc.</u></a>
10.14*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 10.750% First Lien Notes due 2030 of Level 3 Financing, Inc.</u></a>
10.15*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 4.875% Second Lien Notes due 2029 of Level 3 Financing, Inc.</u></a>
10.16*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 3.875% Second Lien Notes due 2030 of Level 3 Financing, Inc.</u></a>
10.17*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 4.500% Second Lien Notes due 2030 of Level 3 Financing, Inc.</u></a>
10.18*	<a href="#"><u>Supplemental Indenture, dated October 31, 2024, among Level 3 Parent, LLC, as guarantor, Level 3 Financing, Inc., as issuer, the guarantors party thereto, and Wilmington Trust, National Association, as trustee and collateral agent, adding additional guarantors of the 4.000% Second Lien Notes due 2031 of Level 3 Financing, Inc.</u></a>
31.1*	<a href="#"><u>Certification of the Chief Executive Officer of Lumen Technologies, Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
31.2*	<a href="#"><u>Certification of the Chief Financial Officer of Lumen Technologies, Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u></a>
32.1*	<a href="#"><u>Certification of the Chief Executive Officer of Lumen Technologies, Inc. pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
32.2*	<a href="#"><u>Certification of the Chief Financial Officer of Lumen Technologies, Inc. pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u></a>
101*	Financial statements from the Quarterly Report on Form 10-Q of Lumen Technologies, Inc. for the period ended September 30, 2024, formatted in Inline XBRL: (i) the Consolidated Statements of Operations, (ii) the Consolidated Statements of Comprehensive Loss, (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Cash Flows, (v) the Consolidated Statements of Stockholders' Equity and (vi) the Notes to Consolidated Financial Statements.
104*	Cover page formatted as Inline XBRL and contained in Exhibit 101.

---

\* Exhibit filed herewith.

**SIGNATURE**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on November 5, 2024.

**LUMEN TECHNOLOGIES, INC.**

By: /s/ Andrea Genschaw  
**Andrea Genschaw**  
**Chief Accounting Officer and Controller**  
*(Principal Accounting Officer)*

**AMENDMENT NO. 1**

AMENDMENT NO. 1 dated as of August 26, 2024 (“Amendment No. 1”), to the Superpriority Term B Credit Agreement dated as of March 22, 2024 (as amended, restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), among LUMEN TECHNOLOGIES, INC., a Louisiana corporation (the “Borrower”), WILMINGTON TRUST, NATIONAL ASSOCIATION, as Administrative Agent, BANK OF AMERICA, N.A., as Collateral Agent, and each Lender party thereto from time to time.

WHEREAS, pursuant to Section 9.08(e)(iii) of the Credit Agreement, technical and conforming modifications to the Loan Documents may be made with the consent of the Borrower and the Administrative Agent to the extent necessary to cure any ambiguity, omission, error, defect or inconsistency; and

WHEREAS, an error was made in Section 6.01(v)(1)(ii) of the Credit Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto hereby agree as follows:

**SECTION 1. Definitions; Terms Generally.** Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement. The rules of construction set forth in the Credit Agreement shall apply to this Amendment No. 1.

**SECTION 2. Amendments and Other Agreements.** Effective immediately as of the effectiveness of this Amendment No. 1, Section 6.01(v)(1)(ii) of the Credit Agreement is hereby amended and restated as follows:

“(ii) such Incremental Equivalent Debt

(A) shall have no borrower or issuer (other than the Borrower) or guarantor (other than the Lumen Guarantors or the QC Guarantors),

(B) if secured, shall not be secured by any assets other than the Collateral,

(C) shall have a Weighted Average Life to Maturity no shorter than the remaining Weighted Average Life to Maturity of the Term B Loans,

(D) shall not be subject to any maturity, mandatory redemption, repurchase, prepayment or sinking fund obligation (other than customary offers to repurchase and prepayment events upon a change of control, asset sale or event of loss (or from the proceeds of an equity offering or Permitted Refinancing Indebtedness) and a customary acceleration right after an event of default) prior to the then Latest Maturity Date,

