ANNUAL REPORT
2023

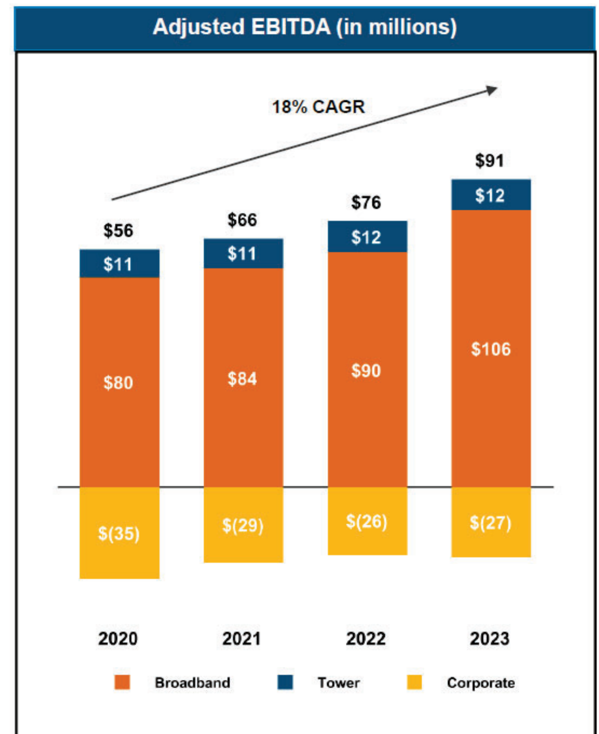
SHENTEL®
Always connected to you

March 14, 2024

Dear Shareholder:

2023 was another strong year for Shentel as we continued executing on our fiber-first broadband strategy. Our Glo Fiber expansion plan is the foundation for future growth, and we significantly accelerated network construction, sales, and revenue during the past year. Since our first full year operating Glo Fiber in 2020, our consolidated revenue and Adjusted EBITDA[1] have grown at compounded annual growth rates of approximately 9% and 18%, respectively. We believe this is an industry-leading pace among publicly-traded broadband companies, and we are excited about the opportunity to continue delivering long-term value to our shareholders.

We were pleased with our 2023 financial results, growing revenue 7.5% to $287.4 million, compared to $267.4 million in 2022. The increase was primarily driven by strong Glo Fiber year-over-year customer growth and an increase in average data subscriber revenue of 4.0%. As we continued to expand our Glo Fiber business, operating expenses remained fairly consistent at $277.8 million, an increase of less than 1% over 2022. Net Income improved significantly year-over-year to $8.0 million in 2023, compared to a loss of $8.4 million in 2022, and Adjusted EBITDA grew to $90.6 million, an increase of 19.3% compared to the prior year. Adjusted EBITDA margins[1] also expanded year-over-year from 28% in 2022 to approximately 32% in 2023 due to scaling our Glo Fiber network.



As reflected in the total shareholder return data reported in the stock performance graph of our Annual Report on Form 10-K, our stock outperformed the comparison telecommunications index and the broader market index in 2023. However, our stock still trades below the August 2021 value following the sale of our wireless business and our payment of the $18.75 special dividend. At that time, our Cable Markets became the largest contributor to our financial results and began to experience slower growth rates than prior years, similar to our larger peers in the cable industry. Unlike many of our peers, Shentel has embarked on a significant fiber-first broadband growth strategy, focused on expanding Glo Fiber service into new greenfield fiber-to-the-home markets. In the fourth quarter of 2023, we marked a milestone where Glo Fiber now passes more homes and businesses than our Cable Markets. We expect to differentiate ourselves from our cable peers as we continue to evolve into a fiber-dominant company with Glo Fiber accelerating growth and becoming a larger portion of our financial results.

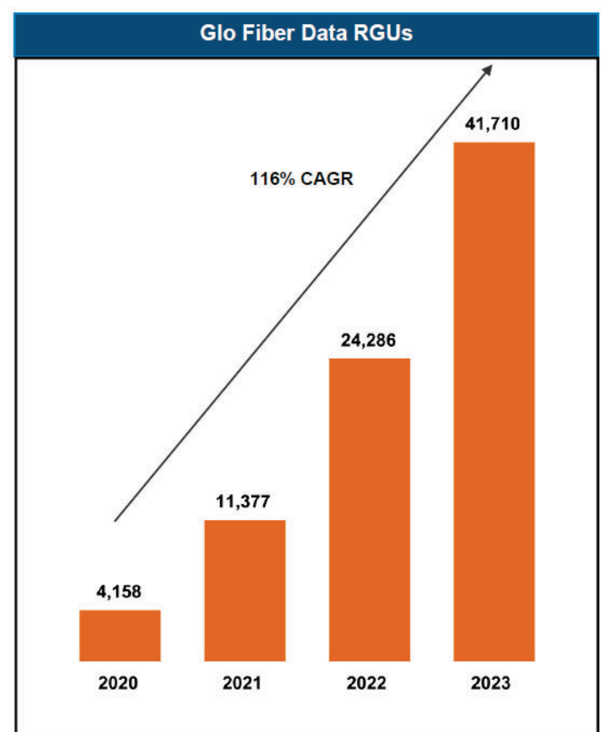
Broadband data subscribers in our Cable Markets remained consistent year over year, ending 2023 at 109,679, reflecting a penetration rate of 50.8% of the homes and businesses passed by these networks (or "passings"). Our total Revenue Generating Units (or "RGUs") for data, voice, and video services decreased by about 3% year-over-year, primarily driven by declines in video service and residential voice service due to "cord cutting". To better position our services in an increasingly competitive environment, we deployed new pricing plans with higher data speeds and more value for the same price in 2023. Over 67% of our broadband data customers now subscribe to speeds of 300 Mbps or higher, up from less than 16% at the end of 2022. In addition,

[1] Please refer to the information under "Non-GAAP Financial Measures" at the end of this letter for an explanation of this non-GAAP financial measure and the reconciliation to net income (loss).

we plan to invest approximately $65 million over the next five years to upgrade our cable networks to support multi-gigabit services. These upgrades will include overbuilding a portion of our passings with fiber-to-the-home technology and deploying DOCSIS 4.0 technology to increase capacity and offer symmetrical services with low latency, high security, and high reliability.

Over the past two years, we have also completed upgrades to our back-office systems and processes, which should allow our customer service representatives and technicians to operate more efficiently. As a result, we have already improved the experience of our customers, increasing our customer service satisfaction rating over 300 basis points to approximately 94% and reducing our number of trouble tickets per customer by 15% between 2021 and 2023. Shentel also believes strongly in giving back to the communities we serve through employee-led volunteering and philanthropic efforts. In 2023, our employees volunteered over 250 hours with local non-profit organizations focused on affordable housing and nutrition support for those in need, and they donated over $29,000 to local charities through Shentel's "Summer Backpack Program" and "Big Give" initiatives. With our new price plans, network upgrades, and continuing focus on local customer service and community involvement, we believe we are well-positioned to compete with alternative providers.

Our Glo Fiber business continued rapid growth in 2023, ending the year with over 41,000 data RGUs and 51,000 total RGUs. Glo Fiber customers increased by over 71% during the past year and by more than 10 times over the past three years. We also delivered a record year for construction, adding over 86,000 new passings and launching service in five new markets in 2023. We now pass approximately 234,000 homes and businesses with Glo Fiber symmetrical, multi-gigabit service in 22 markets across four states with three additional market launches planned in 2024. Our annual construction rate has more than tripled over the past three years, and our sales team has more than kept pace with our construction team. We added over 17,000 Glo Fiber net customers in 2023, representing a 32% increase over 2022 and a 62% annual growth rate since 2020. Our broadband data penetration increased from 16.5% at the end of 2022 to 17.8% at the end of 2023, reflecting growth in both the number of customers and the number of serviceable locations. In addition to providing the fastest speeds in our markets and straightforward pricing, we continued to deliver on our commitment of providing outstanding, local customer service and finished 2023 with an extremely low broadband data churn rate of 1.0%. Our 2023 Glo Fiber Net Promoter score, an independent measurement of customer satisfaction, was an outstanding 61 as compared to low single-digit or negative scores for many other cable companies.



As part of our fiber-first strategy, we continue to expand our integrated broadband network that now consists of almost 10,000 route miles of fiber. This network not only serves as the backbone and middle-mile network for our Cable and Glo Fiber Markets, but it also supports our enterprise and wholesale Commercial Fiber business. In 2023, our Commercial Fiber revenue grew approximately 8.5% to $42.1 million, due primarily to $3.0 million in non-recurring early termination fees for cell site backhaul circuits as T-Mobile turned down the legacy Sprint wireless network. We expect this network turndown to negatively impact our Commercial Fiber revenue in 2024, but we plan to return to previous historical growth rates in the mid- to high-single digits starting in 2025.

In October 2023, we announced the pending acquisition of Horizon Telcom, a leading commercial fiber provider in Ohio with an early-stage fiber-to-the-home line of business, for $385 million.[2] This transformative transaction should accelerate our fiber-first strategy, double the size of our commercial fiber business, and create a new beachhead to further expand our Glo Fiber service. Shentel is very excited about the opportunity to work with the Horizon team as we leverage our combined fiber network of over 17,000 route miles to grow our Glo Fiber and commercial business. We expect to close the transaction early in the second quarter.

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[2] Please refer to the Company's SEC filings for details on the Horizon Telcom acquisition.

Horizon Shentel

As a combined company, we plan to offer broadband service to over 850,000 homes and businesses by 2026 with over 75% served via fiber-to-the-home networks. We plan to reach a total of approximately 600,000 total Glo Fiber passings, including 100,000 in new markets in Ohio, and almost 230,000 total broadband passings in our incumbent cable and local exchange fiber overbuild markets. The balance of the passings are planned for rural, unserved areas where Shentel and Horizon have been awarded approximately $115 million in government grants to bring gigabit broadband service to 30,000 customer locations in Virginia, Maryland, West Virginia, and Ohio.

To provide additional growth capital for our planned Glo Fiber expansion projects, on March 1, 2024, Shentel announced the sale of our tower portfolio and operations (the "Tower Portfolio") for $310 million to Vertical Bridge Holdco, LLC with an expected initial closing date in March 2024. The sale of our wireless assets and operations to T-Mobile in 2021 reduced the need for maintaining our Tower Portfolio as part of our growth strategy. The Portfolio consists of 226 tower sites and generated $18.6 million in revenue in 2023.[3] With the expected closing of this transaction and the previously announced $356 million of committed financings supporting our pending acquisition of Horizon Telcom, we feel that our future capital structure is well balanced and will provide financial flexibility.

[3] Please refer to the Company's SEC filings for details on the sale of the Tower Portfolio.

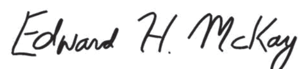
We believe Shentel is well situated to deliver long-term growth and value to our shareholders. Our team of approximately 850 dedicated employees has been the reason to our past success, and their experience and expertise will be the key as we continue to expand our Shentel and Glo Fiber services. We have a clear fiber-first strategy, a strong balance sheet, a proven track record of success and a committed team that takes great pride in being a trusted broadband provider for the rural markets, smaller cities and towns that we serve.

We look forward to providing you an update on our Company's progress at our Annual Meeting on April 30, 2024, beginning at 11:00 a.m., at the Company's offices at 500 Shentel Way in Edinburg, Virginia. Regardless of the number of shares you may hold, it is important that your shares be represented. Please promptly submit your proxy to ensure your shares are voted at this meeting. If you have any questions or require any assistance with voting your shares, please call the Company's proxy solicitor, INNISFREE M&A INCORPORATED, at (877) 750-8269 (toll-free from the United States and Canada).

Our Board of Directors and management team appreciates the ongoing support and trust of our shareholders as we continue our efforts to grow the long-term value of your investment.

For the Board of Directors,

Christopher E. French
Chairman and President



Edward H. McKay
Executive Vice President

Non-GAAP Financial Measures
Adjusted EBITDA

The Company defines Adjusted EBITDA as net income (loss) from continuing operations calculated in accordance with GAAP, adjusted for the impact of depreciation and amortization, impairment, other income (expense), net, interest income, interest expense, income tax expense (benefit), stock compensation expense, transaction costs related to acquisition and disposition events (including professional advisory fees, integration costs and related compensatory matters), restructuring expense, tax on equity award vesting and exercise events and other non-comparable items. A reconciliation of net income (loss), which is the most directly comparable GAAP financial measure, to Adjusted EBITDA is provided below herein.

Adjusted EBITDA margin is the Company's calculation of Adjusted EBITDA, divided by revenue calculated in accordance with GAAP.

The Company uses these non-GAAP measures as supplemental tools in its analysis of the Company's performance. These non-GAAP disclosures should not be viewed as a substitute for operating results determined in accordance with GAAP, nor are they necessarily comparable to non-GAAP performance measures that may be presented by other companies.

Consolidated	**Year Ended December 31,**			
(in thousands)	**2020**	**2021**	**2022**	**2023**
Net income (loss)	$ 1,576	$ 7,929	$ (8,379)	$ 8,038
Depreciation and amortization	48,703	55,206	68,899	65,471
Impairment expense	—	5,986	5,241	2,552
Other (income) expense, net	(3,187)	(8,665)	1,348	(1,387)
Income tax (benefit) expense	(990)	(1,694)	(927)	2,973
Stock-based compensation	5,907	3,408	8,528	10,033
Restructuring charges and transaction related fees	3,780	3,556	1,251	2,915
Adjusted EBITDA	$ 55,789	$ 65,726	$ 75,961	$ 90,595
Adjusted EBITDA margin	25 %	27 %	28 %	32 %

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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2023

☐ **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.: 000-09881

SHENANDOAH TELECOMMUNICATIONS COMPANY

(Exact name of registrant as specified in its charter)

Virginia	**54-1162807**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

500 Shentel Way, Edinburg, Virginia 22824
(Address of principal executive offices) (Zip Code)

(540) 984-4141 (Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(B) OF THE ACT:

Common Stock (No Par Value)	SHEN	NASDAQ Global Select Market	50,272,192
(Title of Class)	(Trading Symbol)	(Name of Exchange on which Registered)	(The number of shares of the registrant's common stock outstanding on February 14, 2024)

SECURITIES REGISTERED PURSUANT TO SECTION 12(G) OF THE ACT: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

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 (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

If securities are registered pursuant to Section 12(b) of the Exchange Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

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

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant at June 30, 2023 based on the closing price of such stock on the Nasdaq Global Select Market on such date was approximately $0.7 billion.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement relating to its 2024 annual meeting of shareholders (the "2024 Proxy Statement") are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. The 2024 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

Auditor Name: RSM US LLP   Auditor Location: Boston, Massachusetts   Auditor Firm ID: 49

SHENANDOAH TELECOMMUNICATIONS COMPANY

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PART I

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS:

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), regarding, among other things, our plans, strategies and prospects, both business and financial including, without limitation, the forward-looking statements set forth in Part I. Item 1, under the heading "Business" and in Part II. Item 7, under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this annual report. Although we believe that our plans, intentions and expectations reflected in or suggested by these forward-looking statements are reasonable, we cannot assure you that we will achieve or realize these plans, intentions or expectations. Forward-looking statements are inherently subject to risks, uncertainties and assumptions, including, without limitation, the factors described in Part I. Item 1A, under "Risk Factors" and in Part II. Item 7, under the heading, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this annual report. Many of the forward-looking statements contained in this annual report may be identified by the use of forward-looking words such as "believe," "expect," "anticipate," "should," "planned," "will," "may," "intend," "estimated," "aim," "on track," "target," "opportunity," "tentative," "positioning," "designed," "create," "predict," "project," "initiatives," "seek," "would," "could," "continue," "ongoing," "upside," "increases" and "potential," among others. Important factors that could cause actual results to differ materially from the forward-looking statements we make in this annual report are set forth in this annual report and in other reports or documents that we file from time to time with the U.S. Securities and Exchange Commission ("SEC"), and include, but are not limited to:

- our ability to sustain and grow revenues and cash flow from operations by offering broadband internet, video, voice, cell tower space, fiber optic network services and other services to residential and commercial customers, to adequately meet the customer demands in our service areas and to maintain and grow our customer base, particularly in the face of increasingly aggressive competition, the need for innovation and the related capital expenditures;
- the impact of competition from other market participants, including but not limited to fiber to the home ("FTTH") providers, incumbent telephone companies, direct broadcast satellite operators, wireless broadband and telephone providers, digital subscriber line ("DSL") providers, incumbent cable providers, video provided over the Internet by (i) market participants that have not historically competed in the multichannel video business, (ii) traditional multichannel video distributors, and (iii) content providers that have historically licensed cable networks to multichannel video distributors, and providers of advertising over the Internet;
- the availability of cash on hand and access to capital to fund the growth of capital expenditures needed to execute our business plan;
- our ability to develop and deploy new products and technologies including mobile products and any other consumer services and service platforms;
- our ability to obtain programming at reasonable prices or to raise prices to offset, in whole or in part, the effects of higher programming costs;
- natural disasters, pandemics and outbreaks of contagious diseases and other adverse public health developments, such as COVID-19;
- any events that disrupt our networks, information systems or properties and impair our operating activities or our reputation;
- the ability to acquire fiber optic cable, consumer premise equipment, and other materials and equipment in a timely manner needed to expand our network and customer base and maintain our current operations;
- the ability to retain and hire key personnel;
- the ability to obtain the required regulatory approvals and satisfy the closing conditions required for the Company's expected purchase of Horizon Acquisition Parent LLC (the "Horizon Transaction");
- the closing of the Horizon Transaction may not occur on time or at all;
- the expected savings and synergies from the Horizon Transaction may not be realized or may take longer or cost more than expected to realize;
- our ability to comply with all covenants in our credit facility, any violation of which, if not cured in a timely manner, could trigger an event of default; and
- general business conditions, inflation, economic uncertainty or downturn, unemployment levels and the level of activity in the housing sector.

All forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. We are under no duty or obligation to update any of the forward-looking statements after the date of this annual report.

Unless we indicate otherwise, references in this report to “we,” “us,” “our,” “Shentel” and “the Company” means Shenandoah Telecommunications Company and its subsidiaries.

ITEM 1. **BUSINESS**

Our Company

Shenandoah Telecommunications Company and its subsidiaries ("Shentel", "we", "our", "us", or the "Company"), provide broadband services through its high speed, state-of-the-art fiber-optic and cable networks to customers in the Mid-Atlantic United States. The Company's services include: broadband internet, video and voice; fiber-optic Ethernet, wavelength and leasing; and tower colocation leasing. The Company owns an extensive regional network with approximately 9,900 route miles of fiber and 219 macro cellular towers. For more information, please visit www.shentel.com.

Pending Acquisition of Horizon Acquisition Parent LLC

On October 24, 2023, Shentel entered into a definitive agreement to acquire 100% of the equity interests in Horizon Acquisition Parent LLC ("Horizon") for $385 million (the "Horizon Transaction"). Consideration will consist of $305 million in cash and $80 million of Shentel common stock. Horizon is a leading commercial fiber provider in Ohio and adjacent states serving national wireless providers, carriers, enterprises, and government, education and healthcare customers. Based in Chillicothe, Ohio, Horizon was founded in 1895 as the incumbent local exchange carrier in Ross County, Ohio and rapidly expanded its fiber network over the past 14 years. Most recently, Horizon has pursued a strategy of investing in FTTH in tier 3 & 4 markets in Ohio.

The description of the Company's business set forth below reflects the operations of the Company prior to the completion of the Horizon Transaction.

Description of Business

Broadband Reporting Segment

Our Broadband segment provides broadband internet, video and voice services to residential and commercial customers in portions of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky, via fiber optics under the brand name of Glo Fiber and hybrid fiber coaxial cable under the brand name of Shentel. The Broadband segment also leases dark fiber and provides Ethernet and wavelength fiber optic services to enterprise and wholesale customers throughout the entirety of our service area under the brand name of Glo Fiber Business. The Broadband segment also provides voice and digital subscriber line ("DSL") telephone services to customers in Virginia's Shenandoah County and portions of adjacent counties as a Rural Local Exchange Carrier ("RLEC"). These integrated networks are connected by approximately 9,900 route miles of fiber. The Broadband segment served 235,298 Revenue Generating Units ("RGUs") at December 31, 2023, representing an increase of 6.5%, from December 31, 2022.

Tower Reporting Segment

Our Tower segment owns 219 macro cellular towers and leases colocation space on the towers to wireless communications providers. Substantially all of our owned towers are built on ground that we lease from the respective landlords.

Competition

Broadband competition

As the incumbent cable provider passing approximately 216,000 homes and businesses, we compete directly against the incumbent local telephone companies that provide data and voice services over hybrid fiber and copper-based networks as well as broadband overbuilder providers that provide data, voice, and video services over hybrid coaxial cable or fiber optic networks. Approximately 17% of our incumbent cable passings compete with a wireline broadband competitor. In addition, we compete with fixed wireless broadband services and indirectly with wireless substitution as the bandwidth speeds from wireless providers have increased with network upgrades to 5th generation technology. Our Glo Fiber FTTH service passes approximately 234,000 homes and competes against the incumbent local telephone companies' DSL and voice services via hybrid fiber and copper-based networks and the incumbent cable companies' broadband service utilizing hybrid fiber-coaxial cable networks.

Competition is also intense and growing in the market for video services. Cable television systems are operated under non-exclusive franchises granted by local authorities, which may result in more than one operator providing video services in a particular market. Incumbent cable television companies, which have historically provided video service, also face competition from direct broadcast satellite providers such as Dish and DirecTV and on-line video services, such as Netflix, YouTube TV, Hulu, Disney and Amazon. Our ability to compete effectively with our competitors in video will depend, in part, on price, content cost and variety, service quality and the convenience of our service offerings.

A continuing trend toward consolidation, mergers, acquisitions and strategic alliances in the telecommunications industry could also increase the level of competition we face by further strengthening of our competitors.

Tower competition

We compete with other public tower companies, such as American Tower Co., Crown Castle International Corp., SBA Communications Corp., and private tower companies, private equity sponsored firms, carrier-affiliated tower companies, and owners of other alternative structures. We believe that zoning approval of site location and capacity, price, and leasing terms have been, and will continue to be, significant competitive factors affecting owners, operators and managers of communications sites.

Regulation

Our operations are subject to regulation by the Federal Communications Commission ("FCC"), the Virginia State Corporation Commission ("VSCC"), the West Virginia Public Service Commission, the Maryland Public Service Commission, the Pennsylvania Public Utility Commission, the Kentucky Public Service Commission and other federal, state, and local governmental agencies. The laws governing these agencies, and the regulations and policies that they administer, are subject to constant review and revision, and some of these changes could have material impacts on our revenues and expenses.

Regulation of Broadband Internet and Cable Video Services

We provide broadband internet, video, voice and fiber services to residential and business customers in franchise areas covering portions of Virginia, West Virginia, Maryland, central Pennsylvania and eastern Kentucky.

The provision of cable service generally is subject to regulation by the FCC, and cable operators typically also must comply with the terms of the franchise agreement between the cable operator and the state or local franchising authority. Some states, including Virginia and West Virginia, have enacted regulations and franchise provisions that also can affect certain aspects of a cable operator's operations. Our business may be significantly impacted by changes to the existing regulatory framework, whether caused by legislation or administrative or judicial actions.

The FCC originally classified broadband Internet access services, such as those we offer, as an information service, which by law exempts the service from traditional common carrier communications laws and regulations. In 2015, the FCC determined that broadband Internet access services, such as those we offer, were a form of telecommunications service under the Communications Act of 1934, as amended (the "Communications Act"), and, on that basis, imposed rules (commonly referred to as "Net Neutrality" rules) banning service providers from blocking access to lawful content, restricting data rates for downloading lawful content, prohibiting the attachment of non-harmful devices, giving special transmission priority to affiliates and offering third parties the ability to pay for priority routing. The 2015 Net Neutrality rules also imposed a transparency requirement, i.e., an obligation to disclose all material terms and conditions of our service to consumers.

In 2017, the FCC adopted an order repudiating its treatment of broadband as a telecommunications service, reclassifying broadband as an information service, and eliminating the 2015 Net Neutrality rules other than the transparency requirement, which the FCC eased in significant ways. The FCC also ruled that state regulators may not impose obligations similar to federal obligations that the FCC removed. In 2019, the U.S. Court of Appeals for the District of Columbia upheld the information service reclassification, but vacated the FCC's blanket prohibition of state utility regulation of broadband services. The court left open the possibility that individual state laws could still be deemed preempted on a case-by-case basis if it is shown that they conflict with federal law. In October 2020, the FCC, responding to the court's remand order, issued a further decision clarifying certain aspects of its earlier order. In this decision, the FCC reclassified broadband internet access service as an unregulated information service,

thus eliminating all federal regulatory "network neutrality" obligations beyond requiring broadband providers to accurately disclose network management practices, performance, and commercial terms of service. These issues may be revisited by the FCC in the current or future administrations.

At the same time, several states (including California, but not states in which we operate) have adopted state obligations replacing the Internet access ("Net Neutrality" type) obligations that the FCC removed, and we expect that additional states will consider the imposition of new regulations on Internet services like those that we offer. For example, New York adopted legislation that would have required Internet service providers to offer a discounted Internet service to qualifying low-income consumers, but a federal district judge enjoined enforcement as likely to be deemed rate regulation of Internet service that would be preempted by federal law. Other state laws and regulations may be adopted in the future, and have been proposed in states in which we operate, but will likely be subject to legal challenges. California's legislation has been challenged in court. We cannot predict how any such state legislation and court challenges will be resolved. Various governmental jurisdictions are also considering additional regulations in these and other areas, such as privacy, pricing, service and product quality, imposition of local franchise fees on Internet-related revenue and taxation. The adoption of new Internet regulations or the adaptation of existing laws to the Internet, including potential liability for the infringing activities of Internet subscribers, could adversely affect our business.

Moreover, irrespective of these cases, and as demonstrated by the FCC's inconsistent positions over time, it is possible that the FCC might further revise its approach to broadband Internet access in the future, or that Congress might enact legislation affecting the rules applicable to the service. In October 2023, the FCC adopted a Notice of Proposed Rulemaking that proposes to reclassify broadband internet service as a telecommunications service and reinstate Net Neutrality rules.

As the Internet has matured, it has become the subject of increasing regulatory interest. Congress and Federal regulators have adopted a wide range of measures directly or potentially affecting Internet use. The adoption of new Internet regulations or policies could adversely affect our business.

On January 29, 2015, the FCC, in a nation-wide proceeding evaluating whether advanced broadband is being deployed in a reasonable and timely fashion, increased the minimum connection speeds required to qualify as advanced broadband service to 25 Mbps for downloads and 3 Mbps for uploads. As a result, the FCC concluded that advanced broadband was not being sufficiently deployed and initiated a new inquiry into what steps it might take to encourage broadband deployment. This action may lead the FCC to adopt additional measures affecting our broadband business. The FCC has ongoing proceedings to allocate additional spectrum for advanced wireless service, which could provide additional wireless competition to our broadband business.

Federal and state governments have launched numerous programs to provide subsidies for the construction of high-speed broadband facilities to homes that do not have access to broadband service of 25 Mbps for downloads and 3 Mbps for uploads, including federal funding from the American Rescue Plan Act, the Coronavirus Aid, Relief, and Economic Security Act and the FCC's Rural Digital Opportunities Fund, and state programs such as the Virginia Telecommunications Initiative ("VATI"), Maryland Network Infrastructure Grant Program and West Virginia Broadband Development Fund.

On January 30, 2020, the FCC adopted an order approving the Rural Digital Opportunity Fund to disburse $20.4 billion over the course of 10 years to subsidize the deployment of networks for the provision of high-speed broadband internet access and voice services in unserved areas via a reverse auction, some of which may be directed to competitive providers in some of the states in which we operate. We prevailed as a winning bidder in the auction for certain areas with a grant of $0.9 million to serve approximately 900 unserved homes. The Company began fulfilling its obligation during 2023 and expects to complete that process by the end of 2025.

In 2021, Congress passed the American Rescue Plan Act to subsidize the deployment of high-speed broadband internet access in unserved areas. We were awarded approximately $85.8 million in grants to serve approximately 25,000 unserved homes in the states of Virginia, West Virginia and Maryland. The grants will be paid to the Company as certain milestones are completed. The Company began fulfilling its obligation in during 2023 and expects to complete that process by the end of 2026.

In November 2021, Congress passed the Infrastructure Investment and Jobs Act that will provide an additional $42.5 billion to states to fund broadband construction and adoption programs that prioritize the expansion of high-speed broadband to unserved homes across the country.

With the influx of government grants now available to subsidize broadband FTTH construction to unserved areas, we ceased our Beam fixed wireless network, operations and services in 2022 as it was not designed to compete against the faster broadband services offered by fiber networks. We incurred $12.4 million in impairment, accelerated depreciation and restructuring charges in 2022 as a result.

Pricing and Packaging. Our video and broadband internet services are not subject to rate regulation. In December 2020, these services became subject to a federal law requiring itemization of certain charges in notices and invoices to customers, and we must also comply with generally-applicable marketing and advertising requirements. Congress and the FCC from time to time have considered imposing new pricing, packaging and consumer protection restrictions on cable operators. We cannot predict whether or when any such new marketing restrictions may be imposed on us or what effect they would have on our ability to provide cable service.

Must-Carry/Retransmission Consent. Local broadcast television stations can require a cable operator to carry their signals pursuant to federal "must-carry" requirements. Alternatively, local television stations may require that a cable operator obtain "retransmission consent" for carriage of the station's signal, which can enable a popular local television station to obtain concessions from the cable operator for the right to carry the station's signal. Although some local television stations today are carried by cable operators under the must-carry obligation, popular broadcast network affiliated stations, such as ABC, CBS, FOX, CW and NBC, typically are carried pursuant to retransmission consent agreements. The retransmission consent costs charged by broadcast networks affiliate stations have increased dramatically over the past decade. We cannot predict the extent to which such retransmission consent costs may increase in the future or the effect such cost increases may have on our ability to provide cable service.

Copyright Fees. Cable operators pay compulsory copyright fees, in addition to possible retransmission consent fees, to retransmit broadcast programming. Although the cable compulsory copyright license has been in place for more than 45 years, there have been legislative and regulatory proposals to modify or even replace the compulsory license with privately negotiated licenses. We cannot predict whether such proposals will be enacted and how they might affect our business.

Programming Costs. Non-broadcast channels (including satellite-delivered cable programming, such as ESPN, HBO and the Discovery Channel) are not subject to must-carry/retransmission consent regulations or a compulsory copyright license. The Company negotiates directly or through the National Cable Television Cooperative with these cable programmers for the right to carry their programming. The cost of acquiring the right to carry cable programming can increase as programmers demand rate increases and we cannot predict the extent to which any potential costs may impact our business.

Franchise Matters. Cable and FTTH operators generally must apply for and obtain non-exclusive franchises from local or state franchising authorities before providing video and data services. The terms and conditions of franchises vary among jurisdictions, but franchises generally last for a fixed term and are subject to renewal, require the cable operator to collect a franchise fee of 5% of the cable operator's gross revenue from video services, and contain certain service quality and customer service obligations. We believe that our ability to obtain franchises or our franchise renewal prospects are generally favorable, but we cannot guarantee the initial franchise award or future renewal of any individual franchise. A significant number of states today have processes in place for obtaining state-wide franchises. In addition, from time to time legislation and regulation are introduced in Congress, the FCC and in various states, including those in which we provide some form of video or data service, that would modify franchising processes, potentially lowering barriers to entry and increasing competition in the marketplace for video services. The states in which we currently operate largely leave franchising responsibility in the hands of local municipalities and counties, but these states govern the local government entities' awards of such franchises and their conduct of franchise negotiations. We cannot predict the extent to which these rules and other developments will accelerate the pace of new entry into the video or data market or the effect, if any, they may have on our FTTH and cable operations.

Federal law imposes a 5% cap on franchise fees. In 2019, the FCC clarified that the value of in-kind contribution requirements set forth in cable franchises (such as channel capacity set aside for public, educational and governmental ("PEG") use or free cable service to public buildings) is subject to the statutory cap on franchise fees, and it reaffirmed that state and local authorities are barred from imposing franchise fees on cable systems providing non-cable services such as Internet services. Those rules were upheld by a federal court in 2021, but the court limited the amount of the in-kind franchise fee contribution credit to the operator's marginal costs rather than its market valuation.

Pole Attachments. The Communications Act requires investor-owned ("IO") utilities and telecommunications carriers to provide cable systems with access to poles and conduits and simultaneously subjects the rates, terms and conditions of access to either federal or state regulation. The FCC rules do not directly affect pole attachment rates in states that self-regulate (rather than allow the FCC to regulate) pole rates, but many of those states have substantially the same rate for cable and telecommunications attachments. Kentucky, Pennsylvania and West Virginia, three states in which we operate, self-regulate IO pole attachments, but do so using essentially the same rate formula and other pole attachment rules as the FCC. The FCC pole attachment rules also do not govern government or cooperatively owned utilities. States, however, are free to regulate such utilities and some do. Of the states in which Shentel operates, Virginia and Kentucky currently regulate cooperatively owned pole attachments. In addition, the FCC has interpreted another federal law governing state and local regulation of public rights of way to impose cost-based limitations on what government entities may charge for pole attachments.

In 2018, the FCC adopted rules to permit a "one-touch" make-ready process for poles subject to its jurisdiction. The "one touch" make-ready rules allow new attachers to alter certain components of existing attachments for "simple make-ready" (i.e. where the alteration of existing attachments does not involve a reasonable expectation of a service outage, splicing, pole replacement or relocation of a wireless attachment). The rules are intended to promote broadband deployment and competition by facilitating competing communications providers' service deployment. Certain aspects of the rules are still pending reconsideration at the FCC. Other aspects were upheld against challenge by the United States Court of Appeals for the Ninth Circuit. Although Kentucky, West Virginia and Pennsylvania self-regulate, each of these states has adopted the FCC's "one touch" make-ready rules.

Privacy. The Company is subject to various federal and state laws intended to protect the privacy of end-users who subscribe to the Company's services. For example, the Communications Act, limits our ability to collect, use and disclose customers' personally identifiable information for our cable television/video, voice and Internet services. We are subject to additional federal, state and local laws and regulations that impose additional restrictions on the collection, use and disclosure of consumer information. Further, the FCC, the Federal Trade Commission ("FTC") and many states regulate and restrict the marketing practices of communications service providers, including telemarketing and sending unsolicited commercial emails. The FCC also has regulations that place restrictions on the permissible uses that we can make of customer-specific information, known as Customer Proprietary Network Information ("CPNI"), received from telecommunications service subscribers, and that govern procedures for release of such information in order to prevent identity theft schemes. Other laws impose criminal and other penalties for the violation of certain CPNI requirements and related privacy protections. The FCC or other regulators may expand these duties. For example, the FCC is currently considering a proposal to expand the CPNI breach reporting obligations for VoIP and telecommunications providers.

As a result of the FCC's December 2017 decision, discussed above, to reclassify broadband Internet access service as an "information service," the FTC has the authority to enforce against unfair or deceptive acts and practices, to protect the privacy of Internet service customers, including our use and disclosure of certain customer information.

Many states and local authorities have considered legislative or other actions that would impose additional restrictions on our ability to collect, use and disclose certain information. California's Consumer Privacy Act ("CCPA") and associated regulations, which became effective in 2020, and the California Privacy Rights Act, which amended the CCPA and became effective in January 2023, under certain circumstances regulate the collection, use, retention, sale and disclosure of the personal information of California consumers, grants California consumers certain rights to, among other things, access, correct and delete data about them in certain circumstances, and authorizes enforcement actions by the California Attorney General, the new California Privacy Protection Agency, and certain limited private class actions. Compliance with the CCPA may increase the cost of providing our services to customers who may be residents in California and increase our litigation exposure. In 2020, Virginia enacted a new consumer privacy law. Companies were required to come into compliance by January 2023. The Virginia privacy law imposes requirements on companies, like Shentel, regarding the handling of consumer data, including a requirement to conduct data protection impact assessments; obtain opt-in consent from consumers to use sensitive personal information; and allow consumers to access, delete, correct and port their data, among other things. Shentel's operations continue to be in compliance with the law as of December 31, 2023. In 2021, Colorado enacted the Colorado Privacy Act, modeled largely after its predecessor in Virginia and in part after the CCPA, which went into effect on July 1, 2023. We expect federal and state efforts to regulate online privacy, data security and cybersecurity to continue in 2024. We cannot predict whether any of these efforts will be successful, or how new legislation and regulations, if any, would affect our business. These efforts have the potential to create a patchwork of differing and/or conflicting state and/or federal regulations, and to increase the cost of providing our services.

In addition, restrictions exist, and new restrictions are considered from time to time by Congress, federal agencies and states, on the extent to which customers may receive unsolicited telemarketing calls, text messages, junk e-mail or spam. Congress, federal agencies and certain states also are considering, and may in the future consider imposing, additional requirements on entities that possess consumer information to protect the privacy of consumers. The Company is required to file an annual certification of compliance with the FCC's CPNI rules. Complying with these requirements may impose costs on the Company or compel the Company to alter the way it provides or promotes its services.

Accessibility. The FCC imposes obligations on multi-channel video programming distributors ("MVPDs"), intended to ensure that individuals with disabilities are able to access and use video programming services and equipment. FCC rules require video programming delivered on MVPD systems to be closed captioned unless exempt and require MVPDs to pass through captions to consumers and to take all steps needed to monitor and maintain equipment to ensure that captioning reaches the consumer intact. Video programming delivered over the Internet must be captioned if it was delivered previously on television with captions. An MVPD must also pass through audio description provided in broadcast and non-broadcast programming if it has the technical capability to do so, unless it is using the required technology for another purpose. FCC rules also require MVPDs to ensure that critical details about emergencies conveyed in video programming are accessible to persons with disabilities, and that video programming guides are accessible to persons who are blind or visually impaired. We cannot predict if or when additional changes will be made to the current FCC accessibility rules, or whether and how such changes will affect us.

Voice over Internet Protocol "VoIP" Services. We provide voice communications services over our cable and fiber networks utilizing interconnected VoIP technology and service arrangements. Although similar to telephone service in some ways, our VoIP service arrangement utilizes different technology and is subject to many of the same rules and regulations applicable to traditional telephone service. The FCC order adopted on October 27, 2011 established rules governing intercarrier compensation payments for the origination and termination of telephone traffic between carriers and VoIP providers. In May 2014, the United States Court of Appeals for the Tenth Circuit upheld the FCC order reducing intercarrier compensation payments. The rules have substantially decreased intercarrier compensation payments we may have otherwise received over a multi-year period. The decreases over the multi-year transition have affected both the amounts that we pay to telecommunications carriers and the amounts that we receive from other carriers. The schedule and magnitude of these decreases, however, has varied depending on the nature of the carriers and the telephone traffic at issue. These changes have had a negative impact on our revenues for voice services at particular times over this multi-year period.

Further regulatory changes are being considered that could impact our VoIP service. The FCC and state regulatory authorities have considered, for example, whether certain common carrier regulations traditionally applied to incumbent local exchange carriers (including RLECs) should be modified or reduced, and the extent to which common carrier requirements should be extended to VoIP providers. The FCC has required VoIP providers to comply with several regulations that apply to other telephone services, including 911 emergency services, the Communications Assistance for Law Enforcement Act ("CALEA"), Universal Service Fund ("USF") contribution, customer privacy and CPNI issues, number portability, network outage, rural call completion, disability access, battery backup, robocall mitigation, regulatory fees and discontinuance of service. We cannot predict whether the FCC will impose additional obligations on our VoIP services in the future.

Our VoIP telephone services are also subject to certain state and local regulatory fees such as E911 fees and contributions to state universal service funds. Although we believe that VoIP telephone services should otherwise be governed only by federal regulation, some states have attempted to subject cable VoIP services to state level regulation. In March 2007, a federal appeals court affirmed the FCC's decision concerning federal regulation of certain VoIP services, but declined to specifically find that VoIP service provided by cable companies, such as we provide, should be regulated only at the federal level. As a result, certain states, including West Virginia, began proceedings to subject cable VoIP services to state-level regulation. Although the West Virginia proceeding concluded without any new state-level regulation, it is difficult to predict whether it, or other state regulators, will continue to attempt to regulate our VoIP service. Some other state attempts to regulate VoIP have been blocked by federal courts on the basis of the FCC's preemption of certain state regulations or on the basis that VoIP services are information services, but as with Internet services, there is uncertainty as to the extent to which courts will preempt state regulation in the future.

We have registered with, or obtained certificates or authorizations from, the FCC and the state regulatory authorities in those states in which we offer competitive voice services in order to ensure the continuity of our services and to maintain needed network interconnection arrangements. Further, it is also unclear whether and how these and other ongoing regulatory matters ultimately will be resolved.

Other Issues. Our ability to provide video service may be affected by a wide range of additional regulatory and related issues, including FCC regulations pertaining to licensing of systems and facilities, set-top boxes, equipment compatibility, program exclusivity blackouts, commercial leased access of video channels by unaffiliated third parties, advertising, maintenance of online public files, accessibility to persons with disabilities, emergency alerts, equal employment opportunity, privacy, consumer protection, and technical standards. Further, the FCC recently adopted a plan to reallocate for other purposes certain spectrum currently used by satellite providers to deliver video programming to individual cable systems, which could be disruptive to the satellite video delivery platform we rely upon to provide our video services. We cannot predict the nature and pace of these and other developments or the effect they may have on our operations.

Regulation of Shenandoah Telephone Company ("Shenandoah Telephone")

State Regulation. Shenandoah Telephone Company is a RLEC serving Shenandoah County, Virginia and portions of the Virginia counties of Rockingham, Frederick, and Augusta. Shenandoah Telephone's rates for local exchange service, intrastate toll service and intrastate access charges are subject to the approval of the VSCC. The VSCC also establishes and oversees implementation of certain provisions of the federal and state telecommunications laws, including interconnection requirements, promotion of competition, and consumer protection standards. The VSCC also regulates rates, service areas, service standards, accounting methods, affiliated transactions and certain other financial transactions. Pursuant to the FCC's October 27, 2011 order adopting comprehensive reforms to the federal intercarrier compensation and universal service policies and rules (as discussed above and further below), the FCC preempted state regulatory commissions' jurisdiction over all terminating access charges, including intrastate terminating access charges, which historically have been within the states' jurisdiction. However, the FCC vested in the states the obligation to monitor the tariffing of intrastate rate reductions for a transition period, to oversee interconnection negotiations and arbitrations, and to determine the network edge, subject to FCC guidance, for purposes of the new "bill-and-keep" framework. A federal appeals court has affirmed the decision. The outcome of those further challenges could modify or delay the effectiveness of the FCC's rule changes. In 2017 the FCC initiated a further proceeding to consider whether additional changes to interconnection obligations are needed, including how and where companies interconnect their networks with the networks of other providers. Although we are unable to predict the ultimate effect that the FCC's order will have on the state regulatory landscape or our operations, the rules may decrease or eliminate revenue sources or otherwise limit our ability to recover the full value of our network assets.

Interconnection. Federal law and FCC regulations impose certain obligations on incumbent local exchange carriers (including RLECs) to interconnect their networks with other telecommunications providers (either directly or indirectly) and to enter into interconnection agreements with certain types of telecommunications providers. Interconnection agreements typically are negotiated on a statewide basis and are subject to state approval. If an agreement cannot be reached, parties to interconnection negotiations can submit unresolved issues to federal or state regulators for arbitration. Disputes regarding intercarrier compensation can be brought in a number of forums (depending on the nature and jurisdiction of the dispute) including state public utility commissions ("PUCs"), the FCC, and the courts. The Company is working to resolve routine interconnection and intercarrier compensation-related disputes concerning the volume of traffic exchanged between the Company and third parties, appropriate access rates, and terms for the origination and termination of traffic on third-party networks.

Regulation of Intercarrier Compensation. Shenandoah Telephone participates in the access revenue pools administered by the FCC-supervised National Exchange Carrier Association ("NECA"), which collects and distributes the revenues from interstate access charges that long-distance carriers pay us for originating and terminating interstate calls over our network. Shenandoah Telephone also participates in some NECA tariffs that govern the rates, terms and conditions of our interstate access offerings. Some of those tariffs are under review by the FCC, and we may be obligated to refund affected access charges collected in the past or in the future if the FCC ultimately finds that the tariffed rates were unreasonable. We cannot predict whether, when and to what extent such refunds may be due.

On October 27, 2011, the FCC adopted a number of broad changes to the intercarrier compensation rules governing the interstate access rates charged by small-to-mid-sized RLECs such as Shenandoah Telephone that have had a

material impact on our revenues. For example, the FCC adopted a national "bill-and-keep" framework, which will result in substantial reductions in the access charges paid by long distance carriers and other interconnecting carriers, possibly to zero, accompanied by increases to the subscriber line charges paid by business and residential end users. In addition, the FCC has changed some of the rules that determine what compensation voice service providers, including but not limited to wireless carriers, competitive local exchange carriers, VoIP providers and providers of other Internet-enabled services, should pay and receive for originating and terminating traffic that is interconnected with RLEC networks.

The VSCC has jurisdiction over local telephone companies' intrastate intercarrier compensation rates, and has indicated in the past that it might open a generic proceeding on the rates charged for intrastate access, although the scope and likelihood of such a proceeding is unclear in light of the FCC's overhaul of the intercarrier compensation rules (discussed above), which affect states' jurisdiction over intrastate access charges.

Universal Service Fund ("USF"). Shenandoah Telephone receives disbursements from the federal USF. In October 2011, the FCC adopted comprehensive changes to the universal service program. Some of the FCC's reforms impact the rules that govern disbursements from the USF to RLECs such as Shenandoah Telephone, and to other providers. These rules have resulted in a substantial decrease in intercarrier compensation payments over a multi-year period. The Company is not able to predict if or when additional changes will be made to the USF, or whether and how such changes would affect the extent of our total federal universal service assessments, the amounts we receive, or our ability to recover costs associated with the USF.

If the Universal Service Administrative Company ("USAC") were required to account for the USF program in accordance with generally accepted accounting principles for federal agencies under the Anti-Deficiency Act (the "ADA"), it could cause delays in USF payments to fund recipients and significantly increase the amount of USF contribution payments charged to wireline and wireless consumers. Each year since 2004, Congress has adopted short-term exemptions for the USAC from the ADA. Congress has from time to time considered adopting a longer term exemption for the USAC from the ADA, but we cannot predict whether any such exemption will be adopted or the effect it may have on the Company.

In 2012, the FCC released an order making substantial changes to the rules and regulations governing the federal USF Lifeline Program, which provides discounted telephone services to low income consumers. The order imposes greater recordkeeping and reporting obligations, and generally subjects providers of Lifeline-supported services to greater oversight. In 2016, the FCC released a second substantial Lifeline order that amended the program to provide support for broadband services and phase out support for voice services. Included among the new rules was a requirement that any eligible telecommunications carrier ("ETC") which offered broadband service, on its own or through an affiliate, must also offer Lifeline-supported broadband service. Due to this requirement, our Company began offering Lifeline-supported broadband in areas where it operates as an ETC. In 2017, the FCC released a Lifeline order that included clarifications to the 2016 Lifeline order and proposed reforms aimed at improving program integrity. As a result of our Company providing Lifeline-supported services, we are subject to increased reporting and recordkeeping requirements, and could be subject to increased regulatory oversight, investigations or audits.

In May 2021, the FCC introduced the temporary Emergency Broadband Benefit ("EBB") program to help qualifying disadvantaged households pay for Internet service. The EBB program provided a subsidy of up to $50 per month toward Internet service to the service provider for most eligible low-income households that elect the benefit and demonstrate their qualification. Congress extended this benefit through the new Affordable Connectivity Program ("ACP") that in 2022 replaced EBB with a $30 subsidy for service provided to most of the same consumers. ACP is expected to end in 2024 unless Congress passes legislation to increase the funding to support this program. If ACP ends, the Company's eligible subscribers may not be able to afford broadband service which could reduce our revenues. These programs are beneficial to participating service providers by increasing the number of customers who can afford and pay for Internet services. At the same time, participation entails some risk because subsidies will not be received if the customer switches to another provider or if the service provider does not fulfill all program requirements. Non-participation would make it more difficult to compete as effectively for business from low-income consumers. The FCC, USAC and other authorities have conducted, and in the future are expected to continue to conduct, more extensive audits of USF support recipients, as well as other heightened oversight activities. The impact of these activities on the Company, if any, is uncertain.

Other Regulatory Obligations. Shenandoah Telephone is subject to requirements relating to CPNI, CALEA implementation, interconnection, access to rights of way, number portability, number pooling, accessibility of telecommunications for those with disabilities, robocalls mitigation and protection for consumer privacy.

The FCC and other authorities continue to consider policies to encourage nationwide advanced broadband infrastructure development. For example, the FCC has largely deregulated DSL and other broadband services offered by RLECs. Such changes benefit our RLEC, but could make it more difficult for us (or for NECA) to tariff and pool DSL costs. Broadband networks and services are subject to CALEA rules, network management disclosure and prohibitions, requirements relating to consumer privacy, and other regulatory mandates.

911 Services. We are subject to FCC rules that require telecommunications carriers to make emergency 911 services available to their subscribers, including enhanced 911 services that convey the caller's telephone number and detailed location information to emergency responders. As a 911 service provider that serves a public safety answering point (a "PSAP") or other local emergency responder, we must take reasonable measures to ensure 911 circuit diversity, availability of backup power at central offices that directly serve PSAPs, and diversity of network monitoring links. Further, as a service provider offering multiline telephone system solutions to business and enterprise customers we must take certain additional actions to ensure emergency responders can properly respond to 911 calls, such as the delivery of specific location information and notices.

Long Distance Services. We offer long distance service to our customers through our subsidiary, Shenandoah Cable Television, LLC. Our long distance rates are not subject to FCC regulation, but we are required to offer long distance service through a subsidiary other than Shenandoah Telephone, to disclose our long distance rates on a website, to maintain geographically averaged rates, to pay contributions to the USF and make other mandatory payments based on our long-distance revenues, and to comply with other filing and regulatory requirements, including enhanced recordkeeping and quarterly reporting obligations and being subject to greater oversight. In November 2013, the FCC issued an order imposing greater recordkeeping and reporting obligations on certain long distance providers delivering calls to rural areas. The order imposes greater recordkeeping and quarterly reporting obligations on such providers, and generally subjects such providers to greater oversight.

Regulation of Our Other Services

Transfers, Assignments and Changes of Control of Spectrum Licenses. The FCC must give prior approval to the assignment of ownership or control of a spectrum license, as well as transfers involving substantial changes in such ownership or control. The FCC also requires licensees to maintain effective working control over their licenses.

Spectrum licenses are typically granted for ten-year terms. Our spectrum licenses for our service area are scheduled to expire on various dates. Spectrum licensees have an expectation of license renewal if they can satisfy three "safe harbor" certifications which, if made, will result in routine processing and grant of the license renewal application. Those certifications require the licensee to certify that it has satisfied any ongoing provision of service requirements applicable to the spectrum license, that it has not permanently discontinued operations (defined as 180 days continuously off the air), and that it has substantially complied with applicable rules and policies. If for some reason a licensee cannot meet these safe harbor requirements, it can file a detailed renewal showing based on the actual service provided by the station.

Construction and Operation of Tower Facilities. The construction of new towers, and in some cases the modification of existing towers, may be subject to environmental review pursuant to the National Environmental Policy Act of 1969 ("NEPA"), which requires federal agencies to evaluate the environmental impacts of their decisions under some circumstances. FCC regulations implementing NEPA place responsibility on each applicant to investigate any potential environmental effects of a proposed operation, including health effects relating to radio frequency emissions, and impacts on endangered species such as certain migratory birds, and to disclose any significant effects on the environment to the agency prior to commencing construction. In the event that the FCC determines that a proposed tower would have a significant environmental impact, the FCC would require preparation of an environmental impact statement, which would be subject to public comment.

In addition, tower construction is subject to regulations including the National Historic Preservation Act. Compliance with FAA, environmental or historic preservation requirements could significantly delay or prevent the registration or construction of a particular tower or make tower construction more costly. On July 15, 2016, Congress enacted new tower marking requirements for certain towers located in rural areas, which may increase our

operational costs. However, statutory changes adopted by Congress in the 2018 FAA Reauthorization Act may ameliorate or mitigate some of those costs. In some jurisdictions, local laws or regulations may impose similar requirements.

Tower Facilities Siting. States and localities are authorized to engage in forms of regulation, including zoning and land-use regulation, which may affect our ability to select and modify sites for wireless tower facilities. States and localities may not engage in forms of regulation that effectively prohibit the provision of wireless services, discriminate among functionally equivalent services or regulate the placement, construction or operation of wireless tower facilities on the basis of the environmental effects of radio frequency emissions. Courts and the FCC are routinely asked to review whether state and local zoning and land-use actions should be preempted by federal law, and the FCC also is routinely asked to consider other issues affecting wireless facilities siting in other proceedings. We cannot predict the outcome of these proceedings or the effect they may have on us.

Human Capital Management

As of December 31, 2023, the Company employed 845 people, geographically located predominately in and around the Mid-Atlantic region of the United States. Approximately 31% of our employees were female and approximately 23% of employees in management positions were female.

Our Chief Human Resources Officer ("CHRO") is responsible for developing and executing the Company's human capital management strategy in alignment with the business. This includes the attraction, acquisition, development, retention and engagement of talent to deliver on the Company's strategy, the design of employee compensation and benefits programs and oversight of our diversity and inclusion efforts. Our CHRO continuously evaluates, modifies and enhances our internal processes and technologies to increase employee engagement, productivity and effectiveness. In addition, our Chief Executive Officer ("CEO") and CHRO regularly update the Company's board of directors and its committees on the operation and status of these human capital trends and management programs. Key areas of focus include:

Culture, Values & Ethics

Shentel is committed to operating in a fair, honest, responsible and ethical manner and we expect our employees to commit to these same principles. The Company has adopted a Code of Business Conduct and Ethics, which is also clearly visible to our customers and vendors on our external Shentel website (https://investor.shentel.com/corporate-governance/governance-overview). Additionally, at time of hire and at least annually, we ask all employees and board members to review and certify their commitment to this Code.

In addition to compliance with our Code of Business Conduct and Ethics, the Company attempts to follow a Positive People Philosophy, which creates the foundation for how all employees work together to drive our collective success. Our culture is built upon values of always looking for opportunities to improve, taking ownership for resolving issues, effectively communicating to solve problems, working collaboratively as a team, and providing leadership by setting positive examples for others to follow.

Workplace Safety

The health and safety of our employees is our highest priority. Exceeding the Occupational Safety and Health Administration ("OSHA") Regulations is the expectation for Shentel. We have achieved this level of success through our deliberate creation and management of both regional and corporate safety committees. Our commitment to safety has also allowed us to achieve a 2023 OSHA Incident Rate of approximately 1.2, compared to the national utilities industry benchmark of 1.7.

Compensation and Benefits

We provide employees with compensation and benefits packages that are market-driven and aligned to a consistent Shentel Compensation and Rewards Philosophy. This philosophy is aligned with the needs of the business, and targeted to be competitive in the Company's designated talent markets. As well as ensuring compensation competitiveness, the primary objectives of Shentel's compensation programs are as follows:

- Create a competitive advantage to attract, motivate and retain the necessary talent for the Company;

- Focus both individual and organizational effort around strategy execution, accountability and Company core values for achieving key business outcomes;
- Emphasize individual performance-based differentiation linked to corporate and shareholder values.
- Establish job and salary structures that are market driven and reviewed on an ongoing basis in order to maintain long-term competitiveness;
- Ensure that pay processes are easily understood;
- Provide a consistent approach to delivering ongoing competitive compensation to employees of the Company. Consistency will be measured in terms of pay positioning relative to the Company's defined competitive survey market as well as in comparison to the Company's overall internal compensation philosophy and objectives; and
- Target the 50th percentile of the Company's defined competitive survey market for each relevant compensation component.

Our compensation and rewards program consists of three primary components: Base Salary, Short-Term Incentive and Long-Term Incentive. Base Salary is paid for comparable knowledge, skills and experience. Short-Term Incentive is variable cash compensation designed to recognize and reward extraordinary performance and is based upon the achievement of a combination of Company-wide financial and service performance goals and achievement of individual objectives. Long-Term Incentive is equity based compensation that aligns eligible employees' interests with those of shareholders and encourages a long term focus and retention.