---

(E) shall have a final maturity no earlier than the Latest Maturity Date in effect at the date of incurrence of such Incremental Equivalent Debt (*provided* that such Incremental Equivalent Debt may be incurred in the form of a customary “bridge” or other interim credit facility intended to be refinanced or replaced with long-term indebtedness so long as, subject only to customary conditions the failure of which to be satisfied would otherwise result in an Event of Default, it would either be automatically converted into or required to be exchanged for permanent financing which satisfies the requirements of this clause (E)),

(F) shall be subject to the Subordination Agreement as “Subordinated Debt” (as defined in the Subordination Agreement),

(G) shall be subject to the First Lien/First Lien Intercreditor Agreement or a Permitted Junior Intercreditor Agreement, as applicable, and

(H) for the avoidance of doubt, shall not rank senior to any Obligations in right of payment or with respect to lien priority,”

**SECTION 3. Effectiveness.** This Amendment No. 1 shall become effective immediately upon receipt by the Administrative Agent of counterparts of this Amendment No. 1 duly executed by the parties hereto.

**SECTION 4. No Other Changes.** Except as modified hereby, all of the terms and provisions of the Loan Documents shall remain in full force and effect. This Amendment No. 1 shall not constitute a novation of the Credit Agreement.

**SECTION 5. Reference To And Effect Upon The Amended Credit Agreement and Loan Documents.** From and after the date hereof, the term “Loan Documents” in the Credit Agreement and the other Loan Documents shall include, without limitation, this Amendment No. 1 and any agreements, instruments and other documents executed and/or delivered in connection herewith.

**SECTION 6. GOVERNING LAW; SUBMISSION TO JURISDICTION.** THIS AMENDMENT NO. 1 AND ANY CLAIM, CONTROVERSY, DISPUTE OR CAUSE OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS AMENDMENT NO. 1 SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO CONFLICTS OF LAW PRINCIPLES THAT WOULD REQUIRE THE APPLICATION OF ANY OTHER LAW. SECTIONS 9.11 AND 9.15 OF THE CREDIT AGREEMENT ARE INCORPORATED HEREIN, *MUTATIS MUTANDIS*, AS IF A PART HEREOF.

**SECTION 7. Counterparts.** This Amendment No. 1 may, if agreed by the Administrative Agent, be in the form of an Electronic Record and may be executed using Electronic Signatures (including, without limitation, facsimile and .pdf) and shall be considered an original, and shall

have the same legal effect, validity and enforceability as a paper record. This Amendment No. 1 may be executed in as many counterparts as necessary or convenient, including both paper and electronic counterparts, but all such counterparts are one and the same Amendment No. 1. For the avoidance of doubt, the authorization under this paragraph may include, without limitation, use or acceptance by the Administrative Agent of a manually signed paper document, amendment, approval, consent, information, notice, certificate, request, statement, disclosure or authorization related to this Agreement (each a “Communication”) which has been converted into electronic form (such as scanned into PDF format), or an electronically signed Communication converted into another format, for transmission, delivery and/or retention. Notwithstanding anything contained herein to the contrary, the Administrative Agent is under no obligation to accept an Electronic Signature in any form or in any format unless expressly agreed to by the Administrative Agent pursuant to procedures approved by it; provided, further, without limiting the foregoing, (a) to the extent the Administrative Agent has agreed to accept such Electronic Signature, the Administrative Agent shall be entitled to rely on any such Electronic Signature without further verification and (b) upon the request of the Administrative Agent any Electronic Signature shall be promptly followed by a manually executed, original counterpart. For purposes hereof, “Electronic Record” and “Electronic Signature” shall have the meanings assigned to them, respectively, by 15 USC §7006, as it may be amended from time to time.

**SECTION 8. Section Headings.** Section headings in this Amendment No. 1 are included herein for convenience of reference only, are not part of this Amendment No. 1 and shall not affect the construction of, or be taken into consideration in interpreting, this Amendment No. 1.

**SECTION 9. Notices.** All notices, requests, and demands to or upon the respective parties hereto shall be given in accordance with Section 9.01 of the Credit Agreement.