We also provide eligible employees the ability to participate in a 401(k) Plan which has competitive Company contributions, as well as generous health and welfare benefits, paid time off, employee assistance programs, and educational assistance, among many others.

Diversity and Inclusion

We believe that a diverse workforce is critical to our success. Our efforts have been focused in three areas: inspiring innovation through an inclusive and diverse culture; expanding our efforts to recruit, hire and retain experienced, diverse talent; and identifying strategic initiatives to accelerate our inclusion and diversity programs.

Training and Talent Management

To empower employees to realize their full potential, we provide a range of leadership development programs and learning opportunities, which emphasize skills and identify resources they can use to be successful. Our Shentel University platform supplements our talent development strategies and provides an online portal that enables employees to access virtual courses and self-directed web-based courses, leveraging both internally and externally developed and hosted content. In addition, we provide our employees with regular leadership and professional development events that focus on how we may best advance our team, effectively execute our business strategies, and continue to develop the talent and potential of our employees. We leverage our training and talent management efforts to ensure we have ready-now successors identified as the Company continues to grow and evolve.

Employee Engagement

Our annual employee satisfaction survey captures critical indicators of employee engagement and provides an overall understanding of employee favorability. During 2023, we conducted our annual enterprise-wide engagement survey, with the assistance of third party consultants, which focused on measuring engagement, inclusion and overall employee satisfaction. We will continue to poll our employees, as appropriate, and build action plans to address feedback shared by our team members.

Information About Our Executive Officers

The following table presents information about our executive officers who, other than Christopher E. French, are not members of our board of directors. Our executive officers serve at the pleasure of the Board of Directors.

Name	Title	Age	Date in Position
Christopher E. French	President and Chief Executive Officer	65	April 1988
Edward H. McKay	Executive Vice President and Chief Operating Officer	51	July 2021
James J. Volk	Senior Vice President and Chief Financial Officer	60	June 2019
Elaine M. Cheng	Senior Vice President and Chief Information Officer	50	March 2019
Heather K. Tormey	Vice President and Chief Human Resources Officer	50	July 2019
Dennis A. Romps	Vice President and Chief Accounting Officer	56	July 2021
Richard W. Mason Jr.	Senior Vice President Engineering and Operations	50	July 2021
Derek C. Rieger	General Counsel, Vice President Legal and Corporate Secretary	43	February 2022
Dara Leslie	Senior Vice President Sales & Marketing	56	June 2022

Mr. French is President and Chief Executive Officer for Shentel. He is responsible for the overall leadership and strategic direction of the Company. He has served as President since 1988, and has been a member and Chairman of the Board of Directors since 1996. Prior to appointment as President, Mr. French held a variety of positions with the Company, including Vice President Network Service and Executive Vice President. Mr. French holds a bachelor's degree in electrical engineering and an MBA, both from the University of Virginia. He has held board and officer positions in both state and national telecommunication associations, including service as a director of the Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO), membership on the Leadership Committee of the USTelecom Association, and was president and director of the Virginia Telecommunications Industry Association.

Mr. McKay is Executive Vice President and Chief Operating Officer for Shentel and is responsible for leading the Company's integrated broadband business, including the Shentel and Glo Fiber brands. He joined Shentel in 2004, has served as Executive Vice President and Chief Operating Officer since 2021 and has more than 25 years of experience in the telecommunications industry. Prior to his current role, he served as Senior Vice President of Engineering and Operations. He played a key role in the growth and success of Shentel's former wireless business, led the expansion of the fiber-rich network supporting the Company's cable and wireline business, and was responsible for delivering on Shentel's broadband Fiber First growth strategy for Glo Fiber. Mr. McKay began his telecommunications industry career in 1996, including previous management positions at UUNET and Verizon. He is a graduate of the University of Virginia, where he earned master's and bachelor's degrees in Electrical Engineering, and he represents the Company on the Board of ACA Connects.

Mr. Volk is Senior Vice President and Chief Financial Officer for Shentel. He joined Shentel in June 2019, has more than 28 years of experience in the telecommunications industry and has served in a variety of senior financial management roles with both large corporations and high growth, early stage telecommunication providers. Prior to joining Shentel, he served as Vice President, Finance and Investor Relations of Uniti Group Inc. Prior to joining Uniti, he served as CFO of multiple public and private telecommunication companies, including PEG Bandwidth, Hargray Communications and UbiquiTel Inc. He previously held senior finance positions with AT&T and Comcast. Mr. Volk holds a Bachelor of Science Degree in Accounting from the University of Delaware and a Master of Business Administration from Villanova University.

Mrs. Cheng is Senior Vice President and Chief Information Officer for Shentel. She leads the Information Technology organization, Enterprise Project Management Office (EPMO) and Enterprise Risk Management program, and is responsible for our Customer Care and Tech Support functions. She joined the Company in March 2019 and has more than 20 years of experience in diverse business environments across all areas of Information Technology. Prior to joining Shentel, Mrs. Cheng served as Chief Information Officer and Managing Director of Global Strategic Design for CFA Institute in Charlottesville, Va. Prior to her time at CFA Institute, Mrs. Cheng held

a number of different roles over 16 years with M&T Bank in Buffalo, NY, including Group Vice President, Technology Business Services, Vice President of Retail Operations and Assistant Vice President, Web Product Owner. She received her Bachelor of Arts degree from Vassar College and her Masters of Business Administration from the University of Rochester. Additionally, Mrs. Cheng is a founding board member of Charlottesville Women in Tech, a non-profit organization which encourages women to join and thrive in technology careers.

Ms. Tormey is Vice President and Chief Human Resources Officer at Shentel. She joined the Company in July 2019. Ms. Tormey brings more than 20 years of experience in leading and managing strategic HR initiatives to Shentel. Prior to joining Shentel, Ms. Tormey was the Chief Human Resources Officer of American Woodmark, headquartered in Winchester, Virginia. Prior to American Woodmark, Ms. Tormey held numerous HR leadership positions with a variety of organizations across a range of industries, including Carlisle FoodService Products, UTC Aerospace Systems, Goodrich Corporation, Northern Power Systems, and IGT. She holds a Bachelor of Science in Psychology from Florida State University and a Master of Arts in Industrial Organizational Psychology from the University of New Haven.

Mr. Romps is Vice President and Chief Accounting Officer for Shentel and is responsible for all accounting, financial reporting, internal controls, SEC, Sarbanes-Oxley and income tax compliance. Mr. Romps joined the Company in July 2021 and has 30 years of progressive accounting and finance experience, including six years as Chief Accounting Officer of Continental Building Products, a publicly-traded building materials company, eight years with AT&T (formerly SBC Communications and Ameritech) and four years with Ernst & Young. Mr. Romps is a certified public accountant and earned a B.A. in Accounting from Michigan State University and MBA from the Kellogg Graduate School of Management at Northwestern University.

Mr. Mason is Senior Vice President Engineering and Operations at Shentel and is responsible for leading our network strategy, engineering, construction and operations functions. Mr. Mason has served in his current role since July 2021. He joined Shentel in May 2019 as Vice President and Head of Business Operations responsible for Enterprise Program Management, Performance Management and Process Excellence across all business segments. Prior to joining Shentel, Mr. Mason was Head of Install and Repair Operations at Google Fiber. Before that, he held a variety of leadership roles over his more than 20 years career with Cincinnati Bell, culminating in Vice President of Field Operations. He received his Bachelor of Science degree in Electrical Engineering from Ohio University and has an MBA from Xavier University.

Mr. Rieger is General Counsel, Vice President Legal and Corporate Secretary for Shentel. He joined Shentel in 2021 and is responsible for all legal and regulatory compliance matters for the Company. He also acts as Corporate Secretary to the Company's Board of Directors. Mr. Rieger joined Shentel from Sykes Enterprises, Incorporated, one of the world's largest Business Process Outsourcers, where he most recently served as Vice President of Global Corporate & Operational Compliance. While at Sykes, he built their global compliance management program from the ground up and was an integral member of the business leadership and legal teams. Prior to Skyes, Mr. Rieger held various leadership legal roles across a number of different businesses and industries. Mr. Rieger holds a Bachelor of Science in Business Administration from Villanova University and a Juris Doctorate from Widener University School of Law.

Ms. Leslie is Senior Vice President of Sales and Marketing for Shentel. She joined Shentel in June 2022 and has over 20 years of experience in the broadband industry, including 10 years with Comcast as Vice President of Sales and Marketing for the Big South Region and Vice President of Marketing for the Central Division, seven years with Atlantic Broadband as Vice President/General Manager of the Maryland-Delaware markets and Vice President of Customer Care and Marketing, and six years with Charter in various leadership roles. Ms. Leslie has a master's degree from Old Dominion University and a bachelor's degree from the University of North Carolina at Greensboro.

Websites and Additional Information

The Company maintains a corporate website at *www.shentel.com.* We make available free of charge, through our website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports, as soon as reasonably practicable after we electronically file or furnish such reports with or to the SEC. The contents of our website are not a part of this report. In addition, the SEC maintains a website at *www.sec.gov* that contains reports, proxy and information statements and other information regarding the Company.

ITEM 1A. **RISK FACTORS**

Our business and operations are subject to a number of risks and uncertainties. The risks set forth under "Part I Item 1. Business" and the following risk factors should be read carefully in connection with evaluating our business. The following risks (or additional risks and uncertainties not presently known to us) could materially affect our financial condition, liquidity, or operating results, as well as the price of our common stock.

Risks Related to Our Business

Intensifying competition may limit our ability to continue to grow our revenue.

The increasing demand for faster residential internet bandwidth driven by working and learning from home since the outbreak of COVID-19 has increased the availability of capital to fund FTTH and cable overbuilds, and approximately 17% of the passings in our incumbent cable business currently have a FTTH or cable competitor. If competitive overbuilds increase in our incumbent cable service areas, more of our subscribers may select other providers' offerings based on price, bandwidth speeds, capabilities or personal preference. Further, if new competitors offer lower prices, we may need to offer more value to retain our customers driving lower revenue per subscriber. Some of our competitors possess greater resources, have greater brand recognition, have more extensive coverage areas, have access to spectrum or technologies not available to us, are able to offer bundled service offerings that we are not able to duplicate and offer more services than we do. If significant numbers of our subscribers elect to move to competing providers, or if market saturation limits the rate of new subscriber additions, we may not be able to continue to grow our revenue.

Prospective competitors of our Broadband segment may receive grants from federal or state universal service funds or other subsidies. Some of those potential competitors may receive support under the Connect America Fund, Rural Development Opportunity Fund, American Rescue Plant Act or Infrastructure Investment and Jobs Act to build broadband facilities to unserved homes that do not meet the minimum broadband speeds in some areas already served by our DSL networks and adjacent to our cable and FTTH footprint. As a result, new competitors may invest in cable and FTTH markets, increasing the number of competitors we face in our network area and in the areas we hope to expand our broadband network in the future. New competitors in our FTTH markets may lead to lower market share than anticipated and lead to lower returns on investments than originally planned.

Consumers are increasingly accessing video content from direct broadcast satellite providers and alternative sources, such as Internet-based "over the top" providers such as Netflix, YouTube TV, Hulu, Disney+, Amazon and related platforms. The influx of competitors in this area, together with the development of new technologies to support them, are resulting in significant changes in the video business models and regulatory provisions that have applied to the provision of video and other services. These developments have led to a loss of video subscribers due to "cord cutting" as customers adopt alternative sources of accessing video content. We expect these trends to continue, which may lead to a decline in the demand, price and profitability of our video services.

The Company's incumbent cable business faces competition from telephone providers (such as Frontier and Lumos), which have upgraded their networks in certain markets inside of our cable footprint, and FTTH and cable overbuilder providers. Wireless providers are also entering the market for broadband. In some areas, wireless providers have partnered with broadband providers to offer quad-play bundles which include broadband, voice, video and wireless. Additionally, our hybrid fiber coaxial cable network will require upgrades in the future in order to meet expected demand from customers and to maintain network parity with potential FTTH competitors. These upgrades will require significant capital and management oversight over the next five years. If we are unable to complete these upgrades or more broadband competition evolves from quad play service offerings or overbuilding activity in our markets, our broadband revenues could be adversely affected in the future.

The Company's Commercial Fiber business faces intense competition from several local and national providers. Most of our competitors possess greater resources, have greater brand recognition, have more extensive coverage areas, have access to technologies not available to us, are able to offer bundled service offerings that we are not able to duplicate and offer more services than we do. If a significant numbers of our customers elect to move to competing providers, our Commercial Fiber revenues could be adversely affected.

Nationwide, incumbent local exchange carriers have experienced a decrease in access lines and DSL subscribers due to the effect of broadband and wireless competition. We have experienced reductions in the number of access lines

and DSL subscriptions to date, and based on industry experience we anticipate that the long-term trend toward declining subscriber counts may continue. There is a risk that this downward trend will have an adverse effect on the Company's landline telephone operations in the future.

Our future growth is primarily dependent upon our expansion strategy, which may or may not be successful.

We are strategically focused on driving growth by expanding our broadband network in order to provide service in communities that are near or adjacent to our network. This expansion strategy includes our FTTH broadband service, which we offer under the Glo Fiber brand. This brand is relatively new in the marketplace and the success of our strategy will depend on the degree to which we are able to successfully establish and continue to enhance this brand, which is not assured. This strategy requires considerable management resources and capital investment and it is uncertain whether and when it will contribute to positive free cash flow and the degree to which we will otherwise achieve our strategic objectives, on a timely basis or at all. As a result, we expect our capital expenditures to exceed the cash flow provided from continuing operations through 2026. Additionally, we must obtain pole attachment agreements, franchise agreements, construction permits and other regulatory approvals to commence operations in these communities. Furthermore, our business growth strategy requires us to leverage third party partners to assist with our planned construction and development of our FTTH networks in new markets. These third party contractors are currently in high demand. Delays in entering into pole attachment agreements, obtaining franchise agreements, obtaining construction permits, procuring needed contractors, materials or supplies at a reasonable cost, and conducting the construction itself could adversely impact our scheduled construction plans and, ultimately, our expansion strategy. Furthermore, attaching the Company's cables to utility poles governed by the pole attachment agreements requires significant coordination with the owners of the utility poles which may result in delays if the owners of the utility poles cannot dedicate sufficient resources to assist in the attachment process. Similarly, Shentel must coordinate with local utility service providers when installing cables underground to ensure all current infrastructure, such as existing cabling or gas lines, is properly located. Delays related to locate services may result in delays in Shentel's overall expansion strategy.

Difficulty in obtaining necessary resources may also adversely affect our ability to expand into new markets as could our ability to adequately market a new brand to customers unfamiliar to us as we expand to markets where we do not currently operate. We may face resistance from competitors who are already in markets we wish to enter. If our expectations regarding our ability to attract customers in these communities are not met, or if the capital requirements to complete the network investment or the time required to attract our expected level of customers are incorrect, our financial performance and returns on investment may be negatively impacted.

We may be materially adversely affected by regulatory, legal and economic changes relating to our physical plant.

Our systems depend on physical facilities, including transmission equipment and miles of fiber and cable. Significant portions of those physical facilities occupy land in the public rights-of-way and are subject to local ordinances and governmental regulations. Other portions occupy private property under express or implied easements, and many miles of the cable are attached to utility poles governed by pole attachment agreements. No assurances can be given that we will be able to maintain and use our facilities in their current locations and at their current costs. Changes in governmental regulations or changes in these relationships could have a material adverse effect on our business and our results of operations.

We may incur more churn than estimated from our largest customer.

We lease space on our towers and provide backhaul and transport services to T-Mobile to support their wireless network in our markets. T-Mobile has begun to decommission parts of their recently acquired Sprint network and disconnect backhaul circuits with us. Shentel estimates the remaining revenue churn from T-Mobile to be approximately $1 million for the Broadband segment and $2 million for the Tower segment. The churn from T-Mobile may be more than we estimated. Further, we may not be able to replace the churn with new revenue from other carriers where our towers and fiber are located in a timely basis or at all leading to lower revenue and earnings.

Some of our competitors are larger than we are and possess greater resources than we do.

In some instances, we compete against companies with greater financial and personnel resources, greater brand name recognition, and long-established relationships with regulatory authorities and customers. We may not be able to successfully compete with these larger competitors to attract new customers and key personnel and retain existing

customers and key personnel. As a result, we could experience lower revenues, higher sales and marketing expenses and lower earnings, which could have an adverse effect on our business and our results of operations.

Alternative technologies, changes in the regulatory environment and current uncertainties in the marketplace may reduce future demand for existing telecommunication services and materially increase our capital expenditures.

The telecommunications industry is experiencing significant technological change, evolving industry standards, ongoing improvements in the capacity and quality of digital technology, shorter development cycles for new products and enhancements and changes in end-user requirements and preferences. Technological advances, industry changes and changes in the regulatory environment could cause the technology we use to become obsolete. We may not be able to respond to such changes and implement new technology on a timely basis or at an acceptable cost. Additionally, we may be required to select one developing or new technology over another and may not choose the technology that is ultimately determined to be the most economic, efficient or attractive to customers. We may also encounter difficulties in implementing new technologies, products and services and may encounter disruptions in service as a result. As a result, our financial performance may be negatively impacted.

Our programming costs continue to increase and our relative size limits our ability to negotiate more favorable terms, which may have an adverse effect on our business and our results of operations.

The cable television industry has continued to experience an increase in the cost of programming, especially sports programming and retransmission fees. In addition, as we add programming to our video services for existing customers or distribute existing programming to more customers, we incur increased programming expenses. Broadcasters affiliated with major over-the-air network services have been increasing their demands for cash payments and other concessions for the right to carry local network television signals on our cable systems. As compared to large national providers, our smaller base of subscribers limits our ability to negotiate lower programming costs. While we pass programming rate increases on to our video customers, we may experience higher churn and lower revenues. If we are unable to raise our customers' rates, these increased programming costs could have an adverse impact on our results of operations. Moreover, as our programming contracts and retransmission agreements with programming providers expire, there can be no assurance that they will be renewed on acceptable terms, which could lead to a loss of video customers and could have an adverse effect on our business and our results of operations.

We may not benefit from our acquisition strategy.

As part of our business strategy, we regularly evaluate opportunities to enhance the value of the Company by pursuing acquisitions of other businesses. Although we remain subject to financial and other covenants in our credit agreement that may limit our ability to pursue certain strategic opportunities, we intend to continue to evaluate and, when appropriate, pursue strategic acquisition opportunities as they arise. We cannot provide any assurance, however, with respect to the timing, likelihood, size or financial effect of any potential transaction involving the Company, as we may not be successful in identifying and consummating any acquisition or in integrating any newly acquired business into our operations.

The evaluation of business acquisition opportunities and the integration of any acquired businesses pose a number of significant risks, including the following:

- acquisitions may place significant strain on our management and financial and other resources by requiring us to expend a substantial amount of time and resources in the pursuit of acquisitions that we may not complete, or to devote significant attention to the various integration efforts of any newly acquired businesses, all of which will require the allocation of limited resources;
- acquisitions may not have a positive impact on our cash flows or financial performance;
- even if acquired businesses eventually contribute to an increase in our cash flows or financial performance, such acquisitions may adversely affect our operating results in the short term as a result of transaction-related expenses we will have to pay or the higher operating and administrative expenses we may incur in the periods immediately following an acquisition as we seek to integrate the acquired business into our operations;
- we may not be able to realize anticipated synergies, achieve the desired level of integration of the acquired business or eliminate as many redundant costs;
- we may not be able to maintain relationships with customers, suppliers and other business partners of the acquired business;

- our operating and financial systems and controls and information services may not be compatible with those of the businesses we may acquire and may not be adequate to support our integration efforts, and any steps we take to improve these systems and controls may not be sufficient;
- our business plans and projections used to justify the acquisitions and expansion investments may be based on assumptions of revenues per subscriber, penetration rates in specific markets where we operate and expected operating costs and these assumptions may not develop as projected, which may negatively impact our profitability or the value of our intangible assets;
- growth through acquisitions will increase our need for qualified personnel, who may not be available to us or, if they were employed by a business we acquire, remain with us after the acquisition; and
- acquired businesses may have unexpected liabilities and contingencies, which could be significant.

The future outbreak of another significant pandemic, like the COVID-19 pandemic, could disrupt the operation of our business resulting in adverse impacts to our financial condition, results of operations and cash flow and could create significant volatility in the trading and value of the Company's common stock.

The COVID-19 pandemic negatively impacted the global economy, disrupted global supply chains and created significant volatility and disruption of financial markets, and another pandemic in the future could have similar effects. Given the ongoing and dynamic nature of the circumstances, it is difficult to predict how further outbreaks of COVID-19 or other future pandemics will impact the Company, and there is no guarantee that efforts by Shentel, designed to address adverse impacts of COVID-19 or other pandemics, will be effective.

Although the Company has instituted a distributed-first work environment, the COVID-19 pandemic did, and a future pandemic could, have material and adverse effects on our ability to successfully operate and on our financial condition, results of operations and cash flows due to, among other factors:

- additional disruptions or delays in our operations or network performance, as well as network maintenance and construction, testing, supervisory and customer support activities, and inventory and supply procurement;
- increases in operating costs, inventory shortages and/or a decrease in productivity related to travel bans, employee illness or quarantine and social distancing efforts, which could include delays in our ability to install broadband services at customer locations or require our vendors and contractors to incur additional costs that may be passed on to us;
- a deterioration in our ability to operate in affected areas or delays in the supply of products or services to us from vendors that are needed for our efficient operations or growth objectives;
- increases in health insurance and labor-related costs arising from illness, quarantine and the implementation of social distancing and work-from-home measures;
- inability to obtain needed contract labor due to illness, quarantine or increased hospitalizations;
- increased risk of phishing and other cybersecurity attacks, and increased risk of unauthorized dissemination of sensitive personal information or proprietary or confidential information about us, our customers or other third parties as a result of employees or third-party vendors' employees working remotely;
- a decrease in the ability of our counterparties to meet their obligations to us in full, or at all;
- a general reduction in business and economic activity may severely impact our customers and may cause them to be unable to pay for services provided; and
- the potential negative impact on the health of our personnel, particularly if a significant number of them are impacted, could result in a deterioration in our ability to ensure business continuity during a disruption and/or impact the ability for us to manage and implement the planned build out and expansion of our network.

Shentel has implemented policies and procedures designed to mitigate the risk of adverse impacts of a future pandemic on the Company's operations, but we may still incur additional costs to ensure continuity of business operations caused by future pandemics, which could adversely affect its financial condition and results of operations.

Disruptions of our information technology infrastructure or operations could harm our business.

A disruption of our information technology infrastructure or overall operations, or the infrastructure or operations of certain vendors who provide information technology or overall operations services to us or our customers, could be caused by a natural disaster, energy or manufacturing failure, telecommunications system failure, ransomware attack, cybersecurity attack, terrorist attack, intrusion or incident or defective or improperly installed new or upgraded business management systems. Although we make significant efforts to maintain the security and integrity of the Company's operations and information technology infrastructure, there can be no assurance that our security

efforts, business impact planning and disaster recovery measures will be effective or that attempted security breaches or catastrophic disruptions would not be successful or damaging, especially in light of the growing sophistication of cyber-attacks and intrusions sponsored by state or other interests. Portions of our information technology infrastructure also may experience interruptions, delays or cessations of service or produce errors in connection with systems integration or migration work that takes place from time to time. In the event of any such disruption, we may be unable to conduct our business in the normal course. Moreover, our business involves the processing, storage and transmission of data, which would also be negatively affected by such an event. A disruption of our information technology infrastructure or operations could also cause us to lose customers and revenue, particularly during a period of heavy demand for our services. We also could incur significant expense in repairing system damage and taking other remedial measures.

Our earnings, margins and stock price may be adversely impacted by our current cost structure as a result of our relative size.

Our sales, general and administrative ("SG&A") costs, including corporate overhead, are a higher percentage of revenue than larger broadband companies due to a lack of relative scale. Although our SG&A as a percentage of revenues has declined since the sale of our wireless segment partially enabled by certain of our information technology initiatives, we anticipate it will take multiple years of organic growth, merger and acquisitions to reduce our SG&A as a percentage of revenue to be comparable to our broadband peers. If we cannot further grow our revenues at a faster pace than our expenses, our earnings and margins may be lower than our peers which may affect the value of our stock price.

Our success depends on consistent supply of physical goods and services to build and sustain services to customers. Significant disruptions to the supply chain could adversely impact our growth and revenue projections.

The supply of critical physical supplies, such as modems, consumer Wi-Fi equipment, optical equipment and fiber is important to our business operations. These materials form the core components needed to deliver both video and data services to our customers. We work to ensure we have a forward-looking supply of these items and redundancy of supply types and suppliers. However, global impacts to supply chains across all suppliers and manufacturers could result in significant supply issues. If supplies to these items became severely impacted, our plans to build out new networks could be adversely impacted. Additionally, the lack of certain equipment could limit our ability to service existing customers. Significant impact to physical equipment supply chains could materially and adversely affect our business, including reduced revenues, loss of customers and limitations on future growth. Additionally, at times we choose to leverage third-party suppliers to help us deliver services to customers because of efficiency reasons or because third-parties provide a service we cannot replicate easily. Should those third-party suppliers be impacted by a shortage of materials, equipment or resources, their inability to provide services to us could also negatively impact our ability to deliver network services or build out future network.

Our success largely depends on our ability to retain and recruit key personnel, and any failure to do so could adversely affect our ability to manage our business.

Our historical operational and financial results have depended, and our future results will depend, upon the retention and continued performance of our management team, as well as the attraction and retention of relevant key roles across our organization. The market for talent for key roles in our industry, including executive officers and key personnel to support our engineering, sales, service delivery, information technology, finance and accounting functions, is highly competitive and could adversely impact our ability to retain and hire new key employees and contractors. The loss of the services of key members of executive management or other employees or contractors in critical roles, and the inability or delay in hiring new key employees and contractors could materially and adversely affect our ability to manage and expand our business and our future operational and financial results. Moreover, an inability to retain sufficient qualified personnel throughout our organization or to attract new personnel as we grow our business could adversely affect our ability to achieve our operational, sales and financial goals impacting our financial results, financial condition and our stock price.

We could suffer a loss of revenue and increased costs, exposure to significant liability, reputational harm and other serious negative consequences if we sustain cyber-attacks or other data security breaches that disrupt our operations or result in the dissemination of proprietary or confidential information about us or our customers or other third parties.

We utilize our information technology infrastructure to manage and store various proprietary information and sensitive or confidential data relating to our operations. We routinely process, store and transmit large amounts of data for our customers, including sensitive and personally identifiable information. We depend on our information technology infrastructure to conduct business operations and provide customer services. We may be subject to data breaches and disruptions of the information technology systems we use for these purposes. Our industry has witnessed an increase in the frequency, intensity and sophistication of cybersecurity incidents caused by threat actors such as foreign governments, criminals, hacktivists, terrorists and insider threats. Threat actors may be able to penetrate our network security and misappropriate or compromise our confidential, sensitive, personal or proprietary information, or that of third parties, and engage in the unauthorized use or dissemination of such information. They may be able to create system disruptions, or cause shutdowns. Threat actors may be able to develop and deploy viruses, worms, ransomware and other malicious software programs that attack our products or otherwise exploit security vulnerabilities of our systems causing operational damage that could impact our ability to serve customers and result in financial losses. In addition, sophisticated hardware and operating system software and applications that we procure from third parties may contain defects in design or manufacture, including "bugs," cybersecurity vulnerabilities and other problems that could unexpectedly interfere with the operation or security of our systems.

Like many other companies, we increasingly leverage third-party SaaS solutions and external service providers to help us deliver services to our customers. In the delivery of these services, we are dependent on the security infrastructure of those third-party providers. These providers are also vulnerable to the myriad of cyber-attacks possible in today's environment. In the case where a third-party provider becomes victim to an attack it could have an impact on our operations or ability to service customers.

To date, interruptions of our information technology infrastructure and third party suppliers have been infrequent and have not had a material impact on our operations. However, because technology is increasingly complex and cyber-attacks are increasingly sophisticated and more frequent, there can be no assurance that such incidents will not have a material adverse effect on us in the future. The consequences of a breach of our security measures or those of a third-party provider, a cyber-related service or operational disruption, or a breach of personal, confidential, proprietary or sensitive data caused by a hacker or other malicious actor could be significant for us, our customers and other affected third parties. For example, the consequences could include damage to infrastructure and property, impairment of business operations, disruptions to customer service, financial costs and harm to our liquidity, costs associated with remediation, loss of revenues, loss of customers, competitive disadvantage, legal expenses associated with litigation, regulatory action, fines or penalties or damage to our brand and reputation.

In addition, the costs to us to eliminate or address the foregoing security challenges and vulnerabilities before or after a cyber-incident could be significant. In addition, our remediation efforts may not be successful and could result in interruptions, delays or cessation of service. We could also lose existing or potential customers for our services in connection with any actual or perceived security vulnerabilities in the services.

We are subject to laws, rules and regulations relating to the collection, use and security of user data. Our operations are also subject to federal and state laws governing information security. In the event of a data breach or operational disruption caused by an information security incident, such rules may require consumer and government agency notification and may result in regulatory enforcement actions with the potential of monetary forfeitures as well as civil litigation. We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, industry standards and contractual obligations. Notification to customers could also result in reputational damage which could result in loss of customers or future customers due to a lack of confidence in our ability to secure their data.

Climate change could disrupt our operations and our distribution networks, cause us to incur increased costs related to such events, or otherwise negatively affect our business.

Our distribution networks may be subject to weather-related events that could damage our networks and impact service delivery, such as downed transmission lines, flooded facilities, power outages, fuel shortages, network congestion, delay or failure, damaged or destroyed property and equipment, and work interruptions. It is predicted that warming global temperatures will increase the frequency and severity of such weather-related events. If there are more weather-related events, and should such events impact the region covered by our networks more frequently or more severely than in the past, our revenues and expenses could be materially adversely impacted. Concern over climate change or other environmental, social and governance (ESG) matters may result in new or increased legal and regulatory requirements to reduce or mitigate the effects of climate change. Further, climate change regulations

may require us to alter our proposed business plans or increase our operating costs due to increased regulation or environmental considerations, and could adversely affect our business and reputation.

Risks Relating to the Horizon Transaction

Failure to complete the Horizon Transaction could negatively impact our stock price.

Our ability to complete the Horizon Transaction is subject to risks and uncertainties, including, but not limited to, the risks that we may be unable to obtain the governmental and regulatory approvals required to consummate the Horizon Transaction, or required governmental and regulatory approvals may delay the Horizon Transaction or result in the imposition of conditions that are not favorable to us or that could cause the parties to abandon the Horizon Transaction.

Furthermore, we have incurred approximately $3 million in transaction costs and will continue to incur transaction costs relating to the Horizon Transaction, including legal, accounting, financial advisory, regulatory and other expenses. In general, these expenses are payable regardless of whether the Horizon Transaction is completed successfully. In addition, we could face litigation in the event the Horizon Transaction is not consummated, which could subject us to significant liability for damages and result in the incurrence of substantial additional legal fees. The current market price of our common stock may reflect an assumption that the Horizon Transaction will be consummated, and failure to complete the Horizon Transaction could result in a decline in our stock price.

If completed, the Horizon Transaction may not achieve the intended benefits or may disrupt our current plans and operations.

If we are not able to integrate the business and assets of Horizon in an efficient and effective manner, the anticipated benefits and cost savings may not be realized fully, or at all, or may take longer to realize than expected, and the financial results of our operations may be affected materially and adversely. An inability to realize the full extent of the anticipated benefits of the Horizon Transaction and the other transactions contemplated by the Horizon Transaction, as well as any delays encountered in the integration process, could have an adverse effect upon our revenues, level of expenses and operating results, which may adversely affect the value of our common stock following the completion of the Horizon Transaction. In addition, the actual integration may result in additional and unforeseen expenses, and the anticipated benefits of the integration plan may not be realized.

Actual growth and cost synergies from the Horizon Transaction, if achieved, may be lower than what we expect and may take longer to achieve than anticipated. If we are not able to adequately address integration challenges, we may be unable to successfully integrate the business and assets of Horizon or to realize the anticipated benefits of the Horizon Transaction.

The integration of the business and assets of Horizon will require significant time and focus from our management following the completion of the Horizon Transaction, and may divert attention from our day-to-day operations and our other businesses. Additionally, consummation of the Horizon Transaction could disrupt current plans and operations, which could delay the achievement of our strategic objectives.

We may be unable to retain our and/or Horizon's customers, key management personnel and other key employees successfully after the Horizon Transaction is completed, which could materially and adversely affect the future business and operations of the combined company.

The success of the Horizon Transaction will depend in part on our ability to retain customers and retain, motivate and recruit key executives and employees. It is also possible that key employees currently employed by Horizon and by us may decide to terminate their employment with Horizon or with us, as applicable, while the Horizon Transaction is pending or with us after the Horizon Transaction is consummated. If key employees terminate their employment, or if an insufficient number of employees are retained to maintain effective operations, our business activities may be adversely affected and management's attention may be diverted from successfully integrating the business and assets of Horizon to hiring suitable replacements, all of which may cause our business to suffer. In addition, we and Horizon may not be able to locate suitable replacements for any key employees who leave either company, or offer employment to potential replacements on reasonable terms.

Impacts from loss of personnel or issues related to integration or operations during integration activities could result in a loss of customers.

The financial performance of Horizon may be less than historical results, adversely affecting the future financial condition, results of operations and cash flows of the combined company.

The growth of Horizon's commercial fiber business is dependent on its ability to install service for the contracted customer sales backlog. Delays in securing pole attachment agreements, permits or completing fiber construction could slow the installation of service and revenue growth. Financial results could be less than historical performance and adversely affect the combined company financial condition, results of operations and cash flows after closing.

Risks Related to Regulation and Legislation

Regulation by government agencies may increase our costs of providing service or require changes in services, either of which could impair our financial performance.

Our operations are subject to varying degrees of regulation by the FCC, the FTC, the Federal Aviation Administration, the Environmental Protection Agency and the Occupational Safety and Health Administration, as well as by state and local regulatory agencies and franchising authorities. Action by these regulatory bodies could negatively affect our operations and our costs of doing business.

Changes to the FCC's Universal Service Fund framework may adversely impact our Broadband revenue, which may have a material adverse effect on our financial performance and our results of operations.

The FCC's USF provides regulatory support to rural local exchange carriers to promote universal service and to eligible schools and libraries through the e-rate program to obtain subsidized internet access and telecommunication services. Recent lawsuits have asked the courts to declare the universal service framework illegal. Any reduction in the USF from these lawsuits, or other means, could negatively impact the regulatory support revenue received by the Company's RLEC business and the ability for schools and libraries to pay the Company for internet access and telecommunication services.

The discontinuation of the FCC's ACP may adversely impact our Broadband revenue, which may have an adverse effect on our financial performance and our results of operations.

The FCC's ACP provides a $30 subsidy toward internet service for eligible households. ACP is expected to end in April 2024 unless Congress passes legislation to increase the funding to support this program. If ACP ends, the Company's eligible subscribers may not be able to afford broadband service, which could reduce our revenues in our Broadband segment if we are not able to retain subscribers that are currently dependent on the ACP subsidy. A decrease in subscribers and lower revenue in our Broadband segment may have an adverse effect on our financial performance and our results of operations.

Changes to key regulatory requirements can affect our ability to compete.

Our industry is subject to governmental regulation, which impacts many aspects of our operations. Legislators and regulators at all levels of government frequently consider changing, and sometimes do change, existing statutes, regulations, and interpretations thereof. Future legislative, judicial, or administrative actions may increase our costs or impose additional challenges and restrictions on our business.

Federal law strictly limits the scope of permissible cable rate regulation, and none of our local franchising authorities currently regulate our rates for video services. Our rates for broadband services have historically not been subject to rate regulation. However, as broadband service is increasingly viewed as an essential service, governments could adopt new laws or regulations related to the prices we charge for our services that could adversely impact our existing business model, revenues, earnings and the value of our and cable industry stock prices.

The Company operates data services and cable television systems in largely rural areas of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky pursuant to local franchise agreements. These franchises are not exclusive, and other entities may secure franchise authorizations in the future, thereby increasing direct competition to the Company.

Many franchises establish comprehensive facilities and service requirements, as well as specific customer service standards and monetary penalties for non-compliance. In many cases, franchises are terminable if the franchisee fails to comply with significant provisions set forth in the franchise agreement governing system operations. Franchises are generally granted for fixed terms and must be periodically renewed. Franchising authorities may resist granting a renewal if either past performance or the prospective operating proposal is considered inadequate. Franchise authorities often demand concessions or other commitments as a condition to renewal. If our local franchises are not renewed at expiration we would have to cease operations or, operate under either temporary operating agreements or without a franchise while negotiating renewal terms with the local franchising authorities. Although we have historically renewed our franchises without incurring significant costs, we cannot offer assurance that we will be able to renew, or to renew as favorably, our franchises in the future. A termination of or a sustained failure to renew a franchise in one or more key markets or obtaining such franchise on unfavorable terms could adversely affect our business in the affected geographic area.

Pole attachments are wires and cables that are attached to utility poles. Cable system attachments to investor-owned public utility poles historically have been regulated at the federal or state level, generally resulting in reasonable pole attachment rates for attachments used to provide cable service. In contrast, utility poles owned by municipalities or cooperatives are not subject to federal regulation and are, with exceptions, generally exempt from state regulation and their attachment rates tend to be higher. Future regulatory changes in this area could impact the pole attachment rates we pay utility companies.

The timing of receipt of government grant payments may adversely affect our liquidity and ability to complete our performance obligations.

Although the Company has executed contracts with several municipalities to reimburse a portion of the costs to construct broadband networks to unserved homes, delays in receipt of the grant payments may adversely affect the Company's liquidity and our ability to complete our performance obligations. If we do not receive such grant payments on the expected timeline or at all, we may default on certain financial obligations, which would have an adverse effect on our business and results of operations.

The Company may fail to complete its performance obligations in regard to government grant awards and incur liquidated damages and/or create an event of default that could allow the municipality to cancel the grant.

Throughout 2021, 2022 and 2023, in partnership with counties in the respective states, Shentel has been awarded grants under the VATI and the Rural Digital Opportunity Fund in Virginia, the Connect Maryland Network Infrastructure Grant Program in Maryland, and the Major Broadband Projects Strategies and Line Extension Advancement and Development programs in West Virginia. As of December 31, 2023, the Company has been awarded grants totaling approximately $85.8 million. Most of the grants awarded under the above programs are funded through the American Rescue Plan Act. As the recipient of these grants, the Company has committed to expand its broadband network and improve broadband services to approximately 25,000 unserved homes in the states of Virginia, Maryland and West Virginia within a specified period, as agreed to by the Company and each municipality. In the event the Company does not fulfill its commitment to extend its existing broadband network within the time frame allotted, the performance of the broadband network is inadequate, the Company is considered insolvent or the Company fails to meets its funding requirements of the grant projects, the Company may be declared in default of the grant contract. If the default is not cured in a timely manner, the grant contract could be terminated, grant reimbursements maybe withheld by the municipalities and the Company may be required to repay grant monies previously received, as well as additional penalties and liquidated damages. Furthermore, the Company may be liable to pay interest, administrative charges, collection costs, attorneys' fees, expert fees, consultant fees, and other applicable fees, and interest on any outstanding repayment, all of which could lead to higher Company capital requirements which may not be available, lower homes passed and unfavorable financial results for the Company.

Regulatory constraints could impact our ability to adequately address increases in broadband usage and may cause network capacity limitations, resulting in service disruptions, reduced capacity or slower transmission speeds for our customers.

Video streaming services, gaming and peer-to-peer file sharing applications use significantly more bandwidth than other Internet activity such as web browsing and email. As use of these services continues to grow, our broadband customers will likely use much more bandwidth than in the past. If this occurs, we could be required to make

significant capital expenditures to increase network capacity in order to avoid service disruptions, service degradation or slower transmission speeds for our customers. Alternatively, we could choose to implement network management practices to reduce the network capacity available to bandwidth-intensive activities during certain times in market areas experiencing congestion, which could negatively affect our ability to retain and attract customers in affected markets. Competitive or regulatory constraints may preclude us from recovering costs of network investments designed to address these issues, which could adversely impact our operating margins, results of operations, financial condition and cash flows.

Our services may be adversely impacted by legislative or regulatory changes that affect our ability to develop and offer services or that could expose us to liability from customers or others.

The Company provides broadband Internet access services to its fiber, cable and telephone customers. As the Internet has matured, it has become the subject of increasing regulatory interest. Congress and Federal regulators have adopted a wide range of measures directly or potentially affecting Internet use. The adoption of new Internet regulations or policies could adversely affect our business.

In 2015, the FCC determined that broadband Internet access services, such as those we offer, were a form of "telecommunications service" under the Communications Act and, on that basis, imposed rules banning service providers from blocking access to lawful content, restricting data rates for downloading lawful content, prohibiting the attachment of non-harmful devices, giving special transmission priority to affiliates, and offering third parties the ability to pay for priority routing. The 2015 rules also imposed a "transparency" requirement, i.e., an obligation to disclose all material terms and conditions of our service to consumers.

In December 2017, the FCC adopted an order repudiating its prior (2015) treatment of broadband as a "telecommunications service," reclassifying broadband as an "information service," and eliminating the rules it had imposed at that time (other than a transparency/disclosure-requirement, which it eased in significant ways). The FCC also ruled that state regulators may not impose obligations similar to federal obligations that the FCC removed. Various parties have challenged this ruling in court, and, we cannot predict how any such court challenges will be resolved. Moreover, it is possible that the FCC might further revise its approach to broadband Internet access, or that Congress might enact legislation affecting the rules applicable to the service. In 2019, the U.S. Court of Appeals for the District of Columbia upheld the information service reclassification, but vacated the FCC's blanket prohibition of state utility regulation of broadband services. The court left open the possibility that individual state laws could still be deemed preempted on a case-by-case basis if it is shown that they conflict with federal law. In October 2020 the FCC, responding to the court's remand order, issued a further decision clarifying certain aspects of its earlier order. In this decision the FCC re-classified broadband internet access service as an unregulated information service, thus eliminating all federal regulatory "network neutrality" obligations beyond requiring broadband providers to accurately disclose network management practices, performance, and commercial terms of service. These issues may be revisited by the FCC in the current or future administrations.

The FCC imposes obligations on telecommunications service providers, including broadband Internet access service providers, and multichannel video program distributors, like our cable company. We cannot predict the nature and pace these requirements and other developments, or the impact they may have on our operations.

Risks Related to our Indebtedness

We may not have sufficient capital to fund our expansion plans and may not be able to repay future indebtedness.

As discussed in the Risks Related to our Business section above, we expect our capital expenditures to exceed the cash flow provided from continuing operations through 2026 as we invest in our network and subscriber growth and expansion initiatives. As of December 31, 2023, we had borrowed $300 million in delayed draw term loans under our Credit Agreement, dated as of July 1, 2021, with various financial institutions party thereto (the "Lenders") and CoBank, ACB, as administrative agent for the Lenders, as amended by Amendment No. 1 to the Credit Agreement, dated as of May 17, 2023 (collectively, the "Credit Agreement"), which contains: (i) a $100 million, five-year undrawn revolving credit facility, (ii) a fully drawn $150 million five-year delayed draw amortizing term loan, and (iii) a fully drawn $150 million seven-year delayed draw amortizing term loan. If our costs to expand our networks are greater than we anticipate, we may not have sufficient capital nor be able to secure additional capital on terms acceptable to us and may have to curtail our expansion plans. We may not be able to generate sufficient cash flows

from operations to raise additional capital in amounts necessary for us to repay our outstanding indebtedness when such indebtedness becomes due and to meet our other cash needs.

Our level of indebtedness could adversely affect our financial health and ability to compete.

As of December 31, 2023, we had $300 million of total indebtedness. Our level of indebtedness could have important adverse consequences. For example, it may:

- increase our vulnerability to general adverse economic and industry conditions, including rising interest rates;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, dividends and other general corporate purposes; and
- place us at a competitive disadvantage relative to companies that have less indebtedness.

Failure to comply with financial and operating covenants or make scheduled payments under our Credit Agreement may restrict our ability to borrow and could accelerate repayment of outstanding debt.

Under the Credit Agreement for our delayed draw term loans, we are required to comply with specified financial and operating covenants in addition to making scheduled payments, which may limit our ability to borrow additional funds to alleviate liquidity constraints and limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate and otherwise limit our ability to operate our business as we otherwise might operate it. Our failure to comply with any of these covenants or to meet any payment obligations under the credit agreement could result in an event of default which, if not cured or waived, would result in any amounts outstanding, including any accrued interest and unpaid fees, becoming immediately due and payable. We might not have sufficient working capital or liquidity to satisfy any repayment obligations in the event of an acceleration of those obligations. In addition, if we are not in compliance with the financial and operating covenants at the time we wish to borrow funds, we will be unable to borrow funds.

General Risk Factors

Adverse economic conditions in the United States and in our market area involving significantly reduced consumer spending or high inflation could have a negative impact on our results of operations.

Unfavorable general economic conditions could negatively affect our business. Although it is difficult to predict the impact of general economic conditions on our business, these conditions could adversely affect the affordability of, and customer demand for our services, and could cause customers to delay or forgo purchases of our services or could negatively impact customer payment for already contracted services. Any national economic weakness, restricted credit markets, high interest rates, high inflation or high unemployment rates could depress consumer spending, increase our expenses and harm our operating performance. In addition, any adverse economic conditions that affect our geographic markets in particular could have a disproportionately negative impact on our results.

Negative outcomes of legal proceedings may adversely affect our business and financial condition, results of operations and cash flows.

We become involved in legal proceedings from time to time. While we are not currently involved in any material legal proceedings, potential future proceedings may be complicated, costly and disruptive to our business operations. We might also incur significant expenses in defending these matters or may be required to pay significant fines, awards and settlements. Any of these potential outcomes, such as judgments, awards, settlements or orders could have a material adverse effect on our business, financial condition, operating results or our ability to do business.

Our business may be impacted by new or changing tax laws or regulations and actions by federal, state and/or local agencies, or how judicial authorities apply tax laws.

In connection with the products and services we sell, we calculate, collect and remit various federal, state and local taxes, surcharges and regulatory fees to numerous federal, state and local governmental authorities, including federal

USF contributions and regulatory fees. In addition, we incur and pay state and local taxes and fees on purchases of goods and services used in our business.

Tax laws are subject to change as new laws are passed and new interpretations of the law are issued or applied. In many cases, the application of tax laws is uncertain and subject to differing interpretations, especially when evaluated against new technologies and telecommunications services, such as broadband internet access and cloud related services.

In the event that we have incorrectly calculated, assessed or remitted amounts that were due to governmental authorities, we could be subject to additional taxes, fines, penalties or other adverse actions, which could materially impact our business, financial condition and operating results. In the event that federal, state and/or local municipalities were to significantly increase taxes on our network, operations or services, or seek to impose new taxes, it could have a material adverse effect on our business, financial condition, operating results or ability to do business.

ITEM 1B. **UNRESOLVED STAFF COMMENTS**

None.

ITEM 1C. **CYBERSECURITY**

Risk Management & Strategy

Shentel's Risk Management Program defines the framework for risk identification and assessment, including cybersecurity risks. Our overall Risk Management Program integrates processes for assessing, identifying and managing material risks from cybersecurity threats. Cybersecurity risks are identified through various means including, but not limited to, regularly conducted security assessments, external and internal penetration testing, data privacy assessments, external security evaluations, the testing and implementation, as applicable, of new technologies, and continuing education and awareness of existing and new threat vectors, industry trends, changes in the environment and changes in the overall technology landscape. Pursuant to our Information Security Program, once a cybersecurity risk is identified, the Information Security team, in collaboration with other areas of the organization, will assess the risk and implement an appropriate response. Security risk assessments comprise the reasonably foreseeable impacts to the Company and its stakeholders due to the threats and known vulnerabilities associated with the operation and use of information systems and the environments in which those systems operate.

To mitigate or address risks, Shentel leverages acceptable and well-known security tools and services allowing Shentel to maintain a robust security posture. Our Information Security Program addresses risks through a wide spectrum of measures, including enhanced monitoring, endpoint protection, multifactor authentication, privileged account security, web and email filtering and comprehensive internal employee training. Our security protocols are rooted in industry standards and guidelines issued by respected bodies such as the National Institute of Standards and Technology, the Department of Homeland Cybersecurity and Infrastructure Security Agency, and the Center for Internet Security. In addition, we regularly consult with external advisors regarding opportunities to enhance and strengthen our policies and practices.

With respect to third-party service providers, our Information Security Program includes conducting due diligence of relevant service providers' information security programs prior to onboarding. We also contractually require third-party service providers with access to our information technology systems, sensitive business data or personal information to implement and maintain appropriate security controls and contractually restrict their ability to use our data, including personal information, for purposes other than to provide services to us, except as required by law. To oversee the risks associated with these service providers, we work with them to help ensure that their cybersecurity protocols are appropriate to the risk presented by their access to or use of our systems and/or data, including notification and coordination concerning incidents occurring on third-party systems that may affect us. Our service providers are contractually required to notify us promptly of actual or reasonably suspected information security incidents occurring on their systems that may affect our systems or data, including personal information.

Should a security breach or incident occur, the Chief Information Officer (the "CIO") in collaboration with the Company's General Counsel, Chief Accounting Officer (the "CAO") and Chief Operating Officer (the "COO") will

evaluate the materiality of any specific incident. The Company's Chief Executive Officer (the "CEO") and Chief Financial Officer (the "CFO") will ultimately decide if an incident is material. Considerations of materiality will include a variety of factors, including, for example, the extent of expected financial cost, customers impacted, operational impacts, and/or data exposed or lost as a result of the incident.

The Information Security Program is intended to provide effective governance and oversight for assessing cybersecurity risks, recognizing that no program, no matter how well designed and implemented, can prevent all potential cybersecurity risks and that the benefits of any potential controls or mitigations should be considered in relation to their costs. While we have experienced cybersecurity incidents in the past, to date, cybersecurity incidents and threats have not materially affected our business strategy, results of operations or financial condition. Although we have invested in the protection of our data and information technology and monitor our systems on an ongoing basis, there can be no assurance that such efforts will in the future prevent material compromises to our information technology systems that could have a material adverse effect on our business. For more information on our cybersecurity related risks, see Item 1A. Risk Factors of this Form 10-K.

Governance

Our Board of Directors has risk oversight responsibility for the Company and administers this responsibility both directly and with assistance from its committees. If applicable, these committees periodically report to the Board of Directors on their risk oversight activities. Cybersecurity is a critical component of our enterprise risk management program and our Board of Directors is involved in reviewing our information security and technology risks and opportunities (including cybersecurity) and discusses these topics on a regular basis. The Audit Committee, comprised solely of independent directors, oversees our enterprise risk management process and assists the Board of Directors in fulfilling its oversight responsibility with respect to our information security and technology risks, including cybersecurity.

Our Director of Information Security leads the Information Security Program and reports to the CIO, who also provides additional oversight of the Program. The Director of Information Security has over 18 years of experience in the information technology and information security fields and the CIO has over 28 years of experience in the information technology and information security fields. In addition, we have established a Security Steering Committee that provides guidance and direction to the CIO regarding the Information Security Program, including approval of the Program mission and its objectives. The Security Steering Committee meets at least quarterly and its membership includes, at a minimum, the Director of Information Security, the CIO, the COO, the CFO, the Sr. Vice President of Engineering and Operations, the VP of Legal/General Counsel and the CEO. Information security risks are reviewed with the Security Steering Committee periodically or as needed.

The CIO, in connection with the General Counsel and CEO, updates the Audit Committee periodically on cybersecurity and other information technology risks and opportunities. Additionally, the Audit Committee, with guidance from the CIO, General Counsel and CEO, provides updates to the Board of Directors on the Information Security Program at least annually. In the case of an information security incident or breach, the Director of Information Security and CIO will follow the Company's Incident Response Plan and follow communication protocols within the plan, which, depending on the severity of the incident, include escalation timelines and responsibilities that involve updating the Audit Committee and the Board of Directors, as applicable.

ITEM 2. **PROPERTIES**

The Company owns or leases switching and data centers, office and retail space, and warehouses that support its operations located across a multi-state area covering large portions of central and western Virginia, south-central Pennsylvania, West Virginia, and portions of Maryland, and Kentucky. The Company also has fiber optic hubs or points of presence in Pennsylvania, Maryland, Virginia, Kentucky and West Virginia. The Company considers the properties owned or leased generally to be in good operating condition and suitable for its business operations.

ITEM 3. **LEGAL PROCEEDINGS**

We are currently involved in, and may in the future become involved in, legal proceedings, claims and investigations in the ordinary course of our business. Although the results of these legal proceedings, claims and investigations cannot be predicted with certainty, we do not believe that the final outcome of any matters that we are currently involved in are reasonably likely to have a material adverse effect on our business, financial condition, results of operations or cash flows. Regardless of final outcomes, however, any such proceedings, claims, and investigations may nonetheless impose a significant burden on management and employees and be costly to defend, with unfavorable preliminary or interim rulings.

PART II

ITEM 5. **MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

Market Information

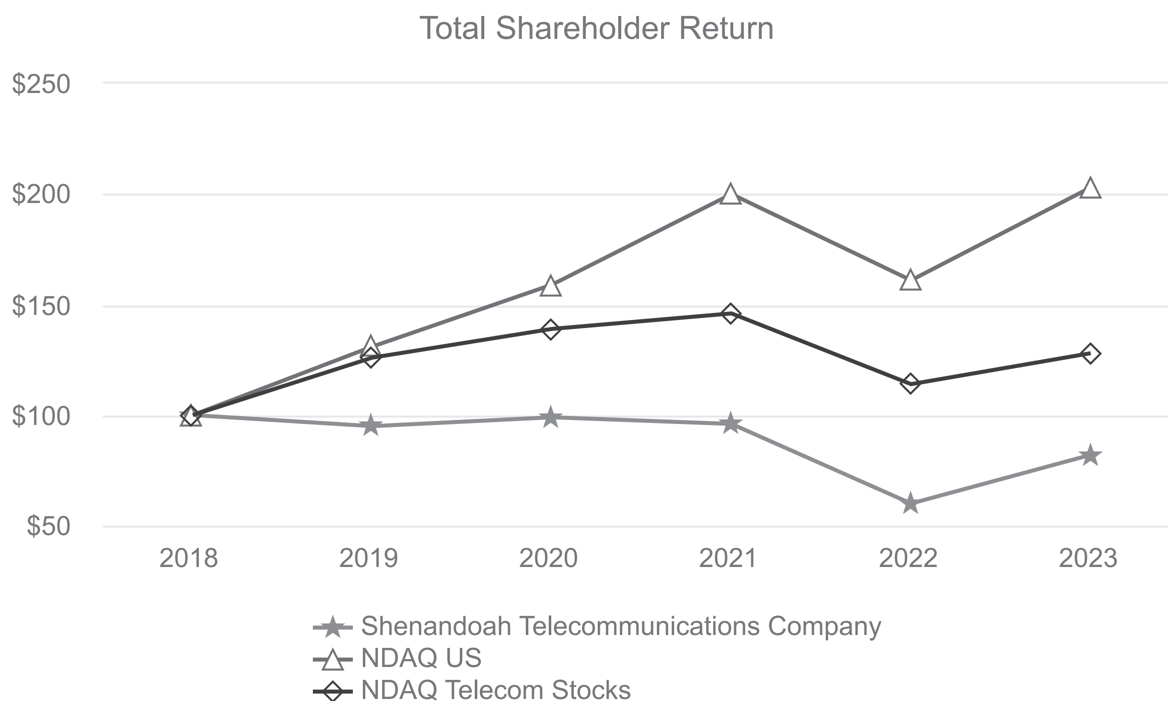
The Company's stock is traded on the Nasdaq Global Select Market under the symbol "SHEN." The following table indicates the closing high and low sales prices per share of common stock as reported by the Nasdaq Global Select Market for each quarter during the last two years:

2023	High	Low
Fourth Quarter	$ 25.51	$ 20.02
Third Quarter	23.31	18.02
Second Quarter	21.00	18.20
First Quarter	21.07	15.62

2022	High	Low
Fourth Quarter	$ 22.79	$ 15.63
Third Quarter	24.50	16.97
Second Quarter	25.93	17.06
First Quarter	26.58	18.77

Stock Performance Graph

The following graph and table show the cumulative total shareholder return on the Company's common stock compared to the Nasdaq US Index and the Nasdaq Telecommunications Index for the period between December 31, 2018 and December 31, 2023. The graph tracks the performance of a $100 investment, with the reinvestment of all dividends, from December 31, 2018 to December 31, 2023.