**SECTION 10. Administrative Agent.** The recitals contained in this Amendment No. 1 shall be taken as the statements of the Borrower, and the Administrative Agent assumes no responsibility for their correctness. In entering into this Amendment No. 1, (i) the Administrative Agent is conclusively relying on a certificate of a Responsible Officer of the Borrower delivered in connection herewith, and (ii) the Administrative Agent shall be entitled to the benefit of every provision of the Credit Agreement relating to the conduct of or affecting the liability of or affording protection to the Administrative Agent, including but not limited to provisions regarding indemnification.

[Signature pages to follow]

IN WITNESS WHEREOF, this Amendment No. 1 has been executed by the parties hereto as of the date first written above.

LUMEN TECHNOLOGIES, INC.

By: /s/ Rahul Modi

Name: Rahul Modi

Title: Senior Vice President & Treasurer

[Signature Page to Amendment No. 1]

---

WILMINGTON TRUST, NATIONAL ASSOCIATION,  
as Administrative Agent

By: /s/ Jeffrey Rose  
Name: Jeffrey Rose  
Title: Vice President

[Signature Page to Amendment No. 1]

**FOURTH SUPPLEMENTAL INDENTURE**

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee and note collateral agent under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of November 29, 2019 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 3.400% Senior Notes due 2027;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

---



2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and or the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee and as  
Note Collateral Agent

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 3.400% Senior Notes due 2027]

**FOURTH SUPPLEMENTAL INDENTURE**

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee and note collateral agent under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of November 29, 2019 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 3.875% Senior Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

---

2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and or the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]



IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee and as  
Note Collateral Agent

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 3.875% Senior Notes due 2029]

#### FOURTH SUPPLEMENTAL INDENTURE

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

#### W I T N E S S E T H :

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of September 25, 2019 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 4.625% Senior Notes due 2027;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and or the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer



THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 4.625% Senior Notes due 2027]

#### FOURTH SUPPLEMENTAL INDENTURE

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

#### W I T N E S S E T H :

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of June 15, 2020 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 4.250% Senior Notes due 2028;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 4.250% Senior Notes due 2028]

**FOURTH SUPPLEMENTAL INDENTURE**

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of January 13, 2021 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 3.750% Sustainability-Linked Senior Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

---



2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and or the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

[Signature Page to Supplemental Indenture for the 3.750% Sustainability-Linked Senior Notes due 2029]

---

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 3.750% Sustainability-Linked Senior Notes due 2029]

**FOURTH SUPPLEMENTAL INDENTURE**

FOURTH SUPPLEMENTAL INDENTURE (this “Supplemental Indenture”) dated as of August 28, 2024, among LEVEL 3 PARENT, LLC, a Delaware limited liability company (“Level 3 Parent”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “Issuer”), LEVEL 3 COMMUNICATIONS, LLC, a Delaware limited liability company (“Level 3 LLC”), THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association, as trustee under the Indenture referred to below (the “Trustee”) and the other parties hereto (each a “New Guarantor” and, collectively with Level 3 Parent and Level 3 LLC, the “Guarantors”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of August 12, 2020 (as amended, restated, supplemented or otherwise modified from time to time prior to the date hereof, the “Indenture”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of the Issuer’s 3.625% Senior Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all of the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “Note Guarantee” and the New Guarantors shall each constitute a “Guarantor” on the terms and conditions set forth herein;

WHEREAS, pursuant to Section 801(8) of the Indenture, the Trustee, the Issuer and the Guarantors are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, Level 3 LLC, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties hereto agree as follows:

1. Agreement to Guaranty. Each of the New Guarantors agrees, jointly and severally with all existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article Twelve of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

---

2. Future Guarantors. Level 3 Parent and the Issuer will endeavor to cause any Subsidiary thereof that guarantees the Credit Agreement (as defined below) to Guarantee the Securities to the extent that doing so does not result in extra cost or burden to them or their Subsidiaries, as determined by them in their sole discretion, and subject to receipt of any necessary regulatory approvals, it being understood that this covenant does not require a Guarantee to be provided within any specified time period.