	2018	2019	2020	2021	2022	2023
Shenandoah Telecommunications Company	$ 100	$ 95	$ 99	$ 96	$ 60	$ 82
NDAQ US	$ 100	$ 131	$ 159	$ 200	$ 161	$ 203
NDAQ Telecom Stocks	$ 100	$ 126	$ 139	$ 146	$ 114	$ 128

Holders

As of February 14, 2024, there were 3,957 holders of record of the Company's common stock.

Dividend Policy

Under the Company's credit agreement, the Company is restricted in its ability to pay dividends in the future. So long as no Default or Event of Default, as defined in the credit agreement, the Company may make, declare and pay lawful cash dividends or distributions to its shareholders or redeem capital stock in an aggregate amount not to exceed, when the Company's Total Net Leverage Ratio (as defined in the credit agreement) is greater than 4.00:1.00 on a pro forma basis, an amount equal to the greater of 6.0% of the net cash proceeds from any public equity issuance of the Company's equity interests or 4.0% of the estimated fair market value of the Company's equity interests or when the Company's Total Net Leverage (as defined in the credit agreement) is less than or equal to 4.00:1.00 on a pro forma basis, an unlimited amount; provided, however, that the amount of any dividend or distribution that is not paid in cash but is reinvested in equity interests of the Company shall be excluded from this calculation and redemptions of equity interests of the Company surrendered by employees and directors to cover withholding taxes shall be excluded from this calculation.

The table below sets forth the cash dividends per share of our common stock that our board of directors declared during the following years:

	Years Ended December 31,				
	2019	2020	2021	2022	2023
Cash Dividend	$ 0.29	$ 0.34	$ 18.82	$ 0.08	$ 0.09

Cash dividends in 2021 include a special dividend of $18.75 per share declared in the third quarter of 2021 following the sale of our Wireless operations and assets.

Future dividend payments remain subject to the discretion of the Board of Directors.

Dividend Reinvestment Plan

The Company maintains a dividend reinvestment plan (the "DRIP") for the benefit of its shareholders. When shareholders remove shares from the DRIP, the Company issues whole shares in book entry form, pays out cash for any fractional shares, and cancels the fractional shares. In conjunction with the vesting of shares or exercise of stock options, the grantees may surrender awards necessary to cover the statutory tax withholding requirements and any amounts required to cover stock option strike prices associated with the transaction.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

None.

ITEM 6. **[Reserved]**

ITEM 7. **MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and notes thereto appearing elsewhere in this Annual Report on Form 10-K. In addition to historical consolidated financial information, the following discussion and analysis may contain forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those anticipated by forward-looking statements as a result of many factors. We discuss factors that we believe could cause or contribute to these differences below and elsewhere in this Annual Report on Form 10-K, including those set forth under "Part I. Cautionary Statement Regarding Forward-Looking Statements" and "Part I. Item 1A. Risk Factors".

Overview

Shenandoah Telecommunications Company ("Shentel", "we", "our", "us", or the "Company"), is a provider of a comprehensive range of broadband communication services and cell tower colocation space in the Mid-Atlantic portion of the United States.

Management's Discussion and Analysis ("MD&A") is organized around our reporting segments. Refer to Item 1 above for our description of our reporting segments and a description of their respective business activities. Also see Note 16, *Discontinued Operations*, and Note 15, *Segment Reporting*, in our consolidated financial statements for additional information.

2023 Developments

Amendment to the Credit Agreement

On May 17, 2023, Shentel entered into Amendment No. 1 to Credit Agreement (the "Amendment") to its existing Credit Agreement, dated as of July 1, 2021, with various financial institutions party thereto (the "Lenders") and CoBank, ACB, as administrative agent for the Lenders (the "Credit Agreement"). The Amendment extended the period during which the Company could borrow under the (i) $150 million five-year delay draw amortizing term loan (the "Term Loan A-1") and (ii) $150 million seven-year delay draw amortizing term loan (the "Term Loan A-2" and, together with the Term Loan A-1, the "Term Loans") from July 1, 2023 to December 31, 2023. The Amendment also extended the date on which the Term Loans must begin to be repaid in quarterly principal installments from September 30, 2023 to March 31, 2024. In addition, the Amendment amended the Credit Agreement to update the benchmark interest rate to a rate based on Term SOFR (as defined in the Amendment), added a 10 bps credit spread adjustment for loans that bear interest based on Term SOFR and made certain other conforming changes. All other material terms and conditions of the Credit Agreement were unchanged.

Hedging Arrangements

In May 2023, Shentel entered into pay fixed, receive variable interest rate swaps totaling $150.0 million of notional principal (the "Swaps"). The Swaps contain monthly payment terms beginning in May 2024, which extend through their maturity dates in June 2026. The Swaps are designated as a cash flow hedges, representing 50% of the Company's expected outstanding debt. The Company uses the Swaps to manage its exposure to interest rate risk for its long-term variable-rate Term Loans.

Pension Plan Termination

In 2021, Shentel's Board of Directors adopted a resolution to terminate its pension plan. The Company terminated the pension plan and all benefits were distributed in June 2023 through the combination of lump sum payments and the purchase of non-participating annuity contracts at the option of the pension plan participants. The Company made an additional $2.9 million contribution from its cash balance as a result of the settlement and recognized a settlement gain of $0.7 million in other income (expense).

The Spectrum Transaction

On August 23, 2022, the Company entered into a definitive asset purchase agreement (the "Spectrum Purchase Agreement") with a wireless carrier pursuant to which the Company agreed to sell certain FCC spectrum licenses and leases previously utilized in the Company's Beam branded fixed wireless service for total consideration of approximately $21.1 million, composed of $17.3 million cash and approximately $3.8 million of liabilities to be assumed by the wireless carrier (the "Spectrum Transaction"). The Spectrum Transaction closed on July 6, 2023.

The Horizon Transaction

On October 24, 2023, Shentel entered into a definitive agreement to acquire 100% of the equity interests Horizon for $385 million (the "Horizon Transaction"). Consideration will consist of $305 million in cash and $80 million of Shentel common stock.

Horizon is a leading commercial fiber provider in Ohio and adjacent states serving national wireless providers, carriers, enterprises, and government, education and healthcare customers. Based in Chillicothe, Ohio, Horizon was founded in 1895 as the incumbent local exchange carrier in Ross County, Ohio and rapidly expanded its fiber network over the past 14 years. Most recently, Horizon has pursued a strategy of investing in Fiber-to-the-Home ("FTTH") in tier 3 & 4 markets in Ohio.

Financing

- Shentel intends to fund the Horizon Transaction with a combination of existing cash resources, revolving credit facility capacity and an amended and upsized credit facility. The Company has received $275 million in financing commitments from CoBank, Bank of America, Citizens Bank, N.A., and Fifth Third Bank, N.A.. This financing is expected to close in conjunction with the Horizon Transaction.
- GCM Grosvenor ("GCM"), a selling unit holder of Horizon, will exchange its equity interest in Horizon for 4.08 million shares of Shentel common stock with an aggregate value of $80 million based on a reference price of $19.60, resulting in GCM owning approximately 7% of Shentel's fully diluted common shares after the transaction is closed.
- Shentel has entered into a 7% Participating Exchangeable Perpetual Preferred Stock ("Preferred Stock") investment agreement with Energy Capital Partners ("ECP"), an existing Shentel shareholder and long-time infrastructure investor, to provide $81 million of growth capital to fund the FTTH network expansion, government grant projects and general corporate purposes. The dividend on the Preferred Stock can be paid in cash or in-kind at the option of the Company. The Preferred Stock can be exchanged for Shentel common stock at an exchange price of $24.50, a 25% premium to the reference price of $19.60, under certain conditions as outlined in the investment agreement. This financing is expected to close in conjunction with the Horizon Transaction.
- The Company plans to raise additional growth capital for the FTTH network expansion, government grant projects and general corporate purposes, which may include the sale of some or all of its tower portfolio as well as exploring other strategic alternatives.

The closing of the Horizon Transaction remains subject to certain regulatory approvals and other customary closing conditions and is expected to close in the first half of 2024.

Results of Operations

Year Ended December 31, 2023 Compared with the Year Ended December 31, 2022

The Company's consolidated results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	2023	% of Revenue	2022	% of Revenue	$	%
Revenue	$ 287,379	100.0	$ 267,371	100.0	20,008	7.5
Operating expenses	277,755	96.7	275,329	103.0	2,426	0.9
Operating income (loss)	9,624	3.3	(7,958)	(3.0)	17,582	(220.9)
Other income (expense), net	1,387	0.5	(1,348)	(0.5)	2,735	(202.9)
Income (loss) before income taxes	11,011	3.8	(9,306)	(3.5)	20,317	(218.3)
Income tax expense (benefit)	2,973	1.0	(927)	(0.3)	3,900	NMF
Net income (loss)	$ 8,038	2.8	$ (8,379)	(3.1)	16,417	(195.9)

Revenue
Revenue increased approximately $20.0 million, or 7.5%, in 2023 compared with 2022, primarily driven by growth of $20.2 million, or 8.1%, in the Broadband segment, partially offset by decline of $0.3 million, or 1.5%, in the Tower segment. Refer to the discussion of the results of operations for the Broadband and Tower segments, included within this MD&A, for additional information.

Operating expenses
Operating expenses increased approximately $2.4 million, or 0.9%, in 2023 compared with 2022, primarily driven by $2.9 million in incremental Corporate operating expenses, partially offset by a $0.2 million and a $0.3 million decrease in operating expenses in the Broadband and Tower segments, respectively. Corporate operating expenses primarily increased due to transaction costs related to the Horizon Transaction. Refer to the discussion of the results of operations for the Broadband and Tower segments, included within this MD&A, for additional information related to operating expenses for those segments.

Other income (expense), net
Other income (expense), net increased $2.7 million, or 202.9%, in 2023 compared with 2022, primarily driven by a gain recorded in connection with the sale of the Company's FCC spectrum licenses upon the closing of the Spectrum Transaction in July 2023, sales taxes refunds received, interest income related to tax refunds and a pension settlement gain resulting from the termination of Shentel's pension plan in June 2023, partially offset by an increase in interest expense.

Income tax expense (benefit)
The Company recognized $3.0 million of income tax expense in 2023, compared with $0.9 million of income tax benefit in 2022. The $3.9 million increase in income tax expense was driven by higher pre-tax income in 2023.

Broadband

Our Broadband segment provides broadband internet, video and voice services to residential and commercial customers in portions of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky, via fiber optics under the brand name of Glo Fiber and hybrid fiber coaxial cable under the brand name of Shentel. The Broadband segment also leases dark fiber and provides Ethernet and Wavelength fiber optic services to enterprise and wholesale customers throughout the entirety of our service area. The Broadband segment also provides voice and digital subscriber line ("DSL") telephone services to customers in Virginia's Shenandoah County and portions of adjacent counties as a Rural Local Exchange Carrier ("RLEC"). These integrated networks are connected by 9,875 route miles of fiber.

The following table indicates selected operating statistics of Broadband:

	December 31, 2023	December 31, 2022	December 31, 2021
Broadband homes and businesses passed (1)	449,635	359,529	286,309
Cable Markets	215,763	212,050	211,120
Glo Fiber Markets	233,872	147,479	75,189
Residential & Small and Medium Business ("SMB") Revenue Generating Units ("RGUs"):			
Broadband Data	151,389	133,930	117,722
Cable Markets	109,679	109,644	106,345
Glo Fiber Markets	41,710	24,286	11,377
Video	43,152	46,975	49,945
Voice	40,757	39,951	34,513
Total Residential & SMB RGUs (excludes RLEC)	235,298	220,856	202,180
Residential & SMB Penetration (2)			
Broadband Data	33.7 %	37.3 %	41.1 %
Cable Markets	50.8 %	51.7 %	50.4 %
Glo Fiber Markets	17.8 %	16.5 %	15.1 %
Video	9.6 %	13.1 %	17.4 %
Voice	9.5 %	11.7 %	12.8 %
Residential & SMB Average Revenue per User ("ARPU") (3)			
Broadband Data	$ 81.27	$ 80.14	$ 78.62
Cable Markets	$ 82.75	$ 81.31	$ 79.00
Glo Fiber Markets	$ 76.45	$ 73.48	$ 74.02
Video	$ 105.71	$ 102.80	$ 100.35
Voice	$ 25.19	$ 26.23	$ 28.60
Fiber route miles	9,875	8,346	7,392
Total fiber miles (4)	861,980	656,033	518,467

(1) Homes and businesses are considered passed ("passings") if we can connect them to our network without further extending the distribution system. Passings is an estimate based upon the best available information. Passings will vary among video, broadband data and voice services.

(2) Penetration is calculated by dividing the number of RGUs by the number of passings or available homes, as appropriate.

(3) Average Revenue Per Data RGU calculation = (Residential & SMB Revenue * 1,000) / average data RGUs / 12 months

(4) Total fiber miles are measured by taking the number of fiber strands in a cable and multiplying that number by the route distance. For example, a 10 mile route with 144 fiber strands would equal 1,440 fiber miles.

Broadband results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	2023	% of Revenue	2022	% of Revenue	$	%
Broadband operating revenue						
Residential & SMB - Cable Markets (1)	$ 176,879	65.7	$ 175,681	70.6	1,198	0.7
Residential & SMB - Glo Fiber Markets (1)	35,103	13.0	18,293	7.3	16,810	91.9
Commercial Fiber	42,141	15.7	38,830	15.6	3,311	8.5
RLEC & Other	15,130	5.6	16,211	6.5	(1,081)	(6.7)
Total broadband revenue	269,253	100.0	249,015	100.0	20,238	8.1
Broadband operating expenses						
Cost of services	100,841	37.5	102,267	41.1	(1,426)	(1.4)
Selling, general, and administrative	62,834	23.3	56,776	22.8	6,058	10.7
Restructuring expense	—	—	849	0.3	(849)	(100.0)
Impairment expense	2,552	0.9	5,241	2.1	(2,689)	(51.3)
Depreciation and amortization	61,897	23.0	63,175	25.4	(1,278)	(2.0)
Total broadband operating expenses	228,124	84.7	228,308	91.7	(184)	(0.1)
Broadband operating income	$ 41,129	15.3	$ 20,707	8.3	20,422	98.6

(1) Shentel has presented Residential & SMB - Cable Markets and Residential & SMB - Glo Fiber Markets separately for 2023. These revenues were previously reported in one line under the description "Residential & SMB". Shentel has amended the presentation for 2022.

Residential & SMB - Cable Markets revenue

Residential & SMB - Cable Markets revenue increased approximately $1.2 million, or 0.7%, in 2023 compared with 2022, primarily driven by 1.8% year-over-year growth in data ARPU.

Residential & SMB - Glo Fiber Markets revenue

Residential & SMB - Glo Fiber Markets revenue increased approximately $16.8 million, or 91.9%, in 2023 compared with 2022, primarily driven by 71.7% year-over-year growth in data RGUs resulting from the Company's expansion of Glo Fiber and 4.0% increase in data ARPU.

Commercial Fiber revenue

Commercial Fiber revenue increased approximately $3.3 million, or 8.5%, in 2023 compared with 2022, primarily driven by $3.0 million in T-Mobile non-recurring early termination fees and $0.3 million in recurring revenue driven by year-over-year growth in connections. T-Mobile disconnected 338 backhaul circuits during 2023 as part of their previously announced rationalization of the former Sprint network. The Company expects approximately $1.0 million of additional annual revenue churn as part of the T-Mobile network rationalization.

RLEC & Other revenue

RLEC & Other revenue decreased approximately $1.1 million, or 6.7%, in 2023 compared with 2022, primarily driven by a decline in residential DSL subscribers.

Cost of services

Cost of services decreased approximately $1.4 million, or 1.4%, in 2023 compared with 2022, primarily driven by lower payroll costs due to higher capitalized labor, partially offset by higher line costs due to the expansion of the network into new markets.

Selling, general and administrative

Selling, general and administrative expense increased $6.1 million, or 10.7%, in 2023 compared with 2022, primarily driven by higher advertising costs associated with the Company's expansion of Glo Fiber and a change in strategy to drive more gross subscriber additions to low cost sales channels and higher credit losses as uncollectible rates have returned to pre-Covid levels.

Impairment

The Company recorded impairment charges of $2.6 million in 2023, compared with $5.2 million of impairment charges recorded in 2022. Impairment charges in 2023 were primarily a result of colocation lease right-of-use and remaining Beam

fixed wireless assets that are no longer expected to be used and have no alternative use, while impairment charges in 2022 were primarily a result of the Company's decommissioning of certain Beam fixed wireless sites.

Depreciation and amortization
Depreciation and amortization decreased $1.3 million, or 2.0%, in 2023 compared with 2022, primarily driven by 2022 accelerated depreciation of Beam network assets associated with the Company's decision to permanently cease Beam operations, for which no equivalent accelerated depreciation was present in 2023.

Tower

Our Tower segment owns cell towers and leases colocation space on the towers to wireless communications providers. Substantially all of our owned towers are built on ground that we lease from the respective landlords.

The following table indicates selected operating statistics of the Tower segment:

	December 31, 2023	December 31, 2022	December 31, 2021
Macro tower sites	219	222	223
Tenants	453	446	485
Average tenants per tower	2.0	1.9	2.1

Tower results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	2023	% of Revenue	2022	% of Revenue	$	%
Tower revenue	$ 18,635	100.0	$ 18,919	100.0 %	(284)	(1.5)
Tower operating expenses	9,140	49.0	9,407	49.7	(267)	(2.8)
Tower operating income	$ 9,495	51.0	$ 9,512	50.3	(17)	(0.2)

Revenue
Revenue decreased approximately $0.3 million, or 1.5%, in 2023 compared with 2022, primarily driven by lower intercompany lease revenue from ceasing Beam operations in 2022.

Operating expenses
Operating expenses decreased approximately $0.3 million, or 2.8%, in 2023 compared with 2022, primarily driven by lower depreciation as a result of fewer depreciable tower assets in 2023 compared to 2022.

Year Ended December 31, 2022 Compared with the Year Ended December 31, 2021

The Company's consolidated results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	**2022**	**% of Revenue**	**2021**	**% of Revenue**	**$**	**%**
Revenue	$ 267,371	100.0	$ 245,239	100.0	22,132	9.0
Operating expenses	275,329	103.0	247,669	101.0	27,660	11.2
Operating loss	(7,958)	(3.0)	(2,430)	(1.0)	(5,528)	227.5
Other (expense) income, net	(1,348)	(0.5)	8,665	3.5	(10,013)	(115.6)
(Loss) income before income taxes	(9,306)	(3.5)	6,235	2.5	(15,541)	(249.3)
Income tax benefit	(927)	(0.3)	(1,694)	(0.7)	767	45.3
(Loss) income from continuing operations	$ (8,379)	(3.1)	$ 7,929	3.2	(16,308)	(205.7)
Income from discontinued operations, net of tax	—	—	990,902	404.1	(990,902)	(100.0)
Net (loss) income	$ (8,379)	(3.1)	$ 998,831	407.3	(1,007,210)	(100.8)

Revenue

Revenue increased approximately $22.1 million, or 9.0%, in 2022 compared with 2021, driven by 9.2% growth in Broadband and 6.9% growth in the Tower segments. Refer to the discussion of the results of operations for the Tower and Broadband segments, included within this MD&A, for additional information.

Operating expenses

Operating expenses increased approximately $27.7 million, or 11.2%, in 2022 compared with 2021, primarily driven by $29.1 million in incremental Broadband operating expenses primarily incurred to support cessation of Beam operations and services and the continuing expansion of Glo Fiber. Tower operating expenses were up $0.7 million. Corporate operating expenses were down $2.1 million primarily due to lower professional fees. Refer to the discussion of results of operations for the Tower and Broadband segments, included within this MD&A, for additional information.

Other (expense) income, net

Other income, net decreased $10.0 million, or 115.6%, in 2022 compared with 2021, primarily driven by lower net actuarial gains recognized for the Company's pension plan in 2022, decreases in patronage income derived from the CoBank patronage program and decreases in transitional service agreement income realized in 2022.

Income tax benefit

Income tax benefit of approximately $0.9 million decreased approximately $0.8 million compared with 2021, primarily driven by higher benefit realized in 2021 as a result of the 2021 disposition of Wireless assets and operations.

Income from discontinued operations, net of tax

Income from discontinued operations, net of tax, decreased $1.0 billion, or 100.0%. The decrease was due to the completion of the disposition of our Wireless assets and operations in 2021, with no additional activity occurring in 2022.

Broadband

Broadband results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	2022	% of Revenue	2021	% of Revenue	$	%
Broadband operating revenue						
Residential & SMB - Cable Markets (1)	$ 175,681	70.6	$ 169,183	74.2	6,498	3.8
Residential & SMB - Glo Fiber Markets (1)	18,293	7.3	8,347	3.7	9,946	119.2
Commercial Fiber	38,830	15.6	34,931	15.3	3,899	11.2
RLEC & Other	16,211	6.5	15,619	6.8	592	3.8
Total broadband revenue	249,015	100.0	228,080	100.0 %	20,935	9.2
Broadband operating expenses						
Cost of services	102,267	41.1	97,283	42.7	4,984	5.1
Selling, general, and administrative	56,776	22.8	47,840	21.0	8,936	18.7
Restructuring expense	849	0.3	202	0.1	647	320.3
Impairment expense	5,241	2.1	5,986	2.6	(745)	(12.4)
Depreciation and amortization	63,175	25.4	47,937	21.0	15,238	31.8
Total broadband operating expenses	228,308	91.7	199,248	87.4	29,060	14.6
Broadband operating income	$ 20,707	8.3	$ 28,832	12.6	(8,125)	(28.2)

(1) Shentel has presented Residential & SMB - Cable Markets and Residential & SMB - Glo Fiber Markets separately for 2023. These revenues were previously reported in one line under the description “Residential & SMB”. Shentel has amended the presentation for 2022 and 2021.

Residential & SMB - Cable Markets revenue
Residential & SMB - Cable Markets revenue increased approximately $6.5 million, or 3.8%, in 2022 compared with 2021, primarily driven by 4.7% growth in data RGUs and 2.9% growth in data ARPU.

Residential & SMB - Glo Fiber Markets revenue
Residential & SMB - Glo Fiber Markets revenue increased approximately $9.9 million, or 119.2%, in 2022 compared with 2021, primarily driven by launching services in new markets resulting in 113.5% growth in broadband RGUs.

Commercial Fiber revenue
Commercial Fiber revenue increased approximately $3.9 million, or 11.2%, in 2022 compared with 2021, primarily driven by increased connections.

Cost of services
Cost of services increased approximately $5.0 million, or 5.1%, in 2022 compared with 2021, primarily driven by the expansion of Glo Fiber and inflation. Payroll related costs were up $3.9 million, primarily due to higher salaries, wages and incentive costs and headcount to support the Glo Fiber expansion. Maintenance costs were up $1.6 million, primarily due to higher fuel, supplies, and contractor costs.

Selling, general and administrative
Selling, general and administrative expense increased $8.9 million, or 18.7%, in 2022 compared with 2021, primarily driven by the expansion of Glo Fiber and inflation. Payroll related costs increased $2.7 million, primarily due to higher salaries, wages and incentive costs and headcount to support the Glo Fiber expansion. Advertising costs increased $2.5 million due primarily to the expansion of Glo Fiber. Software related costs and professional fees increased $2.0 million related to operational system upgrades. Other costs, including provision for bad debt and operating taxes increased $1.7 million.

Restructuring expense
Restructuring expense increased $0.6 million, or 320.3%, in 2022 compared with 2021, primarily driven by the ceasing of Beam operations.

Impairment
Impairment expense decreased $0.7 million, or 12.4%, in 2022 compared with 2021. Impairment expense in 2021 and 2022 was primarily driven by the Company's decision to permanently cease Beam operations.

Depreciation and amortization
Depreciation and amortization increased $15.2 million, or 31.8%, in 2022 compared with 2021, primarily driven by the Company's network expansion of our Glo Fiber network and the accelerated depreciation of Beam network assets associated with the Company's decision to permanently cease Beam operations.

Tower
Tower results from operations are summarized as follows:

	Year Ended December 31,				Change	
($ in thousands)	**2022**	**% of Revenue**	**2021**	**% of Revenue**	**$**	**%**
Tower revenue	$ 18,919	100.0	$ 17,704	100.0	1,215	6.9
Tower operating expenses	9,407	49.7	8,688	49.1	719	8.3
Tower operating income	$ 9,512	50.3	$ 9,016	50.9	496	5.5

Revenue
Revenue increased approximately $1.2 million, or 6.9%, in 2022 compared with 2021, primarily driven by a 4.1% increase in average revenue per tenant.

Operating expenses
Operating expenses increased approximately $0.7 million, or 8.3%, in 2022 compared with 2021, primarily driven by higher costs of service as a result of higher rent costs and higher depreciation.

Financial Condition, Liquidity and Capital Resources

Sources and Uses of Cash: Our principal sources of liquidity are our cash and cash equivalents, cash generated from operations, and borrowings under our Credit Agreement. The Credit Agreement contains (i) a $100 million, five-year undrawn revolving credit facility (the "Revolver"), (ii) a $150 million five-year delayed draw amortizing term loan ("Term Loan A-1") and (iii) a $150 million seven-year delayed draw amortizing term loan ("Term Loan A-2" and collectively with Term Loan A-1, the "Term Loans").

In 2021, Congress passed the American Rescue Plan Act to subsidize the deployment of high-speed broadband internet access in unserved areas. We have been awarded approximately $85.8 million in grants to serve approximately 25,000 unserved homes in the states of Virginia, West Virginia and Maryland. The grants will be paid to the Company as certain milestones are completed. The Company expects to fulfill its obligations under these programs by 2026.

As of December 31, 2023, our cash and cash equivalents totaled $139.3 million and the availability under our revolving line of credit was $100.0 million, for total available liquidity of $239.3 million.

Net cash provided by operating activities from continuing operations was approximately $113.8 million in 2023, representing an increase of $38.9 million compared with 2022, primarily driven by tax refunds of $25.6 million received during 2023 and changes in working capital, partially offset by settlement of Shentel's pension plan.

Net cash used in investing activities from continuing operations was approximately $236.7 million in 2023, representing an increase of $52.5 million compared with 2022, primarily driven by a $66.9 million increase in capital expenditures as a result of higher spending in the Broadband segment to enable our Glo Fiber market expansion, partially offset by $17.3 million in cash proceeds from the closing of the Spectrum Transaction in July 2023.

Net cash provided by financing activities from continuing operations was approximately $218.1 million in 2023, representing an increase of $149.1 million compared with 2022, primarily driven by an increase of $150.0 million in borrowings under the Term Loans.

The Company received approximately $29.0 million in net cash refunds for income and sales taxes during the year ended December 31, 2023.

Indebtedness: To date, Shentel has borrowed $150 million under each of the Term Loans available under the Credit Agreement for a total of $300 million. As of December 31, 2023, the Company's indebtedness totaled approximately $300 million, net of unamortized loan fees of $0.1 million. The borrowed amounts bear interest at a variable rate determined by one-month term SOFR, plus a margin of 1.6%. This rate, including the margin, was 6.95% as of December 31, 2023.

Shentel's Term Loans require quarterly payments based on a percentage of the outstanding balance. Based on the outstanding balance as of December 31, 2023, Term Loan A-1 requires quarterly principal repayments of $0.9 million from March 31, 2024 through June 30, 2024; then increasing to $1.9 million quarterly from September 30, 2024 through March 31, 2026, with the remaining balance due June 30, 2026. Based on the outstanding balance as of December 31, 2023, Term Loan A-2 requires quarterly principal repayments of $0.4 million through March 31, 2028, with the remaining balance due June 30, 2028.

Refer to Note 9, *Debt* in the Company's 2023 Consolidated Financial Statements for information about the Company's Credit Agreement.

As of December 31, 2023, the Company was in compliance with the financial covenants in our Credit Agreement.

We expect our cash on hand, cash flows from continuing operations, and availability of funds from our Credit Agreement as well as government grants will be sufficient to meet our anticipated liquidity needs for business operations for the next twelve months. There can be no assurance that we will continue to generate cash flows at or above current levels.

During the year ended December 31, 2023, our capital expenditures of $256.6 million exceeded our net cash provided by operating activities from continuing operations by $142.8 million, and we expect our capital expenditures to exceed the net cash flows provided by continuing operations through 2026, as we expand our Glo Fiber broadband network.

The actual amount and timing of our future capital requirements may differ materially from our estimates depending on the demand for our products and services, new market developments and expansion opportunities.

Our cash flows from operations could be adversely affected by events outside our control, including, without limitation, changes in overall economic conditions including rising inflation, regulatory requirements, changes in technologies, changes in competition, demand for our products and services, availability of labor resources and capital, natural disasters, pandemics and outbreaks of contagious diseases and other adverse public health developments, such as COVID-19, and other conditions. Our ability to attract and maintain a sufficient customer base, particularly in our Broadband markets, is critical to our ability to maintain a positive cash flow from operations. The foregoing events individually or collectively could affect our results.

Critical Accounting Policies

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenue and expenses, as well as related disclosures. To the extent that there are material differences between these estimates and actual results, our financial condition or operating results would be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below.

Our significant accounting policies are described in Note 2, *Summary of Significant Accounting Policies* in our consolidated financial statements. The following are the accounting policies that we believe involve a greater degree of judgment and complexity and are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") 606, Revenue from contracts with customers, ("ASC 606").

Our Broadband segment provides broadband data, video and voice services to residential, small and midsize businesses ("SMB") and commercial customers in portions of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky, via fiber optic and hybrid fiber coaxial cable networks. The Broadband segment also provides voice and DSL telephone services to customers in Virginia's Shenandoah County and portions of adjacent counties as a RLEC.

We allocate the total transaction price in these transactions based upon the standalone selling price of each distinct good or service. We generally recognize these revenues over time as customers simultaneously receive and consume the benefits of the service, with the exception of equipment sales and home wiring, which are recognized as revenue at a point in time when control transfers and when installation is complete, respectively. A significant portion of the Company's revenues are derived from customers who may cancel their subscriptions at any time without substantial penalty. As such, the amount of deferred revenue related to unsatisfied performance obligations is not necessarily indicative of the future revenue to be recognized from the Company's existing customers. Installation fees charged upfront without transfer of commensurate goods or services to the customer are allocated to services and are recognized ratably over the longer of the contract term or the period in which the unrecognized fee remains material to the contract, which we estimate to be approximately one year. Additionally, the Company incurs commission expenses related to in-house and third-party vendors which are capitalized and amortized over the expected customer benefit period.

Our Broadband segment also provides Ethernet and Wavelength fiber optic services to commercial fiber customers under capacity agreements, and the related revenue is recognized over time. In some cases, non-refundable upfront fees are charged for connecting commercial fiber customers to our fiber network. Those amounts are recognized ratably over the initial contract term.

The Broadband segment also leases dedicated fiber optic strands to customers as part of "dark fiber" agreements, which are accounted for as leases under ASC 842, Leases ("ASC 842").

Our Tower segment leases space on owned cell towers to our Broadband segment, and to other wireless carriers. Revenue from these leases is accounted for under ASC 842.

Cable franchise rights

Cable franchise rights represent the value attributable to agreements with local franchising authorities, which allows access to homes and businesses via public rights of way. Shentel's cable franchise rights were primarily acquired through business

combinations. Cable franchise rights have an indefinite life; therefore, no amortization is recorded for these assets. Costs incurred in negotiating and renewing cable franchise rights are expensed as incurred.

The terms and conditions of franchises vary among jurisdictions, but franchises generally last for a fixed term and are subject to renewal. The renewal process for our state franchises is specified by state law and tends to be a simple process, requiring the filing of a renewal application with information no more burdensome than that contained in our original application. Franchising authorities may resist granting a renewal if either past performance or the prospective operating proposal is considered inadequate. Franchise authorities often demand concessions or other commitments as a condition to renewal. If our local franchises are not renewed at expiration we would have to cease operations or, operate under either temporary operating agreements or without a franchise while negotiating renewal terms with the local franchising authorities.

Although renewal is not assured, there are provisions in the law that protect the Company from arbitrary or unreasonable denial. In our experience, state and local franchising authorities encourage our entry into the market, and we have historically been successful in renewing these agreements.

Shentel evaluates the recoverability of its cable franchise rights at least annually on October 1, or more frequently whenever events or substantive changes in circumstances indicate that the assets might be impaired. This evaluation is either performed on a quantitative or qualitative basis. When performing a quantitative evaluation, we estimate the fair values of our cable franchise rights primarily based on an income approach that involves significant judgment, including the estimate of revenue growth, the amount and timing of capital expenditures, EBITDA margins and the discount rate utilized. When performing a qualitative assessment, we assess whether events and circumstances indicate that it is more likely than not (that is, a likelihood of more than 50%) that an impairment exists. This includes evaluating changes in market conditions, competitive factors, laws and regulations and key assumptions made in quantitative assessments, including expected revenue growth, capital expenditures, EBITDA margins and discount rates.

Our current year evaluation was performed on a qualitative basis. As a result of the current year evaluation, we did not identify any cable franchise right assets for which the fair value was less than the carrying value. As a result, we did not recognize any impairment charges for the year ended December 31, 2023.

Recently Issued Accounting Standards

Recently issued accounting standards and their expected impact, if any, are discussed in Note 2, *Summary of Significant Accounting Policies* in our consolidated financial statements.

ITEM 7A. **QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Throughout 2023, we borrowed a total of $225 million pursuant to the variable rate delayed draw Term Loans available under the Credit Agreement. As of December 31, 2023, Shentel has borrowed the full amount available under our Term Loans.

As of December 31, 2023, the Company had $300 million of gross variable rate debt outstanding, bearing interest at 6.95%. An increase in market interest rates of 1.00% would add approximately $3.0 million to annual interest expense.

In May 2023, Shentel entered into pay fixed, receive variable interest rate swaps totaling $150.0 million of notional principal (the "Swaps"). The Swaps contain monthly payment terms beginning in May 2024 which extend through their maturity dates in June 2026. The Swaps are designated as cash flow hedges, representing 50% of the Company's expected outstanding debt. The Company uses the Swaps to manage its exposure to interest rate risk for its long-term variable-rate Term Loans through interest rate swaps. When the Swaps' payments term begins, Shentel will effectively pay a fixed weighted-average interest rate of 2.90%, prior to interest rate margin provided under our credit facility.

ITEM 8. **FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

Our consolidated financial statements and supplementary data are included as a separate section included within Item 15 of this Annual Report on Form 10-K commencing on page F-1 and are incorporated herein by reference.

ITEM 9. **CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

ITEM 9A. **CONTROLS AND PROCEDURES**

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer, Chief Financial Officer, and Principal Accounting Officer (the certifying officers) have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of December 31, 2023. Our certifying officers concluded that our disclosure controls and procedures were effective as of December 31, 2023.

Management's Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance as to the integrity and reliability of the published financial statements. The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2023. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - Integrated Framework (2013 framework). Based on its assessment, the Company's management believes that, as of December 31, 2023, the Company's internal control over financial reporting is effective based on those criteria.

RSM US LLP, an independent registered public accounting firm, which audited the Company's consolidated financial statements included in this Annual Report, has issued an attestation report on the Company's internal control over financial reporting containing the disclosure required by this Item.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the year ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. **OTHER INFORMATION**

During the year ended December 31, 2023, none of our officers or directors adopted or terminated any "Rule 10b5-1 trading arrangement" or any "non-Rule 10b5-1 trading arrangement" as each term is defined in Item 408 of Regulation S-K.

ITEM 9C. **DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS**

Not applicable.

PART III

ITEM 10. **DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

See "Executive Officers of the Registrant" in Part 1, Item 1 of this report for information about our executive officers, which is incorporated by reference in this Item 10. Other information required by this Item 10 is incorporated by reference to the Company's definitive proxy statement for its 2024 Annual Meeting of Shareholders, referred to as the "2024 proxy statement," which we will file with the SEC on or before 120 days after our 2023 fiscal year end, and which appears in the 2024 proxy statement under the captions "Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance."

We have adopted a code of ethics applicable to our chief executive officer and all senior financial officers, who include our principal financial officer, principal accounting officer, and persons performing similar functions. The code of ethics, which is part of our Code of Business Conduct and Ethics, is available on our website at *www.shentel.com*. To the extent required by SEC rules, we intend to disclose any amendments to our code of conduct and ethics, and any waiver of a provision of the code with respect to the Company's directors, principal executive officer, principal financial officer, principal accounting officer, or persons performing similar functions, on our website referred to above within four business days following such amendment or waiver, or within any other period that may be required under SEC rules from time to time.

ITEM 11. **EXECUTIVE COMPENSATION**

Information required by this Item 11 is incorporated herein by reference to the 2024 proxy statement, including the information in the 2024 proxy statement appearing under the captions "Election of Directors-Director Compensation" and "Executive Compensation."

ITEM 12. **SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

Information required by Item 12 is incorporated herein by reference to the 2024 proxy statement appearing under the caption "Security Ownership."

The Company grants stock awards to its employees meeting certain eligibility requirements under its shareholder-approved Company Stock Incentive Plan, referred to as the 2014 Equity Incentive Plan. The 2014 Equity Incentive Plan authorizes grants of up to an additional 4.2 million shares over a ten-year period beginning in 2014. Outstanding awards and the number of shares available for future issuance as of December 31, 2023 were as follows:

	Number of securities to be issued upon exercise of outstanding options and RSUs	Weighted average exercise price of outstanding options	Number of securities remaining available for future issuance
2014 Equity Incentive Plan	1,122,171	$ —	1,521,963

ITEM 13. **CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE**

Information required by Item 13 is incorporated herein by reference to the 2024 proxy statement, including the information in the 2024 proxy statement appearing under the caption "Executive Compensation-Certain Relationships and Related Transactions."

ITEM 14. **PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information required by Item 14 is incorporated herein by reference to the 2024 proxy statement, including the information in the 2024 proxy statement appearing under the caption "Shareholder Ratification of Independent Registered Public Accounting Firm."

PART IV

ITEM 15. **EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

The following is a list of documents filed as a part of this report:

(1) Financial Statements
(2) Financial Statement Schedule
(3) Exhibits

The exhibits required to be filed by Item 601 of Regulation S-K are listed in the Exhibit Index directly following the Financial Statements beginning on page F-1, within this Annual Report on Form 10-K.

ITEM 16. **FORM 10-K SUMMARY**

None.

SHENANDOAH TELECOMMUNICATIONS COMPANY
AND SUBSIDIARIES

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors Shenandoah Telecommunications Company

Opinion on the Financial Statements
We have audited the accompanying consolidated balance sheets of Shenandoah Telecommunications Company and its subsidiaries (the Company) as of December 31, 2023 and 2022, the related consolidated statements of comprehensive income (loss), shareholders' equity, and cash flows, for each of the two years in the period ended December 31, 2023, and the related notes to the consolidated financial statements and Schedule II – Valuation and Qualifying Accounts (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013, and our report dated February 21, 2024 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion
These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter
The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Cable franchise rights impairment assessment
As described in Notes 2 and 6 to the financial statements, the Company's indefinite-lived cable franchise rights are $64.3 million as of December 31, 2023. The Company assesses its cable franchise rights for impairment annually on October 1, or more frequently whenever events or substantive changes in circumstances indicate that it is more likely than not that the carrying value of the cable franchise rights exceeds its estimated fair value. In connection with the annual evaluation, the Company first performs a qualitative assessment of whether it is more likely than not that the cable franchise rights are impaired. In the event impairment is more likely than not, the fair value of the cable franchise rights is estimated, and an impairment charge is recognized for any excess of the carrying value over fair value. On October 1, 2023, the Company performed a qualitative analysis and concluded there was no impairment. This analysis involved, among other things, evaluating changes in forecasted revenue, operating margins, capital expenditures, the discount rate, as well as assessing the sensitivity of the estimated fair value of the cable franchise rights, previously determined using an income approach, to these and other relevant changes to valuation inputs on a cumulative basis, which is inherently judgmental and complex.

We identified the cable franchise rights impairment assessment as a critical audit matter because of the significant estimates and assumptions management used in the impairment analysis. Auditing management's judgments used in the impairment assessment regarding forecasts of future revenue, operating margins and capital expenditures and the discount rate, as well as evaluating management's assessment of the sensitivity of the estimated fair value to the cumulative change in these and other

relevant valuation inputs, involved a high degree of auditor judgment and increased audit effort, including the use of our valuation specialist.

Our audit procedures related to the Company's cable franchise rights impairment assessment included the following, among others:

- Obtaining an understanding of the relevant controls related to the Company's cable franchise rights impairment analysis, and tested such controls for design and operating effectiveness, including controls over management's review of the significant assumptions and the analysis described above;
- Testing management's process for performing the qualitative impairment assessment by (i) understanding management's process for updating the forecasted revenue growth rates, operating margins, capital expenditures and estimated discount rate from previous forecasts and estimates, (ii) testing the completeness, accuracy, and relevance of the underlying data used in the updated forecast and discount rate, (iii) comparing these assumptions to historical results and to forecasted information included in external industry reports, and (iv) testing the accuracy of management's assessment of sensitivity of the fair value of cable franchise rights to the cumulative change in relevant valuation inputs; and
- Utilizing our valuation professionals to assist in evaluating the reasonableness of the discount rate.

/s/ RSM US LLP

We have served as the Company's auditor since 2022.

Boston, Massachusetts
February 21, 2024

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors Shenandoah Telecommunications Company

Opinion on the Internal Control Over Financial Reporting

We have audited Shenandoah Telecommunications Company's (the Company) internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets as of December 31, 2023 and 2022, the related consolidated statements of comprehensive income (loss), shareholders' equity, and cash flows for each of the two years in the period ended December 31, 2023, and the related notes to the consolidated financial statements and Schedule II – Valuation and Qualifying Accounts of the Company and our report dated February 21, 2024 expressed an unqualified opinion.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ RSM US LLP

Boston, Massachusetts
February 21, 2024

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Shenandoah Telecommunications Company:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of comprehensive income (loss), shareholders' equity, and cash flows of Shenandoah Telecommunications Company and subsidiaries (the Company) for the year ended December 31, 2021, and the related notes and financial statement schedule II – Valuation and Qualifying Accounts (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of operations of the Company and its cash flows for the year ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ KPMG LLP

We served as the Company's auditor from 2001 to 2022.

McLean, Virginia
February 28, 2022

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
December 31, 2023 and 2022

(in thousands)	2023	2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 139,255	$ 44,061
Accounts receivable, net of allowance for credit losses of $886 and $776, respectively	19,782	20,615
Income taxes receivable	4,691	29,755
Prepaid expenses and other	11,782	11,509
Current assets held for sale	561	22,622
Total current assets	176,071	128,562
Investments	13,198	12,971
Property, plant and equipment, net	879,499	687,553
Goodwill and intangible assets, net	81,123	81,515
Operating lease right-of-use assets	50,640	53,859
Deferred charges and other assets	13,698	13,259
Total assets	$ 1,214,229	$ 977,719
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current maturities of long-term debt, net of unamortized loan fees	$ 7,095	$ 648
Accounts payable	53,546	49,173
Advanced billings and customer deposits	13,241	12,425
Accrued compensation	11,749	9,616
Current operating lease liabilities	3,081	2,829
Accrued liabilities and other	9,643	17,906
Current liabilities held for sale	—	3,824
Total current liabilities	98,355	96,421
Long-term debt, less current maturities, net of unamortized loan fees	292,804	74,306
Other long-term liabilities:		
Deferred income taxes	88,147	84,600
Asset retirement obligations	10,069	9,932
Benefit plan obligations	3,943	3,758
Non-current operating lease liabilities	48,358	50,477
Other liabilities	19,883	20,218
Total other long-term liabilities	170,400	168,985
Commitments and contingencies (Note 14)		
Shareholders' equity:		
Common stock, no par value, authorized 96,000; 50,272 and 50,110 issued and outstanding at December 31, 2023 and 2022, respectively	—	—
Additional paid in capital	66,933	57,453
Retained earnings	584,069	580,554
Accumulated other comprehensive income, net of taxes	1,668	—
Total shareholders' equity	652,670	638,007
Total liabilities and shareholders' equity	$ 1,214,229	$ 977,719

See accompanying notes to consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
Years Ended December 31, 2023, 2022 and 2021

(in thousands, except per share amounts)	2023	2022	2021
Service revenue and other	$ 287,379	$ 267,371	$ 245,239
Operating expenses:			
Cost of services exclusive of depreciation and amortization	106,101	107,546	102,299
Selling, general and administrative	103,631	92,392	82,451
Restructuring expense	—	1,251	1,727
Impairment expense	2,552	5,241	5,986
Depreciation and amortization	65,471	68,899	55,206
Total operating expenses	277,755	275,329	247,669
Operating income (loss)	9,624	(7,958)	(2,430)
Other income (expense):			
Other income (expense), net	1,387	(1,348)	8,665
Income (loss) from continuing operations before income taxes	11,011	(9,306)	6,235
Income tax expense (benefit)	2,973	(927)	(1,694)
Income (loss) from continuing operations	8,038	(8,379)	7,929
Discontinued operations:			
Income from discontinued operations, net of tax	—	—	94,667
Gain on the sale of discontinued operations, net of tax	—	—	896,235
Total income from discontinued operations, net of tax	—	—	990,902
Net income (loss)	8,038	(8,379)	998,831
Other comprehensive income (loss):			
Unrealized income on interest rate hedges, net of tax	1,668	—	4,706
Comprehensive income (loss)	$ 9,706	$ (8,379)	$ 1,003,537
Net income (loss) per share, basic and diluted:			
Basic - Income (loss) from continuing operations	$ 0.16	$ (0.17)	$ 0.16
Basic - Income from discontinued operations, net of tax	—	—	19.81
Basic net income (loss) per share	$ 0.16	$ (0.17)	$ 19.97
Diluted - Income (loss) from continuing operations	$ 0.16	$ (0.17)	$ 0.16
Diluted - Income from discontinued operations, net of tax	—	—	19.76
Diluted net income (loss) per share	$ 0.16	$ (0.17)	$ 19.92
Weighted average shares outstanding, basic	50,396	50,155	50,026
Weighted average shares outstanding, diluted	50,715	50,155	50,149
Cash dividends declared per share	$ 0.09	$ 0.08	$ 18.82

See accompanying notes to consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
Years Ended December 31, 2023, 2022 and 2021
(in thousands)

	Shares of Common Stock (no par value)	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
Balance, December 31, 2020	49,868	$ 47,317	$ 534,440	$ (4,706)	$ 577,051
Net income	—	—	998,831	—	998,831
Net gain on interest rate swaps, net of tax	—	—	—	4,706	4,706
Dividends declared	—	—	(940,347)	—	(940,347)
Stock-based compensation	133	3,661	—	—	3,661
Shares surrendered for settlement of employee taxes upon issuance of vested equity awards	(36)	(1,627)	—	—	(1,627)
Balance, December 31, 2021	49,965	49,351	592,924	—	642,275
Net loss	—	—	(8,379)	—	(8,379)
Dividends declared	—	—	(3,991)	—	(3,991)
Stock-based compensation	194	9,178	—	—	9,178
Shares surrendered for settlement of employee taxes upon issuance of vested equity awards	(49)	(1,076)	—	—	(1,076)
Balance, December 31, 2022	50,110	57,453	580,554	—	638,007
Net income	—	—	8,038	—	8,038
Unrealized gain on interest rate swaps, net of tax	—	—	—	1,668	1,668
Dividends declared	—	—	(4,523)	—	(4,523)
Stock-based compensation	231	10,823	—	—	10,823
Common stock issued	2	44	—	—	44
Shares surrendered for settlement of employee taxes upon issuance of vested equity awards	(71)	(1,387)	—	—	(1,387)
Balance, December 31, 2023	50,272	$ 66,933	$ 584,069	$ 1,668	$ 652,670

See accompanying notes to consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
Years Ended December 31, 2023, 2022 and 2021

(in thousands)	2023	2022	2021
Cash flows from operating activities:			
Net income (loss)	$ 8,038	$ (8,379)	$ 998,831
Income from discontinued operations, net of tax	—	—	990,902
Income (loss) from continuing operations	8,038	(8,379)	7,929
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	64,981	68,175	54,389
Amortization of intangible assets	490	724	817
Accretion of asset retirement obligations	621	531	421
Provision for credit losses	2,898	1,972	1,028
Stock-based compensation expense, net of amount capitalized	10,033	8,528	3,408
Deferred income taxes	2,973	(1,414)	22,263
Impairment expense	2,552	5,241	5,986
Gain on sale of FCC spectrum licenses	(1,328)	—	—
Other, net	(504)	427	2,208
Changes in assets and liabilities:			
Accounts receivable	(189)	(583)	163
Current income taxes	25,064	434	(25,149)
Operating lease right-of-use assets	3,614	6,322	4,779
Other assets	5,043	(451)	(7,005)
Accounts payable	(2,869)	19	2,976
Lease liabilities	(3,098)	(5,471)	(4,333)
Other deferrals and accruals	(4,545)	(1,180)	(6,427)
Net cash provided by operating activities - continuing operations	113,774	74,895	63,453
Net cash used in operating activities - discontinued operations	—	—	(314,387)
Net cash provided by (used in) operating activities	113,774	74,895	(250,934)
Cash flows from investing activities:			
Capital expenditures	(256,550)	(189,609)	(160,101)
Government grants received	1,904	—	—
Proceeds from the sale of FCC spectrum licenses	17,300	—	—
Refund received for deposit on FCC spectrum leases	—	3,996	—
Proceeds from sale of assets and other	655	1,434	366
Net cash used in investing activities - continuing operations	(236,691)	(184,179)	(159,735)
Net cash provided by investing activities - discontinued operations	—	—	1,944,089
Net cash (used in) provided by investing activities	(236,691)	(184,179)	1,784,354
Cash flows from financing activities:			
Proceeds from credit facility borrowings	225,000	75,000	—
Payments for debt issuance costs	(300)	—	(841)
Dividends paid, net of dividends reinvested	(4,523)	(3,991)	(940,256)
Taxes paid for equity award issuances	(1,387)	(1,076)	(1,627)
Payments for financing arrangements and other	(679)	(932)	(1,193)
Net cash provided by (used in) financing activities - continuing operations	218,111	69,001	(943,917)
Net cash used in financing activities - discontinued operations	—	—	(700,556)
Net cash provided by (used in) financing activities	218,111	69,001	(1,644,473)
Net increase (decrease) in cash and cash equivalents	95,194	(40,283)	(111,053)
Cash and cash equivalents, beginning of period	44,061	84,344	195,397
Cash and cash equivalents, end of period	$ 139,255	$ 44,061	$ 84,344

See accompanying notes to consolidated financial statements.

Note 1. Nature of Operations

Shenandoah Telecommunications Company and its subsidiaries (collectively, “Shentel”, “we”, “our”, “us”, or the “Company”) provide broadband data, video and voice services to residential and commercial customers in portions of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky, via fiber optic and hybrid fiber coaxial cable networks. We also lease dark fiber and provide Ethernet and Wavelength fiber optic services to enterprise and wholesale customers throughout the entirety of our service area. The Broadband segment also provides voice and DSL telephone services to customers in Virginia’s Shenandoah County and portions of adjacent counties as a Rural Local Exchange Carrier (“RLEC”). These integrated networks are connected by a fiber network. All of these operations are contained within our Broadband reporting segment.

Our Tower segment owns 219 macro cellular towers and leases colocation space on those towers to wireless communications providers. See Note 15, *Segment Reporting*, for additional information.

Pending Acquisition of Horizon Acquisition Parent LLC

On October 24, 2023, Shentel entered into a definitive agreement to acquire 100% of the equity interests in Horizon Acquisition Parent LLC (“Horizon”) for $385 million (the “Horizon Transaction”). Consideration will consist of $305 million in cash and $80 million of Shentel common stock.

Horizon is a leading commercial fiber provider in Ohio and adjacent states serving national wireless providers, carriers, enterprises, and government, education and healthcare customers. Based in Chillicothe, Ohio, Horizon was founded in 1895 as the incumbent local exchange carrier in Ross County, Ohio and rapidly expanded its fiber network over the past 14 years. Most recently, Horizon has pursued a strategy of investing in Fiber-to-the-Home (“FTTH”) in tier 3 & 4 markets in Ohio.

Financing

- Shentel intends to fund the Horizon Transaction with a combination of existing cash resources, revolving credit facility capacity and an amended and upsized credit facility. The Company has received $275 million in financing commitments from CoBank, Bank of America, Citizens Bank, N.A., and Fifth Third Bank, N.A.. This financing is expected to close in conjunction with the Horizon Transaction.
- GCM Grosvenor (“GCM”), a selling unit holder of Horizon, will exchange its equity interest in Horizon for 4.08 million shares of Shentel common stock with an aggregate value of $80 million based on a reference price of $19.60 resulting in GCM owning approximately 7% of Shentel’s fully diluted common shares after the transaction is closed.
- Shentel has entered into a 7% Participating Exchangeable Perpetual Preferred Stock (“Preferred Stock”) investment agreement with Energy Capital Partners (“ECP”), an existing Shentel shareholder and long-time infrastructure investor, to provide $81 million of growth capital to fund the FTTH network expansion, the government grant projects and general corporate purposes. The dividend on the Preferred Stock can be paid in cash or in-kind at the option of the Company. The Preferred Stock can be exchanged for Shentel common stock at an exchange price of $24.50, a 25% premium to the reference price of $19.60, under certain conditions as outlined in the investment agreement. This financing is expected to close in conjunction with the Horizon Transaction.

The closing of the Horizon Transaction remains subject to certain regulatory approvals and other customary closing conditions and is expected to close in the first half of 2024.

Note 2. Summary of Significant Accounting Policies

Principles of consolidation: The accompanying consolidated financial statements include the accounts of Shenandoah Telecommunications Company and all of its wholly owned subsidiaries. All intercompany accounts and transactions for continuing operations have been eliminated in consolidation.

Use of estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States, requires us to make estimates and assumptions that affect reported amounts of assets, liabilities, revenues and expenses and related disclosures. Due to the inherent uncertainty involved in making estimates, actual results to be reported in future periods could differ from our estimates.

Revenue recognition: The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") 606, Revenue from contracts with customers ("ASC 606").

Our Broadband segment provides broadband data, video and voice services to residential, small and midsize businesses ("SMB") and commercial customers in portions of Virginia, West Virginia, Maryland, Pennsylvania and Kentucky, via fiber optic and hybrid fiber coaxial cable networks. The Broadband segment also provides voice and DSL telephone services to customers in Virginia's Shenandoah County and portions of adjacent counties as an RLEC.

Transaction price is measured as the amount billed, which is generally determined by list prices for goods and services less discounts offered. We allocate the total transaction price in these transactions based upon the standalone selling price of each distinct good or service. We generally recognize these revenues over time as customers simultaneously receive and consume the benefits of the service, with the exception of equipment sales and home wiring, which are recognized as revenue at a point in time when control transfers and when installation is complete, respectively. A significant portion of the Company's revenues are derived from customers who may cancel their subscriptions at any time without penalty. As such, the amount of deferred revenue related to unsatisfied performance obligations is not necessarily indicative of the future revenue to be recognized from the Company's existing customers. Installation fees charged upfront without transfer of commensurate goods or services to the customer are allocated to services and are recognized ratably over the longer of the contract term or the period in which the unrecognized fee remains material to the contract, which we estimate to be approximately one year. Additionally, the Company incurs commission expenses related to in-house and third-party vendors which are capitalized and amortized over the expected customer benefit period.

Our Broadband segment also provides Ethernet and Wavelength fiber optic services to commercial fiber customers under capacity agreements, and the related revenue is recognized over time. In some cases, non-refundable upfront fees are charged for connecting commercial fiber customers to our fiber network. Those amounts are recognized ratably over the initial contract term.