3. Future Release of Note Guarantees. With respect to any Guarantor who is not otherwise obligated under the Indenture to guarantee the Securities, other than due to its voluntary Guarantee pursuant hereto, (x) the Issuer may, by delivery of a supplemental indenture in accordance with Section 801(8) of the Indenture, release such Guarantor from its Note Guarantee from time-to-time and (y) the Note Guarantee thereof shall be automatically and unconditionally released if such Guarantor ceases to guarantee (1) the Credit Agreement among Level 3 Parent, the Issuer, the lenders party thereto and Wilmington Trust, National Association, dated as of March 22, 2024, as amended, waived, or modified from time-to-time (as it may be so amended, waived or modified, the “Credit Agreement”) or (2) if the Credit Agreement is no longer outstanding, any replacement thereof (as determined by the Issuer).

4. Successors and Assigns. This Supplemental Indenture shall be binding upon each party hereto and its successors and assigns.

5. No Waiver. Neither a failure nor a delay on the part of either the Trustee or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which either may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

6. Modification. No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by any New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee, and then such waiver or consent shall be effective only in the specific instance and or the purpose for which given. No notice to or demand on any New Guarantor in any case shall entitle the New Guarantors to any other further notice or demand in the same, similar or other circumstances.

7. Opinion of Counsel. Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the requirements under the Indenture.

8. Ratification of Indenture; Supplemental Indentures Part of Indenture. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

9. Governing Law. **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

10. Counterparts. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

11. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction thereof.

12. Trustee. The Trustee makes no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer and the Guarantors, and not of the Trustee.

13. OFAC Sanctions. Each of the Issuer and the New Guarantors represents and warrants that neither it nor any of its subsidiaries, directors, officers or, to its knowledge, affiliates are the target or subject of any sanctions enforced by the US Government (including, the Office of Foreign Assets Control of the US Department of the Treasury (“OFAC”), the United Nations Security Council, the European Union, HM Treasury or other relevant sanctions authority.

[Remainder of this page intentionally left blank]



IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

LEVEL 3 PARENT, LLC,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 FINANCING, INC.,

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

LEVEL 3 COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

BROADWING, LLC  
BTE EQUIPMENT, LLC  
GLOBAL CROSSING NORTH AMERICAN HOLDINGS, INC.  
GLOBAL CROSSING NORTH AMERICA, INC.  
LEVEL 3 ENHANCED SERVICES, LLC  
LEVEL 3 INTERNATIONAL, INC.  
LEVEL 3 TELECOM HOLDINGS II, LLC  
LEVEL 3 TELECOM HOLDINGS, LLC  
LEVEL 3 TELECOM MANAGEMENT CO. LLC  
LEVEL 3 TELECOM OF ALABAMA, LLC  
LEVEL 3 TELECOM OF ARKANSAS, LLC  
LEVEL 3 TELECOM OF CALIFORNIA, LP  
LEVEL 3 TELECOM OF D.C., LLC  
LEVEL 3 TELECOM OF IDAHO, LLC  
LEVEL 3 TELECOM OF ILLINOIS, LLC  
LEVEL 3 TELECOM OF IOWA, LLC  
LEVEL 3 TELECOM OF LOUISIANA, LLC  
LEVEL 3 TELECOM OF MISSISSIPPI, LLC  
LEVEL 3 TELECOM OF NEW MEXICO, LLC  
LEVEL 3 TELECOM OF NORTH CAROLINA, LP  
LEVEL 3 TELECOM OF OHIO, LLC  
LEVEL 3 TELECOM OF OKLAHOMA, LLC  
LEVEL 3 TELECOM OF OREGON, LLC  
LEVEL 3 TELECOM OF SOUTH CAROLINA, LLC  
LEVEL 3 TELECOM OF TEXAS, LLC  
LEVEL 3 TELECOM OF UTAH, LLC  
LEVEL 3 TELECOM OF VIRGINIA, LLC  
LEVEL 3 TELECOM OF WASHINGTON, LLC  
LEVEL 3 TELECOM OF WISCONSIN, LP  
LEVEL 3 TELECOM, LLC  
VYVX, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President & Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ April Bradley  
Name: April Bradley  
Title: Vice President

[Signature Page to Supplemental Indenture for the 3.625% Senior Notes due 2029]