The Broadband segment also leases dedicated fiber optic strands to customers as part of "dark fiber" agreements, which are accounted for as leases under ASC 842, Leases ("ASC 842").

Our Tower segment leases space on owned cell towers to our Broadband segment, and to other wireless carriers. Revenue from these leases is accounted for under ASC 842.

Advertising costs: The Company expenses advertising costs and marketing production costs as incurred and includes such costs within selling, general and administrative expenses in the consolidated statements of operations. Advertising expense for the years ended December 31, 2023, 2022 and 2021 was $11.4 million, $6.8 million and $4.4 million, respectively.

Fair value measurements: The Company measures certain assets and liabilities at fair value. Fair value is defined as the exchange price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The Company uses the fair value hierarchy to evaluate inputs used in determining the fair value of its assets and liabilities. The three levels of inputs used to measure fair value are (i) observable inputs, such as quoted prices in active markets (level 1); (ii) inputs other than quoted prices in active markets that are observable either directly or indirectly (level 2); and (iii) unobservable inputs that require the Company to use present value and other valuation techniques in the determination of fair value (level 3).

The Company remeasures long-lived assets such as property, plant and equipment, intangible assets and goodwill at fair value when they are deemed to be impaired. The fair value of these assets is determined with valuation techniques using the best information available and may include quoted market prices, market comparables or discounted cash flow models.

The carrying amounts reported in the Company's consolidated financial statements for cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate fair value because of the short-term nature of these financial instruments. The carrying amount of the Company's long-term debt, which have a floating interest rate, approximates fair value. The Company's interest rate swaps are marked to market on a quarterly basis and are presented on the consolidated balance sheets at fair value.

Cash and cash equivalents: Cash equivalents include all investments with an original maturity of three months or less. The Company places its temporary cash investments with high credit quality financial institutions. Generally, such investments are in excess of FDIC or SIPC insurance limits.

Allowance for credit losses: Accounts receivable have been reduced by an allowance for amounts that may be uncollectible in the future. This estimated allowance is based primarily on the aging category, historical collection experience and management's evaluation of the financial condition of the customer. The Company writes off accounts receivable balances deemed uncollectible against the allowance for credit losses generally when the account is turned over for collection to an outside collection agency.

Investments: The Company investments measured at fair value primarily consist of supplemental executive retirement plan ("SERP") investments in a rabbi trust as a source of funding for future payments under the plan. The SERP's investments were designated as trading securities and will be liquidated and paid out to the participants six months after retirement. The benefit obligation to participants is always equal to the value of the SERP assets under ASC 710, *Compensation*. Changes to the investments' fair value are presented in Other income, net, while the reciprocal changes in the liability representative of compensatory expense, are presented in selling, general and administrative expense in the Company's consolidated statements of comprehensive income (loss).

The Company's investments measured at cost primarily consist of CoBank's Class A common stock derived from the CoBank patronage program. The investment is recognized as the Company's initial investment in CoBank plus subsequent patronage distributions received from CoBank.

Property, plant and equipment: Property, plant and equipment is stated at cost less accumulated depreciation and amortization. The Company capitalizes all costs associated with the purchase, deployment and installation of property, plant and equipment, including interest costs and internal labor costs on major capital projects during the period of their construction. Shentel capitalized $5.4 million and $0.7 million of interest costs for the years ended December 31, 2023 and 2022, respectively. Maintenance expense is recognized as incurred when repairs are performed that do not extend the life of property, plant and equipment. Expenses for major renewals and improvements, which significantly extend the useful lives of existing property and equipment, are capitalized and depreciated. Depreciation is calculated on the straight-line method over the estimated useful lives of the assets. Labor costs associated with customer installation activities at existing service locations are expensed as incurred under industry specific guidance. Leasehold improvements are amortized over the lesser of their useful lives or respective lease terms. Land is not depreciated. Refer to Note 5, *Property, Plant and Equipment*, for additional information.

Indefinite-lived intangible assets: Goodwill represents the excess of acquisition costs over the fair value of tangible net assets and identifiable intangible assets of the businesses acquired. Cable franchise rights provide us with the non-exclusive right to provide video services in a specified area. Spectrum licenses are issued by the Federal Communications Commission ("FCC") and provide us with either an exclusive or priority access right to utilize designated radio frequency spectrum within specific geographic service areas to provide wireless communication services. While some cable franchises and spectrum licenses are issued for a fixed time (generally ten years and up to fifteen years, respectively), renewals have been granted routinely and at nominal costs. The Company believes it will be able to meet all requirements necessary to secure renewal of its cable franchise rights and spectrum licenses. Moreover, the Company has determined that there are currently no legal, regulatory, contractual, competitive, economic or other factors that limit the useful lives of our cable franchises or spectrum licenses and, as a result, we account for cable franchise rights and spectrum licenses as indefinite-lived intangible assets.

Indefinite-lived intangible assets are not amortized but rather, are subject to impairment testing annually, in the fourth quarter, or whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. Goodwill is evaluated for impairment based on the identification of reporting units. Our reporting units align with our reportable segments. We evaluated goodwill in each of our reporting units for impairment on October 1, 2023 on the basis of qualitative factors. Our consideration of qualitative factors included but was not limited to macroeconomic conditions, industry and market conditions, company specific events, changes in circumstances, after tax cash flows and market capitalization trends. We concluded that there were no indicators that a reporting unit impairment was more likely than not.

We evaluated our cable franchise rights and spectrum licenses for impairment on October 1, 2023 utilizing a qualitative assessment. Our consideration of qualitative factors included but was not limited to macroeconomic conditions, industry and market conditions, company specific events, changes in circumstances, after tax cash flows and market capitalization trends. We concluded that there were no indicators that an impairment of these indefinite-lived intangible assets was more likely than not.

Long-lived assets: Finite-lived intangible assets, property, plant, and equipment, and other long-lived assets held for use are amortized or depreciated over their estimated useful lives, as summarized in the respective notes below. These assets are evaluated for impairment based on the identification of asset groups. Our asset groups align with our reportable segments. We evaluated our asset groups for impairment during the fourth quarter of 2023 and concluded that there were no indicators that an

asset group impairment was more likely than not, with the exception of those described in Note 5, *Property, Plant and Equipment.*

Asset retirement obligations: Certain of the Company's lease agreements contain provisions requiring the Company to restore facilities or remove property in the event that the lease agreement is not renewed. The Company records an estimate for the cost to comply with these provisions based on what a willing third party would charge for the retirement activity on the date of recognizing the asset retirement obligation. Upon retirement of the related asset and performance of the asset retirement activities, the Company derecognizes the asset retirement obligation and records a gain or loss to reflect the difference between the Company's estimate and the actual cost to retire the asset. Current ARO liabilities are recorded in accrued liabilities and other in the Company's consolidated balance sheets and noncurrent ARO liabilities are presented in the consolidated balance sheets as "Asset retirement obligations."

Benefit plan obligations: The Benefit Plan Obligations caption includes the following:

($ in thousands)	December 31, 2023	December 31, 2022
Postretirement medical benefits plan	$ 1,653	$ 1,869
Supplemental executive retirement plan	2,290	1,889
Total	$ 3,943	$ 3,758

Prior to December 31, 2023, Shentel maintained a frozen defined benefit plan. Benefits under the plan vested after five years of plan service and were based on years of service and an average of the five highest consecutive years of compensation subject to certain reductions if the employee elects to receive the benefit prior to age 65. This plan was amended on December 31, 2012, to freeze future benefit plan accruals for participants.

On October 13, 2021, Shentel's Board of Directors adopted a resolution to terminate its pension plan. The Company terminated the pension plan and all benefits were distributed in June 2023 through the combination of lump sum payments and the purchase of non-participating annuity contracts at the option of the pension plan participants. The Company made an additional $2.9 million contribution from its cash balance as a result of the settlement and recognized a settlement gain of $0.7 million in other income (expense) for the year ended December 31, 2023.

As of December 31, 2022, the fair value of our pension plan assets were $21.3 million. These investments were held in mutual funds and were valued based on the net asset value per share. Our pension plan's projected benefit obligation was $24.7 million, at December 31, 2022, determined using a discount rate of 4.90%. The net benefit plan obligation for the pension plan, with a balance of approximately $3.4 million, is presented in accrued liabilities and other in the Company's consolidated balance sheet at December 31, 2022.

The postretirement medical benefits plan is a frozen, unfunded, defined benefit plan. The postretirement plan liability was discounted at 4.9% and 5.0% at December 31, 2023 and 2022, respectively.

The SERP is a benefit plan that provides deferred compensation to certain employees. The Company holds investments in a rabbi trust as a source of funding for future payments under the plan. The SERP's investments were designated as trading securities and will be liquidated and paid out to the participants upon retirement. The benefit obligation to participants is always equal to the value of the SERP assets under ASC 710 *Compensation.* Changes to the investments' fair value are presented in Other income, net, while the reciprocal changes in the liability representative of compensatory expense, are presented in selling, general and administrative expense in the Company's consolidated statements of comprehensive income (loss).

Leases: The Company leases various telecommunications sites, warehouses, retail stores, and office facilities for use in our business. These agreements include fixed rental payments as well as variable rental payments such as those based on relevant inflation indices. The accounting lease term includes optional renewal periods that we are reasonably certain to exercise based on our assessment of relevant contractual and economic factors. The related lease payments are discounted at lease commencement using the Company's incremental borrowing rate in order to measure the lease liability and right-of-use asset.

The incremental borrowing rate is determined using a portfolio approach based on the rate of interest that the Company would have to pay to borrow an amount equal to the lease payments on a collateralized basis over a similar term. The Company uses the observable unsecured borrowing rate and risk-adjusts that rate to approximate a collateralized rate.

Income taxes: The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated

financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

In assessing the ability to realize deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon generating future taxable income during the periods in which those temporary differences become deductible. The Company considers the scheduled reversal of deferred tax liabilities, projected future taxable income, taxable income in prior carryback years if available and tax planning strategies in making this assessment. Based upon the level of historical taxable income, projections for future taxable income over the periods for which the deferred tax assets are deductible, and the option to elect out of bonus depreciation on in-serviced fixed assets, the Company believes it more likely than not that the net deferred tax assets will be realized.

The Company recognizes a tax benefit from an uncertain tax position when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits. The Company records a liability for the difference between the benefit recognized and measured for financial statement purposes and the tax position taken or expected to be taken on the tax return. Changes in the estimate are recorded in the period in which such determination is made.

Stock-based compensation: The cost of employee services received in exchange for share-based awards classified as equity is measured using the estimated fair value of the award on the date of the grant, and the related expense is recorded over the recipient's respective service period. The fair value for the Company's restricted stock units ("RSUs") are determined using the Company's stock price and the fair value for the Company's Relative Total Shareholder Return ("RTSR") awards are determined using a Monte Carlo simulation. The Company records forfeitures for its RSUs and RTSRs as they occur. Certain of the Company's share-based awards contain retirement clauses which state that awards will continue to vest without the requirement of continuous employment after a participant achieves certain service- and age-based requirements ("Retirement Eligibility"). The Company accelerates expense associated with eligible awards for employees who have achieved Retirement Eligibility on the later of the grant date or the date in which Retirement Eligibility is achieved.

Government grants: Shentel receives grants from the U.S. Government and its agencies, as well as various state governments under various programs designed to fund telecommunications operations and broadband infrastructure expansion into rural or underserved areas. The grant programs are evaluated to determine if they represent grants related to revenue or capital expenditures. Grants for revenue and operating activities are recorded as other revenue in the Company's consolidated statements of comprehensive income (loss) as the services are provided. Grants for capital expenditures are recorded as a reduction to the corresponding property, plant and equipment asset balance and are recognized through a reduction in depreciation expense over the life of the corresponding asset in the Company's consolidated statements of operating income (loss). Government grants related to revenue and operations are classified as operating cash inflows and grants for capital expenditures are classified as investing cash inflows.

The Company monitors government grants for requirements to ensure that conditions related to grants have been met and there is reasonable assurance that the Company will be able to retain the grant proceeds and to ensure that any contingencies that may arise from not meeting the conditions are appropriately recognized. See Note 13, *Government Grants* for additional information.

Segments: The Company's chief operating decision maker ("CODM") regularly reviews the Company's results to assess performance and allocates resources at the level of the Company's two operating segments, Broadband and Tower. Given the differences in the characteristics of the Company's operating segments, management has determined that the operating segments cannot be combined into one reportable segment. As such, the Company has two reportable segments, Broadband and Tower.

New Accounting Standards

In October 2023, the FASB issued ASU 2023-06, "*Disclosure Improvements: Codification Amendments in Response to the SEC's Disclosure Update and Simplification Initiative,*" ("ASU 2023-06") which aligns the disclosure and presentation requirements of a variety of the FASB's ASC Topics with the requirements described in the SEC's Disclosure Update and Simplification Initiative. ASU 2023-06 will become effective for each amendment on the effective date of the SEC's

corresponding disclosure rule changes. The Company is currently assessing the impact of adopting ASU 2023-06 on the consolidated financial statements and related disclosures.

In November 2023, the FASB issued ASU 2023-07, "*Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures,*" ("ASU 2023-07"). The amendments in ASU 2023-07 improve reportable segment disclosure requirements, primarily through enhanced disclosures about significant segment expenses. These enhanced disclosures requirements also include, but are not limited to, the requirement to disclose other segment items by reportable segment, the title and the position of the CODM and an explanation of how the CODM uses the reported measure(s) of segment profit or loss in assessing segment performance. The amendments in ASU 2023-07 are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The Company is currently assessing the impact of adopting ASU 2023-07 on the consolidated financial statements and related disclosures.

In December 2023, the FASB issued ASU 2023-09, "*Income Taxes (Topic 740): Improvements to Income Tax Disclosures,*" ("ASU 2023-09"). ASU 2023-09 is intended to enhance the transparency and decision usefulness of income tax disclosures. The amendments in ASU 2023-09 address investor requests for enhanced income tax information primarily through changes to the rate reconciliation and income taxes paid information. The amendments in ASU 2023-09 are effective for annual periods beginning after December 15, 2024. The Company is currently assessing the impact of adopting ASU 2023-09 on the consolidated financial statements and related disclosures.

Note 3. Revenue from Contracts with Customers

Contract Assets

The Company's contract assets primarily include commissions incurred to acquire contracts with customers. The Company incurs commission expenses related to in-house and third-party vendors which are capitalized and amortized over the expected customer benefit period which is approximately six years. The Company's current contract assets are included in prepaid expenses and other and the Company's non-current contract assets are included in deferred charges and other assets in its consolidated balance sheets. Amortization of capitalized commission expenses is recorded in selling, general and administrative expenses in the Company's consolidated statements of comprehensive income (loss).

The following tables present the activity of current and non-current contract assets:

(in thousands)	**2023**	**2022**
Beginning Balance	$ 8,646	$ 8,147
Commission payments	3,138	3,355
Contract asset amortization	(3,151)	(2,856)
Ending Balance	$ 8,633	$ 8,646

Contract Liabilities

The Company's contract liabilities include services that are billed in advance and recorded as deferred revenue, as well as installation fees that are charged upfront without transfer of commensurate goods or services to the customer. The Company's current contract liabilities are included in advanced billings and customer deposits in its consolidated balance sheets and the Company's non-current contract liabilities are included in other liabilities in its consolidated balance sheets. Shentel's current contract liability balances were $10.0 million and $9.5 million as of December 31, 2023 and 2022, respectively. Shentel's non-current contract liability balances were $1.0 million and $1.9 million as of December 31, 2023 and 2022, respectively. Shentel expects its current contract liability balances to be recognized as revenues during the twelve-month periods following the respective balance sheet dates and its non-current contract liability balances to be recognized as revenues after the twelve-month periods following the respective balance sheet dates.

No customer accounted for more than 10% of revenue for the years ended December 31, 2023, 2022, and 2021 and no customer made up more than 10% of accounts receivable at December 31, 2023 and 2022.

See Note 15, *Segment Reporting*, for a summary of the Company's revenue streams.

Note 4. Investments

Investments consist of the following:

(in thousands)	December 31, 2023	December 31, 2022
SERP investments at fair value	$ 2,290	$ 1,889
Cost method investments	10,675	10,749
Equity method investments	233	333
Total investments	$ 13,198	$ 12,971

SERP investments at fair value: The fair value of the SERP investments are based on unadjusted quoted prices in active markets and are classified as Level 1 of the fair value hierarchy.

Cost method investments: Our investment in CoBank's Class A common stock, derived from the CoBank patronage program, represented substantially all of our cost method investments with a balance of $10.1 million and $10.0 million at December 31, 2023 and 2022, respectively. We recognized approximately $0.5 million, $0.1 million and $2.0 million of patronage income in other income (expense) in 2023, 2022 and 2021, respectively. The Company expects that approximately 88% of the patronage distributions will be collected in cash and 12% in equity in 2024.

Equity method investments: At December 31, 2022, the Company had a 20.0% ownership interest in Valley Network Partnership ("ValleyNet"). During 2023, ValleyNet ceased operations and was dissolved. In April 2023, Shentel received a payment of $0.1 million, representing Shentel's remaining capital in the partnership, and the investment balance was derecognized from Shentel's consolidated balance sheets. Prior to the commencement of dissolution proceedings, the Company and ValleyNet purchased capacity on one another's fiber network, through related party transactions.

Note 5. Property, Plant and Equipment

Property, plant and equipment consist of the following:

($ in thousands)	Estimated Useful Lives	December 31, 2023	December 31, 2022
Land		$ 3,692	$ 3,722
Land improvements	10 years	4,448	3,483
Buildings and structures	10 - 45 years	95,436	93,461
Cable and fiber	15 - 30 years	799,612	593,771
Equipment and software	4 - 8 years	337,808	317,347
Plant in service		1,240,996	1,011,784
Plant under construction		145,710	144,534
Total property, plant and equipment		1,386,706	1,156,318
Less: accumulated depreciation and amortization		(507,207)	(468,765)
Property, plant and equipment, net		$ 879,499	$ 687,553

Property, plant and equipment, net increased due primarily to capital expenditures in the Broadband segment driven by our Glo Fiber market expansion. The Company's accounts payable as of December 31, 2023 and 2022 included amounts associated with capital expenditures of approximately $51.1 million and $43.8 million, respectively. Depreciation and amortization expense was $65.0 million, $68.2 million, and $54.4 million for the years ended December 31, 2023, 2022, and 2021, respectively. During year ended December 31, 2023, the Company disposed of fully depreciated property, plant and equipment assets, which reduced plant in service by approximately $26.0 million, with a corresponding offset to accumulated depreciation and amortization. The majority of disposals related to Beam assets as a result of the cessation of Beam assets described in the following paragraph.

In the fourth quarter of 2021, due to the availability of grants awarded under various governmental initiatives in support of rural FTTH broadband network expansion projects, we decided to cease further expansion of our Beam branded fixed wireless edge-out strategy, which is offered under our Broadband segment. During the second quarter of 2022, the Company permanently ceased operating 20 of our 55 Beam fixed wireless sites. Consequently, Shentel recorded an impairment charge of $4.1 million. The Company ceased its remaining Beam operations in the fourth quarter of 2022 and accelerated depreciation for remaining Beam network assets, which were expected to have limited use through 2023. Shentel recorded $7.4 million in accelerated depreciation during the year ended December 31, 2022 and impaired the remaining $1.5 million of Beam property, plant and equipment assets during the year ended December 31, 2023. Shentel also recorded $1.3 million in restructuring costs related to severance and other exit costs associated with the cessation of Beam operations during the year ended December 31, 2022. No restructuring costs related to Beam were recorded during the year ended December 31, 2023.

Note 6. Goodwill and Intangible Assets

The Company's goodwill and intangible assets consist of the following:

	December 31, 2023			December 31, 2022		
(in thousands)	Gross Carrying Amount	Accumulated Amortization and Other	Net	Gross Carrying Amount	Accumulated Amortization and Other	Net
Goodwill - Broadband	$ 3,244	$ —	$ 3,244	$ 3,244	$ —	$ 3,244
Indefinite-lived intangibles:						
Cable franchise rights	$ 64,334	$ —	$ 64,334	$ 64,334	$ —	$ 64,334
FCC spectrum licenses	12,122	—	12,122	12,122	—	12,122
Railroad crossing rights	217	—	217	141	—	141
Total indefinite-lived intangibles	76,673	—	76,673	76,597	—	76,597
Finite-lived intangibles:						
Subscriber relationships	28,425	(27,370)	1,055	28,425	(26,910)	1,515
Other intangibles	510	(359)	151	488	(329)	159
Total finite-lived intangibles	28,935	(27,729)	1,206	28,913	(27,239)	1,674
Total goodwill and intangible assets	$ 108,852	$ (27,729)	$ 81,123	$ 108,754	$ (27,239)	$ 81,515

Amortization expense was $0.5 million, $0.7 million and $0.8 million for the years ended December 31, 2023, 2022 and 2021, respectively.

On August 23, 2022, the Company entered into a definitive asset purchase agreement (the "Spectrum Purchase Agreement") with a wireless carrier pursuant to which the Company agreed to sell certain FCC spectrum licenses and leases utilized in the Company's Beam branded fixed wireless service for total consideration of approximately $21.1 million, composed of $17.3 million cash and approximately $3.8 million of liabilities to be assumed by the wireless carrier (the "Spectrum Transaction").

As a result of the expected sale, the Company concluded that the FCC spectrum licenses met the held for sale criteria. Accordingly, $13.8 million of indefinite-lived licenses and $5.9 million of finite-lived licenses are presented as held for sale, along with the corresponding $3.8 million of operating lease liabilities related to the finite-lived licenses, as of December 31, 2022. Upon the closing of the Spectrum Transaction on July 6, 2023, the respective balances were derecognized, resulting in a gain of $1.3 million recorded in other income (expense). The Company evaluated these events and determined that the Spectrum Transaction does not represent a strategic shift in the Company's business.

Our finite-lived intangible assets are amortized over the following estimated useful lives:

	Estimated Useful Life
Subscriber relationships	3 - 10 years
Other intangibles	15 - 20 years

The following table summarizes expected amortization of intangible assets at December 31, 2023:

(in thousands)	Amortization of Intangible Assets
2024	$ 492
2025	486
2026	105
2027	67
2028	19
Thereafter	37
Total	$ 1,206

Note 7. Other Assets and Accrued Liabilities

Prepaid expenses and other, classified as current assets, included the following:

(in thousands)	December 31, 2023	December 31, 2022
Prepaid maintenance expenses	$ 5,157	$ 7,444
Broadband contract acquisition costs	2,675	2,809
Interest rate swaps	1,443	—
Other	2,507	1,256
Prepaid expenses and other	$ 11,782	$ 11,509

Deferred charges and other assets, classified as long-term assets, included the following:

(in thousands)	December 31, 2023	December 31, 2022
Broadband contract acquisition costs	$ 5,958	$ 5,837
Interest rate swaps	798	—
Prepaid expenses and other	6,942	7,422
Deferred charges and other assets	$ 13,698	$ 13,259

Accrued liabilities and other, classified as current liabilities, included the following:

(in thousands)		December 31, 2023		December 31, 2022
Accrued programming costs	$	3,209	$	3,306
Pension plan		—		3,341
Other current liabilities		6,434		11,259
Accrued liabilities and other	$	9,643	$	17,906

Other liabilities, classified as long-term liabilities, included the following:

(in thousands)		December 31, 2023		December 31, 2022
Noncurrent portion of deferred lease revenue	$	18,194	$	18,679
Noncurrent portion of financing leases		1,395		1,500
Other		294		39
Other liabilities	$	19,883	$	20,218

Restructuring Activities

During 2021, as a result of the sale of our Wireless assets and operations, we implemented a restructuring plan whereby certain employees were notified of their pending dismissal under the workforce reduction program. We made $1.7 million and $2.1 million in severance payments for the years ended December 31, 2022 and 2021, respectively. For the year ended December 31, 2021, we recognized expenses of $1.7 million and $2.2 million, presented in continuing and discontinued operations, respectively. No restructuring expenses were incurred during the year ended December 31, 2023.

Asset Retirement Obligations:

Below is a summary of our current and non-current asset retirement obligations:

	Years Ended December 31,					
(in thousands)		2023		2022		2021
Balance at beginning of year	$	11,368	$	9,824	$	5,113
Additional asset retirement obligations recorded and changes to prior estimates		(111)		1,198		4,290
Liabilities settled		(1,000)		(185)		—
Accretion expense		621		531		421
Balance at end of year	$	10,878	$	11,368	$	9,824

Note 8. Leases

The Company leases various broadband network and telecommunications sites, fiber optic cable routes, warehouses, retail stores and office facilities for use in our business.

The components of lease costs were as follows:

(in thousands)	Classification	Years Ended December 31, 2023	2022	2021
Finance lease cost				
Amortization of leased assets	Depreciation	$ 477	$ 477	$ 498
Interest on lease liabilities	Interest expense	78	83	95
Operating lease cost	Operating expense[1]	6,982	7,570	7,063
Lease cost		$ 7,537	$ 8,130	$ 7,656

(1) Operating lease expense is presented in cost of service or selling, general and administrative expense based on the use of the relevant facility.

The following table summarizes the expected maturity of lease liabilities at December 31, 2023:

(in thousands)	Operating Leases	Finance Leases	Total
2024	$ 5,626	$ 178	$ 5,804
2025	5,555	180	5,735
2026	4,702	153	4,855
2027	3,874	155	4,029
2028	3,539	158	3,697
2029 and thereafter	61,732	1,201	62,933
Total lease payments	85,028	2,025	87,053
Less: interest	(33,589)	(526)	(34,115)
Present value of lease liabilities	$ 51,439	$ 1,499	$ 52,938

	December 31, 2023	December 31, 2022
Operating leases		
Weighted average remaining lease term (years)	19.2	19.8
Weighted average discount rate	4.9 %	4.5 %
Finance leases		
Weighted average remaining lease term (years)	12.3	13.1
Weighted average discount rate	5.2 %	5.2 %

(in thousands)	Years Ended December 31, 2023	2022	2021
Cash paid for operating lease liabilities	$ 6,379	$ 6,116	$ 5,643
Operating lease right-of-use assets obtained in exchange for new lease liabilities (includes new leases or modifications of existing leases)	$ 2,037	$ 2,527	$ 11,140

The Company recognized $18.5 million, $18.4 million and $11.1 million of operating lease revenue for the years ended December 31, 2023, 2022 and 2021, respectively, related to the cell site colocation space and dedicated fiber optic strands that we lease to our customers, which is included in service revenue and other in the consolidated statements of comprehensive income (loss). Substantially all of our lease revenue relates to fixed lease payments.

Below is a summary of our contractual minimum rental receipts expected under the lease agreements in place at December 31, 2023:

(in thousands)	Operating Leases
2024	$ 16,508
2025	15,574
2026	12,517
2027	11,022
2028	9,529
2029 and thereafter	16,275
Total	$ 81,425

Note 9. Debt

On May 17, 2023, Shentel entered into Amendment No. 1 to Credit Agreement (the "Amendment") to its existing Credit Agreement, dated as of July 1, 2021, with various financial institutions party thereto (the "Lenders") and CoBank, ACB, as administrative agent for the Lenders (as amended, the "Credit Agreement"), which contains (i) a $100 million, five-year undrawn revolving credit facility (the "Revolver"), (ii) a $150 million five-year delayed draw amortizing term loan ("Term Loan A-1") and (iii) a $150 million seven-year delayed draw amortizing term loan ("Term Loan A-2" and collectively with Term Loan A-1, the "Term Loans"). The following loans were outstanding under the Credit Agreement:

(in thousands)	December 31, 2023	December 31, 2022
Term loan A-1	$ 150,000	$ 37,500
Term loan A-2	150,000	37,500
Total debt	300,000	75,000
Less: unamortized loan fees	(101)	(46)
Total debt, net of unamortized loan fees	$ 299,899	$ 74,954

The Amendment extended the period during which the Company could borrow under the Term Loans from July 1, 2023 to December 31, 2023. The Amendment also extended the date on which the Term Loans must begin to be repaid in quarterly principal installments from September 30, 2023 to March 31, 2024. In addition, the Amendment amended the Credit Agreement to update the benchmark interest rate from the one-month term London Inter-Bank Offered Rate ("LIBOR") to a rate based on the one-month term Secured Overnight Financing Rate ("SOFR"), added a 10 bps credit spread adjustment for loans that bear interest based on Term SOFR and made certain other conforming changes. All other material terms and conditions of the Credit Agreement were unchanged. Management evaluated the amendment and concluded that the amendment was a modification of the existing Credit Agreement and, therefore, modification accounting was applied.