SUPPLEMENTAL INDENTURE

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among CENTURYLINK COMMUNICATIONS, LLC (the “**New Guarantor**”), LUMEN TECHNOLOGIES, INC., a Louisiana corporation (the “**Issuer**”) on behalf of itself and the Guarantors (the “**Existing Guarantors**”) under the Indenture referred to below, WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and BANK OF AMERICA, N.A., a national banking association, as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

W I T N E S S E T H:

WHEREAS, the Issuer and the Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 4.125% Superpriority Senior Secured Notes due 2029;

WHEREAS, the Indenture permits the New Guarantor to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantor shall unconditionally guarantee all the Issuer’s obligations under the Notes pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantor shall constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent and the Issuer are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Issuer and the New Guarantor have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantor, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Agreement to Guaranty.* The New Guarantor hereby agrees, jointly and severally with all the Existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Notes and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Notes.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantor and its successors and assigns and shall inure to the benefit of the successors and

assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Notes shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Notes shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Notes at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantor in any case shall entitle the New Guarantor to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and

statements herein are deemed to be those of the Issuer, the Existing Guarantors and the New Guarantor, and not of the Trustee or the Collateral Agent.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

CENTURYLINK COMMUNICATIONS,  
LLC

By: /s/ Rahul Modi

Name: Rahul Modi

Title: Senior Vice President &  
Treasurer

LUMEN TECHNOLOGIES, INC.,  
on behalf of itself as the Issuer and the  
other Existing Guarantors

By: /s/ Rahul Modi

Name: Rahul Modi

Title: Senior Vice President &  
Treasurer

[Signature Page – Supplemental Indenture – 4.125% 2029 SP Notes]

---





WILMINGTON TRUST, NATIONAL  
ASSOCIATION,  
as Trustee

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President



BANK OF AMERICA, N.A.,  
as Collateral Agent

By: /s/ Tyler D. Levings

Name: Tyler D. Levings

Title: Managing Director

## SUPPLEMENTAL INDENTURE

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among CENTURYLINK COMMUNICATIONS, LLC (the “**New Guarantor**”), LUMEN TECHNOLOGIES, INC., a Louisiana corporation (the “**Issuer**”) on behalf of itself and the Guarantors (the “**Existing Guarantors**”) under the Indenture referred to below, WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and BANK OF AMERICA, N.A., a national banking association, as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

## WITNESSETH:

WHEREAS, the Issuer and the Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 4.125% Superpriority Senior Secured Notes due 2030;

WHEREAS, the Indenture permits the New Guarantor to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantor shall unconditionally guarantee all the Issuer’s obligations under the Notes pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantor shall constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent and the Issuer are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Issuer and the New Guarantor have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantor, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Agreement to Guaranty.* The New Guarantor hereby agrees, jointly and severally with all the Existing Guarantors, to unconditionally guarantee the Issuer’s obligations under the Notes and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Notes.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantor and its successors and assigns and shall inure to the benefit of the successors and

assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Notes shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Notes shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Notes at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantor in any case shall entitle the New Guarantor to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and

statements herein are deemed to be those of the Issuer, the Existing Guarantors and the New Guarantor, and not of the Trustee or the Collateral Agent.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

CENTURYLINK COMMUNICATIONS,  
LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LUMEN TECHNOLOGIES, INC.,  
on behalf of itself as the Issuer and the  
other Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

[Signature Page – Supplemental Indenture – 4.125% 2030 SP Notes]

---

WILMINGTON TRUST, NATIONAL  
ASSOCIATION,  
as Trustee

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President



BANK OF AMERICA, N.A.,  
as Collateral Agent

By: /s/ Tyler D. Levings

Name: Tyler D. Levings

Title: Managing Director

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 10.500% First Lien Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**

**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WITEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 10.500% 1L Notes]*

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 11.000% First Lien Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**



**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WILTEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

*[Signature Page – Supplemental Indenture - Level 3 11.000% 1L Notes]*

---

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 11.000% 1L Notes]*

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 10.750% First Lien Notes due 2030;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**

**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WILTEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 10.750% 1L Notes]*



**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WILTEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 4.875% Second Lien Notes due 2029;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the

---

Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WILTEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

*[Signature Page – Supplemental Indenture - Level 3 4.875% 2L Notes]*

---

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 4.875% 2L Notes]*

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 3.875% Second Lien Notes due 2030;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

---

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**

**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*



IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WILTEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 3.875% 2L Notes]*

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 4.500% Second Lien Notes due 2030;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:

---

1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**

**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WITEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

*[Signature Page – Supplemental Indenture - Level 3 4.500% 2L Notes]*

---

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

*[Signature Page – Supplemental Indenture - Level 3 4.500% 2L Notes]*

**SUPPLEMENTAL INDENTURE**

SUPPLEMENTAL INDENTURE (this “**Supplemental Indenture**”) dated as of October 31, 2024, among BROADWING COMMUNICATIONS, LLC, GLOBAL CROSSING TELECOMMUNICATIONS, INC., LEVEL 3 COMMUNICATIONS, LLC, TELCOVE OPERATIONS, LLC, and WITEL COMMUNICATIONS, LLC (the “**New Guarantors**”), LEVEL 3 PARENT, LLC, a Delaware limited liability company (“**Level 3 Parent**”), LEVEL 3 FINANCING, INC., a Delaware corporation (the “**Issuer**”) on behalf of itself and the Guarantors (other than Level 3 Parent) (the “**Existing Guarantors**”) under the Indenture referred to below, and WILMINGTON TRUST, NATIONAL ASSOCIATION, a national banking association, as trustee under the Indenture referred to below (the “**Trustee**”) and as collateral agent under the Indenture referred to below (the “**Collateral Agent**”).

**WITNESSETH:**

WHEREAS, the Issuer, Level 3 Parent and the other Guarantors party thereto have heretofore executed and delivered to the Trustee an Indenture dated as of March 22, 2024 (the “**Indenture**”; capitalized terms used but not defined herein having the meanings assigned thereto in the Indenture), providing for the issuance of its 4.000% Second Lien Notes due 2031;

WHEREAS, the Indenture permits the New Guarantors to execute and deliver to the Trustee a supplemental indenture pursuant to which the New Guarantors shall unconditionally guarantee all the Issuer’s obligations under the Securities pursuant to a Guarantee on the terms and conditions set forth herein;

WHEREAS, the Guarantee contained in this Supplemental Indenture shall constitute a “**Note Guarantee**”, and the New Guarantors shall each constitute a “**Guarantor**”, for all purposes of the Indenture;

WHEREAS, pursuant to Section 8.01 and Section 12.07 of the Indenture, the Trustee, the Collateral Agent, Level 3 Parent and the Issuer, on behalf of itself and the Existing Guarantors, are authorized to execute and deliver this Supplemental Indenture; and

WHEREAS, all acts and requirements necessary to make this Supplemental Indenture the legal, valid and binding obligation of Level 3 Parent, the Issuer and the New Guarantors have been done.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the New Guarantors, Level 3 Parent, the Issuer, on behalf of itself and the Existing Guarantors, the Trustee and the Collateral Agent mutually covenant and agree for the equal and ratable benefit of the Holders of the Securities as follows:



1. *Agreement to Guaranty.* The New Guarantors hereby agree, jointly and severally with all the existing Guarantors, to unconditionally guarantee the Issuer's obligations under the Securities and the Indenture on the terms and subject to the conditions set forth in Article 12 of the Indenture and to be bound by all other applicable provisions of the Indenture and the Securities.

2. *Successors and Assigns.* This Supplemental Indenture shall be binding upon the New Guarantors and their successors and assigns and shall inure to the benefit of the successors and assigns of the Trustee, the Collateral Agent and the Holders and, in the event of any transfer or assignment of rights by any Holder, the Trustee or the Collateral Agent, the rights and privileges conferred upon that party in the Indenture and in the Securities shall automatically extend to and be vested in such transferee or assignee, all subject to the terms and conditions of the Indenture.

3. *No Waiver.* Neither a failure nor a delay on the part of the Trustee, the Collateral Agent or the Holders in exercising any right, power or privilege under this Supplemental Indenture, the Indenture or the Securities shall operate as a waiver thereof, nor shall a single or partial exercise thereof preclude any other or further exercise of any right, power or privilege. The rights, remedies and benefits of the Trustee, the Collateral Agent and the Holders herein and therein expressly specified are cumulative and not exclusive of any other rights, remedies or benefits which they may have under this Supplemental Indenture, the Indenture or the Securities at law, in equity, by statute or otherwise.