Both Term Loan A-1 and Term Loan A-2 bore interest at one-month LIBOR plus a margin of 1.60% until May 2023 and now bears interest at one-month term SOFR plus a margin of 1.60%. The margin of 1.60% is variable and determined by the Company's net leverage ratio. Interest is paid monthly. The interest rate was 6.95% and 5.89% at December 31, 2023 and December 31, 2022, respectively. Our cash payments for interest were $8.4 million, $0.6 million and $10.4 million for the years ended December 31, 2023, 2022 and 2021, respectively. Interest paid in 2021 was incurred and paid under a prior credit agreement which was repaid in connection with the sale of the Wireless business in 2021. See Note 16, *Discontinued Operations*, for details concerning the sale of the Wireless business. Shentel is charged commitment fees on unutilized portions of its Revolver and Term Loans. The Company recorded $0.5 million, $0.7 million and $0.5 million related to these fees for the year ended December 31, 2023, 2022 and 2021, respectively, which are included in other (expense) income, net in the consolidated statements of comprehensive income (loss).

The Credit Agreement includes various covenants, including total net leverage ratio and debt service coverage ratio financial covenants.

Shentel's Term Loans require quarterly payments based on a percentage of the outstanding balance. Based on the outstanding balance as of December 31, 2023, Term Loan A-1 requires quarterly principal repayments of $0.9 million from March 31, 2024 through June 30, 2024; then increasing to $1.9 million quarterly from September 30, 2024 through March 31, 2026, with the remaining balance due June 30, 2026. Based on the outstanding balance as of December 31, 2023, Term Loan A-2 requires quarterly principal repayments of $0.4 million through March 31, 2028, with the remaining balance due June 30, 2028.

The following table summarizes the expected payments of Shentel's outstanding borrowings as of December 31, 2023:

(in thousands)		Amount
2024	$	7,125
2025		9,000
2026		138,375
2027		1,500
2028		144,000
Total	$	300,000

Shentel has not made any borrowings under its Revolver as of December 31, 2023. In the event borrowings are made in the future, the entire outstanding principal amount borrowed is due June 30, 2026.

The Credit Agreement is fully secured by a pledge and unconditional guarantee from the Company and all of its subsidiaries, except Shenandoah Telephone Company. This provides the lenders a security interest in substantially all of the assets of the Company.

Note 10. Derivatives and Hedging

During the second quarter of 2023, Shentel entered into pay fixed (2.90%), receive variable (one-month term SOFR) interest rate swaps totaling $150.0 million of notional principal (the "Swaps"). The Swaps contain monthly payment terms beginning in May 2024, which extend through their maturity dates in June 2026. The Swaps are designated as cash flow hedges, representing 50% of the Company's expected outstanding debt. The Company uses the Swaps to manage its exposure to interest rate risk for its long-term variable-rate Term Loans.

The table below presents the fair value of the Swaps as well as their classification in the consolidated balance sheets. The fair value of these instruments was estimated using an income approach and observable market inputs (Level 2):

(in thousands)		December 31, 2023
Balance sheet line items containing derivative financial instruments:		
Prepaid expenses and other	$	1,443
Deferred charges and other assets		798
Total fair value of derivatives designated as hedging instruments	$	2,241

The Swaps were determined to be highly effective hedges and therefore all change in the fair value of the Swaps was recognized in other comprehensive income. The Company recognized $1.7 million of unrealized gains net of deferred taxes totaling $0.6 million for 2023. Since the Company did not have outstanding interest rate swaps in the prior year period, there were no gains or losses recorded for 2022. Shentel expects to begin reclassifying amounts related to the Swaps from accumulated other comprehensive income to interest expense in May 2024, when the payment periods of the Swaps begin.

The Company previously held interest rate swaps that were designated as cash flow hedges related to variable-rate long-term debt that were settled in connection with the sale the Company's Wireless assets and operations described in Note 16, *Discontinued Operations.* Similar to the Company's current Swaps, these interest rate swaps were used to manage its exposure to interest rate risk. These interest rate swaps were determined to be highly effective hedges their through the settlement dates in 2021. Upon settlement in 2021, the Company reclassified the remaining balance from accumulated other comprehensive income to the Company's consolidated statements of comprehensive income (loss), resulting in a net gain on interest rate swaps of $4.7 million.

Note 11. Income Taxes

The Company files a consolidated U.S. federal income tax return and various state income tax returns. The provision for the federal and state income taxes attributable to income (loss) consists of the following components:

	Years Ended December 31,		
(in thousands)	**2023**	**2022**	**2021**
Current expense (benefit)			
Federal taxes	$ —	$ 673	$ (21,392)
State taxes	(170)	(186)	(2,565)
Total current provision	(170)	487	(23,957)
Deferred expense (benefit)			
Federal taxes	3,851	(1,119)	25,518
State taxes	(708)	(295)	(3,255)
Total deferred expense (benefit)	3,143	(1,414)	22,263
Income tax expense (benefit)	$ 2,973	$ (927)	$ (1,694)
Effective tax rate	27.0 %	10.0 %	(27.2)%

A reconciliation of income tax expense (benefit) determined by applying the federal and state tax rates to income before income taxes is as follows:

	Years Ended December 31,		
(in thousands)	**2023**	**2022**	**2021**
Expected tax expense (benefit) at federal statutory	$ 2,312	$ (1,954)	$ 1,310
State income tax expense (benefit), net of federal tax effect	657	(410)	438
Revaluation of deferred tax liabilities	(1,373)	—	(5,206)
Stranded tax effects reclassified from other comprehensive income	—	—	1,620
Excess tax deficiency from share-based compensation and other expense, net	854	818	144
Valuation allowance	523	619	—
Income tax expense (benefit)	$ 2,973	$ (927)	$ (1,694)

The change in effective tax rate between 2023 and 2022 was primarily a result of higher pre-tax income in 2023.

The Company received $25.6 million in cash refunds for income taxes for the year ended December 31, 2023. The Company's cash payments for income taxes were $0.1 million, $0.1 million, and $11.2 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Deferred tax assets and liabilities are measured using enacted tax rates that are expected to apply in the year of reversal or settlement and arise from temporary differences between the US GAAP and tax bases of the following assets and liabilities:

(in thousands)	December 31, 2023	December 31, 2022
Deferred tax assets:		
Net operating loss carry-forwards	$ 59,814	$ 28,398
Leases	14,208	14,809
Asset retirement obligations	2,827	2,972
Benefit plan obligations	1,017	978
Accruals and stock-based compensation	4,075	3,087
Other	7,441	5,767
Total gross deferred tax assets	89,382	56,011
Less valuation allowance	(523)	(619)
Net deferred tax assets	88,859	55,392
Deferred tax liabilities:		
Property, plant and equipment	146,302	109,852
Leases	13,616	14,541
Intangible assets	13,837	12,867
Prepaid assets and other	3,251	2,732
Total gross deferred tax liabilities	177,006	139,992
Net deferred tax liabilities	$ 88,147	$ 84,600

The Company has a deferred tax asset of $59.8 million related to federal and various state net operating losses. As of December 31, 2023, the Company had approximately $261.8 million of federal net operating losses, including approximately $236.9 million of federal net operating losses generated after 2017. Federal net operating losses generated prior to 2018 expire through 2027. The Company also had approximately $97.2 million of state net operating losses, which can be carried forward indefinitely. The Company's income tax expense (benefit) for the years ended December 31, 2023 and 2022 included tax expense of $0.5 million and $0.6 million, respectively, for the valuation allowance on deferred tax assets related to federal net operating losses expected to expire unused. The Company recorded no valuation allowances prior to December 31, 2022.

As of December 31, 2023 and 2022, the Company had no unrecognized tax benefits.

The Company's returns are generally open to examination from 2020 forward and the net operating losses acquired from nTelos are open to examination from 2004 forward. The Company is currently involved in one state income tax audit and no federal income tax audits as of December 31, 2023.

Note 12. Stock Compensation, Earnings per Share, and Dividends

The Company's 2014 Equity Incentive Plan (the "2014 Plan") allows for the grant of equity based incentive compensation to all employees. The 2014 Plan authorized grants of up to an additional 4,200,000 shares over a ten-year period beginning in 2014. As of December 31, 2023, approximately 1,521,963 shares remained available for future issuance under the 2014 Plan. The 2014 Plan expired on February 18, 2024 and the Company's Board of Directors approved the resolution to adopt the 2024 Equity Incentive Plan (the "2024 Plan") on February 13, 2024. The Board of Directors has recommend the plan to be presented to the shareholders of the Company at the April 30, 2024 Annual Shareholder Meeting to vote for the approval of the 2024 Plan. The 2024 Plan will authorize grants of up to an additional 3,000,000 shares over a ten-year period beginning no sooner than the effective date of March 1, 2024. Under the 2014 Plan and the 2024 Plan, grants may take the form of stock awards, awards of options to acquire stock, stock appreciation rights and other forms of equity based compensation; both options to acquire stock and stock awards were granted. As of December 31, 2023, the only forms of stock awards outstanding are RSUs and RTSRs.

The Company granted approximately 385,000 RSUs at a weighted average grant price of $19.05 to employees and directors during the year ended December 31, 2023. Approximately 200,000 RSUs with a weighted average grant price of $25.01 vested and 9,000 RSUs with a weighted average grant price of $21.67 were forfeited during the year ended December 31, 2023. The

total fair value of RSUs vested was $5.0 million during the year ended December 31, 2023. Approximately 825,000 RSUs with a weighted average grant price of $21.16 remained outstanding as of December 31, 2023.

The Company granted approximately 134,000 RTSRs at a weighted average grant price of $23.64 to employees during the year ended December 31, 2023. Approximately 30,000 RTSRs with a weighted average grant price of $36.27 vested and no RTSRs were forfeited during the year ended December 31, 2023. The total fair value of RTSRs vested was $1.1 million during the year ended December 31, 2023. Approximately 293,000 RTSRs with a weighted average grant price of $25.80 remained outstanding as of December 31, 2023. As described above, the amount of RTSRs issued are adjusted on the vesting date. The vested amounts above exclude the vesting date adjustment and issuance of RTSRs based on actual performance, which totaled approximately 13,000 RTSRs, resulting in lower shares issued upon vesting of the RTSRs than originally granted.

The Company's RSUs generally have service conditions only or performance and service conditions with vesting periods ranging from one year for directors to five years for employees. RTSR awards vest approximately three years from the grant date. The performance condition applied to the RTSR awards is based upon the Company's stock performance compared to a group of peer companies. The actual number of shares to be issued can range from 0% to 150% of the awards granted.

Stock-based compensation expense was as follows:

	Years Ended December 31,		
(in thousands)	**2023**	**2022**	**2021**
Stock compensation expense	$ 10,823	$ 9,142	$ 3,552
Capitalized stock compensation	(790)	(614)	(144)
Stock compensation expense, net	$ 10,033	$ 8,528	$ 3,408

As of December 31, 2023, there was $8.4 million of total unrecognized compensation cost related to non-vested incentive awards which is expected to be recognized over weighted average period of 2.1 years.

We utilize the treasury stock method to calculate the impact on diluted earnings per share that potentially dilutive stock-based compensation awards have. The following table indicates the computation of basic and diluted earnings per share:

	Years Ended December 31,		
(in thousands, except per share amounts)	**2023**	**2022**	**2021**
Calculation of net income (loss) per share:			
Income (loss) from continuing operations	$ 8,038	$ (8,379)	$ 7,929
Income from discontinued operations, net of tax	—	—	990,902
Net income (loss)	$ 8,038	$ (8,379)	$ 998,831
Basic weighted average shares outstanding	50,396	50,155	50,026
Basic net income (loss) per share - continuing operations	$ 0.16	$ (0.17)	$ 0.16
Basic net income per share - discontinued operations	—	—	19.81
Basic net income (loss) per share	$ 0.16	$ (0.17)	$ 19.97
Effect of stock-based compensation awards outstanding:			
Basic weighted average shares outstanding	50,396	50,155	50,026
Effect from dilutive shares and options outstanding	319	—	123
Diluted weighted average shares outstanding	50,715	50,155	50,149
Diluted net income (loss) per share - continuing operations	$ 0.16	$ (0.17)	$ 0.16
Diluted net income per share - discontinued operations	—	—	19.76
Diluted net income (loss) per share	$ 0.16	$ (0.17)	$ 19.92

There were approximately 117,000 and 259,000 anti-dilutive awards outstanding for the years ended December 31, 2023 and 2021, respectively. There were approximately 365,000 potentially dilutive equity awards for the year ended December 31, 2022; however, these securities were excluded from the calculation of diluted weighted average shares outstanding due to the fact that they were anti-dilutive as a result of the Company's net loss for the year ended December 31, 2022.

The Company paid a special dividend of $18.75 per share on August 2, 2021 (the "Special Dividend"). The total amount paid pursuant to the Special Dividend to Shentel shareholders, including amounts reinvested in the Company's stock via the Company's Dividend Reinvestment Plan, was approximately $937 million.

Note 13. Government Grants

In 2021, Shentel commenced negotiations with various governmental entities to receive awards under broadband infrastructure grant programs to strategically expand the Company's broadband network in order to provide broadband services to unserved residences in the partnering counties in Virginia, Maryland and West Virginia. Throughout 2021, 2022 and 2023, in partnership with counties in the respective states, Shentel has been awarded grants under the Virginia Telecommunication Initiative ("VATI") and the Rural Digital Opportunity Fund ("RDOF") in Virginia, the Connect Maryland Network Infrastructure Grant Program ("Connect MD") in Maryland, and the Major Broadband Projects Strategies ("MBPS") and Line Extension Advancement and Development ("LEAD") programs in West Virginia.

The following table summarizes the awards under each program:

(in thousands)		Awards
VATI	$	60,872
RDOF		887
Connect MD		19,609
MBPS		3,560
LEAD		823
Total	$	85,751

To receive such grant distributions, the Company entered into agreements with each partnering county in Virginia, Maryland and West Virginia. These agreements outline certain build-out milestones. The network is required to meet certain performance conditions to ensure that minimum download and upload speeds are able to be provided to the unserved residences.

As discussed in Note 2, *Summary of Significant Accounting Policies*, government assistance that is used to fund capital expenditures is recorded as a reduction to property, plant and equipment. Given the primary purpose of the programs listed above is to fund build-out of the Company's broadband network, amounts recognized under these programs are recorded as a reduction to the related property, plant and equipment and cash receipts are presented as cash flows from investing activities in the Company's consolidated statements of cash flows. The Company recognizes grant receivables at the time it becomes probable that the Company will be eligible to receive the grant, which is estimated to correspond with the date when specified build-out milestones are achieved. As a result of these programs, the Company received $1.9 million in cash reimbursements during the year ended December 31, 2023 and has recorded approximately $1.9 million in accounts receivable as of December 31, 2023. The Company did not recognize any amounts under these programs during the years ended December 31, 2022 and 2021 or as of December 31, 2022.

Note 14. Commitments and Contingencies

We are committed to make payments to satisfy our lease liabilities. The scheduled payments under those obligations are summarized in Note 8, *Leases*. We also have outstanding unconditional purchase commitments to procure programming, marketing services and IT software licenses through 2026. For the years ended December 31, 2023, 2022 and 2021 we paid $4.6 million, $5.2 million and $3.4 million, respectively, for the programming, marketing and IT software license purchase commitments. The Company is obligated to make the following future minimum payments under the non-cancelable terms of these commitments as of December 31, 2023:

(in thousands)		Purchase Commitments
2024	$	3,894
2025		3,161
2026		1,778
2027		814
Total	$	9,647

The Company is subject to claims and legal actions that may arise in the ordinary course of business. The Company does not believe that any of these pending claims or legal actions are either probable or reasonably possible of a material loss.

Note 15. Segment Reporting

Shentel has presented Residential & SMB - Cable Markets and Residential & SMB - Glo Fiber Markets separately for 2023. These revenues were previously reported in one line under the description "Residential & SMB". Shentel has amended the presentation for 2022 and 2021.

The divestiture of our Wireless operations on July 1, 2021 represented a strategic shift in the Company's business, which therefore qualified the segment as a discontinued operation. As a result, for all periods presented, the operating results and cash flows related to the Wireless segment were reflected as a discontinued operation in our consolidated statements of comprehensive income (loss) and the consolidated statements of cash flows. The tables below reflect the results of operations of the Company's reportable segments in continuing operations, consistent with internal reporting used by the Company. Intercompany revenue is primarily derived from services provided to the discontinued operation, for periods prior to the divestiture.

Year ended December 31, 2023:

(in thousands)	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue				
Residential & SMB - Cable Markets	$ 176,879	$ —	$ —	$ 176,879
Residential & SMB - Glo Fiber Markets	35,103	—	—	35,103
Commercial Fiber	42,132	—	—	42,132
RLEC & Other	14,791	—	—	14,791
Tower lease	—	18,474	—	18,474
Service revenue and other	268,905	18,474	—	287,379
Intercompany revenue and other	348	161	(509)	—
Total revenue	269,253	18,635	(509)	287,379
Operating expenses				
Cost of services	100,841	5,625	(365)	106,101
Selling, general and administrative	62,834	1,412	39,385	103,631
Impairment expense	2,552	—	—	2,552
Depreciation and amortization	61,897	2,103	1,471	65,471
Total operating expenses	228,124	9,140	40,491	277,755
Operating income (loss)	$ 41,129	$ 9,495	$ (41,000)	$ 9,624
Capital expenditures	$ 254,929	$ 1,480	$ 141	$ 256,550

Year ended December 31, 2022:

(in thousands)	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue				
Residential & SMB - Cable Markets	$ 175,681	$ —	$ —	$ 175,681
Residential & SMB - Glo Fiber Markets	18,293	—	—	18,293
Commercial Fiber	38,821	—	—	38,821
RLEC & Other	16,035	—	—	16,035
Tower lease	—	18,541	—	18,541
Service revenue and other	248,830	18,541	—	267,371
Intercompany revenue and other	185	378	(563)	—
Total revenue	249,015	18,919	(563)	267,371
Operating expenses				
Cost of services	102,267	5,712	(433)	107,546
Selling, general and administrative	56,776	1,279	34,337	92,392
Restructuring expense	849	—	402	1,251
Impairment expense	5,241	—	—	5,241
Depreciation and amortization	63,175	2,416	3,308	68,899
Total operating expenses	228,308	9,407	37,614	275,329
Operating income (loss)	$ 20,707	$ 9,512	$ (38,177)	$ (7,958)
Capital expenditures	$ 188,729	$ 620	$ 260	$ 189,609

Year ended December 31, 2021:

(in thousands)	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue				
Residential & SMB - Cable Markets	$ 169,183	$ —	$ —	$ 169,183
Residential & SMB - Glo Fiber Markets	8,347	—	—	8,347
Commercial Fiber	30,842	—	—	30,842
RLEC & Other	15,249	—	—	15,249
Tower lease	—	12,393	—	12,393
Service revenue and other	223,621	12,393	—	236,014
Revenue for service provided to the discontinued Wireless operations	4,459	5,311	(545)	9,225
Total revenue	228,080	17,704	(545)	245,239
Operating expenses				
Cost of services	97,283	5,438	(422)	102,299
Selling, general and administrative	47,840	1,197	33,414	82,451
Restructuring expense	202	—	1,525	1,727
Impairment expense	5,986	—	—	5,986
Depreciation and amortization	47,937	2,053	5,216	55,206
Total operating expenses	199,248	8,688	39,733	247,669
Operating income (loss)	$ 28,832	$ 9,016	$ (40,278)	$ (2,430)
Capital expenditures	$ 156,131	$ 977	$ 2,993	$ 160,101

A reconciliation of the total of the reportable segments' operating income (loss) to consolidated income (loss) from continuing operations before income taxes is as follows:

	Years Ended December 31,		
(in thousands)	**2023**	**2022**	**2021**
Total consolidated operating income (loss)	$ 9,624	$ (7,958)	$ (2,430)
Other income (expense), net	1,387	(1,348)	8,665
Income (loss) from continuing operations before income taxes	$ 11,011	$ (9,306)	$ 6,235

The Company's CODM does not currently review total assets by segment since the assets are centrally managed and some of the assets are shared by the segments As a result, total assets by reportable segment have not been presented.

Note 16. Discontinued Operations

On July 1, 2021, pursuant to the Asset Purchase Agreement (the "Purchase Agreement"), dated May 28, 2021, between Shentel and T-Mobile, Shentel completed the sale to T-Mobile of its Wireless assets and operations for cash consideration of approximately $1.94 billion, inclusive of the approximately $60 million settlement of the waived management fees by Sprint, and net of certain transaction expenses (the "Transaction").

The assets and liabilities that transferred in the Transaction (the "disposal group") were presented as held for sale within our historical consolidated balance sheets, and discontinued operations within our historical consolidated statements of comprehensive income (loss).

Income from discontinued operations, net of tax in the consolidated statements of comprehensive income (loss) consist of the following for December 31, 2021:

(in thousands)		
Revenue:		**2021**
Service revenue and other	$	201,076
Equipment revenue		12,253
Total revenue		213,329
Operating expenses:		
Cost of services		38,144
Cost of goods sold		11,964
Selling, general and administrative		17,514
Severance expense		465
Depreciation and amortization		—
Total operating expenses		68,087
Operating income		145,242
Other (expense) income:		
Debt extinguishment		(11,032)
Interest expense and other, net		(9,178)
Gain on sale of disposition of Wireless assets and operations		1,227,531
Income before income taxes		1,352,563
Income tax expense		361,661
Income from discontinued operations, net of tax	$	990,902

There was no material income from discontinued operations for the years ended December 31, 2023 and 2022.

Schedule II
Valuation and Qualifying Accounts

Changes in the Company's allowance for credit losses for accounts receivable for the years ended December 31, 2023, 2022 and 2021 are summarized below:

(in thousands)	Balance at Beginning of Year	Recoveries added to allowance	Provision for Credit Losses	Write-offs	Balance at End of Year
Year Ended December 31, 2023					
Allowance for credit losses	$ 776	$ 424	$ 2,898	$ (3,212)	$ 886
Year Ended December 31, 2022					
Allowance for credit losses	$ 352	$ 414	$ 1,972	$ (1,962)	$ 776
Year Ended December 31, 2021					
Allowance for credit losses	$ 614	$ 530	$ 1,028	$ (1,820)	$ 352

Exhibits Index

Exhibit Number	Exhibit Description
2.1	Asset Purchase Agreement, dated May 28, 2021, between Shenandoah Telecommunications Company and T-Mobile USA, Inc. (incorporated by reference from Exhibit 2.1 to the Company’s Current Report on Form 8-K filed on June 1, 2021).
2.2	Agreement and Plan of Merger, dated October 24, 2023, by and among Shenandoah Telecommunications Company, Fox Merger Sub I Inc., Fox Merger Sub II LLC, Horizon Acquisition Parent LLC, Novacap TMT V, L.P. and the Sellers set forth on the signature pages thereto (incorporated by reference from Exhibit 2.1 to the Company’s Current Report on Form 8-K filed on October 26, 2023).
2.3	Investment Agreement, dated October 24, 2023, by and among Shenandoah Telecommunications Company, Shentel Broadband Holding Inc., ECP Fiber Holdings, LP and, solely for the limited purposes specified therein, Hill City Holdings, LP (incorporated by reference from Exhibit 2.2 to the Company’s Current Report on Form 8-K filed on October 26, 2023).
3.1	Amended and Restated Articles of Incorporation of Shenandoah Telecommunications Company, effective August 31, 2019 (incorporated by reference from Exhibit 3.2 to the Company’s Quarterly Report on Form 10-Q filed on September 30, 2019).
3.2	Amended and Restated Bylaws of Shenandoah Telecommunications Company, effective October 25, 2022 (incorporated by reference from Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on October 27, 2022).
*4.1	Description of the Company’s Common Stock Registered Under Section 12 of the Exchange Act of 1934.
4.2	Shenandoah Telecommunications Company Dividend Reinvestment Plan (incorporated by reference from Exhibit 4.4 to the Company’s Registration Statement on Form S-3D (No. 333-74297).
10.1	Credit Agreement, dated July 1, 2021, by and among Shenandoah Telecommunications Company, certain of its subsidiaries as guarantors, CoBank ACB, as administrative agent, and the other lenders party thereto (incorporated by reference from Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on July 1, 2021).
*10.2	Amendment No. 1 to Credit Agreement, dated May 17, 2023, among Shenandoah Telecommunications Company, certain of its subsidiaries, CoBank ACB, as administrative agent, and the other lenders party thereto.
10.3	Consent and Amendment No. 2 to Credit Agreement, dated October 24, 2023, by and among Shenandoah Telecommunications Company, certain of its subsidiaries, CoBank ACB, as administrative agent, and the lenders party thereto (incorporated by reference from Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on October 26, 2023).
10.4	Commitment Letter, dated October 24, 2023, by and among Shenandoah Telecommunications Company, certain of its subsidiaries, CoBank ACB, Citizens Bank, N.A., Bank of America, N.A. and Fifth Third Bank, National Association. (incorporated by reference from Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on October 26, 2023).
10.5	Supplemental Executive Retirement Plan as amended and restated (incorporated by reference from Exhibit 10.14 to the Company’s Current Report on Form 8-K filed on March 23, 2007).
10.6	2014 Equity Incentive Plan (incorporated by reference from Appendix A to the Company’s Definitive Proxy Statement filed on March 13, 2014 (No. 333-196990)).
10.7	Form of Stock Option Awards for Executives under the 2014 Equity Incentive Plan.
10.8	Form of Restricted Stock Unit Award for Executives under the 2014 Equity Incentive Plan (incorporated by reference from Exhibit 10.5 to the Company’s Annual Report on Form 10-K filed on February 22, 2023).

10.9	Form of RTSR Performance Share Unit Award for Executives under the 2014 Equity Incentive Plan (incorporated by reference from Exhibit 10.6 to the Company's Annual Report on Form 10-K filed on February 22, 2023).
10.10	Form of Strategic Retention Performance Share Unit Award (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 23, 2022).
10.11	Form of Severance Agreement (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 11, 2020).
*21	List of Subsidiaries.
*23.1	Consent of RSM US LLP, Independent Registered Public Accounting Firm.
*23.2	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
*31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.
*31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.
*31.3	Certification of Principal Accounting Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.
**32	Certifications pursuant to Rule 13a-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. § 1350.
*97.1	Shenandoah Telecommunications Company Incentive Award Recoupment Policy.
(101)	Formatted in XBRL (Extensible Business Reporting Language)

101.INS	XBRL Instance Document - the instance document does not appear in the interactive data filing because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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* Filed herewith

** This certification is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended (Securities Act), or the Exchange Act.

SIGNATURES

Pursuant to the requirements of Sections 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.

SHENANDOAH TELECOMMUNICATIONS COMPANY

February 21, 2024	/S/ CHRISTOPHER E. FRENCH *Christopher E. French, President & Chief Executive Officer* *(Principal Executive Officer)*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

/s/CHRISTOPHER E. FRENCH February 21, 2024 Christopher E. French	President & Chief Executive Officer, Director (Principal Executive Officer)
/s/JAMES J. VOLK February 21, 2024 James J. Volk	Senior Vice President – Chief Financial Officer (Principal Financial Officer)
/s/DENNIS A. ROMPS February 21, 2024 Dennis A. Romps	Vice President - Chief Accounting Officer (Principal Accounting Officer)
/s/THOMAS A. BECKETT February 21, 2024 Thomas A. Beckett	Director
/s/TRACY FITZSIMMONS February 21, 2024 Tracy Fitzsimmons	Director
/s/JOHN W. FLORA February 21, 2024 John W. Flora	Director
/s/ RICHARD L. KOONTZ, JR. February 21, 2024 Richard L. Koontz, Jr.	Director
/s/KENNETH L. QUAGLIO February 21, 2024 Kenneth L. Quaglio	Director
/s/LEIGH ANN SCHULTZ February 21, 2024 Leigh Ann Schultz	Director
/s/VICTOR C. BARNES February 21, 2024 Victor C. Barnes	Director