4. *Modification.* No modification, amendment or waiver of any provision of this Supplemental Indenture, nor the consent to any departure by the New Guarantors therefrom, shall in any event be effective unless the same shall be in writing and signed by the Trustee and the Collateral Agent, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on the New Guarantors in any case shall entitle the New Guarantors to any other or further notice or demand in the same, similar or other circumstances.

5. *Opinion of Counsel.* Concurrently with the execution and delivery of this Supplemental Indenture, the Issuer shall deliver to the Trustee an Opinion of Counsel in accordance with the terms of the Indenture.

6. *Ratification of Indenture; Supplemental Indentures Part of Indenture.* Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Securities heretofore or hereafter authenticated and delivered shall be bound hereby.

7. *Governing Law.* **THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK BUT WITHOUT GIVING EFFECT TO**

**APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.**

8. *Counterparts.* The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

9. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction thereof.

10. *Trustee and Collateral Agent.* The Trustee and Collateral Agent make no representations as to the validity or sufficiency of this Supplemental Indenture. The recitals and statements herein are deemed to be those of the Issuer, Level 3 Parent, the Existing Guarantors and the New Guarantors, and not of the Trustee or the Collateral Agent. The rights, privileges, indemnities and protections afforded the Trustee and the Collateral Agent under the Indenture shall apply to the execution hereof and the transactions contemplated hereunder.

*[Remainder of this page intentionally left blank]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date first above written.

BROADWING COMMUNICATIONS,  
LLC  
GLOBAL CROSSING  
TELECOMMUNICATIONS, INC.  
LEVEL 3 COMMUNICATIONS, LLC  
TELCOVE OPERATIONS, LLC  
WILTEL COMMUNICATIONS, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 PARENT, LLC

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

LEVEL 3 FINANCING, INC., on behalf  
of itself as the Issuer and the other  
Existing Guarantors

By: /s/ Rahul Modi  
Name: Rahul Modi  
Title: Senior Vice President &  
Treasurer

*[Signature Page – Supplemental Indenture - Level 3 4.000% 2L Notes]*

---

WILMINGTON TRUST, NATIONAL  
ASSOCIATION, as Trustee and as  
Collateral Agent

By: /s/ Jane Schweiger

Name: Jane Schweiger

Title: Vice President

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER**

I, Kate Johnson, Chief Executive Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Lumen Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2024

/s/ Kate Johnson  
\_\_\_\_\_  
Kate Johnson  
Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER**

I, Chris Stansbury, Chief Financial Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Lumen Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:
  - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2024

/s/ Chris Stansbury

---

Chris Stansbury  
Executive Vice President and Chief  
Financial Officer

**Certification Pursuant to  
18 U.S.C. Section 1350,  
as Adopted Pursuant to  
Section 906 of the Sarbanes-Oxley Act of 2002**

I, Kate Johnson, Chief Executive Officer of Lumen Technologies, Inc. ("Lumen Technologies"), certify that, to my knowledge, the Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 of Lumen Technologies fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934 and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Lumen Technologies as of the dates and for the periods covered by such report.

A signed original of this statement has been provided to Lumen Technologies and will be retained by Lumen Technologies and furnished to the Securities and Exchange Commission or its staff upon request.

Date: November 5, 2024

\_\_\_\_\_  
/s/ Kate Johnson  
Kate Johnson  
Chief Executive Officer

**Certification Pursuant to  
18 U.S.C. Section 1350,  
as Adopted Pursuant to  
Section 906 of the Sarbanes-Oxley Act of 2002**

I, Chris Stansbury, Chief Financial Officer of Lumen Technologies, Inc. ("Lumen Technologies"), certify that, to my knowledge, the Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 of Lumen Technologies fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934 and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Lumen Technologies as of the dates and for the periods covered by such report.

A signed original of this statement has been provided to Lumen Technologies and will be retained by Lumen Technologies and furnished to the Securities and Exchange Commission or its staff upon request.

Date: November 5, 2024

/s/ Chris Stansbury

---

Chris Stansbury  
Executive Vice President and Chief  
Financial Officer